

# Publications by Björn W. Schuller

3 July 2017

Current h-index: **57** (source: Google Scholar)

Current citation count: **15 060** (source: Google Scholar)

Citations are only provided for papers with citation count  $\geq 100$ .

(IF): Journal Impact Factor according to Journal Citation Reports, Thomson Reuters.

(IF\*): Conference Impact Factor according to <http://citescholar.org>.

Acceptance rates and impact factors of satellite workshops may be subsumed with the main conference.

## A) BOOKS

### Books Authored (6):

- 1) B. W. Schuller, *I Know What You're Thinking: The Making of Emotional Machines*. Princeton University Press, 2018. to appear
- 2) A. Balahur-Dobrescu, M. Taboada, and B. W. Schuller, *Computational Methods for Affect Detection from Natural Language*. Computational Social Sciences, Springer, 2017. to appear
- 3) B. Schuller, *Intelligent Audio Analysis*. Signals and Communication Technology, Springer, 2013. 350 pages
- 4) B. Schuller and A. Batliner, *Computational Paralinguistics: Emotion, Affect and Personality in Speech and Language Processing*. Wiley, November 2013
- 5) K. Kroschel, G. Rigoll, and B. Schuller, *Statistische Informationstechnik*. Berlin/Heidelberg: Springer, 5th ed., 2011
- 6) B. Schuller, *Mensch, Maschine, Emotion – Erkennung aus sprachlicher und manueller Interaktion*. Saarbrücken: VDM Verlag Dr Müller, 2007. 239 pages

### Books Edited (4):

- 7) S. Oviatt, B. Schuller, P. Cohen, D. Sonntag, G. Potamianos, and A. Krüger, eds., *The Handbook of Multimodal-Multisensor Interfaces Volume 1 – Foundations, User Modeling, and Common Modality Combinations*. ACM Books, Morgan & Claypool, 2017. 661 pages
- 8) S. Oviatt, B. Schuller, P. Cohen, D. Sonntag, G. Potamianos, and A. Krüger, eds., *The Handbook of Multimodal-Multisensor Interfaces Volume 2 – Signal Processing, Architectures, and Detection of Emotion and Cognition*. ACM Books, Morgan & Claypool, 2017. to appear
- 9) S. Oviatt, B. Schuller, P. Cohen, D. Sonntag, G. Potamianos, and A. Krüger, eds., *The Handbook of Multimodal-Multisensor Interfaces Volume 3 – Multimodal Language Processing, Software Tools, Commercial Applications and Emerging Directions*. ACM Books, Morgan & Claypool, 2017. to appear
- 10) S. D’Mello, A. Graesser, B. Schuller, and J.-C. Martin, eds., *Proceedings of the 4th International HUMAINE Association Conference on Affective Computing and Intelligent Interaction 2011, ACII 2011*, vol. 6974/6975, Part I / Part II of *Lecture Notes on Computer Science (LNCS)*, (Memphis, TN), HUMAINE Association, Springer, October 2011

### Contributions to Books (41):

- 11) B. Schuller, A. Elkins, and K. Scherer, “Computational Analysis of Vocal Expression of Affect: Trends and Challenges,” in *Social Signal Processing* (J. Burgoon, N. Magnenat-Thalmann, M. Pantic, and A. Vinciarelli, eds.), ch. 6, pp. 56–68, Cambridge University Press, 2017
- 12) B. Schuller, “Multimodal User State & Trait Recognition: An Overview,” in *Handbook of Multimodal-Multisensor Interfaces* (S. Oviatt, B. Schuller, P. Cohen, D. Sonntag, G. Potamianos, and A. Krüger, eds.), ACM Books, Morgan & Claypool, 2017. 30 pages, to appear

- 13) S. Bengio, L. Deng, L.-P. Morency, and B. Schuller, “Multi-disciplinary Challenge Topic: Perspectives on Predictive Power of Multimodal Deep Learning: Surprises and Future Directions,” in *Handbook of Multimodal-Multisensor Interfaces* (S. Oviatt, B. Schuller, P. Cohen, D. Sonntag, G. Potamianos, and A. Krüger, eds.), ACM Books, Morgan & Claypool, 2017. 30 pages, to appear
- 14) F. Ramos, A. Ross, and B. Schuller, “Multidisciplinary Challenge Topic: Perspectives on Strategic Fusion: What Can Neuroscience, Engineering, and Applications Experience Teach Us about Optimizing Multimodal Multi-sensor System Reliability?,” in *Handbook of Multimodal-Multisensor Interfaces* (S. Oviatt, B. Schuller, P. Cohen, D. Sonntag, G. Potamianos, and A. Krüger, eds.), ACM Books, Morgan & Claypool, 2017. to appear
- 15) H. Gunes and B. Schuller, “Automatic Analysis of Aesthetics: Human Beauty, Attractiveness, and Likability,” in *Social Signal Processing* (J. Burgoon, N. Magnenat-Thalmann, M. Pantic, and A. Vinciarelli, eds.), ch. 14, pp. 183–201, Cambridge University Press, 2017
- 16) H. Gunes and B. Schuller, “Automatic Analysis of Social Emotions,” in *Social Signal Processing* (J. Burgoon, N. Magnenat-Thalmann, M. Pantic, and A. Vinciarelli, eds.), ch. 16, pp. 213–224, Cambridge University Press, 2017
- 17) V. Pandit, S. Amiriparian, M. Schmitt, K. Qian, J. Guo, S. Matsuoka, and B. Schuller, “Big Data Multimedia Mining: Feature Extraction facing Volume, Velocity, and Variety,” in *Big Data Analytics for Large-Scale Multimedia Search* (S. Vrochidis, B. Huet, E. Chang, and I. Kompatsiaris, eds.), Wiley, 2017. to appear
- 18) P. Tzirakis, S. Zafeiriou, and B. Schuller, “Real-world automatic continuous affect recognition from audiovisual signals,” in *Multi-modal Behavior Analysis in the Wild: Advances and Challenges* (X. Alameda-Pineda, E. Ricci, and N. Sebe, eds.), Elsevier, 2017. to appear
- 19) B. Schuller, “Acquisition of affect,” in *Emotions and Personality in Personalized Services* (M. Tkalcic, B. De Carolis, M. de Gemmis, A. Odić, and A. Kosir, eds.), Human-Computer Interaction Series, pp. 57–80, Springer, 1st ed., 2016
- 20) F. Burkhardt, C. Pelachaud, B. Schuller, and E. Zovato, “Emotion Markup Language,” in *Multimodal Interaction with W3C Standards: Towards Natural User Interfaces to Everything* (D. Dahl, ed.), pp. 65–80, Berlin/Heidelberg: Springer, 2017
- 21) G. Keren, A. E.-D. Mousa, O. Pietquin, S. Zafeiriou, and B. Schuller, “Deep Learning for Multisensorial and Multimodal Interaction,” in *Handbook of Multimodal-Multisensor Interfaces* (S. Oviatt, B. Schuller, P. Cohen, D. Sonntag, G. Potamianos, and A. Krüger, eds.), ACM Books, Morgan & Claypool, 2017. 30 pages, to appear
- 22) M. Schmitt and B. Schuller, “Machine-based decoding of paralinguistic vocal features,” in *The Oxford Handbook of Voice Perception* (S. Frühholz and P. Belin, eds.), ch. 40, Oxford University Press, 2015. invited contribution, to appear
- 23) B. Schuller, “Deep Learning our Everyday Emotions – A Short Overview,” in *Advances in Neural Networks: Computational and Theoretical Issues Emotional Expressions and Daily Cognitive Functions* (S. Bassis, A. Esposito, and F. C. Morabito, eds.), vol. 37 of *Smart Innovation Systems and Technologies*, pp. 339–346, Berlin Heidelberg: Springer, 2015. invited contribution
- 24) B. Schuller and F. Weninger, “Human Affect Recognition – Audio-Based Methods,” in *Wiley Encyclopedia of Electrical and Electronics Engineering* (J. G. Webster, ed.), pp. 1–13, New York: John Wiley & Sons, 2015. invited contribution
- 25) B. Schuller, “Multimodal Affect Databases -? Collection, Challenges & Chances,” in *Handbook of Affective Computing* (R. A. Calvo, S. D’Mello, J. Gratch, and A. Kappas, eds.), Oxford Library of Psychology, ch. 23, pp. 323–333, Oxford University Press, 2015. invited contribution
- 26) B. Schuller, “Emotion Modeling via Speech Content and

- Prosody – in Computer Games and Elsewhere,” in *Emotion in Games – Theory and Practice* (G. Yannakakis and K. Karpouzis, eds.), vol. 4 of *Socio-Affective Computing*, ch. 5, pp. 85–102, Springer, 2015. invited contribution
- 27) A. Batliner, S. Steidl, F. Eyben, and B. Schuller, “On Laughter and Speech Laugh, Based on Observations of Child-Robot Interaction,” in *Phonetics of Laughing* (J. Trouvain and N. Campbell, eds.), Saarbrücken, Germany: universaar – Saarland University Press, 2015. 29 pages, to appear
  - 28) R. Brückner and B. Schuller, “Being at Odds? – Deep and Hierarchical Neural Networks for Classification and Regression of Conflict in Speech,” in *Conflict and Multimodal Communication – Social research and machine intelligence* (F. D’Errico, I. Poggi, A. Vinciarelli, and L. Vincze, eds.), Computational Social Sciences, pp. 403–429, Berlin/Heidelberg: Springer, 2015. invited contribution
  - 29) G. Castellano, H. Gunes, C. Peters, and B. Schuller, “Multimodal Affect Detection for Naturalistic Human-Computer and Human-Robot Interactions,” in *Handbook of Affective Computing* (R. A. Calvo, S. D’Mello, J. Gratch, and A. Kappas, eds.), Oxford Library of Psychology, ch. 17, pp. 246–260, Oxford University Press, 2015. invited contribution
  - 30) E. Marchi, Y. Zhang, F. Eyben, F. Ringeval, and B. Schuller, “Autism and Speech, Language, and Emotion -? a Survey,” in *Evaluating the Role of Speech Technology in Medical Case Management* (H. Patil and M. Kulshreshtha, eds.), Berlin: De Gruyter, 2015. invited contribution, to appear
  - 31) F. Weninger, M. Wöllmer, and B. Schuller, “Emotion Recognition in Naturalistic Speech and Language ?- A Survey,” in *Emotion Recognition: A Pattern Analysis Approach* (A. Konar and A. Chakraborty, eds.), ch. 10, pp. 237–267, Wiley, 1st ed., December 2015
  - 32) E. Marchi, F. Ringeval, and B. Schuller, “Voice-enabled assistive robots for handling autism spectrum conditions: an examination of the role of prosody,” in *Speech and Automata in Health Care (Speech Technology and Text Mining in Medicine and Healthcare)* (A. Neustein, ed.), pp. 207–236, Boston/Berlin/Munich: De Gruyter, 2014. invited contribution
  - 33) B. Schuller, “Prosody and Phonemes: On the Influence of Speaking Style,” in *Prosody and Iconicity* (S. Hancil and D. Hirst, eds.), ch. 13, pp. 233–250, Benjamins, May 2013
  - 34) B. Schuller and F. Weninger, “Ten Recent Trends in Computational Paralinguistics,” in *4th COST 2102 International Training School on Cognitive Behavioural Systems* (A. Esposito, A. Vinciarelli, R. Hoffmann, and V. C. Müller, eds.), vol. 7403/2012 of *Lecture Notes on Computer Science (LNCS)* 7403, pp. 35–49, Berlin Heidelberg: Springer, 2012
  - 35) R. Rotili, E. Principi, M. Wöllmer, S. Squartini, and B. Schuller, “Conversational Speech Recognition In Non-Stationary Reverberated Environments,” in *4th COST 2102 International Training School on Cognitive Behavioural Systems* (A. Esposito, A. Vinciarelli, R. Hoffmann, and V. C. Müller, eds.), vol. 7403/2012 of *Lecture Notes on Computer Science (LNCS)*, pp. 50–59, Berlin Heidelberg: Springer, 2012
  - 36) R. Rotili, E. Principi, S. Squartini, and B. Schuller, “Real-Time Speech Recognition in a Multi-Talker Reverberated Acoustic Scenario,” in *Advanced Intelligent Computing Theories and Applications. With Aspects of Artificial Intelligence. Proc. Seventh International Conference on Intelligent Computing (ICIC 2011)*, vol. 6839 of *Lecture Notes on Computer Science (LNCS)*, pp. 379–386, Springer, 2012
  - 37) B. Schuller, “Voice and Speech Analysis in Search of States and Traits,” in *Computer Analysis of Human Behavior* (A. A. Salah and T. Gevers, eds.), *Advances in Pattern Recognition*, ch. 9, pp. 227–253, Springer, 2011
  - 38) B. Schuller and T. Knaup, “Learning and Knowledge-based Sentiment Analysis in Movie Review Key Excerpts,” in *Toward Autonomous, Adaptive, and Context-Aware Multimodal Interfaces: Theoretical and Practical Issues: Third COST 2102 International Training School, Caserta, Italy, March 15-19, 2010, Revised Selected Papers* (A. Esposito, A. M. Esposito, R. Martone, V. Müller, and G. Scarpetta, eds.), vol. 6456/2010 of *Lecture Notes on Computer Science (LNCS)*, pp. 448–472, Heidelberg: Springer, 1st ed., 2011
  - 39) B. Schuller, M. Wöllmer, F. Eyben, and G. Rigoll, “Retrieval of Paralinguistic Information in Broadcasts,” in *Multimedia Information Extraction: Advances in video, audio, and imagery extraction for search, data mining, surveillance, and authoring* (M. T. Maybury, ed.), ch. 17, pp. 273–288, Wiley, IEEE Computer Society Press, 2011
  - 40) D. Arsić and B. Schuller, “Real Time Person Tracking and Behavior Interpretation in Multi Camera Scenarios Applying Homography and Coupled HMMs,” in *Analysis of Verbal and Nonverbal Communication and Enactment: The Processing Issues, COST 2102 International Conference, Budapest, Hungary, September 7-10, 2010, Revised Selected Papers* (A. Esposito, A. Vinciarelli, K. Vicsi, C. Pelachaud, and A. Nijholt, eds.), vol. 6800/2011 of *Lecture Notes on Computer Science (LNCS)*, pp. 1–18, Heidelberg: Springer, 2011
  - 41) B. Schuller, F. Dibiasi, F. Eyben, and G. Rigoll, “Music Thumbnailing Incorporating Harmony- and Rhythm Structure,” in *Adaptive Multimedia Retrieval: 6th International Workshop, AMR 2008, Berlin, Germany, June 26-27, 2008. Revised Selected Papers* (M. Detyniecki, U. Leiner, and A. Nürnberger, eds.), vol. 5811/2010 of *Lecture Notes in Computer Science (LNCS)*, pp. 78–88, Berlin/Heidelberg: Springer, 2010
  - 42) A. Batliner, B. Schuller, D. Seppi, S. Steidl, L. Devillers, L. Vidrascu, T. Vogt, V. Aharonson, and N. Amir, “The Automatic Recognition of Emotions in Speech,” in *Emotion-Oriented Systems: The HUMAINE Handbook* (R. Cowie, P. Petta, and C. Pelachaud, eds.), Cognitive Technologies, pp. 71–99, Springer, 1st ed., 2010
  - 43) M. Wöllmer, F. Eyben, A. Graves, B. Schuller, and G. Rigoll, “Improving Keyword Spotting with a Tandem BLSTM-DBN Architecture,” in *Advances in Non-Linear Speech Processing: International Conference on Nonlinear Speech Processing, NOLISP 2009, Vic, Spain, June 25-27, 2009, Revised Selected Papers* (J. Sole-Casals and V. Zaiats, eds.), vol. 5933/2010 of *Lecture Notes on Computer Science (LNCS)*, pp. 68–75, Springer, 2010
  - 44) B. Schuller, M. Wöllmer, F. Eyben, and G. Rigoll, “Spectral or Voice Quality? Feature Type Relevance for the Discrimination of Emotion Pairs,” in *The Role of Prosody in Affective Speech* (S. Hancil, ed.), vol. 97 of *Linguistic Insights, Studies in Language and Communication*, pp. 285–307, Peter Lang Publishing Group, 2009
  - 45) B. Schuller, F. Eyben, and G. Rigoll, “Static and Dynamic Modelling for the Recognition of Non-Verbal Vocalisations in Conversational Speech,” in *Perception in Multimodal Dialogue Systems: 4th IEEE Tutorial and Research Workshop on Perception and Interactive Technologies for Speech-Based Systems, PIT 2008, Kloster Irsee, Germany, June 16-18, 2008, Proceedings* (E. André, L. Dybkjaer, H. Neumann, R. Pieraccini, and M. Weber, eds.), vol. 5078/2008 of *Lecture Notes on Computer Science (LNCS)*, pp. 99–110, Berlin/Heidelberg: Springer, 2008
  - 46) B. Schuller, M. Wöllmer, T. Moosmayr, G. Ruske, and G. Rigoll, “Switching Linear Dynamic Models for Noise Robust In-Car Speech Recognition,” in *Pattern Recognition: 30th DAGM Symposium Munich, Germany, June 10-13, 2008 Proceedings* (G. Rigoll, ed.), vol. 5096 of *Lecture Notes on Computer Science (LNCS)*, pp. 244–253, Berlin/Heidelberg: Springer, 2008. (acceptance rate: 39 %, IF\* 1.13 (2010))
  - 47) B. Vlasenko, B. Schuller, A. Wendemuth, and G. Rigoll, “On the Influence of Phonetic Content Variation for Acoustic Emotion Recognition,” in *Perception in Multimodal Dialogue Systems: 4th IEEE Tutorial and Research Workshop on Perception and Interactive Technologies for Speech-Based Systems, PIT 2008, Kloster Irsee, Germany, June 16-18, 2008, Proceedings*

- (E. André, L. Dybkaer, H. Neumann, R. Pieraccini, and M. Weber, eds.), vol. 5078/2008 of *Lecture Notes on Computer Science (LNCS)*, pp. 217–220, Berlin/Heidelberg: Springer, 2008
- 48) M. Grimm, K. Kroschel, H. Harris, C. Nass, B. Schuller, G. Rigoll, and T. Moosmayr, “On the Necessity and Feasibility of Detecting a Driver’s Emotional State While Driving,” in *Affective Computing and Intelligent Interaction: Second International Conference, ACII 2007, Lisbon, Portugal, September 12-14, 2007, Proceedings* (A. Paiva, R. W. Picard, and R. Prada, eds.), vol. 4738/2007 of *Lecture Notes on Computer Science (LNCS)*, pp. 126–138, Berlin/Heidelberg: Springer, 2007
- 49) B. Vlasenko, B. Schuller, A. Wendemuth, and G. Rigoll, “Frame vs. Turn-Level: Emotion Recognition from Speech Considering Static and Dynamic Processing,” in *Affective Computing and Intelligent Interaction: Second International Conference, ACII 2007, Lisbon, Portugal, September 12-14, 2007, Proceedings* (A. Paiva, R. W. Picard, and R. Prada, eds.), vol. 4738/2007 of *Lecture Notes on Computer Science (LNCS)*, pp. 139–147, Berlin/Heidelberg: Springer, 2007
- 50) M. Schröder, L. Devillers, K. Karpouzis, J.-C. Martin, C. Pelachaud, C. Peter, H. Pirker, B. Schuller, J. Tao, and I. Wilson, “What should a generic emotion markup language be able to represent?,” in *Affective Computing and Intelligent Interaction: Second International Conference, ACII 2007, Lisbon, Portugal, September 12-14, 2007, Proceedings* (A. Paiva, R. W. Picard, and R. Prada, eds.), vol. 4738/2007 of *Lecture Notes on Computer Science (LNCS)*, pp. 440–451, Berlin/Heidelberg: Springer, 2007
- 51) B. Schuller, M. Ablameier, R. Müller, S. Reifinger, T. Poitschke, and G. Rigoll, “Speech Communication and Multimodal Interfaces,” in *Advanced Man Machine Interaction* (K.-F. Kraiss, ed.), Signals and Communication Technology, ch. 4, pp. 141–190, Berlin/Heidelberg: Springer, 2006
- B) REFEREED JOURNAL PAPERS (98)
- 52) B. Schuller, “Can Affective Computing Save Lives? Meet Mobile Health,” *IEEE Computer Magazine*, vol. 50, p. 40, 2017. (IF: 1.438 (2013))
- 53) B. Schuller, “Speech Emotion Recognition: 20 Years in a Nutshell, Benchmarks, and Ongoing Trends,” *Communications of the ACM*, 2016. 8 pages, to appear (IF: 3.301, 5-year IF: 4.425 (2015))
- 54) E. Coutinho and B. Schuller, “Shared Acoustic Codes Underlie Emotional Communication in Music and Speech – Evidence from Deep Transfer Learning,” *PLoS ONE*, vol. 12, 2017. 23 pages, to appear (IF: 3.057 (2015))
- 55) J. Deng, S. Frühholz, Z. Zhang, and B. Schuller, “Recognizing Emotions From Whispered Speech Based on Acoustic Feature Transfer Learning,” *IEEE Access*, vol. 5, pp. 5235–5246, December 2017. (IF: 1.270, 5-year IF: 1.276 (2015))
- 56) J. Deng, X. Xu, Z. Zhang, S. Frühholz, and B. Schuller, “Universum Autoencoder-based Domain Adaptation for Speech Emotion Recognition,” *IEEE Signal Processing Letters*, vol. 24, 2017. 5 pages, to appear (acceptance rate: 17%, IF: 1.674, 5-year IF: 1.595 (2012))
- 57) J. Guo, K. Qian, G. Zhang, H. Xu, and B. Schuller, “Accelerating biomedical signal processing using GPU: A case study of snore sounds feature extraction,” *Interdisciplinary Sciences – Computational Life Sciences*, vol. 9, 2017. 11 pages, to appear (IF: 0.853 (2015))
- 58) C. Janott, B. Schuller, and C. Heiser, “Akustische Informationen von Schnarchgeräuschen,” *HNO, Leitthemenheft “Schlafmedizin”*, vol. 22, pp. 1–10, February 2017. (IF: 0.852 (2015))
- 59) E. Marchi, F. Vesperini, S. Squartini, and B. Schuller, “Deep Recurrent Neural Network-based Autoencoders for Acoustic Novelty Detection,” *Computational Intelligence and Neuroscience*, vol. 2017, 2017. 14 pages (IF: 0.430 (2015))
- 60) P. B. Marschik, F. B. Pokorný, R. Peharz, D. Zhang, J. O’Muircheartaigh, H. Roeyers, S. Bölte, A. J. Spittler, B. Urlsberger, B. Schuller, L. Poustka, S. Ozonoff, F. Pernkopf, T. Pock, K. Tammimies, C. Enzinger, M. Kriebler, I. Tomantschger, K. D. Bartl-Pokorný, J. Sigafoss, L. Roche, G. Esposito, M. Gugatschka, K. Nielsen-Saines, C. Einspieler, W. E. Kaufmann, and The BEE-PRI study group, “A Novel Way to Measure and Predict Development: A Heuristic Approach to Facilitate the Early Detection of Neurodevelopmental Disorders,” *Current Neurology and Neuroscience Reports*, vol. 17, no. 43, 2017. 15 pages (IF: 2.961, 5-year IF: 3.064 (2015))
- 61) K. Qian, Z. Zhang, A. Baird, and B. Schuller, “Active Learning for Bird Sounds Classification,” *Acta Acustica united with Acustica*, vol. 103, pp. 361–364, April 2017. (IF: 0.897 (2015))
- 62) O. Rudovic, J. Lee, L. Mascarell-Maricic, B. W. Schuller, and R. Picard, “Measuring Engagement in Autism Therapy with Social Robots: a Cross-cultural Study,” *Frontiers in Robotics and AI, section Humanoid Robotics, Special Issue on Affective and Social Signals for HRI*, 2017. to appear
- 63) M. Schmitt and B. Schuller, “openXBOW – Introducing the Passau Open-Source Crossmodal Bag-of-Words Toolkit,” *Journal of Machine Learning Research*, vol. 18, 2017. 5 pages, to appear (acceptance rate: 18%, IF: 2.450, 5-year IF: 5.587 (2015))
- 64) M. Soleymani, D. Garcia, B. Jou, B. Schuller, S.-F. Chang, and M. Pantic, “A Survey of Multimodal Sentiment Analysis,” *Image and Vision Computing, Special Issue on Multimodal Sentiment Analysis and Mining in the Wild*, vol. 35, 2017. 23 pages, to appear (IF: 1.766, 5-year IF: 2.584 (2015))
- 65) G. Trigeorgis, K. Bousmalis, S. Zafeiriou, and B. Schuller, “A deep matrix factorization method for learning attribute representations,” *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 39, pp. 417–429, March 2017. (IF: 6.077, 5-year IF: 8.693 (2015))
- 66) G. Trigeorgis, M. A. Nicolaou, S. Zafeiriou, and B. Schuller, “Deep Canonical Time Warping for simultaneous alignment and representation learning of sequences,” *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 39, 2017. 12 pages, to appear (IF: 6.077, 5-year IF: 8.693 (2015))
- 67) X. Xu, J. Deng, N. Cummins, Z. Zhang, C. Wu, L. Zhao, and B. Schuller, “A Two-Dimensional Framework of Multiple Kernel Subspace Learning for Recognising Emotion in Speech,” *IEEE/ACM Transactions on Audio, Speech and Language Processing*, vol. 25, pp. 1436–1449, July 2017. (acceptance rate: 25%, IF: 2.625, 5-year IF: 2.583 (2013))
- 68) Z. Zhang, N. Cummins, and B. Schuller, “Advanced Data Exploitation in Speech Analysis – An Overview,” *IEEE Signal Processing Magazine*, vol. 34, July 2017. 24 pages, to appear (IF: 6.671 (2015))
- 69) B. Schuller, “Can Virtual Human Interviewers “Hear” Real Humans’ Depression?,” *IEEE Computer Magazine*, vol. 49, p. 8, July 2016. (IF: 1.438 (2013))
- 70) J. Deng, X. Xu, Z. Zhang, S. Frühholz, and B. Schuller, “Exploitation of Phase-based Features for Whispered Speech Emotion Recognition,” *IEEE Access*, vol. 4, pp. 4299–4309, July 2016. (IF: 1.270, 5-year IF: 1.276 (2015))
- 71) F. Eyben, K. Scherer, B. Schuller, J. Sundberg, E. André, C. Busso, L. Devillers, J. Epps, P. Laukka, S. Narayanan, and K. Truong, “The Geneva Minimalistic Acoustic Parameter Set (GeMAPS) for Voice Research and Affective Computing,” *IEEE Transactions on Affective Computing*, vol. 7, pp. 190–202, April–June 2016. (acceptance rate: 22%, IF: 3.466, 5-year IF: 3.871 (2013))
- 72) F. Gross, J. Jordan, F. Weninger, F. Klanner, and B. Schuller, “Route and Stopping Intent Prediction at Intersections from Car Fleet Data,” *IEEE Transactions on Intelligent Vehicles*, vol. 1, pp. 177–186, June 2016
- 73) W. Han, E. Coutinho, H. Ruan, H. Li, B. Schuller, X. Yu, and X. Zhu, “Semi-Supervised Active Learning for Sound Classification in Hybrid Learning Environments,” *PLoS ONE*, vol. 11, no. 9, 2016. 23 pages (IF: 3.234 (2014))

- 74) J. Han, Z. Zhang, N. Cummins, F. Ringeval, and B. Schuller, "Strength Modelling for Real-World Automatic Continuous Affect Recognition from Audiovisual Signals," *Image and Vision Computing, Special Issue on Multimodal Sentiment Analysis and Mining in the Wild*, vol. 34, 2016. 12 pages, to appear (IF: 1.766, 5-Year IF: 2.584 (2015))
- 75) S. Hantke, F. Weninger, R. Kurlle, F. Ringeval, A. Batliner, A. El-Desoky Mousa, and B. Schuller, "I Hear You Eat and Speak: Automatic Recognition of Eating Condition and Food Types, Use-Cases, and Impact on ASR Performance," *PLoS ONE*, vol. 11, pp. 1–24, May 2016. (IF: 3.234 (2014))
- 76) F. Lingensfeld, J. Wagner, J. Deng, R. Brueckner, B. Schuller, and E. André, "Asynchronous and Event-based Fusion Systems for Affect Recognition on Naturalistic Data in Comparison to Conventional Approaches," *IEEE Transactions on Affective Computing*, vol. 7, 2016. 13 pages, to appear (IF: 3.466, 5-year IF: 3.871 (2013))
- 77) E. Marchi, S. Frühholz, and B. Schuller, "The Effect of Narrow-band Transmission on Recognition of Paralinguistic Information from Human Vocalizations," *IEEE Access*, vol. 4, pp. 6059–6072, October 2016. (IF: 1.270, 5-year IF: 1.276 (2015))
- 78) A. Mencattini, E. Martinelli, F. Ringeval, B. Schuller, and C. Di Natale, "Continuous Estimation of Emotions in Speech by Dynamic Cooperative Speaker Models," *IEEE Transactions on Affective Computing*, vol. 7, 2016. 14 pages, to appear (IF: 3.466, 5-year IF: 3.871 (2013))
- 79) K. Qian, C. Janott, V. Pandit, Z. Zhang, C. Heiser, W. Hohenhorst, M. Herzog, W. Hemmert, and B. Schuller, "Classification of the Excitation Location of Snore Sounds in the Upper Airway by Acoustic Multi-Feature Analysis," *IEEE Transactions on Biomedical Engineering*, 2016. 11 pages, to appear (IF: 2.468, 5-year IF: 2.719 (2015))
- 80) A. Rynkiewicz, B. Schuller, E. Marchi, S. Piana, A. Camurri, A. Lassalle, and S. Baron-Cohen, "An investigation of the 'female camouflage effect' in autism using a computerized ADOS-2, and a test of sex/gender differences," *Molecular Autism*, vol. 7, no. 10, 2016. 10 pages (IF: 5.413 (2014))
- 81) H. Sagha, N. Cummins, and B. Schuller, "Autoencoders for Sentiment Analysis: A Review," *WIREs Data Mining and Knowledge Discovery*, vol. 7, 2017. to appear, invited review article (IF: 1.759 (2015))
- 82) H. Sagha, F. Li, E. V. J. del R. Millán, R. Chavarriaga, and B. Schuller, "Stream fusion for multi-stream automatic speech recognition," *International Journal of Speech Technology*, vol. 19, no. 4, pp. 669–675, 2016
- 83) B. Schuller, S. Steidl, A. Batliner, E. Nöth, A. Vinciarelli, F. Burkhardt, R. van Son, F. Weninger, F. Eyben, T. Bocklet, G. Mohammadi, and B. Weiss, "A Survey on Perceived Speaker Traits: Personality, Likability, Pathology, and the First Challenge," *Computer Speech and Language, Special Issue on Next Generation Computational Paralinguistics*, vol. 29, pp. 100–131, January 2015. (acceptance rate: 23%, IF: 1.812, 5-year IF: 1.776 (2013))
- 84) B. Schuller, "Do Computers Have Personality?," *IEEE Computer Magazine*, vol. 48, pp. 6–7, March 2015. (IF: 1.438 (2013))
- 85) B. Schuller, A. E.-D. Mousa, and V. Vasileios, "Sentiment Analysis and Opinion Mining: On Optimal Parameters and Performances," *WIREs Data Mining and Knowledge Discovery*, vol. 5, pp. 255–263, September/October 2015. invited focus article (IF: 1.759 (2015))
- 86) E. Coutinho and B. Schuller, "Automatic estimation of biosignals from the human voice," *Science, Special Supplement on Advances in Computational Psychophysiology*, vol. 350, pp. 114:48–50, 2 October 2015. invited contribution
- 87) F. Eyben, G. L. Salomó, J. Sundberg, K. Scherer, and B. Schuller, "Emotion in the singing voice ?- a deeper look at acoustic features in the light of automatic classification," *EURASIP Journal on Audio, Speech, and Music Processing, Special Issue on Scalable Audio-Content Analysis*, vol. 2015, 2015. 9 pages (acceptance rate: 33%, IF: 0.709 (2011))
- 88) A. Mencattini, F. Ringeval, B. Schuller, E. Martinelli, and C. D. Natale, "Continuous monitoring of emotions by a multimodal cooperative sensor system," *Procedia Engineering, Special Issue EuroSensors 2015*, vol. 120, pp. 556–559, July 2015
- 89) F. Weninger, J. Bergmann, and B. Schuller, "Introducing CUR-RENT: the Munich Open-Source CUDA RecurREnt Neural Network Toolkit," *Journal of Machine Learning Research*, vol. 16, pp. 547–551, 2015. (acceptance rate: 18%, IF: 2.450, 5-year IF: 5.587 (2015))
- 90) Z. Zhang, E. Coutinho, J. Deng, and B. Schuller, "Cooperative Learning and its Application to Emotion Recognition from Speech," *IEEE/ACM Transactions on Audio, Speech and Language Processing*, vol. 23, no. 1, pp. 115–126, 2015. (acceptance rate: 25%, IF: 2.625, 5-year IF: 2.583 (2013))
- 91) B. Schuller, S. Steidl, A. Batliner, F. Schiel, J. Krajewski, F. Weninger, and F. Eyben, "Medium-Term Speaker States – A Review on Intoxication, Sleepiness and the First Challenge," *Computer Speech and Language, Special Issue on Broadening the View on Speaker Analysis*, vol. 28, pp. 346–374, March 2014. (acceptance rate: 23%, IF: 1.812, 5-year IF: 1.776 (2013))
- 92) F. Ringeval, F. Eyben, E. Kroupi, A. Yuce, J.-P. Thiran, T. Ebrahimi, D. Lalanne, and B. Schuller, "Prediction of Asynchronous Dimensional Emotion Ratings from Audiovisual and Physiological Data," *Pattern Recognition Letters*, vol. 66, pp. 22–30, November 2015. (acceptance rate: 25%, IF: 1.062, 5-year IF: 1.466 (2013))
- 93) A. Rosner, B. Schuller, and B. Kostek, "Classification of music genres based on music separation into harmonic and drum components," *Archives of Acoustics*, vol. 39, no. 4, pp. 629–638, 2014. (IF: 0.829, 5-year IF: 0.500 (2012))
- 94) Z. Zhang, E. Coutinho, J. Deng, and B. Schuller, "Distributing Recognition in Computational Paralinguistics," *IEEE Transactions on Affective Computing*, vol. 5, pp. 406–417, October–December 2014. (acceptance rate: 22%, IF: 3.466, 5-year IF: 3.871 (2013))
- 95) J. Deng, Z. Zhang, F. Eyben, and B. Schuller, "Autoencoder-based Unsupervised Domain Adaptation for Speech Emotion Recognition," *IEEE Signal Processing Letters*, vol. 21, no. 9, pp. 1068–1072, 2014. (acceptance rate: 17%, IF: 1.674, 5-year IF: 1.595 (2012))
- 96) J. T. Geiger, F. Weninger, J. F. Gemmeke, M. Wöllmer, B. Schuller, and G. Rigoll, "Memory-Enhanced Neural Networks and NMF for Robust ASR," *IEEE/ACM Transactions on Audio, Speech and Language Processing*, vol. 22, pp. 1037–1046, June 2014. (acceptance rate: 25%, IF: 2.625, 5-year IF: 2.583 (2013))
- 97) F. Weninger, J. Geiger, M. Wöllmer, B. Schuller, and G. Rigoll, "Feature Enhancement by Deep LSTM Networks for ASR in Reverberant Multisource Environments," *Computer Speech and Language*, vol. 28, pp. 888–902, July 2014. (acceptance rate: 23%, IF: 1.812, 5-year IF: 1.776 (2013))
- 98) M. Wöllmer and B. Schuller, "Probabilistic Speech Feature Extraction with Context-Sensitive Bottleneck Neural Networks," *Neurocomputing, Special Issue on Machines learning for Non-Linear Processing ? Selected papers from the 2011 International Conference on Non-Linear Speech Processing (NoLISP 2011)*, vol. 132, pp. 113–120, May 2014. (acceptance rate: 31%, IF: 2.005 (2013))
- 99) Z. Zhang, J. Pinto, C. Plahl, B. Schuller, and D. Willett, "Channel Mapping using Bidirectional Long Short-Term Memory for Dereverberation in Hands-Free Voice Controlled Devices," *IEEE Transactions on Consumer Electronics*, vol. 60, pp. 525–533, August 2014. (acceptance rate: 15%, IF: 1.157 (2013))
- 100) B. Schuller, I. Dunwell, F. Weninger, and L. Paletta, "Serious Gaming for Behavior Change – The State of Play," *IEEE Pervasive Computing Magazine, Special Issue on Understanding and Changing Behavior*, vol. 12, pp. 48–55, July–September 2013.

- (IF: 2.103 (2013))
- 101) B. Schuller, S. Steidl, A. Batliner, F. Burkhardt, L. Devillers, C. Müller, and S. Narayanan, "Paralinguistics in Speech and Language – State-of-the-Art and the Challenge," *Computer Speech and Language, Special Issue on Paralinguistics in Naturalistic Speech and Language*, vol. 27, pp. 4–39, January 2013. (CSL most downloaded article 2012–2014 (3 208 downloads) (acceptance rate: 36 %, IF: 1.812 (2013), 5-year IF: 1.776, > 100 citations))
  - 102) E. Cambria, B. Schuller, Y. Xia, and C. Havasi, "New Avenues in Opinion Mining and Sentiment Analysis," *IEEE Intelligent Systems Magazine*, vol. 28, pp. 15–21, March/April 2013. (IF: 2.570, 5-year IF: 2.632 (2010), > 300 citations)
  - 103) F. Eyben, F. Wenginger, N. Lehment, B. Schuller, and G. Rigoll, "Affective Video Retrieval: Violence Detection in Hollywood Movies by Large-Scale Segmental Feature Extraction," *PLOS ONE*, vol. 8, pp. 1–9, December 2013. (acceptance rate: 50 %, IF: 3.534 (2013))
  - 104) H. Gunes and B. Schuller, "Categorical and Dimensional Affect Analysis in Continuous Input: Current Trends and Future Directions," *Image and Vision Computing, Special Issue on Affect Analysis in Continuous Input*, vol. 31, pp. 120–136, February 2013. (acceptance rate: 20 %, IF: 1.581 (2013), > 100 citations)
  - 105) M. Hofmann, J. Geiger, S. Bachmann, B. Schuller, and G. Rigoll, "The TUM Gait from Audio, Image and Depth (GAID) Database: Multimodal Recognition of Subjects and Traits," *Journal of Visual Communication and Image Representation, Special Issue on Visual Understanding and Applications with RGB-D Cameras*, vol. 25, no. 1, pp. 195–206, 2013. (IF: 1.361 (2013))
  - 106) F. Wenginger, F. Eyben, B. W. Schuller, M. Mortillaro, and K. R. Scherer, "On the Acoustics of Emotion in Audio: What Speech, Music and Sound have in Common," *Frontiers in Psychology, section Emotion Science, Special Issue on Expression of emotion in music and vocal communication*, vol. 4, pp. 1–12, May 2013. (IF: 2.843 (2013))
  - 107) F. Wenginger, P. Staudt, and B. Schuller, "Words that Fascinate the Listener: Predicting Affective Ratings of On-Line Lectures," *International Journal of Distance Education Technologies, Special Issue on Emotional Intelligence for Online Learning*, vol. 11, pp. 110–123, April–June 2013
  - 108) M. Wöllmer, B. Schuller, and G. Rigoll, "Keyword Spotting Exploiting Long Short-Term Memory," *Speech Communication*, vol. 55, no. 2, pp. 252–265, 2013. (acceptance rate: 38 %, IF: 1.267, 5-year IF: 1.526 (2011))
  - 109) M. Wöllmer, F. Wenginger, T. Knaup, B. Schuller, C. Sun, K. Sagae, and L.-P. Morency, "YouTube Movie Reviews: Sentiment Analysis in an Audiovisual Context," *IEEE Intelligent Systems Magazine, Special Issue on Statistical Approaches to Concept-Level Sentiment Analysis*, vol. 28, pp. 46–53, May/June 2013. (acceptance rate: 17 %, IF: 2.570, 5-year IF: 2.632 (2010))
  - 110) M. Wöllmer, M. Kaiser, F. Eyben, B. Schuller, and G. Rigoll, "LSTM-Modeling of Continuous Emotions in an Audiovisual Affect Recognition Framework," *Image and Vision Computing, Special Issue on Affect Analysis in Continuous Input*, vol. 31, pp. 153–163, February 2013. (acceptance rate: 20 %, IF: 1.581 (2013))
  - 111) B. Schuller, "The Computational Paralinguistics Challenge," *IEEE Signal Processing Magazine*, vol. 29, pp. 97–101, July 2012. (IF: 6.000, 5-year IF: 7.043 (2011))
  - 112) B. Schuller and B. Gollan, "Music Theoretic and Perception-based Features for Audio Key Determination," *Journal of New Music Research*, vol. 41, no. 2, pp. 175–193, 2012. (IF: 0.755, 5-year IF: 0.768 (2010))
  - 113) B. Schuller, "Recognizing Affect from Linguistic Information in 3D Continuous Space," *IEEE Transactions on Affective Computing*, vol. 2, pp. 192–205, October-December 2012. (acceptance rate: 22 %, IF: 3.466, 5-year IF: 3.871 (2013))
  - 114) B. Schuller, Z. Zhang, F. Wenginger, and F. Burkhardt, "Synthesized Speech for Model Training in Cross-Corpus Recognition of Human Emotion," *International Journal of Speech Technology, Special Issue on New and Improved Advances in Speaker Recognition Technologies*, vol. 15, no. 3, pp. 313–323, 2012
  - 115) R. Rotili, E. Principi, S. Squartini, and B. Schuller, "A Real-Time Speech Enhancement Framework in Noisy and Reverberated Acoustic Scenarios," *Cognitive Computation*, vol. 5, no. 4, pp. 504–516, 2012. (IF: 1.000 (2011))
  - 116) F. Eyben, A. Batliner, and B. Schuller, "Towards a standard set of acoustic features for the processing of emotion in speech," *Proceedings of Meetings on Acoustics*, vol. 16, 2012. 11 pages
  - 117) F. Wenginger, J. Krajewski, A. Batliner, and B. Schuller, "The Voice of Leadership: Models and Performances of Automatic Analysis in On-Line Speeches," *IEEE Transactions on Affective Computing*, vol. 3, no. 4, pp. 496–508, 2012. (acceptance rate: 22 %, IF: 3.466, 5-year IF: 3.871 (2013))
  - 118) M. Wöllmer, F. Wenginger, J. Geiger, B. Schuller, and G. Rigoll, "Noise Robust ASR in Reverberated Multisource Environments Applying Convolutional NMF and Long Short-Term Memory," *Computer Speech and Language, Special Issue on Speech Separation and Recognition in Multisource Environments*, vol. 27, pp. 780–797, May 2013. (acceptance rate: 36 %, IF: 1.812, 5-year IF: 1.776 (2013))
  - 119) F. Wenginger and B. Schuller, "Optimization and Parallelization of Monaural Source Separation Algorithms in the openBliS-SART Toolkit," *Journal of Signal Processing Systems*, vol. 69, no. 3, pp. 267–277, 2012. (IF: 0.672, 5-year IF: 0.684 (2011))
  - 120) E. Principi, R. Rotili, M. Wöllmer, F. Eyben, S. Squartini, and B. Schuller, "Real-Time Activity Detection in a Multi-Talker Reverberated Environment," *Cognitive Computation, Special Issue on Cognitive and Emotional Information Processing for Human-Machine Interaction*, vol. 4, no. 4, pp. 386–397, 2012. (IF: 1.000 (2011))
  - 121) J. Krajewski, S. Schnieder, D. Sommer, A. Batliner, and B. Schuller, "Applying Multiple Classifiers and Non-Linear Dynamics Features for Detecting Sleepiness from Speech," *Neurocomputing, Special Issue From neuron to behavior: evidence from behavioral measurements*, vol. 84, pp. 65–75, May 2012. (acceptance rate: 31 %, IF: 2.005 (2013))
  - 122) A. Metallinou, M. Wöllmer, A. Katsamanis, F. Eyben, B. Schuller, and S. Narayanan, "Context-Sensitive Learning for Enhanced Audiovisual Emotion Classification," *IEEE Transactions on Affective Computing*, vol. 3, pp. 184–198, April – June 2012. (acceptance rate: 22 %, IF: 3.466, 5-year IF: 3.871 (2013))
  - 123) F. Eyben, M. Wöllmer, and B. Schuller, "A Multi-Task Approach to Continuous Five-Dimensional Affect Sensing in Natural Speech," *ACM Transactions on Interactive Intelligent Systems, Special Issue on Affective Interaction in Natural Environments*, vol. 2, March 2012. 29 pages
  - 124) P. Grosche, B. Schuller, M. Müller, and G. Rigoll, "Automatic Transcription of Recorded Music," *Acta Acustica united with Acustica*, vol. 98, pp. 199–215(17), March/April 2012. (IF: 0.714 (2012))
  - 125) M. Schröder, E. Bevacqua, R. Cowie, F. Eyben, H. Gunes, D. Heylen, M. ter Maat, G. McKeown, S. Pammi, M. Pantic, C. Pelachaud, B. Schuller, E. de Sevin, M. Valstar, and M. Wöllmer, "Building Autonomous Sensitive Artificial Listeners," *IEEE Transactions on Affective Computing*, vol. 3, pp. 165–183, April – June 2012. (acceptance rate: 22 %, IF: 3.466, 5-year IF: 3.871 (2013), > 100 citations)
  - 126) B. Schuller, "Affective Speaker State Analysis in the Presence of Reverberation," *International Journal of Speech Technology*, vol. 14, no. 2, pp. 77–87, 2011
  - 127) B. Schuller, A. Batliner, S. Steidl, and D. Seppi, "Recognising Realistic Emotions and Affect in Speech: State of the Art and Lessons Learnt from the First Challenge," *Speech Communication, Special Issue on Sensing Emotion and Affect -? Facing Realism in Speech Processing*, vol. 53, pp. 1062–1087, November/December 2011. (acceptance rate: 38 %, IF: 1.267,

- 5-year IF: 1.526 (2011), > 300 citations)
- 128) M. Wöllmer, E. Marchi, S. Squartini, and B. Schuller, "Multi-Stream LSTM-HMM Decoding and Histogram Equalization for Noise Robust Keyword Spotting," *Cognitive Neurodynamics*, vol. 5, no. 3, pp. 253–264, 2011. (acceptance rate: 50 %, IF: 1.77 (2013))
  - 129) M. Wöllmer, F. Weninger, F. Eyben, and B. Schuller, "Computational Assessment of Interest in Speech – Facing the Real-Life Challenge," *Künstliche Intelligenz (German Journal on Artificial Intelligence), Special Issue on Emotion and Computing*, vol. 25, no. 3, pp. 227–236, 2011
  - 130) M. Wöllmer, C. Blaschke, T. Schindl, B. Schuller, B. Färber, S. Mayer, and B. Trefflich, "On-line Driver Distraction Detection using Long Short-Term Memory," *IEEE Transactions on Intelligent Transportation Systems*, vol. 12, no. 2, pp. 574–582, 2011. (IF: 3.452, 5-year IF: 4.090 (2011))
  - 131) M. Wöllmer, B. Schuller, A. Batliner, S. Steidl, and D. Seppi, "Tandem Decoding of Children's Speech for Keyword Detection in a Child-Robot Interaction Scenario," *ACM Transactions on Speech and Language Processing, Special Issue on Speech and Language Processing of Children's Speech for Child-machine Interaction Applications*, vol. 7, August 2011. 22 pages, Article 12
  - 132) F. Weninger, B. Schuller, A. Batliner, S. Steidl, and D. Seppi, "Recognition of Non-Prototypical Emotions in Reverberated and Noisy Speech by Non-Negative Matrix Factorization," *EURASIP Journal on Advances in Signal Processing, Special Issue on Emotion and Mental State Recognition from Speech*, vol. 2011, no. Article ID 838790, 2011. 16 pages (acceptance rate: 38 %, IF: 1.012, 5-Year IF: 1.136 (2010))
  - 133) A. Batliner, S. Steidl, B. Schuller, D. Seppi, T. Vogt, J. Wagner, L. Devillers, L. Vidrascu, V. Aharonson, L. Kessous, and N. Amir, "Whodunnit – Searching for the Most Important Feature Types Signalling Emotion-Related User States in Speech," *Computer Speech and Language, Special Issue on Affective Speech in real-life interactions*, vol. 25, no. 1, pp. 4–28, 2011. (acceptance rate: 31 %, IF: 1.812, 5-year IF: 1.776 (2013), > 100 citations)
  - 134) B. Schuller, B. Vlasenko, F. Eyben, M. Wöllmer, A. Stuhlsatz, A. Wendemuth, and G. Rigoll, "Cross-Corpus Acoustic Emotion Recognition: Variances and Strategies," *IEEE Transactions on Affective Computing*, vol. 1, pp. 119–131, July-December 2010. (acceptance rate: 32 %, IF: 3.466, 5-year IF: 3.871 (2013), > 100 citations)
  - 135) B. Schuller, C. Hage, D. Schuller, and G. Rigoll, "'Mister D.J., Cheer Me Up!': Musical and Textual Features for Automatic Mood Classification," *Journal of New Music Research*, vol. 39, no. 1, pp. 13–34, 2010. (IF: 0.755, 5-year IF: 0.768 (2010))
  - 136) B. Schuller, "On the acoustics of emotion in speech: Desperately seeking a standard.," *Journal of the Acoustical Society of America*, vol. 127, pp. 1995–1995, March 2010. (IF: 1.644, 5-year IF: 1.899 (2010))
  - 137) B. Schuller, J. Dorfner, and G. Rigoll, "Determination of Non-Prototypical Valence and Arousal in Popular Music: Features and Performances," *EURASIP Journal on Audio, Speech, and Music Processing, Special Issue on Scalable Audio-Content Analysis*, vol. 2010, no. Article ID 735854, 2010. 19 pages, (acceptance rate: 33 %, IF: 0.709 (2011))
  - 138) S. Steidl, A. Batliner, D. Seppi, and B. Schuller, "On the Impact of Children's Emotional Speech on Acoustic and Language Models," *EURASIP Journal on Audio, Speech, and Music Processing, Special Issue on Atypical Speech*, vol. 2010, no. Article ID 783954, 2010. 14 pages (acceptance rate: 33 %, IF: 0.709 (2011))
  - 139) A. Batliner, D. Seppi, S. Steidl, and B. Schuller, "Segmenting into adequate units for automatic recognition of emotion-related episodes: a speech-based approach," *Advances in Human Computer Interaction, Special Issue on Emotion-Aware Natural Interaction*, vol. 2010, no. Article ID 782802, 2010. 15 pages
  - 140) F. Eyben, M. Wöllmer, A. Graves, B. Schuller, E. Douglas-Cowie, and R. Cowie, "On-line Emotion Recognition in a 3-D Activation-Valence-Time Continuum using Acoustic and Linguistic Cues," *Journal on Multimodal User Interfaces, Special Issue on Real-Time Affect Analysis and Interpretation: Closing the Affective Loop in Virtual Agents and Robots*, vol. 3, pp. 7–12, March 2010. (IF: 0.833 (2012))
  - 141) S. Can, B. Schuller, M. Kranzfelder, and H. Feussner, "Emotional factors in speech based human-machine interaction in the operating room," *International Journal of Computer Assisted Radiology and Surgery*, vol. 5, no. Supplement 1, pp. 188–189, 2010. (acceptance rate: 75 %, IF: 1.659 (2013))
  - 142) M. Wöllmer, F. Eyben, A. Graves, B. Schuller, and G. Rigoll, "Bidirectional LSTM Networks for Context-Sensitive Keyword Detection in a Cognitive Virtual Agent Framework," *Cognitive Computation, Special Issue on Non-Linear and Non-Conventional Speech Processing*, vol. 2, no. 3, pp. 180–190, 2010. (IF: 1.1 (2013))
  - 143) F. Eyben, M. Wöllmer, T. Poitschke, B. Schuller, C. Blaschke, B. Färber, and N. Nguyen-Thien, "Emotion on the Road – Necessity, Acceptance, and Feasibility of Affective Computing in the Car," *Advances in Human Computer Interaction, Special Issue on Emotion-Aware Natural Interaction*, vol. 2010, no. Article ID 263593, 2010. 17 pages
  - 144) M. Wöllmer, B. Schuller, F. Eyben, and G. Rigoll, "Combining Long Short-Term Memory and Dynamic Bayesian Networks for Incremental Emotion-Sensitive Artificial Listening," *IEEE Journal of Selected Topics in Signal Processing, Special Issue on Speech Processing for Natural Interaction with Intelligent Environments*, vol. 4, pp. 867–881, October 2010. (IF: 2.571 (2010), > 100 citations)
  - 145) B. Schuller, R. Müller, F. Eyben, J. Gast, B. Hörnler, M. Wöllmer, G. Rigoll, A. Höthker, and H. Konosu, "Being Bored? Recognising Natural Interest by Extensive Audiovisual Integration for Real-Life Application," *Image and Vision Computing, Special Issue on Visual and Multimodal Analysis of Human Spontaneous Behavior*, vol. 27, pp. 1760–1774, November 2009. (IF: 1.474, 5-Year IF: 1.767 (2009), > 100 citations)
  - 146) B. Schuller, M. Wöllmer, T. Moosmayr, and G. Rigoll, "Recognition of Noisy Speech: A Comparative Survey of Robust Model Architecture and Feature Enhancement," *EURASIP Journal on Audio, Speech, and Music Processing*, vol. 2009, no. Article ID 942617, 2009. 17 pages (acceptance rate: 33 %, IF: 0.709 (2011))
  - 147) M. Wöllmer, M. Al-Hames, F. Eyben, B. Schuller, and G. Rigoll, "A Multidimensional Dynamic Time Warping Algorithm for Efficient Multimodal Fusion of Asynchronous Data Streams," *Neurocomputing*, vol. 73, pp. 366–380, December 2009. (IF: 1.440, 5-year IF: 1.459 (2009))
  - 148) B. Schuller, F. Eyben, and G. Rigoll, "Tango or Waltz? – Putting Ballroom Dance Style into Tempo Detection," *EURASIP Journal on Audio, Speech, and Music Processing, Special Issue on Intelligent Audio, Speech, and Music Processing Applications*, vol. 2008, no. Article ID 846135, 2008. 12 pages (acceptance rate: 33 %, IF: 0.709 (2011))
  - 149) R. Nieschulz, B. Schuller, M. Geiger, and R. Neuss, "Aspects of Efficient Usability Engineering," *Information Technology, Special Issue on Usability Engineering*, vol. 44, no. 1, pp. 23–30, 2002

#### C) REFEREED CONFERENCE PROCEEDINGS

##### *Contributions to Conference Proceedings (376):*

- 150) B. Schuller, "Big Data, Deep Learning – At the Edge of X-Ray Speaker Analysis," in *Proceedings 19th International Conference on Speech and Computer, SPECOM 2017, Hatfield, UK, 12.-16.09.2017*, Lecture Notes in Computer Science (LNCS),





- (acceptance rate: 50%)
- 173) S. Hantke, Z. Zhang, and B. Schuller, "Towards Intelligent Crowdsourcing for Audio Data Annotation: Integrating Active Learning in the Real World," in *Proceedings INTERSPEECH 2017, 18th Annual Conference of the International Speech Communication Association*, (Stockholm, Sweden), ISCA, ISCA, August 2017. 5 pages, to appear (acceptance rate: 50%)
- 174) G. Keren, T. Kirschstein, E. Marchi, F. Ringeval, and B. Schuller, "End-to-end learning for dimensional emotion recognition from physiological signals," in *Proceedings 18th IEEE International Conference on Multimedia and Expo, ICME 2017*, (Hong Kong, P.R. China), IEEE, IEEE, July 2017. 6 pages, to appear (acceptance rate: 30%, IF\* 0.88 (2010))
- 175) A. E.-D. Mousa and B. Schuller, "Contextual Bidirectional Long Short-Term Memory Recurrent Neural Network Language Models: A Generative Approach to Sentiment Analysis," in *Proceedings EACL 2017, 15th Conference of the European Chapter of the Association for Computational Linguistics*, (Valencia, Spain), pp. 1023–1032, ACL, ACL, April 2017. (acceptance rate: 27% for long papers)
- 176) E. Parada-Cabaleiro, A. E. Baird, N. Cummins, and B. Schuller, "Stimulation of Psychological Listener Experiences by Semi-Automatically Composed Electroacoustic Environments," in *Proceedings 18th IEEE International Conference on Multimedia and Expo, ICME 2017*, (Hong Kong, P.R. China), IEEE, IEEE, July 2017. 7 pages, to appear (acceptance rate: 30%, IF\* 0.88 (2010))
- 177) E. Parada-Cabaleiro, A. Baird, A. Batliner, N. Cummins, S. Hantke, and B. Schuller, "The Perception of Emotions in Noisified Non-Sense Speech," in *Proceedings INTERSPEECH 2017, 18th Annual Conference of the International Speech Communication Association*, (Stockholm, Sweden), ISCA, ISCA, August 2017. 5 pages, to appear (acceptance rate: 50%)
- 178) E. Parada-Cabaleiro, A. Batliner, A. E. Baird, and B. Schuller, "The SEILS dataset: Symbolically Encoded Scores in Modern-Ancient Notation for Computational Musicology," in *Proceedings 18th International Society for Music Information Retrieval Conference, ISMIR 2017*, (Suzhou, P.R. China), ISMIR, ISMIR, October 2017. 5 pages, to appear
- 179) F. Pokorny, B. Schuller, P. Marschik, R. Brückner, P. Nyström, N. Cummins, S. Bölte, C. Einspieler, and T. Falck-Ytter, "Earlier Identification of Children with Autism Spectrum Disorder: An Automatic Vocalisation-based Approach," in *Proceedings INTERSPEECH 2017, 18th Annual Conference of the International Speech Communication Association*, (Stockholm, Sweden), ISCA, ISCA, August 2017. 5 pages, to appear (acceptance rate: 50%)
- 180) K. Qian, C. Janott, J. Deng, C. Heiser, W. Hohenhorst, N. Cummins, and B. Schuller, "Snore Sound Recognition: On Wavelets and Classifiers from Deep Nets to Kernels," in *Proceedings of the 39th Annual International Conference of the IEEE Engineering in Medicine & Biology Society, EMBC 2017*, (Jeju Island, South Korea), IEEE, IEEE, July 2017. 4 pages, to appear
- 181) F. Ringeval, B. Schuller, M. Valstar, S. Mozgai, N. Cummins, M. Schmitt, and M. Pantic, "AVEC 2017 – Real-life Depression, and Affect Recognition Workshop and Challenge," in *Proceedings of the 7th International Workshop on Audio/Visual Emotion Challenge, AVEC'17, co-located with the 25th ACM International Conference on Multimedia, MM 2017* (F. Ringeval, M. Valstar, J. Gratch, B. Schuller, R. Cowie, and M. Pantic, eds.), (Mountain View, CA), ACM, ACM, October 2017. 6 pages, to appear
- 182) F. Ringeval, M. Valstar, J. Gratch, B. Schuller, R. Cowie, and M. Pantic, "Summary for AVEC 2017 – Real-life Depression, and Affect Recognition Workshop and Challenge," in *Proceedings of the 25th ACM International Conference on Multimedia, MM 2017*, (Mountain View, CA), ACM, ACM, October 2017. 2 pages, to appear
- 183) O. Rudovic, J. Lee, L. Mascarell-Maricic, B. W. Schuller, and R. Picard, "Engagement in Autism Therapy with Social Robots: a Cross-cultural Study," in *Proceedings International Conference on Robotics and Automation, ICRA*, (Singapore, Singapore), IEEE, IEEE, May–June 2017. 1 page, to appear
- 184) R. Sabathé, E. Coutinho, and B. Schuller, "Deep Recurrent Music Writer: Memory-enhanced Variational Autoencoder-based Musical Score Composition and an Objective Measure," in *Proceedings 30th International Joint Conference on Neural Networks (IJCNN)*, (Anchorage, AK), pp. 3467–3474, IEEE, IEEE, May 2017. (acceptance rate: 67%)
- 185) M. Schmitt and B. Schuller, "Recognising Guitar Effects – Which Acoustic Features Really Matter?," in *Proceedings GI Workshop "Musik trifft Informatik", held in conjunction with INFORMATIK 2017*, (Chemnitz, Germany), GI, GI, September 2017. 15 pages, to appear
- 186) B. Vlasenko, H. Sagha, N. Cummins, and B. Schuller, "Implementing gender-dependent vowel-level analysis for boosting speech-based depression recognition," in *Proceedings INTERSPEECH 2017, 18th Annual Conference of the International Speech Communication Association*, (Stockholm, Sweden), ISCA, ISCA, August 2017. 5 pages, to appear (acceptance rate: 50%)
- 187) R. Walecki, O. Rudovic, V. Pavlovic, B. Schuller, and M. Pantic, "Deep Structured Ordinal Regression for Facial Action Unit Intensity Estimation," in *Proceedings IEEE Conference on Computer Vision and Pattern Recognition, CVPR 2017*, (Honolulu, HI), IEEE, IEEE, July 2017. (acceptance rate: 20%, IF\* 5.97 (2010))
- 188) Y. Zhang, W. McGehee, M. Schmitt, F. Eyben, and B. Schuller, "A Paralinguistic Approach To Holistic Speaker Diarisation – Using Age, Gender, Voice Likability and Personality Traits," in *Proceedings of the 25th ACM International Conference on Multimedia, MM 2017*, (Mountain View, CA), ACM, ACM, October 2012. 6 pages, to appear (acceptance rate: 28%)
- 189) Y. Zhang, F. Weninger, and B. Schuller, "Cross-Domain Classification of Drowsiness in Speech: The Case of Alcohol Intoxication and Sleep Deprivation," in *Proceedings INTERSPEECH 2017, 18th Annual Conference of the International Speech Communication Association*, (Stockholm, Sweden), ISCA, ISCA, August 2017. 5 pages, to appear (acceptance rate: 50%)
- 190) Y. Zhang, Y. Liu, F. Weninger, and B. Schuller, "Multi-Task Deep Neural Network with Shared Hidden Layers: Breaking Down the Wall between Emotion Representations," in *Proceedings 42nd IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2017*, (New Orleans, LA), pp. 4990–4994, IEEE, IEEE, March 2017. (acceptance rate: 49%, IF\* 1.16 (2010))
- 191) Z. Zhang, F. Weninger, M. Wöllmer, J. Han, and B. Schuller, "Towards Intoxicated Speech Recognition," in *Proceedings 30th International Joint Conference on Neural Networks (IJCNN)*, (Anchorage, AK), pp. 1555–1559, IEEE, IEEE, May 2017. (acceptance rate: 67%)
- 192) B. Schuller, "7 Essential Principles to Make Multimodal Sentiment Analysis Work in the Wild," in *Proceedings of the 4th Workshop on Sentiment Analysis where AI meets Psychology (SAIP 2016)*, satellite of the 25th International Joint Conference on Artificial Intelligence, IJCAI 2016 (S. Bandyopadhyay, D. Das, E. Cambria, and B. G. Patra, eds.), vol. 1619, (New York City, NY), p. 1, IJCAI/AAAI, CEUR, July 2016. invited contribution
- 193) B. Schuller, J.-G. Ganascia, and L. Devillers, "Multimodal Sentiment Analysis in the Wild: Ethical considerations on Data Collection, Annotation, and Exploitation," in *Proceedings of the 1st International Workshop on ETHics In Corpus Collection, Annotation and Application (ETHI-CA<sup>2</sup> 2016)*, satellite of the 10th Language Resources and Evaluation Conference (LREC 2016) (L. Devillers, B. Schuller, E. Mower Provost, P. Robinson, J. Mariani, and A. Delaborde, eds.), (Portoroz, Slovenia), pp. 29–34, ELRA, ELRA, May 2016



- 194) B. Schuller and M. McTear, "Sociocognitive Language Processing ?- Emphasising the Soft Factors," in *Proceedings of the Seventh International Workshop on Spoken Dialogue Systems (IWSDS)*, (Saariselkä, Finland), January 2016. 6 pages
- 195) B. Schuller, S. Steidl, A. Batliner, J. Hirschberg, J. K. Burgoon, A. Baird, A. Elkins, Y. Zhang, E. Coutinho, and K. Evanini, "The INTERSPEECH 2016 Computational Paralinguistics Challenge: Deception, Sincerity & Native Language," in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 2001–2005, ISCA, ISCA, September 2016. (acceptance rate: 50 %)
- 196) I. Abdić, L. Fridman, D. McDuff, E. Marchi, B. Reimer, and B. Schuller, "Driver Frustration Detection From Audio and Video," in *Proceedings of the 25th International Joint Conference on Artificial Intelligence, IJCAI 2016*, (New York City, NY), pp. 1354–1360, IJCAI/AAAI, July 2016. (acceptance rate: 25 %)
- 197) I. Abdić, L. Fridman, D. E. Brown, W. Angell, B. Reimer, E. Marchi, and B. Schuller, "Detecting Road Surface Wetness from Audio: A Deep Learning Approach," in *Proceedings 23rd International Conference on Pattern Recognition (ICPR 2016)*, (Cancun, Mexico), IAPR, IAPR, December 2016. 6 pages
- 198) I. Abdić, L. Fridman, D. McDuff, E. Marchi, B. Reimer, and B. Schuller, "Driver Frustration Detection From Audio and Video (Extended Abstract)," in *KI 2016: Advances in Artificial Intelligence 39th German Conference on AI* (G. Friedrich, M. Helmert, and F. Wotawa, eds.), vol. LNCS Volume 9904/2016, (Klagenfurt, Austria), pp. 237–243, GfI / ÖGAI, Springer, September 2016. (acceptance rate: 45 %)
- 199) S. Amiriparian, J. Pohjalainen, E. Marchi, S. Pugachevskiy, and B. Schuller, "Is deception emotional? An emotion-driven predictive approach," in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 2011–2015, ISCA, ISCA, September 2016. nominated for best student paper award (12 nominations for 3 awards, acceptance rate overall conference: 50 %)
- 200) E. Cambria, S. Poria, R. Bajpai, and B. Schuller, "SenticNet4: A Semantic Resource for Sentiment Analysis Based on Conceptual Primitives," in *Proceedings of the 26th International Conference on Computational Linguistics, COLING*, (Osaka, Japan), pp. 2666–2677, ICCL, ANLP, December 2016
- 201) E. Coutinho, F. Hönig, Y. Zhang, S. Hantke, A. Batliner, E. Nöth, and B. Schuller, "Assessing the Prosody of Non-Native Speakers of English: Measures and Feature Sets," in *Proceedings 10th Language Resources and Evaluation Conference (LREC 2016)*, (Portoroz, Slovenia), pp. 1328–1332, ELRA, ELRA, May 2016
- 202) J. Deng, N. Cummins, J. Han, X. Xu, Z. Ren, V. Pandit, Z. Zhang, and B. Schuller, "The University of Passau Open Emotion Recognition System for the Multimodal Emotion Challenge," in *Proceedings of the 7th Chinese Conference on Pattern Recognition, CCPR*, (Chengdu, P.R. China), pp. 652–666, Springer, November 2016
- 203) B. Dong, Z. Zhang, and B. Schuller, "Empirical Mode Decomposition: A Data-Enrichment Perspective on Speech Emotion Recognition," in *Proceedings of the 6th International Workshop on Emotion and Sentiment Analysis (ESA 2016), satellite of the 10th Language Resources and Evaluation Conference (LREC 2016)* (J. Sánchez-Rada and B. Schuller, eds.), (Portoroz, Slovenia), pp. 71–75, ELRA, ELRA, May 2016. (acceptance rate: 74 %)
- 204) J. Guo, K. Qian, H. Xu, C. Janott, B. W. Schuller, and S. Matsuoka, "GPU-Based Fast Signal Processing for Large Amounts of Snore Sound Data," in *Proceedings IEEE 5th Global Conference on Consumer Electronics, GCCE 2016*, (Kyoto, Japan), pp. 523–524, IEEE, IEEE, October 2016. (acceptance rate: 66 %)
- 205) S. Hantke, A. Batliner, and B. Schuller, "Ethics for Crowdsourced Corpus Collection, Data Annotation and its Application in the Web-based Game iHEARu-PLAY," in *Proceedings of the 1st International Workshop on ETHics In Corpus Collection, Annotation and Application (ETHI-CA<sup>2</sup> 2016), satellite of the 10th Language Resources and Evaluation Conference (LREC 2016)* (L. Devillers, B. Schuller, E. Mower Provost, P. Robinson, J. Mariani, and A. Delaborde, eds.), (Portoroz, Slovenia), pp. 54–59, ELRA, ELRA, May 2016. (oral acceptance rate: 45 %)
- 206) S. Hantke, E. Marchi, and B. Schuller, "Introducing the Weighted Trustability Evaluator for Crowdsourcing Exemplified by Speaker Likability Classification," in *Proceedings 10th Language Resources and Evaluation Conference (LREC 2016)*, (Portoroz, Slovenia), pp. 2156–2161, ELRA, ELRA, May 2016
- 207) G. Keren, J. Deng, J. Pohjalainen, and B. Schuller, "Convolutional Neural Networks and Data Augmentation for Classifying Speakers' Native Language," in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 2393–2397, ISCA, ISCA, September 2016. (acceptance rate: 50 %)
- 208) G. Keren and B. Schuller, "Convolutional RNN: an Enhanced Model for Extracting Features from Sequential Data," in *Proceedings 2016 International Joint Conference on Neural Networks (IJCNN) as part of the IEEE World Congress on Computational Intelligence (IEEE WCCI)*, (Vancouver, Canada), pp. 3412–3419, IEEE, IEEE, July 2016
- 209) G. Keren, S. Sabato, and B. Schuller, "Tunable Sensitivity to Large Errors in Neural Network Training," in *Proceedings of the 31st AAAI Conference on Artificial Intelligence, AAAI 17*, (San Francisco, CA), pp. 2087–2093, AAAI, February 2017. (acceptance rate: 25 %)
- 210) Y. Li, J. Tao, B. Schuller, S. Shan, D. Jiang, and J. Jia, "MEC 2016: The Multimodal Emotion Recognition Challenge of CCPR 2016," in *Proceedings of the 7th Chinese Conference on Pattern Recognition, CCPR*, (Chengdu, P.R. China), pp. 667–678, Springer, November 2016
- 211) E. Marchi, D. Tonelli, X. Xu, F. Ringeval, J. Deng, S. Squartini, and B. Schuller, "Pairwise Decomposition with Deep Neural Networks and Multiscale Kernel Subspace Learning for Acoustic Scene Classification," in *Proceedings of the Detection and Classification of Acoustic Scenes and Events 2016 IEEE AASP Challenge Workshop (DCASE 2016), satellite to EUSIPCO 2016*, (Budapest, Hungary), pp. 1–5, EUSIPCO, IEEE, September 2016
- 212) E. Marchi, F. Eyben, G. Hagerer, and B. W. Schuller, "Real-time Tracking of Speakers' Emotions, States, and Traits on Mobile Platforms," in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 1182–1183, ISCA, ISCA, September 2016. Show & Tell demonstration (acceptance rate: 50 %)
- 213) E. Marchi, D. Tonelli, X. Xu, F. Ringeval, J. Deng, S. Squartini, and B. Schuller, "The UP System for the 2016 DCASE Challenge using Deep Recurrent Neural Network and Multiscale Kernel Subspace Learning," in *Proceedings of the Detection and Classification of Acoustic Scenes and Events 2016 IEEE AASP Challenge Workshop (DCASE 2016), satellite to EUSIPCO 2016*, (Budapest, Hungary), EUSIPCO, IEEE, September 2016. 1 page
- 214) A. E.-D. Mousa and B. Schuller, "Deep Bidirectional Long Short-Term Memory Recurrent Neural Networks for Grapheme-to-Phoneme Conversion utilizing Complex Many-to-Many Alignments," in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 2836–2840, ISCA, ISCA, September 2016. (acceptance rate: 50 %)
- 215) F. B. Pokorny, P. B. Marschik, C. Einspieler, and B. W. Schuller, "Does She Speak RTT? Towards an Earlier Identification of

- Rett Syndrome Through Intelligent Pre-linguistic Vocalisation Analysis,” in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 1953–1957, ISCA, ISCA, September 2016. (acceptance rate: 50 %)
- 216) F. B. Pokorný, R. Peharz, W. Roth, M. Zohrer, F. Pernkopf, P. B. Marschik, and B. W. Schuller, “Manual Versus Automated: The Challenging Routine of Infant Vocalisation Segmentation in Home Videos to Study Neuro(mal)development,” in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 2997–3001, ISCA, ISCA, September 2016. (acceptance rate: 50 %)
- 217) K. Qian, C. Janott, Z. Zhang, C. Heiser, and B. Schuller, “Wavelet Features for Classification of VOTE Snore Sounds,” in *Proceedings 41st IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2016*, (Shanghai, P.R. China), pp. 221–225, IEEE, IEEE, March 2016. (acceptance rate: 45 %, IF\* 1.16 (2010))
- 218) M. Pantic, V. Evers, M. Deisenroth, L. Merino, and B. Schuller, “Social and Affective Robotics Tutorial,” in *Proceedings of the 24th ACM International Conference on Multimedia, MM 2016*, (Amsterdam, The Netherlands), pp. 1477–1478, ACM, ACM, October 2016. (acceptance rate short paper: 30 %, IF\* 2.45 (2010))
- 219) J. Pohjalainen, F. Ringeval, Z. Zhang, and B. Schuller, “Spectral and Cepstral Audio Noise Reduction Techniques in Speech Emotion Recognition,” in *Proceedings of the 24th ACM International Conference on Multimedia, MM 2016*, (Amsterdam, The Netherlands), pp. 670–674, ACM, ACM, October 2016. (acceptance rate short paper: 30 %, IF\* 2.45 (2010))
- 220) F. Ringeval, E. Marchi, C. Grossard, J. Xavier, M. Chetouani, D. Cohen, and B. Schuller, “Automatic Analysis of Typical and Atypical Encoding of Spontaneous Emotion in the Voice of Children,” in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 1210–1214, ISCA, ISCA, September 2016. (acceptance rate: 50 %)
- 221) A. Rynkiewicz, B. Schuller, E. Marchi, S. Piana, A. Camurri, A. Lassalle, and S. Baron-Cohen, “An Investigation of the ‘Female Camouflage Effect’ in Autism Using a New Computerized Test Showing Sex/Gender Differences during ADOS-2,” in *Proceedings 15th Annual International Meeting For Autism Research (IMFAR 2016)*, (Baltimore, MD), International Society for Autism Research (INSAR), INSAR, May 2016. 1 page
- 222) H. Sagha, J. Deng, M. Gavryukova, J. Han, and B. Schuller, “Cross Lingual Speech Emotion Recognition using Canonical Correlation Analysis on Principal Component Subspace,” in *Proceedings 41st IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2016*, (Shanghai, P.R. China), pp. 5800–5804, IEEE, IEEE, March 2016. (acceptance rate: 45 %, IF\* 1.16 (2010))
- 223) H. Sagha, P. Matejka, M. Gavryukova, F. Povolny, E. Marchi, and B. Schuller, “Enhancing multilingual recognition of emotion in speech by language identification,” in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 2949–2953, ISCA, ISCA, September 2016. (acceptance rate: 50 %)
- 224) J. Sánchez-Rada, B. Schuller, V. Patti, P. Buitelaar, G. Vulcu, F. Burkhardt, C. Clavel, M. Petychakis, and C. A. Iglesias, “Towards a Common Linked Data Model for Sentiment and Emotion Analysis,” in *Proceedings of the 6th International Workshop on Emotion and Sentiment Analysis (ESA 2016), satellite of the 10th Language Resources and Evaluation Conference (LREC 2016)* (J. Sánchez-Rada and B. Schuller, eds.), (Portoroz, Slovenia), pp. 48–54, ELRA, ELRA, May 2016. (acceptance rate: 42 % for long papers)
- 225) M. Schmitt, C. Janott, V. Pandit, K. Qian, C. Heiser, W. Hemmert, and B. Schuller, “A Bag-of-Audio-Words Approach for Snore Sounds’ Excitation Localisation,” in *Proceedings 14th ITG Conference on Speech Communication*, vol. 267 of *ITG-Fachbericht*, (Paderborn, Germany), pp. 230–234, ITG/VDE, IEEE/VDE, October 2016. nominated for best student paper award (4 nominations for 2 awards)
- 226) M. Schmitt, F. Ringeval, and B. Schuller, “At the Border of Acoustics and Linguistics: Bag-of-Audio-Words for the Recognition of Emotions in Speech,” in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 495–499, ISCA, ISCA, September 2016. (acceptance rate: 50 %)
- 227) M. Schmitt, E. Marchi, F. Ringeval, and B. Schuller, “Towards Cross-lingual Automatic Diagnosis of Autism Spectrum Condition in Children’s Voices,” in *Proceedings 14th ITG Conference on Speech Communication*, vol. 267 of *ITG-Fachbericht*, (Paderborn, Germany), pp. 264–268, ITG/VDE, IEEE/VDE, October 2016
- 228) M. Telespan and B. Schuller, “Audio Watermarking Based on Empirical Mode Decomposition and Beat Detection,” in *Proceedings 41st IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2016*, (Shanghai, P.R. China), pp. 2124–2128, IEEE, IEEE, March 2016. (acceptance rate: 45 %, IF\* 1.16 (2010))
- 229) G. Trigeorgis, F. Ringeval, R. Brückner, E. Marchi, M. Nicolaou, B. Schuller, and S. Zafeiriou, “Adieu Features? End-to-End Speech Emotion Recognition using a Deep Convolutional Recurrent Network,” in *Proceedings 41st IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2016*, (Shanghai, P.R. China), pp. 5200–5204, IEEE, IEEE, March 2016. winner of the IEEE Spoken Language Processing Student Travel Grant 2016 (acceptance rate: 45 %, IF\* 1.16 (2010))
- 230) G. Trigeorgis, M. A. Nicolaou, S. Zafeiriou, and B. Schuller, “Deep Canonical Time Warping,” in *Proceedings IEEE Conference on Computer Vision and Pattern Recognition, CVPR 2016*, (Las Vegas, NV), pp. 5110–5118, IEEE, IEEE, June 2016. (acceptance rate: ~25 %, IF\* 5.97 (2010))
- 231) M. Valstar, J. Gratch, B. Schuller, F. Ringeval, D. Lalanne, M. Torres Torres, S. Scherer, G. Stratou, R. Cowie, and M. Pantic, “AVEC 2016: Depression, Mood, and Emotion Recognition Workshop and Challenge,” in *Proceedings of the 6th International Workshop on Audio/Visual Emotion Challenge, AVEC’16, co-located with the 24th ACM International Conference on Multimedia, MM 2016* (M. Valstar, J. Gratch, B. Schuller, F. Ringeval, R. Cowie, and M. Pantic, eds.), (Amsterdam, The Netherlands), pp. 3–10, ACM, ACM, October 2016
- 232) M. Valstar, C. Pelachaud, D. Heylen, A. Cafaro, S. Dermouche, A. Ghitulescu, E. André, T. Bauer, J. Wagner, L. Durieu, M. Aylett, P. Blaise, E. Coutinho, B. Schuller, Y. Zhang, M. Theune, and J. van Waterschoot, “Ask Alice: an Artificial Retrieval of Information Agent,” in *Proceedings of the 18th ACM International Conference on Multimodal Interaction, ICMI (L.-P. Morency, C. Busso, and C. Pelachaud, eds.)*, (Tokyo, Japan), pp. 419–420, ACM, ACM, November 2016. (IF\* 1.77 (2010))
- 233) M. Valstar, J. Gratch, B. Schuller, F. Ringeval, R. Cowie, and M. Pantic, “Summary for AVEC 2016: Depression, Mood, and Emotion Recognition Workshop and Challenge,” in *Proceedings of the 24th ACM International Conference on Multimedia, MM 2016*, (Amsterdam, The Netherlands), pp. 1483–1484, ACM, ACM, October 2016. (acceptance rate short paper: 30 %, IF\* 2.45 (2010))
- 234) B. Vlasenko, B. Schuller, and A. Wendemuth, “Tendencies Regarding the Effect of Emotional Intensity in Inter Corpus Phoneme-Level Speech Emotion Modelling,” in *Proceedings 2016 IEEE International Workshop on Machine Learning for Signal Processing, MLSP*, (Salerno, Italy), pp. 1–6, IEEE, IEEE, September 2016
- 235) R. Wegener, C. Kohlschein, S. Jeschke, and B. Schuller, “Auto-

- matic Detection of Textual Triggers of Reader Emotion in Short Stories,” in *Proceedings of the 6th International Workshop on Emotion and Sentiment Analysis (ESA 2016), satellite of the 10th Language Resources and Evaluation Conference (LREC 2016)* (J. Sánchez-Rada and B. Schuller, eds.), (Portoroz, Slovenia), pp. 80–84, ELRA, ELRA, May 2016. (acceptance rate: 74 %)
- 236) F. Wenginger, F. Ringeval, E. Marchi, and B. Schuller, “Discriminatively trained recurrent neural networks for continuous dimensional emotion recognition from audio,” in *Proceedings of the 25th International Joint Conference on Artificial Intelligence, IJCAI 2016*, (New York City, NY), pp. 2196–2202, IJCAI/AAAI, July 2016. (acceptance rate: 25 %)
- 237) F. Wenginger, F. Ringeval, E. Marchi, and B. Schuller, “Discriminatively Trained Recurrent Neural Networks for Continuous Dimensional Emotion Recognition from Audio (Extended Abstract),” in *KI 2016: Advances in Artificial Intelligence 39th Annual German Conference on AI* (G. Friedrich, M. Helmert, and F. Wotawa, eds.), vol. LNCS Volume 9904/2016, (Klagenfurt, Austria), pp. 310–315, GfI / ÖGAI, Springer, September 2016. (acceptance rate: 45 %)
- 238) X. Xu, J. Deng, M. Gavryukova, Z. Zhang, L. Zhao, and B. Schuller, “Multiscale Kernel Locally Penalised Discriminant Analysis Exemplified by Emotion Recognition in Speech,” in *Proceedings of the 18th ACM International Conference on Multimodal Interaction, ICMI* (L.-P. Morency, C. Busso, and C. Pelachaud, eds.), (Tokyo, Japan), pp. 233–237, ACM, ACM, November 2016. (IF\* 1.77 (2010))
- 239) Z. Zhang, F. Ringeval, B. Dong, E. Coutinho, E. Marchi, and B. Schuller, “Enhanced Semi-Supervised Learning for Multimodal Emotion Recognition,” in *Proceedings 41st IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2016*, (Shanghai, P.R. China), pp. 5185–5189, IEEE, IEEE, March 2016. (acceptance rate: 45 %, IF\* 1.16 (2010))
- 240) Z. Zhang, F. Ringeval, J. Han, J. Deng, E. Marchi, and B. Schuller, “Facing Realism in Spontaneous Emotion Recognition from Speech: Feature Enhancement by Autoencoder with LSTM Neural Networks,” in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 3593–3597, ISCA, ISCA, September 2016. (acceptance rate: 50 %)
- 241) Y. Zhang, F. Wenginger, A. Batliner, F. Hönl, and B. Schuller, “Language Proficiency Assessment of English L2 Speakers Based on Joint Analysis of Prosody and Native Language,” in *Proceedings of the 18th ACM International Conference on Multimodal Interaction, ICMI* (L.-P. Morency, C. Busso, and C. Pelachaud, eds.), (Tokyo, Japan), pp. 274–278, ACM, ACM, November 2016. (IF\* 1.77 (2010))
- 242) Y. Zhang, F. Wenginger, Z. Ren, and B. Schuller, “Sincerity and Deception in Speech: Two Sides of the Same Coin? A Transfer- and Multi-Task Learning Perspective,” in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 2041–2045, ISCA, ISCA, September 2016. (acceptance rate: 50 %)
- 243) Y. Zhang, Y. Zhou, J. Shen, and B. Schuller, “Semi-autonomous Data Enrichment Based on Cross-task Labelling of Missing Targets for Holistic Speech Analysis,” in *Proceedings 41st IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2016*, (Shanghai, P.R. China), pp. 6090–6094, IEEE, IEEE, March 2016. (acceptance rate: 45 %, IF\* 1.16 (2010))
- 244) Y. Zhang and B. Schuller, “Towards Human-Like Holistic Machine Perception of Speaker States and Traits,” in *Proceedings of the Human-Like Computing Machine Intelligence Workshop, MI20-HLC*, (Windsor, U.K.), Springer, October 2016. 3 pages
- 245) J. Deng, X. Xu, Z. Zhang, S. Frühholz, D. Grandjean, and B. Schuller, “Fisher Kernels on Phase-based Features for Speech Emotion Recognition,” in *Proceedings of the Seventh International Workshop on Spoken Dialogue Systems (IWSDS)*, (Saariselkä, Finland), Springer, January 2016. 6 pages
- 246) B. Schuller, B. Vlasenko, F. Eyben, M. Wöllmer, A. Stuhlsatz, A. Wendemuth, and G. Rigoll, “Cross-Corpus Acoustic Emotion Recognition: Variances and Strategies (Extended Abstract),” in *Proc. 6th biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, (Xi’an, P.R. China), pp. 470–476, AAAC, IEEE, September 2015. invited for the Special Session on Most Influential Articles in IEEE Transactions on Affective Computing
- 247) B. Schuller, E. Marchi, S. Baron-Cohen, A. Lassalle, H. O’Reilly, D. Pigat, P. Robinson, I. Davies, T. Baltrusaitis, M. Mahmoud, O. Golan, S. Friedenson, S. Tal, S. Newman, N. Meir, R. Shillo, A. Camurri, S. Piana, A. Staglianò, S. Bölte, D. Lundqvist, S. Berggren, A. Baranger, N. Sullings, M. Sezgin, N. Alyuz, A. Rynkiewicz, K. Ptaszek, and K. Ligmann, “Recent developments and results of ASC-Inclusion: An Integrated Internet-Based Environment for Social Inclusion of Children with Autism Spectrum Conditions,” in *Proceedings of the 3rd International Workshop on Intelligent Digital Games for Empowerment and Inclusion (IDGEI 2015) as part of the 20th ACM International Conference on Intelligent User Interfaces, IUI 2015* (L. Paletta, B. Schuller, P. Robinson, and N. Sabouret, eds.), (Atlanta, GA), ACM, ACM, March 2015. 9 pages, best paper award (long talk acceptance rate: 36 %)
- 248) B. Schuller, “Speech Analysis in the Big Data Era,” in *Text, Speech, and Dialogue – Proceedings of the 18th International Conference on Text, Speech and Dialogue, TSD 2015*, vol. 9302 of *Lecture Notes in Computer Science (LNCS)*, pp. 3–11, Springer, September 2015. satellite event of INTERSPEECH 2015, invited contribution (acceptance rate: 50 %)
- 249) B. Schuller, S. Steidl, A. Batliner, S. Hantke, F. Hönl, J. R. Orozco-Arroyave, E. Nöth, Y. Zhang, and F. Wenginger, “The INTERSPEECH 2015 Computational Paralinguistics Challenge: Degree of Nativeness, Parkinson’s & Eating Condition,” in *Proceedings INTERSPEECH 2015, 16th Annual Conference of the International Speech Communication Association*, (Dresden, Germany), pp. 478–482, ISCA, ISCA, September 2015. (acceptance rate: 51 %)
- 250) L. Azaïs, A. Payan, T. Sun, G. Vidal, T. Zhang, E. Coutinho, F. Eyben, and B. Schuller, “Does my Speech Rock? Automatic Assessment of Public Speaking Skills,” in *Proceedings INTERSPEECH 2015, 16th Annual Conference of the International Speech Communication Association*, (Dresden, Germany), pp. 2519–2523, ISCA, ISCA, September 2015. (acceptance rate: 51 %)
- 251) E. Coutinho, G. Trigeorgis, S. Zafeiriou, and B. Schuller, “Automatically Estimating Emotion in Music with Deep Long-Short Term Memory Recurrent Neural Networks,” in *Proceedings of the MediaEval 2015 Multimedia Benchmark Workshop, satellite of Interspeech 2015* (M. Larson, B. Ionescu, M. Sjöberg, X. Anguera, J. Poignant, M. Riegler, M. Eskevich, C. Hauff, R. Sutcliffe, G. J. Jones, Y.-H. Yang, M. Soleymani, and S. Papadopoulos, eds.), vol. 1436, (Wurzen, Germany), CEUR, September 2015. 3 pages
- 252) J. Deng, Z. Zhang, F. Eyben, and B. Schuller, “Autoencoder-based Unsupervised Domain Adaptation for Speech Emotion Recognition,” in *Proceedings 40th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2015*, (Brisbane, Australia), pp. 1068–1072, IEEE, IEEE, April 2015. (IF\* 1.16 (2010))
- 253) F. Eyben, B. Huber, E. Marchi, D. Schuller, and B. Schuller, “Robust Real-time Affect Analysis and Speaker Characterisation on Mobile Devices,” in *Proc. 6th biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, (Xi’an, P.R. China), pp. 778–780, AAAC, IEEE, September 2015. (acceptance rate: 55 %)
- 254) S. Feraru, D. Schuller, and B. Schuller, “Cross-Language

- Acoustic Emotion Recognition: An Overview and Some Tendencies,” in *Proc. 6th biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, (Xi’an, P.R. China), pp. 125–131, AAAC, IEEE, September 2015. (acceptance rate oral: 28 %)
- 255) K. Gentsch, E. Coutinho, F. Eyben, B. Schuller, and K. R. Scherer, “Classifying Emotion-Antecedent Appraisal in Brain Activity using Machine Learning Methods,” in *Proceedings of the International Society for Research on Emotions Conference (ISRE 2015)*, (Geneva, Switzerland), ISRE, ISRE, July 2015. 1 page
- 256) S. Hantke, F. Eyben, T. Appel, and B. Schuller, “iHEARU-PLAY: Introducing a game for crowdsourced data collection for affective computing,” in *Proc. 1st International Workshop on Automatic Sentiment Analysis in the Wild (WASA 2015) held in conjunction with the 6th biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, (Xi’an, P.R. China), pp. 891–897, AAAC, IEEE, September 2015. (acceptance rate: 60 %)
- 257) E. Marchi, F. Vesperini, F. Eyben, S. Squartini, and B. Schuller, “A Novel Approach for Automatic Acoustic Novelty Detection Using a Denoising Autoencoder with Bidirectional LSTM Neural Networks,” in *Proceedings 40th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2015*, (Brisbane, Australia), pp. 1996–2000, IEEE, IEEE, April 2015. (IF\* 1.16 (2015))
- 258) E. Marchi, F. Vesperini, F. Weninger, F. Eyben, S. Squartini, and B. Schuller, “Non-Linear Prediction with LSTM Recurrent Neural Networks for Acoustic Novelty Detection,” in *Proceedings 2015 International Joint Conference on Neural Networks (IJCNN)*, (Killarney, Ireland), IEEE, IEEE, July 2015
- 259) E. Marchi, B. Schuller, S. Baron-Cohen, O. Golan, S. Bölte, P. Arora, and R. Hüb-Umbach, “Typicality and Emotion in the Voice of Children with Autism Spectrum Condition: Evidence Across Three Languages,” in *Proceedings INTERSPEECH 2015, 16th Annual Conference of the International Speech Communication Association*, (Dresden, Germany), pp. 115–119, ISCA, ISCA, September 2015. (acceptance rate: 51 %)
- 260) E. Marchi, B. Schuller, S. Baron-Cohen, A. Lassalle, H. O’Reilly, D. Pigat, O. Golan, S. Friedenson, S. Tal, S. Bölte, S. Berggren, D. Lundqvist, and M. S. Elfström, “Voice Emotion Games: Language and Emotion in the Voice of Children with Autism Spectrum Condition,” in *Proceedings of the 3rd International Workshop on Intelligent Digital Games for Empowerment and Inclusion (IDGEI 2015) as part of the 20th ACM International Conference on Intelligent User Interfaces, IUI 2015* (L. Paletta, B. Schuller, P. Robinson, and N. Sabouret, eds.), (Atlanta, GA), ACM, ACM, March 2015. 9 pages (long talk acceptance rate: 36 %)
- 261) A. Metallinou, M. Wöllmer, A. Katsamanis, F. Eyben, B. Schuller, and S. Narayanan, “Context-Sensitive Learning for Enhanced Audiovisual Emotion Classification (Extended Abstract),” in *Proc. 6th biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, (Xi’an, P.R. China), pp. 463–469, AAAC, IEEE, September 2015. invited for the Special Session on Most Influential Articles in IEEE Transactions on Affective Computing
- 262) S. Newman, O. Golan, S. Baron-Cohen, S. Bölte, A. Rynkiewicz, A. Baranger, B. Schuller, P. Robinson, A. Camurri, M. Sezgin, N. Meir-Goren, S. Tal, S. Fridenson-Hayo, A. Lassalle, S. Berggren, N. Sullings, D. Pigat, K. Ptaszek, E. Marchi, S. Piana, and T. Baltrusaitis, “ASC-Inclusion ?- a Virtual World Teaching Children with ASC about Emotions,” in *Proceedings 14th Annual International Meeting For Autism Research (IMFAR 2015)*, (Salt Lake City, UT), International Society for Autism Research (INSAR), INSAR, May 2015. 1 page
- 263) P. Pohl and B. Schuller, “Digital Analysis of Vocal Operants,” in *Proceedings 2015 Meeting of the Experimental Analysis of Behaviour Group (EABG)*, (London, UK), EABG, EABG, March 2015. 1 page, to appear
- 264) F. Pokorny, F. Graf, F. Pernkopf, and B. Schuller, “Detection of Negative Emotions in Speech Signals Using Bags-of-Audio-Words,” in *Proc. 1st International Workshop on Automatic Sentiment Analysis in the Wild (WASA 2015) held in conjunction with the 6th biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, (Xi’an, P.R. China), pp. 879–884, AAAC, IEEE, September 2015. (acceptance rate: 60 %)
- 265) K. Qian, Z. Zhang, F. Ringeval, and B. Schuller, “Bird Sounds Classification by Large Scale Acoustic Features and Extreme Learning Machine,” in *Proceedings 3rd IEEE Global Conference on Signal and Information Processing, GlobalSIP, Machine Learning Applications in Speech Processing Symposium*, (Orlando, FL), pp. 1317–1321, IEEE, IEEE, December 2015. (acceptance rate: 45 %)
- 266) F. Ringeval, E. Marchi, M. Méhu, K. Scherer, and B. Schuller, “Face Reading from Speech ?- Predicting Facial Action Units from Audio Cues,” in *Proceedings INTERSPEECH 2015, 16th Annual Conference of the International Speech Communication Association*, (Dresden, Germany), pp. 1977–1981, ISCA, ISCA, September 2015. (acceptance rate: 51 %)
- 267) F. Ringeval, B. Schuller, M. Valstar, R. Cowie, and M. Pantic, “AVEC 2015: The 5th International Audio/Visual Emotion Challenge and Workshop,” in *Proceedings of the 23rd ACM International Conference on Multimedia, MM 2015*, (Brisbane, Australia), pp. 1335–1336, ACM, ACM, October 2015. (acceptance rate: 25 %)
- 268) F. Ringeval, B. Schuller, M. Valstar, S. Jaiswal, E. Marchi, D. Lalanne, R. Cowie, and M. Pantic, “AV+EC 2015 ?- The First Affect Recognition Challenge Bridging Across Audio, Video, and Physiological Data,” in *Proceedings of the 5th International Workshop on Audio/Visual Emotion Challenge, AVEC’15, co-located with the 23rd ACM International Conference on Multimedia, MM 2015* (F. Ringeval, B. Schuller, M. Valstar, R. Cowie, and M. Pantic, eds.), (Brisbane, Australia), pp. 3–8, ACM, ACM, October 2015
- 269) N. Sabouret, B. Schuller, L. Paletta, E. Marchi, H. Jones, and A. B. Youssef, “Intelligent User Interfaces in Digital Games for Empowerment and Inclusion,” in *Proceedings of the 12th International Conference on Advancement in Computer Entertainment Technology, ACE 2015*, (Iskandar, Malaysia), ACM, ACM, November 2015. 8 pages, Gold Paper Award
- 270) H. Sagha, E. Coutinho, and B. Schuller, “The importance of individual differences in the prediction of emotions induced by music,” in *Proceedings of the 5th International Workshop on Audio/Visual Emotion Challenge, AVEC’15, co-located with the 23rd ACM International Conference on Multimedia, MM 2015* (F. Ringeval, B. Schuller, M. Valstar, R. Cowie, and M. Pantic, eds.), (Brisbane, Australia), pp. 57–63, ACM, ACM, October 2015. (acceptance rate: 60 %)
- 271) M. Schröder, E. Bevacqua, R. Cowie, F. Eyben, H. Gunes, D. Heylen, M. ter Maat, G. McKeown, S. Pammi, M. Pantic, C. Pelachaud, B. Schuller, E. de Sevin, M. Valstar, and M. Wöllmer, “Building Autonomous Sensitive Artificial Listeners (Extended Abstract),” in *Proc. 6th biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, (Xi’an, P.R. China), pp. 456–462, AAAC, IEEE, September 2015. invited for the Special Session on Most Influential Articles in IEEE Transactions on Affective Computing
- 272) G. Trigeorgis, E. Coutinho, F. Ringeval, E. Marchi, S. Zafeiriou, and B. Schuller, “The ICL-TUM-PASSAU approach for the MediaEval 2015 “Affective Impact of Movies” Task,” in *Proceedings of the MediaEval 2015 Multimedia Benchmark Workshop, satellite of Interspeech 2015* (M. Larson, B. Ionescu, M. Sjöberg, X. Anguera, J. Poignant, M. Riegler, M. Eskevich, C. Hauff, R. Sutcliffe, G. J. Jones, Y.-H. Yang, M. Soleymani, and S. Papadopoulos, eds.), vol. 1436, (Wurzen, Germany),

- CEUR, September 2015. 3 pages, best result
- 273) G. Trigeorgis, M. A. Nicolaou, S. Zafeiriou, and B. Schuller, "Towards Deep Alignment of Multimodal Data," in *Proceedings 2015 Multimodal Machine Learning Workshop held in conjunction with NIPS 2015 (MMML@NIPS)*, (Montréal, QC), NIPS, NIPS, December 2015. 4 pages
- 274) F. Weninger, H. Erdogan, S. Watanabe, E. Vincent, J. Le Roux, J. R. Hershey, and B. Schuller, "Speech Enhancement with LSTM Recurrent Neural Networks and its Application to Noise-Robust ASR," in *Latent Variable Analysis and Signal Separation – Proceedings 12th International Conference on Latent Variable Analysis and Signal Separation, LVA/ICA 2015* (E. Vincent, A. Yeredor, Z. Koldovsk?, and P. Tichavsk?, eds.), vol. 9237 of *Lecture Notes in Computer Science*, (Liberec, Czech Republic), pp. 91–99, Springer, August 2015
- 275) X. Xu, J. Deng, W. Zheng, L. Zhao, and B. Schuller, "Dimensionality Reduction for Speech Emotion Features by Multiscale Kernels," in *Proceedings INTERSPEECH 2015, 16th Annual Conference of the International Speech Communication Association*, (Dresden, Germany), pp. 1532–1536, ISCA, ISCA, September 2015. (acceptance rate: 51 %)
- 276) Y. Zhang, E. Coutinho, Z. Zhang, C. Quan, and B. Schuller, "Agreement-based Dynamic Active Learning with Least and Medium Certainty Query Strategy," in *Proceedings Advances in Active Learning : Bridging Theory and Practice Workshop held in conjunction with the 32nd International Conference on Machine Learning, ICML 2015* (A. Krishnamurthy, A. Ramdas, N. Balcan, and A. Singh, eds.), (Lille, France), International Machine Learning Society, IMLS, July 2015. 5 pages
- 277) Y. Zhang, E. Coutinho, Z. Zhang, M. Adam, and B. Schuller, "On Rater Reliability and Agreement Based Dynamic Active Learning," in *Proc. 6th biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, (Xi'an, P.R. China), pp. 70–76, AAAC, IEEE, September 2015. (acceptance rate oral: 28 %)
- 278) Y. Zhang, E. Coutinho, Z. Zhang, C. Quan, and B. Schuller, "Dynamic Active Learning Based on Agreement and Applied to Emotion Recognition in Spoken Interactions," in *Proceedings 17th International Conference on Multimodal Interaction, ICMI 2015*, (Seattle, WA), pp. 275–278, ACM, ACM, November 2015. (IF\* 1.77 (2010))
- 279) B. Schuller, Y. Zhang, F. Eyben, and F. Weninger, "Intelligent systems' Holistic Evolving Analysis of Real-life Universal speaker characteristics," in *Proceedings of the 5th International Workshop on Emotion Social Signals, Sentiment & Linked Open Data (ES<sup>3</sup>LOD 2014), satellite of the 9th Language Resources and Evaluation Conference (LREC 2014)* (B. Schuller, P. Buitelaar, L. Devillers, C. Pelachaud, T. Declerck, A. Batliner, P. Rosso, and S. Gaines, eds.), (Reykjavik, Iceland), pp. 14–20, ELRA, ELRA, May 2014
- 280) B. Schuller, S. Steidl, A. Batliner, J. Epps, F. Eyben, F. Ringeval, E. Marchi, and Y. Zhang, "The INTERSPEECH 2014 Computational Paralinguistics Challenge: Cognitive & Physical Load," in *Proceedings INTERSPEECH 2014, 15th Annual Conference of the International Speech Communication Association*, (Singapore, Singapore), ISCA, ISCA, September 2014. 5 pages (acceptance rate: 52 %)
- 281) B. Schuller, F. Friedmann, and F. Eyben, "The Munich BioVoice Corpus: Effects of Physical Exercising, Heart Rate, and Skin Conductance on Human Speech Production," in *Proceedings 9th Language Resources and Evaluation Conference (LREC 2014)*, (Reykjavik, Iceland), pp. 1506–1510, ELRA, ELRA, May 2014
- 282) B. Schuller, E. Marchi, S. Baron-Cohen, H. O'Reilly, D. Pigat, P. Robinson, I. Davies, O. Golan, S. Fridenson, S. Tal, S. Newman, N. Meir, R. Shillo, A. Camurri, S. Piana, A. Staglianò, S. Bölte, D. Lundqvist, S. Berggren, A. Baranger, and N. Sullings, "The state of play of ASC-Inclusion: An Integrated Internet-Based Environment for Social Inclusion of Children with Autism Spectrum Conditions," in *Proceedings 2nd International Workshop on Digital Games for Empowerment and Inclusion (IDGEI 2014)* (L. Paletta, B. Schuller, P. Robinson, and N. Sabouret, eds.), (Haifa, Israel), ACM, ACM, February 2014. 8 pages, held in conjunction with the 19th International Conference on Intelligent User Interfaces (IUI 2014)
- 283) A. Batliner and B. Schuller, "More Than Fifty Years of Speech Processing – The Rise of Computational Paralinguistics and Ethical Demands," in *Proceedings ETHICOMP 2014*, (Paris, France), Commission de réflexion sur l'Ethique de la Recherche en sciences et technologies du Numérique d'Allistene, CERNA, June 2014
- 284) R. Brückner and B. Schuller, "Social Signal Classification Using Deep BLSTM Recurrent Neural Networks," in *Proceedings 39th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2014*, (Florence, Italy), pp. 4856–4860, IEEE, IEEE, May 2014. (acceptance rate: 50 %, IF\* 1.16 (2010))
- 285) O. Celiktutan, F. Eyben, E. Sariyanidi, H. Gunes, and B. Schuller, "MAPTRAITS 2014: The First Audio/Visual Mapping Personality Traits Challenge," in *Proceedings of the Personality Mapping Challenge & Workshop (MAPTRAITS 2014), Satellite of the 16th ACM International Conference on Multimodal Interaction (ICMI 2014)*, (Istanbul, Turkey), pp. 3–9, ACM, ACM, November 2014
- 286) O. Celiktutan, F. Eyben, E. Sariyanidi, H. Gunes, and B. Schuller, "MAPTRAITS 2014: The First Audio/Visual Mapping Personality Traits Challenge – An Introduction," in *Proceedings of the Personality Mapping Challenge & Workshop (MAPTRAITS 2014), Satellite of the 16th ACM International Conference on Multimodal Interaction (ICMI 2014)*, (Istanbul, Turkey), pp. 529–530, ACM, ACM, November 2014
- 287) E. Coutinho, F. Weninger, K. Scherer, and B. Schuller, "The Munich LSTM-RNN Approach to the MediaEval 2014 "Emotion in Music" Task," in *Proceedings of the MediaEval 2014 Multimedia Benchmark Workshop* (M. Larson, B. Ionescu, X. Anguera, M. Eskevich, P. Korshunov, M. Schedl, M. Soleymani, G. Petkos, R. Sutcliffe, J. Choi, and G. J. Jones, eds.), (Barcelona, Spain), CEUR, October 2014. 2 pages, best result
- 288) E. Coutinho, J. Deng, and B. Schuller, "Transfer Learning Emotion Manifestation Across Music and Speech," in *Proceedings 2014 International Joint Conference on Neural Networks (IJCNN) as part of the IEEE World Congress on Computational Intelligence (IEEE WCCI)*, (Beijing, China), pp. 3592–3598, IEEE, IEEE, July 2014. (acceptance rate: 30 %)
- 289) J. Deng, R. Xia, Z. Zhang, Y. Liu, and B. Schuller, "Introducing Shared-Hidden-Layer Autoencoders for Transfer Learning and their Application in Acoustic Emotion Recognition," in *Proceedings 39th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2014*, (Florence, Italy), pp. 4851–4855, IEEE, IEEE, May 2014. (acceptance rate: 50 %, IF\* 1.16 (2010))
- 290) J. Deng, Z. Zhang, and B. Schuller, "Linked Source and Target Domain Subspace Feature Transfer Learning – Exemplified by Speech Emotion Recognition," in *Proceedings 22nd International Conference on Pattern Recognition (ICPR 2014)*, (Stockholm, Sweden), pp. 761–766, IAPR, IAPR, August 2014. acceptance rate: 56 %
- 291) J. T. Geiger, M. Kneissl, B. Schuller, and G. Rigoll, "Acoustic Gait-based Person Identification using Hidden Markov Models," in *Proceedings of the Personality Mapping Challenge & Workshop (MAPTRAITS 2014), Satellite of the 16th ACM International Conference on Multimodal Interaction (ICMI 2014)*, (Istanbul, Turkey), pp. 25–30, ACM, ACM, November 2014
- 292) J. T. Geiger, J. F. Gemmeke, B. Schuller, and G. Rigoll, "Investigating NMF Speech Enhancement for Neural Network based Acoustic Models," in *Proceedings INTERSPEECH 2014, 15th Annual Conference of the International Speech Communication Association*, (Singapore, Singapore), ISCA, ISCA, September

2014. 5 pages (acceptance rate: 52 %)
- 293) J. T. Geiger, F. Weninger, J. F. Gemmeke, M. Wöllmer, B. Schuller, and G. Rigoll, "Memory-Enhanced Neural Networks and NMF for Robust ASR," in *Proceedings 2nd IEEE Global Conference on Signal and Information Processing, GlobalSIP, Machine Learning Applications in Speech Processing Symposium*, (Atlanta, GA), IEEE, IEEE, December 2014. 10 pages (acceptance rate: 45 %)
- 294) J. T. Geiger, Z. Zhang, F. Weninger, B. Schuller, and G. Rigoll, "Robust Speech Recognition using Long Short-Term Memory Recurrent Neural Networks for Hybrid Acoustic Modelling," in *Proceedings INTERSPEECH 2014, 15th Annual Conference of the International Speech Communication Association*, (Singapore, Singapore), ISCA, ISCA, September 2014. 5 pages (acceptance rate: 52 %)
- 295) J. Geiger, E. Marchi, F. Weninger, B. Schuller, and G. Rigoll, "The TUM system for the REVERB Challenge: Recognition of Reverberated Speech using Multi-Channel Correlation Shaping Dereverberation and BLSTM Recurrent Neural Networks," in *Proceedings REVERB Workshop, held in conjunction with ICASSP 2014 and HSCMA 2014*, (Florence, Italy), pp. 1–8, IEEE, IEEE, May 2014
- 296) J. T. Geiger, B. Zhang, B. Schuller, and G. Rigoll, "On the Influence of Alcohol Intoxication on Speaker Recognition," in *Proceedings AES 53rd International Conference on Semantic Audio*, (London, UK), pp. 1–7, AES, Audio Engineering Society, January 2014
- 297) K. Hartmann, R. Böck, and B. Schuller, "ERM4HCI 2014 – The 2nd Workshop on Emotion Representation and Modelling in Human-Computer-Interaction-Systems," in *Proceedings of the 2nd Workshop on Emotion representation and modelling in Human-Computer-Interaction-Systems, ERM4HCI 2014* (K. Hartmann, R. Böck, and B. Schuller, eds.), (Istanbul, Turkey), pp. 525–526, ACM, ACM, November 2014. held in conjunction with the 16th ACM International Conference on Multimodal Interaction, ICMI 2014
- 298) H. Kaya, F. Eyben, A. A. Salah, and B. Schuller, "CCA Based Feature Selection with Application to Continuous Depression Recognition from Acoustic Speech Features," in *Proceedings 39th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2014*, (Florence, Italy), pp. 3757–3761, IEEE, IEEE, May 2014. (acceptance rate: 50 %, IF\* 1.16 (2010))
- 299) C. Kirst, F. Weninger, C. Joder, P. Grosche, J. Geiger, and B. Schuller, "On-line NMF-based Stereo Up-Mixing of Speech Improves Perceived Reduction of Non-Stationary Noise," in *Proceedings AES 53rd International Conference on Semantic Audio* (K. Brandenburg and M. Sandler, eds.), (London, UK), pp. 1–7, AES, Audio Engineering Society, January 2014. Best Student Paper Award
- 300) E. Marchi, G. Ferroni, F. Eyben, L. Gabrielli, S. Squartini, and B. Schuller, "Multi-resolution Linear Prediction Based Features for Audio Onset Detection with Bidirectional LSTM Neural Networks," in *Proceedings 39th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2014*, (Florence, Italy), pp. 2183–2187, IEEE, IEEE, May 2014. (acceptance rate: 50 %, IF\* 1.16 (2010))
- 301) E. Marchi, G. Ferroni, F. Eyben, S. Squartini, and B. Schuller, "Audio Onset Detection: A Wavelet Packet Based Approach with Recurrent Neural Networks," in *Proceedings 2014 International Joint Conference on Neural Networks (IJCNN) as part of the IEEE World Congress on Computational Intelligence (IEEE WCCI)*, (Beijing, China), pp. 3585–3591, IEEE, IEEE, July 2014. (acceptance rate: 30 %)
- 302) S. Newman, O. Golan, S. Baron-Cohen, S. Bölte, A. Baranger, B. Schuller, P. Robinson, A. Camurri, N. Meir-Goren, M. Skurnik, S. Fridenson, S. Tal, E. Eshchar, H. O'Reilly, D. Pigat, S. Berggren, D. Lundqvist, N. Sullings, I. Davies, and S. Piana, "ASC-Inclusion – Interactive Software to Help Children with ASC Understand and Express Emotions," in *Proceedings 13th Annual International Meeting For Autism Research (IMFAR 2014)*, (Atlanta, GA), International Society for Autism Research (INSAR), INSAR, May 2014. 1 page
- 303) F. Ringeval, S. Amiriparian, F. Eyben, K. Scherer, and B. Schuller, "Emotion Recognition in the Wild: Incorporating Voice and Lip Activity in Multimodal Decision-Level Fusion," in *Proceedings of the ICMI 2014 EmotiW – Emotion Recognition In The Wild Challenge and Workshop (EmotiW 2014), Satellite of the 16th ACM International Conference on Multimodal Interaction (ICMI 2014)*, (Istanbul, Turkey), pp. 473–480, ACM, ACM, November 2014
- 304) M. Soleymani, A. Aljanaki, Y.-H. Yang, M. N. Caro, F. Eyben, K. Markov, B. Schuller, R. Veltkamp, F. Weninger, and F. Wiering, "Emotional Analysis of Music: A Comparison of Methods," in *Proceedings of the 22nd ACM International Conference on Multimedia, MM 2014*, (Orlando, FL), pp. 1161–1164, ACM, ACM, November 2014. 4 pages
- 305) G. Trigeorgis, K. Bousmalis, S. Zafeiriou, and B. Schuller, "A Deep Semi-NMF Model for Learning Hidden Representations," in *Proceedings 31st International Conference on Machine Learning, ICML 2014* (E. P. Xing and T. Jebara, eds.), vol. 32, (Beijing, China), International Machine Learning Society, IMLS, June 2014. 9 pages (acceptance rate: 25 %)
- 306) F. Weninger, J. R. Hershey, J. Le Rouxy, and B. Schuller, "Discriminatively Trained Recurrent Neural Networks for Single-Channel Speech Separation," in *Proceedings 2nd IEEE Global Conference on Signal and Information Processing, GlobalSIP, Machine Learning Applications in Speech Processing Symposium*, (Atlanta, GA), pp. 577–581, IEEE, IEEE, December 2014. (acceptance rate: 45 %)
- 307) F. Weninger, S. Watanabe, J. Le Roux, J. R. Hershey, Y. Tachioka, J. Geiger, B. Schuller, and G. Rigoll, "The MERL/MELCO/TUM system for the REVERB Challenge using Deep Recurrent Neural Network Feature Enhancement," in *Proceedings REVERB Workshop, held in conjunction with ICASSP 2014 and HSCMA 2014*, (Florence, Italy), pp. 1–8, IEEE, IEEE, May 2014. second best result
- 308) Z. Zhang, F. Eyben, J. Deng, and B. Schuller, "An Agreement and Sparseness-based Learning Instance Selection and its Application to Subjective Speech Phenomena," in *Proceedings of the 5th International Workshop on Emotion Social Signals, Sentiment & Linked Open Data (ES<sup>3</sup>LOD 2014), satellite of the 9th Language Resources and Evaluation Conference (LREC 2014)* (B. Schuller, P. Buitelaar, L. Devillers, C. Pelachaud, T. Declerck, A. Batliner, P. Rosso, and S. Gaines, eds.), (Reykjavik, Iceland), pp. 21–26, ELRA, ELRA, May 2014
- 309) M. Valstar, B. Schuller, K. Smith, T. Almaev, F. Eyben, J. Krajewski, R. Cowie, and M. Pantic, "AVEC 2014 – The Three Dimensional Affect and Depression Challenge," in *Proceedings of the 4th ACM international workshop on Audio/Visual Emotion Challenge*, (Orlando, FL), ACM, ACM, November 2014. 9 pages
- 310) F. J. Weninger, S. Watanabe, Y. Tachioka, and B. Schuller, "Deep Recurrent De-Noiseing Auto-Encoder and blind dereverberation for reverberated speech recognition," in *Proceedings 39th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2014*, (Florence, Italy), pp. 4656–4660, IEEE, IEEE, May 2014. (acceptance rate: 50 %, IF\* 1.16 (2010))
- 311) F. J. Weninger, F. Eyben, and B. Schuller, "On-Line Continuous-Time Music Mood Regression with Deep Recurrent Neural Networks," in *Proceedings 39th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2014*, (Florence, Italy), pp. 5449–5453, IEEE, IEEE, May 2014. (acceptance rate: 50 %, IF\* 1.16 (2010))
- 312) F. J. Weninger, F. Eyben, and B. Schuller, "Single-Channel Speech Separation With Memory-Enhanced Recurrent Neural Networks," in *Proceedings 39th IEEE International Conference*



- on Acoustics, Speech, and Signal Processing, ICASSP 2014, (Florence, Italy), pp. 3737–3741, IEEE, IEEE, May 2014. (acceptance rate: 50 %, IF\* 1.16 (2010))
- 313) R. Xia, J. Deng, B. Schuller, and Y. Liu, “Modeling Gender Information for Emotion Recognition Using Denoising Autoencoders,” in *Proceedings 39th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2014*, (Florence, Italy), pp. 990–994, IEEE, IEEE, May 2014. (acceptance rate: 50 %, IF\* 1.16 (2010))
- 314) B. Schuller, E. Marchi, S. Baron-Cohen, H. O’Reilly, P. Robinson, I. Davies, O. Golan, S. Friedenson, S. Tal, S. Newman, N. Meir, R. Shillo, A. Camurri, S. Piana, S. Bölte, D. Lundqvist, S. Berggren, A. Baranger, and N. Sullings, “ASC-Inclusion: Interactive Emotion Games for Social Inclusion of Children with Autism Spectrum Conditions,” in *Proceedings 1st International Workshop on Intelligent Digital Games for Empowerment and Inclusion (IDGEI 2013) held in conjunction with the 8th Foundations of Digital Games 2013 (FDG)* (B. Schuller, L. Paletta, and N. Sabouret, eds.), (Chania, Greece), ACM, SASDG, May 2013. 8 pages (acceptance rate: 69 %)
- 315) B. Schuller, S. Steidl, A. Batliner, A. Vinciarelli, K. Scherer, F. Ringeval, M. Chetouani, F. Weninger, F. Eyben, E. Marchi, M. Mortillaro, H. Salamin, A. Polychroniou, F. Valente, and S. Kim, “The INTERSPEECH 2013 Computational Paralinguistics Challenge: Social Signals, Conflict, Emotion, Autism,” in *Proceedings INTERSPEECH 2013, 14th Annual Conference of the International Speech Communication Association*, (Lyon, France), pp. 148–152, ISCA, ISCA, August 2013. (acceptance rate: 52 %, IF\* 1.05 (2010), > 200 citations)
- 316) B. Schuller, F. Friedmann, and F. Eyben, “Automatic Recognition of Physiological Parameters in the Human Voice: Heart Rate and Skin Conductance,” in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 7219–7223, IEEE, IEEE, May 2013. (acceptance rate: 53 %, IF\* 1.16 (2010))
- 317) B. Schuller, F. Pokorny, S. Ladstätter, M. Fellner, F. Graf, and L. Paletta, “Acoustic Geo-Sensing: Recognising Cyclists’ Route, Route Direction, and Route Progress from Cell-Phone Audio,” in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 453–457, IEEE, IEEE, May 2013. (acceptance rate: 53 %, IF\* 1.16 (2010))
- 318) R. Brückner and B. Schuller, “Hierarchical Neural Networks and Enhanced Class Posteriors for Social Signal Classification,” in *Proceedings 13th Biannual IEEE Automatic Speech Recognition and Understanding Workshop, ASRU 2013*, (Olomouc, Czech Republic), pp. 362–367, IEEE, IEEE, December 2013. 6 pages (acceptance rate: 47 %)
- 319) J. Deng, Z. Zhang, E. Marchi, and B. Schuller, “Sparse Autoencoder-based Feature Transfer Learning for Speech Emotion Recognition,” in *Proc. 5th biannual Humaine Association Conference on Affective Computing and Intelligent Interaction (ACII 2013)*, (Geneva, Switzerland), pp. 511–516, HUMAINE Association, IEEE, September 2013. (acceptance rate oral: 31 %)
- 320) I. Dunwell, P. Lameris, C. Stewart, P. Petridis, S. Arnab, M. Hendrix, S. de Freitas, M. Gaved, B. Schuller, and L. Paletta, “Developing a Digital Game to Support Cultural Learning amongst Immigrants,” in *Proceedings 1st International Workshop on Intelligent Digital Games for Empowerment and Inclusion (IDGEI 2013) held in conjunction with the 8th Foundations of Digital Games 2013 (FDG)* (B. Schuller, L. Paletta, and N. Sabouret, eds.), (Chania, Greece), ACM, SASDG, May 2013. 8 pages (acceptance rate: 69 %)
- 321) F. Eyben, F. Weninger, L. Paletta, and B. Schuller, “The acoustics of eye contact -? Detecting visual attention from conversational audio cues,” in *Proceedings 6th Workshop on Eye Gaze in Intelligent Human Machine Interaction: Gaze in Multimodal Interaction (GAZEIN 2013), held in conjunction with the 15th International Conference on Multimodal Interaction, ICMI 2013*, (Sydney, Australia), pp. 7–12, ACM, ACM, December 2013. (acceptance rate: 38 %, IF\* 1.77 (2010))
- 322) F. Eyben, F. Weninger, and B. Schuller, “Affect recognition in real-life acoustic conditions -? A new perspective on feature selection,” in *Proceedings INTERSPEECH 2013, 14th Annual Conference of the International Speech Communication Association*, (Lyon, France), pp. 2044–2048, ISCA, ISCA, August 2013. (acceptance rate: 52 %, IF\* 1.05 (2010))
- 323) F. Eyben, F. Weninger, F. Groß, and B. Schuller, “Recent Developments in openSMILE, the Munich Open-Source Multimedia Feature Extractor,” in *Proceedings of the 21st ACM International Conference on Multimedia, MM 2013*, (Barcelona, Spain), pp. 835–838, ACM, ACM, October 2013. (Honorable Mention (2nd place) in the ACM MM 2013 Open-source Software Competition, acceptance rate: 28 %, > 200 citations)
- 324) F. Eyben, F. Weninger, S. Squartini, and B. Schuller, “Real-life Voice Activity Detection with LSTM Recurrent Neural Networks and an Application to Hollywood Movies,” in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 483–487, IEEE, IEEE, May 2013. (acceptance rate: 53 %, IF\* 1.16 (2010))
- 325) F. Eyben, F. Weninger, E. Marchi, and B. Schuller, “Likability of human voices: A feature analysis and a neural network regression approach to automatic likability estimation,” in *Proceedings 14th International Workshop on Image and Audio Analysis for Multimedia Interactive Services, WIA?MIS 2013*, (Paris, France), IEEE, IEEE, July 2013. Special Session on Social Stance Analysis, 4 pages (acceptance rate: 52 %)
- 326) J. T. Geiger, F. Eyben, B. Schuller, and G. Rigoll, “Detecting Overlapping Speech with Long Short-Term Memory Recurrent Neural Networks,” in *Proceedings INTERSPEECH 2013, 14th Annual Conference of the International Speech Communication Association*, (Lyon, France), pp. 1668–1672, ISCA, ISCA, August 2013. (acceptance rate: 52 %, IF\* 1.05 (2010))
- 327) J. T. Geiger, B. Schuller, and G. Rigoll, “Large-Scale Audio Feature Extraction and SVM for Acoustic Scene Classification,” in *Proceedings of the 2013 IEEE Workshop on Applications of Signal Processing to Audio and Acoustics, WASPAA 2013*, (New Paltz, NY), pp. 1–4, IEEE, IEEE, October 2013
- 328) J. T. Geiger, F. Eyben, N. Evans, B. Schuller, and G. Rigoll, “Using Linguistic Information to Detect Overlapping Speech,” in *Proceedings INTERSPEECH 2013, 14th Annual Conference of the International Speech Communication Association*, (Lyon, France), pp. 690–694, ISCA, ISCA, August 2013. (acceptance rate: 52 %, IF\* 1.05 (2010))
- 329) J. T. Geiger, M. Hofmann, B. Schuller, and G. Rigoll, “Gait-based Person Identification by Spectral, Cepstral and Energy-related Audio Features,” in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 458–462, IEEE, IEEE, May 2013. (acceptance rate: 53 %, IF\* 1.16 (2010))
- 330) J. T. Geiger, F. Weninger, A. Hurmalainen, J. F. Gemmeke, M. Wöllmer, B. Schuller, G. Rigoll, and T. Virtanen, “The TUM+TUT+KUL Approach to the CHiME Challenge 2013: Multi-Stream ASR Exploiting BLSTM Networks and Sparse NMF,” in *Proceedings The 2nd CHiME Workshop on Machine Listening in Multisource Environments held in conjunction with ICASSP 2013*, (Vancouver, Canada), pp. 25–30, IEEE, IEEE, June 2013. winning paper of track 1 and best paper award
- 331) W. Han, H. Li, H. Ruan, L. Ma, J. Sun, and B. Schuller, “Active Learning for Dimensional Speech Emotion Recognition,” in *Proceedings INTERSPEECH 2013, 14th Annual Conference of the International Speech Communication Association*, (Lyon, France), pp. 2856–2859, ISCA, ISCA, August 2013. (acceptance rate: 52 %, IF\* 1.05 (2010))
- 332) C. Joder, F. Weninger, D. Virette, and B. Schuller, “A Comparative Study on Sparsity Penalties for NMF-based Speech



- Separation: Beyond LP-Norms,” in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 858–862, IEEE, IEEE, May 2013. (acceptance rate: 53 %, IF\* 1.16 (2010))
- 333) C. Joder, F. Weninger, D. Virette, and B. Schuller, “Integrating Noise Estimation and Factorization-based Speech Separation: a Novel Hybrid Approach,” in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 131–135, IEEE, IEEE, May 2013. (acceptance rate: 53 %, IF\* 1.16 (2010))
- 334) C. Joder and B. Schuller, “Off-line Refinement of Audio-to-Score Alignment by Observation Template Adaptation,” in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 206–210, IEEE, IEEE, May 2013. (acceptance rate: 53 %, IF\* 1.16 (2010))
- 335) S. Newman, O. Golan, S. Baron-Cohen, S. Bölte, A. Baranger, B. Schuller, P. Robinson, A. Camurri, N. Meir, C. Rotman, S. Tal, S. Fridenson, H. O’Reilly, D. Lundqvist, S. Berggren, N. Sullings, E. Marchi, A. Batliner, I. Davies, and S. Piana, “ASC-Inclusion – Interactive Software to Help Children with ASC Understand and Express Emotions,” in *Proceedings 12th Annual International Meeting For Autism Research (IMFAR 2013)*, (San Sebastián, Spain), International Society for Autism Research (INSAR), INSAR, May 2013. 1 page
- 336) A. Rosner, F. Weninger, B. Schuller, M. Michalak, and B. Kostek, “Influence of Low-Level Features Extracted from Rhythmic and Harmonic Sections on Music Genre Classification,” in *Man-Machine Interactions 3* (A. Gruca, T. Czachurski, and S. Kozielski, eds.), vol. 242 of *Advances in Intelligent Systems and Computing (AISC)*, pp. 467–473, Springer, 2013
- 337) M. Valstar, B. Schuller, K. Smith, F. Eyben, B. Jiang, S. Bilakhia, S. Schnieder, R. Cowie, and M. Pantic, “AVEC 2013 – The Continuous Audio/Visual Emotion and Depression Recognition Challenge,” in *Proceedings of the 3rd ACM international workshop on Audio/Visual Emotion Challenge*, (Barcelona, Spain), pp. 3–10, ACM, ACM, October 2013. (> 100 citations)
- 338) M. Valstar, B. Schuller, J. Krajewski, R. Cowie, and M. Pantic, “Workshop summary for the 3rd international audio/visual emotion challenge and workshop (AVEC’13),” in *Proceedings of the 21st ACM international conference on Multimedia, ACM MM 2013*, (Barcelona, Spain), pp. 1085–1086, ACM, ACM, October 2013. (acceptance rate: 28 %)
- 339) F. Weninger, C. Kirst, B. Schuller, and H.-J. Bungartz, “A Discriminative Approach to Polyphonic Piano Note Transcription using Non-negative Matrix Factorization,” in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 6–10, IEEE, IEEE, May 2013. (acceptance rate: 53 %, IF\* 1.16 (2010))
- 340) F. Weninger, C. Wagner, M. Wöllmer, B. Schuller, and L.-P. Morency, “Speaker Trait Characterization in Web Videos: Uniting Speech, Language, and Facial Features,” in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 3647–3651, IEEE, IEEE, May 2013. (acceptance rate: 53 %, IF\* 1.16 (2010))
- 341) F. Weninger, J. Geiger, M. Wöllmer, B. Schuller, and G. Rigoll, “The Munich Feature Enhancement Approach to the 2013 CHiME Challenge Using BLSTM Recurrent Neural Networks,” in *Proceedings The 2nd CHiME Workshop on Machine Listening in Multisource Environments held in conjunction with ICASSP 2013*, (Vancouver, Canada), pp. 86–90, IEEE, IEEE, June 2013
- 342) F. Weninger, F. Eyben, and B. Schuller, “The TUM Approach to the MediaEval Music Emotion Task Using Generic Affective Audio Features,” in *Proceedings of the MediaEval 2013 Multimedia Benchmark Workshop* (M. Larson, X. Anguera, T. Reuter, G. J. Jones, B. Ionescu, M. Schedl, T. Piatrik, C. Hauff, and M. Soleymani, eds.), (Barcelona, Spain), CEUR, October 2013. 2 pages, best result
- 343) M. Wöllmer, Z. Zhang, F. Weninger, B. Schuller, and G. Rigoll, “Feature Enhancement by Bidirectional LSTM Networks for Conversational Speech Recognition in Highly Non-Stationary Noise,” in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 6822–6826, IEEE, IEEE, May 2013. (acceptance rate: 53 %, IF\* 1.16 (2010))
- 344) M. Wöllmer, B. Schuller, and G. Rigoll, “Probabilistic ASR Feature Extraction Applying Context-Sensitive Connectionist Temporal Classification Networks,” in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 7125–7129, May 2013
- 345) Z. Zhang, J. Deng, E. Marchi, and B. Schuller, “Active Learning by Label Uncertainty for Acoustic Emotion Recognition,” in *Proceedings INTERSPEECH 2013, 14th Annual Conference of the International Speech Communication Association*, (Lyon, France), pp. 2841–2845, ISCA, ISCA, August 2013. (acceptance rate: 52 %, IF\* 1.05 (2010))
- 346) Z. Zhang, J. Deng, and B. Schuller, “Co-Training Succeeds in Computational Paralinguistics,” in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 8505–8509, IEEE, IEEE, May 2013. (acceptance rate: 53 %, IF\* 1.16 (2010))
- 347) B. Schuller, S. Steidl, A. Batliner, E. Nöth, A. Vinciarelli, F. Burkhardt, R. van Son, F. Weninger, F. Eyben, T. Bocklet, G. Mohammadi, and B. Weiss, “The INTERSPEECH 2012 Speaker Trait Challenge,” in *Proceedings INTERSPEECH 2012, 13th Annual Conference of the International Speech Communication Association*, (Portland, OR), ISCA, ISCA, September 2012. 4 pages (acceptance rate: 52 %, IF\* 1.05 (2010), > 100 citations)
- 348) B. Schuller, M. Valstar, F. Eyben, R. Cowie, and M. Pantic, “AVEC 2012 – The Continuous Audio/Visual Emotion Challenge,” in *Proceedings of the 14th ACM International Conference on Multimodal Interaction, ICMI (L.-P. Morency, D. Bohus, H. K. Aghajan, J. Cassell, A. Nijholt, and J. Epps, eds.)*, (Santa Monica, CA), pp. 449–456, ACM, ACM, October 2012. (acceptance rate: 36 %, IF\* 1.77 (2010), > 100 citations)
- 349) B. Schuller, S. Hantke, F. Weninger, W. Han, Z. Zhang, and S. Narayanan, “Automatic Recognition of Emotion Evoked by General Sound Events,” in *Proceedings 37th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2012*, (Kyoto, Japan), pp. 341–344, IEEE, IEEE, March 2012. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 350) S. Ungruh, J. Krajewski, and B. Schuller, “Maus- und tastaturunterstützte Detektion von Schläfrigkeit Zuständen,” in *Proceedings 48. Kongress der Deutschen Gesellschaft für Psychologie*, (Bielefeld, Germany), Deutsche Gesellschaft für Psychologie (DGPs), Deutsche Gesellschaft für Psychologie, September 2012. 1 page
- 351) F. Eyben, F. Weninger, N. Lehment, G. Rigoll, and B. Schuller, “Violent Scenes Detection with Large, Brute-forced Acoustic and Visual Feature Sets,” in *Working Notes Proceedings of the MediaEval 2012 Workshop* (M. A. Larson, S. Schmiedeke, P. Kelm, A. Rae, V. Mezaris, T. Piatrik, M. Soleymani, F. Metzke, and G. J. Jones, eds.), vol. 927, (Pisa, Italy), CEUR, October 2012. 2 pages
- 352) C. Joder, F. Weninger, M. Wöllmer, and B. Schuller, “The TUM Cumulative DTW Approach for the Mediaeval 2012 Spoken Web Search Task,” in *Working Notes Proceedings of the MediaEval 2012 Workshop* (M. A. Larson, S. Schmiedeke, P. Kelm, A. Rae, V. Mezaris, T. Piatrik, M. Soleymani, F. Metzke, and G. J. Jones, eds.), vol. 927, (Pisa, Italy), CEUR, October 2012. 2 pages

- 353) F. Eyben, B. Schuller, and G. Rigoll, "Improving Generalisation and Robustness of Acoustic Affect Recognition," in *Proceedings of the 14th ACM International Conference on Multimodal Interaction, ICMI* (L.-P. Morency, D. Bohus, H. K. Aghajan, J. Cassell, A. Nijholt, and J. Epps, eds.), (Santa Monica, CA), pp. 517–522, ACM, ACM, October 2012. (acceptance rate: 36 %, IF\* 1.77 (2010))
- 354) W. Han, H. Li, L. Ma, X. Zhang, J. Sun, F. Eyben, and B. Schuller, "Preserving Actual Dynamic Trend of Emotion in Dimensional Speech Emotion Recognition," in *Proceedings of the 14th ACM International Conference on Multimodal Interaction, ICMI* (L.-P. Morency, D. Bohus, H. K. Aghajan, J. Cassell, A. Nijholt, and J. Epps, eds.), (Santa Monica, CA), pp. 523–528, ACM, ACM, October 2012. (acceptance rate: 36 %, IF\* 1.77 (2010))
- 355) E. Marchi, B. Schuller, A. Batliner, S. Fridenzon, S. Tal, and O. Golan, "Emotion in the Speech of Children with Autism Spectrum Conditions: Prosody and Everything Else," in *Proceedings 3rd Workshop on Child, Computer and Interaction (WOCCI 2012), Satellite Event of INTERSPEECH 2012*, (Portland, OR), ISCA, ISCA, September 2012. 8 pages (acceptance rate: 52 %, IF\* 1.05 (2010))
- 356) E. Marchi, A. Batliner, B. Schuller, S. Fridenzon, S. Tal, and O. Golan, "Speech, Emotion, Age, Language, Task, and Typicality: Trying to Disentangle Performance and Feature Relevance," in *Proceedings First International Workshop on Wide Spectrum Social Signal Processing (WS<sup>2</sup>P 2012), held in conjunction with the ASE/IEEE International Conference on Social Computing (SocialCom 2012)*, (Amsterdam, The Netherlands), ASE/IEEE, IEEE, September 2012. 8 pages (acceptance rate: 42 %, IF\* 2.6 (2010))
- 357) J. Deng and B. Schuller, "Confidence Measures in Speech Emotion Recognition Based on Semi-supervised Learning," in *Proceedings INTERSPEECH 2012, 13th Annual Conference of the International Speech Communication Association*, (Portland, OR), ISCA, ISCA, September 2012. 4 pages (acceptance rate: 52 %, IF\* 1.05 (2010))
- 358) F. Weninger, E. Marchi, and B. Schuller, "Improving Recognition of Speaker States and Traits by Cumulative Evidence: Intoxication, Sleepiness, Age and Gender," in *Proceedings INTERSPEECH 2012, 13th Annual Conference of the International Speech Communication Association*, (Portland, OR), ISCA, ISCA, September 2012. 4 pages (acceptance rate: 52 %, IF\* 1.05 (2010))
- 359) F. Weninger and B. Schuller, "Discrimination of Linguistic and Non-Linguistic Vocalizations in Spontaneous Speech: Intra- and Inter-Corpus Perspectives," in *Proceedings INTERSPEECH 2012, 13th Annual Conference of the International Speech Communication Association*, (Portland, OR), ISCA, ISCA, September 2012. 4 pages (acceptance rate: 52 %, IF\* 1.05 (2010))
- 360) R. Brückner and B. Schuller, "Likability Classification – A not so Deep Neural Network Approach," in *Proceedings INTERSPEECH 2012, 13th Annual Conference of the International Speech Communication Association*, (Portland, OR), ISCA, ISCA, September 2012. 4 pages (acceptance rate: 52 %, IF\* 1.05 (2010))
- 361) F. Weninger, M. Wöllmer, and B. Schuller, "Combining Bottleneck-BLSTM and Semi-Supervised Sparse NMF for Recognition of Conversational Speech in Highly Instationary Noise," in *Proceedings INTERSPEECH 2012, 13th Annual Conference of the International Speech Communication Association*, (Portland, OR), ISCA, ISCA, September 2012. 4 pages (acceptance rate: 52 %, IF\* 1.05 (2010))
- 362) Z. Zhang and B. Schuller, "Active Learning by Sparse Instance Tracking and Classifier Confidence in Acoustic Emotion Recognition," in *Proceedings INTERSPEECH 2012, 13th Annual Conference of the International Speech Communication Association*, (Portland, OR), ISCA, ISCA, September 2012. 4 pages (acceptance rate: 52 %, IF\* 1.05 (2010))
- 363) J. T. Geiger, R. Vipperla, S. Bozonnet, N. Evans, B. Schuller, and G. Rigoll, "Convolutional Non-Negative Sparse Coding and New Features for Speech Overlap Handling in Speaker Diarization," in *Proceedings INTERSPEECH 2012, 13th Annual Conference of the International Speech Communication Association*, (Portland, OR), ISCA, ISCA, September 2012. 4 pages (acceptance rate: 52 %, IF\* 1.05 (2010))
- 364) M. Wöllmer, F. Eyben, and B. Schuller, "Temporal and Situational Context Modeling for Improved Dominance Recognition in Meetings," in *Proceedings INTERSPEECH 2012, 13th Annual Conference of the International Speech Communication Association*, (Portland, OR), ISCA, ISCA, September 2012. 4 pages (acceptance rate: 52 %, IF\* 1.05 (2010))
- 365) F. Ringeval, M. Chetouani, and B. Schuller, "Novel Metrics of Speech Rhythm for the Assessment of Emotion," in *Proceedings INTERSPEECH 2012, 13th Annual Conference of the International Speech Communication Association*, (Portland, OR), ISCA, ISCA, September 2012. 4 pages (acceptance rate: 52 %, IF\* 1.05 (2010))
- 366) C. Joder and B. Schuller, "Score-Informed Leading Voice Separation from Monaural Audio," in *Proceedings 13th International Society for Music Information Retrieval Conference, ISMIR 2012*, (Porto, Portugal), pp. 277–282, ISMIR, ISMIR, October 2012. (acceptance rate: 44 %)
- 367) J. T. Geiger, R. Vipperla, N. Evans, B. Schuller, and G. Rigoll, "Speech Overlap Handling for Speaker Diarization Using Convolutional Non-negative Sparse Coding and Energy-Related Features," in *Proceedings 20th European Signal Processing Conference (EUSIPCO)*, (Bucharest, Romania), EURASIP, EURASIP, August 2012. 4 pages
- 368) W. Han, H. Li, L. Ma, X. Zhang, and B. Schuller, "A Ranking-based Emotion Annotation Scheme and Real-life Speech Database," in *Proceedings 4th International Workshop on EMOTION SENTIMENT & SOCIAL SIGNALS 2012 (ES<sup>2</sup> 2012) – Corpora for Research on Emotion, Sentiment & Social Signals, held in conjunction with LREC 2012*, (Istanbul, Turkey), pp. 67–71, ELRA, ELRA, May 2012. (acceptance rate: 68 %, IF\* 1.37 (2010))
- 369) E. Principi, R. Rotili, M. Wöllmer, S. Squartini, and B. Schuller, "Dominance Detection in a Reverberated Acoustic Scenario," in *Proceedings 9th International Conference on Advances in Neural Networks, ISNN 2012, Shenyang, China, 11.-14.07.2012*, vol. 7367 of *Lecture Notes in Computer Science (LNCS)*, pp. 394–402, Berlin/Heidelberg: Springer, July 2012. Special Session on Advances in Cognitive and Emotional Information Processing
- 370) F. Weninger, M. Wöllmer, J. Geiger, B. Schuller, J. Gemmeke, A. Hurmalainen, T. Virtanen, and G. Rigoll, "Non-Negative Matrix Factorization for Highly Noise-Robust ASR: to Enhance or to Recognize?," in *Proceedings 37th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2012*, (Kyoto, Japan), pp. 4681–4684, IEEE, IEEE, March 2012. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 371) M. Wöllmer, A. Metallinou, N. Katsamanis, B. Schuller, and S. Narayanan, "Analyzing the Memory of BLSTM Neural Networks for Enhanced Emotion Classification in Dyadic Spoken Interactions," in *Proceedings 37th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2012*, (Kyoto, Japan), pp. 4157–4160, IEEE, IEEE, March 2012. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 372) Z. Zhang and B. Schuller, "Semi-supervised Learning Helps in Sound Event Classification," in *Proceedings 37th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2012*, (Kyoto, Japan), pp. 333–336, IEEE, IEEE, March 2012. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 373) F. Weninger, J. Feliu, and B. Schuller, "Supervised and Semi-Supervised Suppression of Background Music in Monaural Speech Recordings," in *Proceedings 37th IEEE International Conference on Acoustics, Speech, and Signal Processing*,

- ICASSP 2012, (Kyoto, Japan), pp. 61–64, IEEE, IEEE, March 2012. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 374) F. Weninger, N. Amir, O. Amir, I. Ronen, F. Eyben, and B. Schuller, “Robust Feature Extraction for Automatic Recognition of Vibrato Singing in Recorded Polyphonic Music,” in *Proceedings 37th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2012*, (Kyoto, Japan), pp. 85–88, IEEE, IEEE, March 2012. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 375) D. Prylipko, B. Schuller, and A. Wendemuth, “Fine-Tuning HMMs for Nonverbal Vocalizations in Spontaneous Speech: a Multicorpus Perspective,” in *Proceedings 37th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2012*, (Kyoto, Japan), pp. 4625–4628, IEEE, IEEE, March 2012. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 376) F. Eyben, S. Petridis, B. Schuller, and M. Pantic, “Audiovisual Vocal Outburst Classification in Noisy Acoustic Conditions,” in *Proceedings 37th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2012*, (Kyoto, Japan), pp. 5097–5100, IEEE, IEEE, March 2012. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 377) R. Vippera, J. Geiger, S. Bozonnet, D. Wang, N. Evans, B. Schuller, and G. Rigoll, “Speech Overlap Detection and Attribution Using Convolutional Non-Negative Sparse Coding,” in *Proceedings 37th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2012*, (Kyoto, Japan), pp. 4181–4184, IEEE, IEEE, March 2012. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 378) C. Joder, F. Weninger, F. Eyben, D. Virette, and B. Schuller, “Real-time Speech Separation by Semi-Supervised Nonnegative Matrix Factorization,” in *Proceedings 10th International Conference on Latent Variable Analysis and Signal Separation, LVA/ICA 2012* (F. J. Theis, A. Cichocki, A. Yeredor, and M. Zibulevsky, eds.), vol. 7191 of *Lecture Notes in Computer Science*, (Tel Aviv, Israel), pp. 322–329, Springer, March 2012. Special Session Real-world constraints and opportunities in audio source separation
- 379) B. Schuller, F. Weninger, and J. Dorfner, “Multi-Modal Non-Prototypical Music Mood Analysis in Continuous Space: Reliability and Performances,” in *Proceedings 12th International Society for Music Information Retrieval Conference, ISMIR 2011*, (Miami, FL), pp. 759–764, ISMIR, ISMIR, October 2011. (acceptance rate: 59 %)
- 380) B. Schuller, M. Valstar, F. Eyben, G. McKeown, R. Cowie, and M. Pantic, “AVEC 2011 ?- The First International Audio/Visual Emotion Challenge,” in *Proceedings First International Audio/Visual Emotion Challenge and Workshop, AVEC 2011, held in conjunction with the International HUMAINE Association Conference on Affective Computing and Intelligent Interaction 2011, ACII 2011* (B. Schuller, M. Valstar, R. Cowie, and M. Pantic, eds.), vol. II, pp. 415–424, Memphis, TN: Springer, October 2011. (> 200 citations)
- 381) B. Schuller, Z. Zhang, F. Weninger, and G. Rigoll, “Selecting Training Data for Cross-Corpus Speech Emotion Recognition: Prototypicality vs. Generalization,” in *Proceedings 2011 Speech Processing Conference*, (Tel Aviv, Israel), AVIOS, AVIOS, June 2011. invited contribution, 4 pages
- 382) B. Schuller, A. Batliner, S. Steidl, F. Schiel, and J. Krajewski, “The INTERSPEECH 2011 Speaker State Challenge,” in *Proceedings INTERSPEECH 2011, 12th Annual Conference of the International Speech Communication Association*, (Florence, Italy), pp. 3201–3204, ISCA, ISCA, August 2011. (acceptance rate: 59 %, IF\* 1.05 (2010), > 100 citations)
- 383) B. Schuller, Z. Zhang, F. Weninger, and G. Rigoll, “Using Multiple Databases for Training in Emotion Recognition: To Unite or to Vote?,” in *Proceedings INTERSPEECH 2011, 12th Annual Conference of the International Speech Communication Association*, (Florence, Italy), pp. 1553–1556, ISCA, ISCA, August 2011. (acceptance rate: 59 %, IF\* 1.05 (2010))
- 384) R. Rotili, E. Principi, S. Squartini, and B. Schuller, “A Real-Time Speech Enhancement Framework for Multi-party Meetings,” in *Advances in Nonlinear Speech Processing, 5th International Conference on Nonlinear Speech Processing, NoLISP 2011, Las Palmas de Gran Canaria, Spain, November 7-9, 2011, Proceedings* (C. M. Travieso-González and J. Alonso-Hernández, eds.), vol. 7015/2011 of *Lecture Notes in Computer Science (LNCS)*, pp. 80–87, Springer, 2011
- 385) M. Wöllmer and B. Schuller, “Enhancing Spontaneous Speech Recognition with BLSTM Features,” in *Advances in Nonlinear Speech Processing, 5th International Conference on Nonlinear Speech Processing, NoLISP 2011, Las Palmas de Gran Canaria, Spain, November 7-9, 2011, Proceedings* (C. M. Travieso-González and J. Alonso-Hernández, eds.), vol. 7015/2011 of *Lecture Notes in Computer Science (LNCS)*, pp. 17–24, Springer, 2011
- 386) Z. Zhang, F. Weninger, M. Wöllmer, and B. Schuller, “Unsupervised Learning in Cross-Corpus Acoustic Emotion Recognition,” in *Proceedings 12th Biannual IEEE Automatic Speech Recognition and Understanding Workshop, ASRU 2011*, (Big Island, HI), pp. 523–528, IEEE, IEEE, December 2011. (acceptance rate: 43 %)
- 387) M. Wöllmer, B. Schuller, and G. Rigoll, “A Novel Bottleneck-BLSTM Front-End for Feature-Level Context Modeling in Conversational Speech Recognition,” in *Proceedings 12th Biannual IEEE Automatic Speech Recognition and Understanding Workshop, ASRU 2011*, (Big Island, HI), pp. 36–41, IEEE, IEEE, December 2011. (acceptance rate: 43 %)
- 388) F. Weninger, M. Wöllmer, and B. Schuller, “Automatic Assessment of Singer Traits in Popular Music: Gender, Age, Height and Race,” in *Proceedings 12th International Society for Music Information Retrieval Conference, ISMIR 2011*, (Miami, FL), pp. 37–42, ISMIR, ISMIR, October 2011. (acceptance rate: 59 %)
- 389) S. Ungruh, J. Krajewski, F. Eyben, and B. Schuller, “Maus- und tastaturunterstützte Detektion von Schläfrigkeitsszuständen,” in *Proceedings 7. Tagung der Fachgruppe Arbeits-, Organisations- und Wirtschaftspsychologie, AOW 2011*, (Rostock, Germany), Deutsche Gesellschaft für Psychologie (DGPs), Deutsche Gesellschaft für Psychologie, September 2011. 1 page
- 390) F. Weninger, J. Geiger, M. Wöllmer, B. Schuller, and G. Rigoll, “The Munich 2011 CHiME Challenge Contribution: NMF-BLSTM Speech Enhancement and Recognition for Reverberated Multisource Environments,” in *Proceedings Machine Listening in Multisource Environments, CHiME 2011, satellite workshop of Interspeech 2011*, (Florence, Italy), pp. 24–29, ISCA, ISCA, September 2011. (acceptance rate: 59 %, IF\* 1.05 (2010))
- 391) M. Wöllmer, F. Weninger, F. Eyben, and B. Schuller, “Acoustic-Linguistic Recognition of Interest in Speech with Bottleneck-BLSTM Nets,” in *Proceedings INTERSPEECH 2011, 12th Annual Conference of the International Speech Communication Association*, (Florence, Italy), pp. 3201–3204, ISCA, ISCA, August 2011. (acceptance rate: 59 %, IF\* 1.05 (2010))
- 392) M. Wöllmer, F. Weninger, S. Steidl, A. Batliner, and B. Schuller, “Speech-based Non-prototypical Affect Recognition for Child-Robot Interaction in Reverberated Environments,” in *Proceedings INTERSPEECH 2011, 12th Annual Conference of the International Speech Communication Association*, (Florence, Italy), pp. 3113–3116, ISCA, ISCA, August 2011. (acceptance rate: 59 %, IF\* 1.05 (2010))
- 393) M. Wöllmer, B. Schuller, and G. Rigoll, “Feature Frame Stacking in RNN-based Tandem ASR Systems – Learned vs. Predefined Context,” in *Proceedings INTERSPEECH 2011, 12th Annual Conference of the International Speech Communication Association*, (Florence, Italy), pp. 1233–1236, ISCA, ISCA, August 2011. (acceptance rate: 59 %, IF\* 1.05 (2010))
- 394) F. Burkhardt, B. Schuller, B. Weiss, and F. Weninger, ““Would You Buy A Car From Me?” -? On the Likability of Telephone

- Voices,” in *Proceedings INTERSPEECH 2011, 12th Annual Conference of the International Speech Communication Association*, (Florence, Italy), pp. 1557–1560, ISCA, ISCA, August 2011. (acceptance rate: 59%, IF\* 1.05 (2010))
- 395) J. T. Geiger, M. A. Lakhall, B. Schuller, and G. Rigoll, “Learning new acoustic events in an HMM-based system using MAP adaptation,” in *Proceedings INTERSPEECH 2011, 12th Annual Conference of the International Speech Communication Association*, (Florence, Italy), pp. 293–296, ISCA, ISCA, August 2011. (acceptance rate: 59%, IF\* 1.05 (2010))
- 396) H. Gunes, B. Schuller, M. Pantic, and R. Cowie, “Emotion Representation, Analysis and Synthesis in Continuous Space: A Survey,” in *Proceedings International Workshop on Emotion Synthesis, rePresentation, and Analysis in Continuous space, EmoSPACE 2011, held in conjunction with the 9th IEEE International Conference on Automatic Face & Gesture Recognition and Workshops, FG 2011*, (Santa Barbara, CA), pp. 827–834, IEEE, IEEE, March 2011. (> 100 citations)
- 397) M. Wöllmer, E. Marchi, S. Squartini, and B. Schuller, “Robust Multi-Stream Keyword and Non-Linguistic Vocalization Detection for Computationally Intelligent Virtual Agents,” in *Proceedings 8th International Conference on Advances in Neural Networks, ISNN 2011, Guilin, China, 29.05.-01.06.2011* (D. Liu, H. Zhang, M. Polycarpou, C. Alippi, and H. He, eds.), vol. 6676, Part II of *Lecture Notes in Computer Science (LNCS)*, pp. 496–505, Berlin/Heidelberg: Springer, May/June 2011
- 398) F. Eyben, M. Wöllmer, M. Valstar, H. Gunes, B. Schuller, and M. Pantic, “String-based Audiovisual Fusion of Behavioural Events for the Assessment of Dimensional Affect,” in *Proceedings International Workshop on Emotion Synthesis, rePresentation, and Analysis in Continuous space, EmoSPACE 2011, held in conjunction with the 9th IEEE International Conference on Automatic Face & Gesture Recognition and Workshops, FG 2011*, (Santa Barbara, CA), pp. 322–329, IEEE, IEEE, March 2011
- 399) F. Eyben, S. Petridis, B. Schuller, G. Tzimiropoulos, S. Zafeiriou, and M. Pantic, “Audiovisual Classification of Vocal Outbursts in Human Conversation Using Long-Short-Term Memory Networks,” in *Proceedings 36th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2011*, (Prague, Czech Republic), pp. 5844–5847, IEEE, IEEE, May 2011. (acceptance rate: 49%, IF\* 1.16 (2010))
- 400) F. Wenginger, B. Schuller, M. Wöllmer, and G. Rigoll, “Localization of Non-Linguistic Events in Spontaneous Speech by Non-Negative Matrix Factorization and Long Short-Term Memory,” in *Proceedings 36th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2011*, (Prague, Czech Republic), pp. 5840–5843, IEEE, IEEE, May 2011. (acceptance rate: 49%, IF\* 1.16 (2010))
- 401) F. Wenginger and B. Schuller, “Audio Recognition in the Wild: Static and Dynamic Classification on a Real-World Database of Animal Vocalizations,” in *Proceedings 36th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2011*, (Prague, Czech Republic), pp. 337–340, IEEE, IEEE, May 2011. (acceptance rate: 49%, IF\* 1.16 (2010))
- 402) M. Wöllmer, F. Eyben, B. Schuller, and G. Rigoll, “A Multi-Stream ASR Framework for BLSTM Modeling of Conversational Speech,” in *Proceedings 36th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2011*, (Prague, Czech Republic), pp. 4860–4863, IEEE, IEEE, May 2011. (acceptance rate: 49%, IF\* 1.16 (2010))
- 403) F. Wenginger, J.-L. Durrieu, F. Eyben, G. Richard, and B. Schuller, “Combining Monaural Source Separation With Long Short-Term Memory for Increased Robustness in Vocalist Gender Recognition,” in *Proceedings 36th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2011*, (Prague, Czech Republic), pp. 2196–2199, IEEE, IEEE, May 2011. (acceptance rate: 49%, IF\* 1.16 (2010))
- 404) F. Wenginger, A. Lehmann, and B. Schuller, “openBLISSART: Design and Evaluation of a Research Toolkit for Blind Source Separation in Audio Recognition Tasks,” in *Proceedings 36th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2011*, (Prague, Czech Republic), pp. 1625–1628, IEEE, IEEE, May 2011. (acceptance rate: 49%, IF\* 1.16 (2010))
- 405) C. Landsiedel, J. Edlund, F. Eyben, D. Neiberg, and B. Schuller, “Syllabification of Conversational Speech Using Bidirectional Long-Short-Term Memory Neural Networks,” in *Proceedings 36th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2011*, (Prague, Czech Republic), pp. 5265–5268, IEEE, IEEE, May 2011. (acceptance rate: 49%, IF\* 1.16 (2010))
- 406) A. Stuhlsatz, C. Meyer, F. Eyben, T. Zielke, G. Meier, and B. Schuller, “Deep Neural Networks for Acoustic Emotion Recognition: Raising the Benchmarks,” in *Proceedings 36th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2011*, (Prague, Czech Republic), pp. 5688–5691, IEEE, IEEE, May 2011. (acceptance rate: 49%, IF\* 1.16 (2010))
- 407) B. Schuller, S. Steidl, A. Batliner, F. Burkhardt, L. Devillers, C. Müller, and S. Narayanan, “The INTERSPEECH 2010 Paralinguistic Challenge,” in *Proceedings INTERSPEECH 2010, 11th Annual Conference of the International Speech Communication Association*, (Makuhari, Japan), pp. 2794–2797, ISCA, ISCA, September 2010. (acceptance rate: 58%, IF\* 1.05 (2010), > 200 citations)
- 408) B. Schuller and L. Devillers, “Incremental Acoustic Valence Recognition: an Inter-Corpus Perspective on Features, Matching, and Performance in a Gating Paradigm,” in *Proceedings INTERSPEECH 2010, 11th Annual Conference of the International Speech Communication Association*, (Makuhari, Japan), pp. 2794–2797, ISCA, ISCA, September 2010. (acceptance rate: 58%, IF\* 1.05 (2010))
- 409) B. Schuller, C. Kozielski, F. Wenginger, F. Eyben, and G. Rigoll, “Vocalist Gender Recognition in Recorded Popular Music,” in *Proceedings 11th International Society for Music Information Retrieval Conference, ISMIR 2010*, (Utrecht, The Netherlands), pp. 613–618, ISMIR, ISMIR, October 2010. (acceptance rate: 61%)
- 410) B. Schuller, R. Zaccarelli, N. Rollet, and L. Devillers, “CIN-EMO -? A French Spoken Language Resource for Complex Emotions: Facts and Baselines,” in *Proceedings 7th International Conference on Language Resources and Evaluation, LREC 2010* (N. Calzolari, K. Choukri, B. Maegaard, J. Mariani, J. Odijk, S. Piperidis, M. Rosner, and D. Tapias, eds.), (Valletta, Malta), pp. 1643–1647, ELRA, European Language Resources Association, May 2010. (acceptance rate: 69%, IF\* 1.37 (2010))
- 411) B. Schuller, F. Eyben, S. Can, and H. Feussner, “Speech in Minimal Invasive Surgery – Towards an Affective Language Resource of Real-life Medical Operations,” in *Proceedings 3rd International Workshop on EMOTION: Corpora for Research on Emotion and Affect, satellite of LREC 2010* (L. Devillers, B. Schuller, R. Cowie, E. Douglas-Cowie, and A. Batliner, eds.), (Valletta, Malta), pp. 5–9, ELRA, European Language Resources Association, May 2010. (acceptance rate: 69%, IF\* 1.37 (2010))
- 412) B. Schuller, F. Wenginger, M. Wöllmer, Y. Sun, and G. Rigoll, “Non-Negative Matrix Factorization as Noise-Robust Feature Extractor for Speech Recognition,” in *Proceedings 35th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2010*, (Dallas, TX), pp. 4562–4565, IEEE, IEEE, March 2010. (acceptance rate: 48%, IF\* 1.16 (2010))
- 413) B. Schuller and F. Burkhardt, “Learning with Synthesized Speech for Automatic Emotion Recognition,” in *Proceedings 35th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2010*, (Dallas, TX), pp. 5150–515, IEEE, IEEE, March 2010. (acceptance rate: 48%, IF\* 1.16

- (2010))
- 414) B. Schuller and F. Weninger, "Discrimination of Speech and Non-Linguistic Vocalizations by Non-Negative Matrix Factorization," in *Proceedings 35th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2010*, (Dallas, TX), pp. 5054–5057, IEEE, IEEE, March 2010. (acceptance rate: 48 %, IF\* 1.16 (2010))
- 415) B. Schuller, F. Metze, S. Steidl, A. Batliner, F. Eyben, and T. Polzehl, "Late Fusion of Individual Engines for Improved Recognition of Negative Emotions in Speech – Learning vs. Democratic Vote," in *Proceedings 35th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2010*, (Dallas, TX), pp. 5230–5233, IEEE, IEEE, March 2010. (acceptance rate: 48 %, IF\* 1.16 (2010))
- 416) F. Metze, A. Batliner, F. Eyben, T. Polzehl, B. Schuller, and S. Steidl, "Emotion Recognition using Imperfect Speech Recognition," in *Proceedings INTERSPEECH 2010, 11th Annual Conference of the International Speech Communication Association*, (Makuhari, Japan), pp. 478–481, ISCA, ISCA, September 2010. (acceptance rate: 58 %, IF\* 1.05 (2010))
- 417) M. Wöllmer, F. Eyben, B. Schuller, and G. Rigoll, "Recognition of Spontaneous Conversational Speech using Long Short-Term Memory Phoneme Predictions," in *Proceedings INTERSPEECH 2010, 11th Annual Conference of the International Speech Communication Association*, (Makuhari, Japan), pp. 1946–1949, ISCA, ISCA, September 2010. (acceptance rate: 58 %, IF\* 1.05 (2010))
- 418) M. Wöllmer, Y. Sun, F. Eyben, and B. Schuller, "Long Short-Term Memory Networks for Noise Robust Speech Recognition," in *Proceedings INTERSPEECH 2010, 11th Annual Conference of the International Speech Communication Association*, (Makuhari, Japan), pp. 2966–2969, ISCA, ISCA, September 2010. (acceptance rate: 58 %, IF\* 1.05 (2010))
- 419) M. Wöllmer, A. Metallinou, F. Eyben, B. Schuller, and S. Narayanan, "Context-Sensitive Multimodal Emotion Recognition from Speech and Facial Expression using Bidirectional LSTM Modeling," in *Proceedings INTERSPEECH 2010, 11th Annual Conference of the International Speech Communication Association*, (Makuhari, Japan), pp. 2362–2365, ISCA, ISCA, September 2010. (acceptance rate: 58 %, IF\* 1.05 (2010))
- 420) M. Wöllmer, F. Eyben, B. Schuller, and G. Rigoll, "Spoken Term Detection with Connectionist Temporal Classification: a Novel Hybrid CTC-DBN Decoder," in *Proceedings 35th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2010*, (Dallas, TX), pp. 5274–5277, IEEE, IEEE, March 2010. (acceptance rate: 48 %, IF\* 1.16 (2010))
- 421) F. Eyben, M. Wöllmer, and B. Schuller, "openSMILE – The Munich Versatile and Fast Open-Source Audio Feature Extractor," in *Proceedings of the 18th ACM International Conference on Multimedia, MM 2010*, (Florence, Italy), pp. 1459–1462, ACM, ACM, October 2010. (Honorable Mention (2nd place) in the ACM MM 2010 Open-source Software Competition, acceptance rate short paper: about 30 %, IF\* 2.45 (2010), > 600 citations)
- 422) D. Arsić, M. Wöllmer, G. Rigoll, L. Roalter, M. Kranz, M. Kaiser, F. Eyben, and B. Schuller, "Automated 3D Gesture Recognition Applying Long Short-Term Memory and Contextual Knowledge in a CAVE," in *Proceedings 1st Workshop on Multimodal Pervasive Video Analysis, MPVA 2010, held in conjunction with ACM Multimedia 2010*, (Florence, Italy), pp. 33–36, ACM, ACM, October 2010. (acceptance rate short paper: about 30 %, IF\* 2.45 (2010))
- 423) F. Eyben, S. Böck, B. Schuller, and A. Graves, "Universal Onset Detection with Bidirectional Long-Short Term Memory Neural Networks," in *Proceedings 11th International Society for Music Information Retrieval Conference, ISMIR 2010*, (Utrecht, The Netherlands), pp. 589–594, ISMIR, ISMIR, October 2010. (acceptance rate: 61 %)
- 424) M. Brendel, R. Zaccarelli, B. Schuller, and L. Devillers, "Towards measuring similarity between emotional corpora," in *Proceedings 3rd International Workshop on EMOTION: Corpora for Research on Emotion and Affect, satellite of LREC 2010* (L. Devillers, B. Schuller, R. Cowie, E. Douglas-Cowie, and A. Batliner, eds.), (Valletta, Malta), pp. 58–64, ELRA, European Language Resources Association, May 2010. (acceptance rate: 69 %, IF\* 1.37 (2010))
- 425) F. Eyben, A. Batliner, B. Schuller, D. Seppi, and S. Steidl, "Cross-Corpus Classification of Realistic Emotions ?- Some Pilot Experiments," in *Proceedings 3rd International Workshop on EMOTION: Corpora for Research on Emotion and Affect, satellite of LREC 2010* (L. Devillers, B. Schuller, R. Cowie, E. Douglas-Cowie, and A. Batliner, eds.), (Valletta, Malta), pp. 77–82, ELRA, European Language Resources Association, May 2010. (acceptance rate: 69 %, IF\* 1.37 (2010))
- 426) E. de Sevin, E. Bevacqua, S. Pammi, C. Pelachaud, M. Schröder, and B. Schuller, "A Multimodal Listener Behaviour Driven by Audio Input," in *Proceedings International Workshop on Interacting with ECAs as Virtual Characters, satellite of AAMAS 2010*, (Toronto, Canada), ACM, ACM, May 2010. 4 pages (acceptance rate: 24 %, IF\* 3.12 (2010))
- 427) M. Schröder, S. Pammi, R. Cowie, G. McKeown, H. Gunes, M. Pantic, M. Valstar, D. Heylen, M. ter Maat, F. Eyben, B. Schuller, M. Wöllmer, E. Bevacqua, C. Pelachaud, and E. de Sevin, "Demo: Have a Chat with Sensitive Artificial Listeners," in *Proceedings 36th Annual Convention of the Society for the Study of Artificial Intelligence and Simulation of Behaviour, AISB 2010*, (Leicester, UK), AISB, AISB, March 2010. Symposium Towards a Comprehensive Intelligence Test, TCIT, 1 page
- 428) M. Schröder, R. Cowie, D. Heylen, M. Pantic, C. Pelachaud, and B. Schuller, "How to build a machine that people enjoy talking to," in *Proceedings 4th International Conference on Cognitive Systems, CogSys*, (Zurich, Switzerland), January 2010. 1 page
- 429) D. Seppi, A. Batliner, S. Steidl, B. Schuller, and E. Nöth, "Word Accent and Emotion," in *Proceedings 5th International Conference on Speech Prosody, SP 2010*, (Chicago, IL), ISCA, ISCA, May 2010. 4 pages
- 430) B. Schuller, B. Vlasenko, F. Eyben, G. Rigoll, and A. Wendenmuth, "Acoustic Emotion Recognition: A Benchmark Comparison of Performances," in *Proceedings 11th Biannual IEEE Automatic Speech Recognition and Understanding Workshop, ASRU 2009*, (Merano, Italy), pp. 552–557, IEEE, IEEE, December 2009. (acceptance rate: 43 %, > 100 citations)
- 431) B. Schuller, S. Steidl, and A. Batliner, "The Interspeech 2009 Emotion Challenge," in *Proceedings INTERSPEECH 2009, 10th Annual Conference of the International Speech Communication Association*, (Brighton, UK), pp. 312–315, ISCA, ISCA, September 2009. (acceptance rate: 58 %, IF\* 1.05 (2010), > 400 citations)
- 432) B. Schuller and G. Rigoll, "Recognising Interest in Conversational Speech – Comparing Bag of Frames and Supra-segmental Features," in *Proceedings INTERSPEECH 2009, 10th Annual Conference of the International Speech Communication Association*, (Brighton, UK), pp. 1999–2002, ISCA, ISCA, September 2009. (acceptance rate: 58 %, IF\* 1.05 (2010))
- 433) B. Schuller, J. Schenk, G. Rigoll, and T. Knaup, "'The Godfather' vs. 'Chaos': Comparing Linguistic Analysis based on Online Knowledge Sources and Bags-of-N-Grams for Movie Review Valence Estimation," in *Proceedings 10th International Conference on Document Analysis and Recognition, ICDAR 2009*, (Barcelona, Spain), pp. 858–862, IAPR, IEEE, July 2009. (acceptance rate: 64 %)
- 434) B. Schuller, S. Can, H. Feussner, M. Wöllmer, D. Arsić, and B. Hörnler, "Speech Control in Surgery: a Field Analysis and Strategies," in *Proceedings 10th IEEE International Conference on Multimedia and Expo, ICME 2009*, (New York, NY), pp. 1214–1217, IEEE, IEEE, July 2009. (acceptance rate: about 30 %, IF\* 0.88 (2010))

- 435) B. Schuller, B. Hörnler, D. Arsić, and G. Rigoll, "Audio Chord Labeling by Musiological Modeling and Beat-Synchronization," in *Proceedings 10th IEEE International Conference on Multimedia and Expo, ICME 2009*, (New York, NY), pp. 526–529, IEEE, IEEE, July 2009. (acceptance rate: about 30 %, IF\* 0.88 (2010))
- 436) B. Schuller, "Traits Prosodiques dans la Modélisation Acoustique à Base de Segment," in *Proceedings Conférence Internationale sur Prosodie et Iconicité, Prosico 2009* (S. Hancil, ed.), (Rouen, France), pp. 24–26, April 2009
- 437) B. Schuller, A. Batliner, S. Steidl, and D. Seppi, "Emotion Recognition from Speech: Putting ASR in the Loop," in *Proceedings 34th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2009*, (Taipei, Taiwan), pp. 4585–4588, IEEE, IEEE, April 2009. (acceptance rate: 43 %, IF\* 1.16 (2010))
- 438) M. Wöllmer, F. Eyben, B. Schuller, and G. Rigoll, "Robust Vocabulary Independent Keyword Spotting with Graphical Models," in *Proceedings 11th Biannual IEEE Automatic Speech Recognition and Understanding Workshop, ASRU 2009*, (Merano, Italy), pp. 349–353, IEEE, IEEE, December 2009. (acceptance rate: 43 %)
- 439) F. Eyben, M. Wöllmer, B. Schuller, and A. Graves, "From Speech to Letters – Using a novel Neural Network Architecture for Grapheme Based ASR," in *Proceedings 11th Biannual IEEE Automatic Speech Recognition and Understanding Workshop, ASRU 2009*, (Merano, Italy), pp. 376–380, IEEE, IEEE, December 2009. (acceptance rate: 43 %)
- 440) M. Wöllmer, F. Eyben, B. Schuller, E. Douglas-Cowie, and R. Cowie, "Data-driven Clustering in Emotional Space for Affect Recognition Using Discriminatively Trained LSTM Networks," in *Proceedings INTERSPEECH 2009, 10th Annual Conference of the International Speech Communication Association*, (Brighton, UK), pp. 1595–1598, ISCA, ISCA, September 2009. (acceptance rate: 58 %, IF\* 1.05 (2010))
- 441) M. Wöllmer, F. Eyben, B. Schuller, Y. Sun, T. Moosmayr, and N. Nguyen-Thien, "Robust In-Car Spelling Recognition – A Tandem BLSTM-HMM Approach," in *Proceedings INTERSPEECH 2009, 10th Annual Conference of the International Speech Communication Association*, (Brighton, UK), pp. 1990–1972, ISCA, ISCA, September 2009. (acceptance rate: 58 %, IF\* 1.05 (2010))
- 442) J. Schenk, B. Hörnler, B. Schuller, A. Braun, and G. Rigoll, "GMs in On-Line Handwritten Whiteboard Note Recognition: the Influence of Implementation and Modeling," in *Proceedings 10th International Conference on Document Analysis and Recognition, ICDAR 2009*, (Barcelona, Spain), pp. 877–880, IAPR, IEEE, July 2009. (acceptance rate: 64 %)
- 443) B. Hörnler, D. Arsić, B. Schuller, and G. Rigoll, "Boosting Multi-modal Camera Selection with Semantic Features," in *Proceedings 10th IEEE International Conference on Multimedia and Expo, ICME 2009*, (New York, NY), pp. 1298–1301, IEEE, IEEE, July 2009. (acceptance rate: about 30 %, IF\* 0.88 (2010))
- 444) M. Wöllmer, F. Eyben, J. Keshet, A. Graves, B. Schuller, and G. Rigoll, "Robust Discriminative Keyword Spotting for Emotionally Colored Spontaneous Speech Using Bidirectional LSTM Networks," in *Proceedings 34th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2009*, (Taipei, Taiwan), pp. 3949–3952, IEEE, IEEE, April 2009. (acceptance rate: 43 %, IF\* 1.16 (2010))
- 445) D. Arsić, A. Lyutskanov, B. Schuller, and G. Rigoll, "Applying Bayes Markov Chains for the Detection of ATM Related Scenarios," in *Proceedings 10th IEEE Workshop on Applications of Computer Vision, WACV 2009*, (Snowbird, UT), pp. 464–471, IEEE, IEEE, December 2009
- 446) M. Schröder, E. Bevacqua, F. Eyben, H. Gunes, D. Heylen, M. ter Maat, S. Pammi, M. Pantic, C. Pelachaud, B. Schuller, E. de Sevin, M. Valstar, and M. Wöllmer, "A Demonstration of Audiovisual Sensitive Artificial Listeners," in *Proceedings 3rd International Conference on Affective Computing and Intelligent Interaction and Workshops, ACII 2009*, vol. I, (Amsterdam, The Netherlands), pp. 263–264, HUMAINE Association, IEEE, September 2009. Best Technical Demonstration Award
- 447) F. Eyben, M. Wöllmer, and B. Schuller, "openEAR – Introducing the Munich Open-Source Emotion and Affect Recognition Toolkit," in *Proceedings 3rd International Conference on Affective Computing and Intelligent Interaction and Workshops, ACII 2009*, vol. I, (Amsterdam, The Netherlands), pp. 576–581, HUMAINE Association, IEEE, September 2009. (> 200 citations)
- 448) M. Wöllmer, F. Eyben, A. Graves, B. Schuller, and G. Rigoll, "A Tandem BLSTM-DBN Architecture for Keyword Spotting with Enhanced Context Modeling," in *Proceedings ISCA Tutorial and Research Workshop on Non-Linear Speech Processing, NOLISP 2009*, (Vic, Spain), ISCA, ISCA, June 2009. 9 pages
- 449) N. Lehment, D. Arsić, A. Lyutskanov, B. Schuller, and G. Rigoll, "Supporting Multi Camera Tracking by Monocular Deformable Graph Tracking," in *Proceedings 11th IEEE International Workshop on Performance Evaluation of Tracking and Surveillance, PETS 2009, in Conjunction with the IEEE Conference on Computer Vision and Pattern Recognition, CVPR 2009*, (Miami, FL), pp. 87–94, IEEE, IEEE, June 2009. (acceptance rate: 26 %, IF\* 5.97 (2010))
- 450) D. Arsić, B. Schuller, B. Hörnler, and G. Rigoll, "A Hierarchical Approach for Visual Suspicious Behavior Detection in Aircrafts," in *Proceedings 16th International Conference on Digital Signal Processing, DSP 2009*, (Santorini, Greece), IEEE, IEEE, July 2009. 7 pages (acceptance rate oral: 38 %)
- 451) D. Arsić, B. Hörnler, B. Schuller, and G. Rigoll, "Resolving Partial Occlusions in Crowded Environments Utilizing Range Data and Video Cameras," in *Proceedings 16th International Conference on Digital Signal Processing, DSP 2009*, (Santorini, Greece), IEEE, IEEE, July 2009. 6 pages (acceptance rate oral: 38 %)
- 452) B. Hörnler, D. Arsić, B. Schuller, and G. Rigoll, "Graphical Models for Multi-Modal Automatic Video Editing in Meetings," in *Proceedings 16th International Conference on Digital Signal Processing, DSP 2009*, (Santorini, Greece), IEEE, IEEE, July 2009. 8 pages (acceptance rate oral: 38 %)
- 453) A. Batliner, S. Steidl, F. Eyben, and B. Schuller, "Laughter in Child-Robot Interaction," in *Proceedings Interdisciplinary Workshop on Laughter and other Interactional Vocalisations in Speech, Laughter 2009*, (Berlin, Germany), February 2009
- 454) B. Schuller, A. Batliner, S. Steidl, and D. Seppi, "Does Affect Affect Automatic Recognition of Children's Speech?," in *Proceedings 1st Workshop on Child, Computer and Interaction, WOCCI 2008, ACM ICMI 2008 post-conference workshop*, (Chania, Greece), ISCA, ISCA, October 2008. 4 pages (acceptance rate: 44 %, IF\* 1.77 (2010))
- 455) D. Seppi, M. Gerosa, B. Schuller, A. Batliner, and S. Steidl, "Detecting Problems in Spoken Child-Computer Interaction," in *Proceedings 1st Workshop on Child, Computer and Interaction, WOCCI 2008, ACM ICMI 2008 post-conference workshop*, (Chania, Greece), ISCA, ISCA, October 2008. 4 pages (acceptance rate: 44 %, IF\* 1.77 (2010))
- 456) B. Schuller, M. Wöllmer, T. Moosmayr, and G. Rigoll, "Speech Recognition in Noisy Environments using a Switching Linear Dynamic Model for Feature Enhancement," in *Proceedings INTERSPEECH 2008, 9th Annual Conference of the International Speech Communication Association, incorporating 12th Australasian International Conference on Speech Science and Technology, SST 2008*, (Brisbane, Australia), pp. 1789–1792, ISCA/ASSTA, ISCA, September 2008. Special Session Human-Machine Comparisons of Consonant Recognition in Noise (Consonant Challenge) (acceptance rate: 59 %, IF\* 1.05 (2010))
- 457) B. Schuller, X. Zhang, and G. Rigoll, "Prosodic and Spectral Features within Segment-based Acoustic Modeling," in *Proceedings INTERSPEECH 2008, 9th Annual Conference*



- of the International Speech Communication Association, incorporating 12th Australasian International Conference on Speech Science and Technology, SST 2008, (Brisbane, Australia), pp. 2370–2373, ISCA/ASSTA, ISCA, September 2008. (acceptance rate: 59 %, IF\* 1.05 (2010))
- 458) B. Schuller, M. Wimmer, D. Arsić, T. Moosmayr, and G. Rigoll, “Detection of Security Related Affect and Behaviour in Passenger Transport,” in *Proceedings INTERSPEECH 2008, 9th Annual Conference of the International Speech Communication Association, incorporating 12th Australasian International Conference on Speech Science and Technology, SST 2008*, (Brisbane, Australia), pp. 265–268, ISCA/ASSTA, ISCA, September 2008. (acceptance rate: 59 %, IF\* 1.05 (2010))
- 459) B. Schuller, F. Dibiasi, F. Eyben, and G. Rigoll, “One Day in Half an Hour: Music Thumbnailing Incorporating Harmony- and Rhythm Structure,” in *Proceedings 6th Workshop on Adaptive Multimedia Retrieval, AMR 2008*, (Berlin, Germany), June 2008. 10 pages
- 460) B. Schuller, G. Rigoll, S. Can, and H. Feussner, “Emotion Sensitive Speech Control for Human-Robot Interaction in Minimal Invasive Surgery,” in *Proceedings 17th IEEE International Symposium on Robot and Human Interactive Communication, RO-MAN 2008*, (Munich, Germany), pp. 453–458, IEEE, IEEE, August 2008
- 461) B. Schuller, B. Vlasenko, D. Arsić, G. Rigoll, and A. Wendemuth, “Combining Speech Recognition and Acoustic Word Emotion Models for Robust Text-Independent Emotion Recognition,” in *Proceedings 9th IEEE International Conference on Multimedia and Expo, ICME 2008*, (Hannover, Germany), pp. 1333–1336, IEEE, IEEE, June 2008. (acceptance rate: 50 %, IF\* 0.88 (2010))
- 462) B. Schuller, M. Wimmer, L. Mösenlechner, C. Kern, D. Arsić, and G. Rigoll, “Brute-Forcing Hierarchical Functionals for Paralinguistics: a Waste of Feature Space?,” in *Proceedings 33rd IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2008*, (Las Vegas, NV), pp. 4501–4504, IEEE, IEEE, April 2008. (acceptance rate: 50 %, IF\* 1.16 (2010))
- 463) M. Wöllmer, F. Eyben, S. Reiter, B. Schuller, C. Cox, E. Douglas-Cowie, and R. Cowie, “Abandoning Emotion Classes – Towards Continuous Emotion Recognition with Modelling of Long-Range Dependencies,” in *Proceedings INTERSPEECH 2008, 9th Annual Conference of the International Speech Communication Association, incorporating 12th Australasian International Conference on Speech Science and Technology, SST 2008*, (Brisbane, Australia), pp. 597–600, ISCA/ASSTA, ISCA, September 2008. (acceptance rate: 59 %, IF\* 1.05 (2010), > 100 citations)
- 464) D. Seppi, A. Batliner, B. Schuller, S. Steidl, T. Vogt, J. Wagner, L. Devillers, L. Vidrascu, N. Amir, and V. Aharonson, “Patterns, Prototypes, Performance: Classifying Emotional User States,” in *Proceedings INTERSPEECH 2008, 9th Annual Conference of the International Speech Communication Association, incorporating 12th Australasian International Conference on Speech Science and Technology, SST 2008*, (Brisbane, Australia), pp. 601–604, ISCA/ASSTA, ISCA, September 2008. (acceptance rate: 59 %, IF\* 1.05 (2010))
- 465) B. Vlasenko, B. Schuller, K. T. Mengistu, G. Rigoll, and A. Wendemuth, “Balancing Spoken Content Adaptation and Unit Length in the Recognition of Emotion and Interest,” in *Proceedings INTERSPEECH 2008, 9th Annual Conference of the International Speech Communication Association, incorporating 12th Australasian International Conference on Speech Science and Technology, SST 2008*, (Brisbane, Australia), pp. 805–808, ISCA/ASSTA, ISCA, September 2008. (acceptance rate: 59 %, IF\* 1.05 (2010))
- 466) A. Batliner, B. Schuller, S. Schaeffler, and S. Steidl, “Mothers, Adults, Children, Pets – Towards the Acoustics of Intimacy,” in *Proceedings 33rd IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2008*, (Las Vegas, NV), pp. 4497–4500, IEEE, IEEE, April 2008. (acceptance rate: 50 %, IF\* 1.16 (2010))
- 467) D. Arsić, B. Schuller, and G. Rigoll, “Multiple Camera Person Tracking in multiple layers combining 2D and 3D information,” in *Proceedings Workshop on Multi-camera and Multi-modal Sensor Fusion Algorithms and Applications, M2SFA2 2008, in conjunction with 10th European Conference on Computer Vision, ECCV 2008*, (Marseille, France), pp. 1–12, October 2008. (acceptance rate: about 23 %, IF\* 5.91 (2010))
- 468) M. Schröder, R. Cowie, D. Heylen, M. Pantic, C. Pelachaud, and B. Schuller, “Towards responsive Sensitive Artificial Listeners,” in *Proceedings 4th International Workshop on Human-Computer Conversation*, (Bellagio, Italy), October 2008. 6 pages
- 469) D. Arsić, N. Lehment, E. Hristov, B. Schuller, and G. Rigoll, “Applying Multi Layer Homography for Multi Camera tracking,” in *Proceedings Workshop on Activity Monitoring by Multi-Camera Surveillance Systems, AMMCSS 2008, in conjunction with 2nd ACM/IEEE International Conference on Distributed Smart Cameras, ICDS-C 2008*, (Stanford, CA), ACM/IEEE, IEEE, September 2008. 9 pages
- 470) M. Wimmer, B. Schuller, D. Arsić, B. Radig, and G. Rigoll, “Low-Level Fusion of Audio and Video Features For Multi-Modal Emotion Recognition,” in *Proceedings 3rd International Conference on Computer Vision Theory and Applications, VIS-APP 2008*, (Funchal, Portugal), January 2008. 7 pages
- 471) B. Schuller, B. Vlasenko, R. Minguez, G. Rigoll, and A. Wendemuth, “Comparing One and Two-Stage Acoustic Modeling in the Recognition of Emotion in Speech,” in *Proceedings 10th Biannual IEEE Automatic Speech Recognition and Understanding Workshop, ASRU 2007*, (Kyoto, Japan), pp. 596–600, IEEE, IEEE, December 2007. (acceptance rate: 43 %)
- 472) B. Schuller, A. Batliner, D. Seppi, S. Steidl, T. Vogt, J. Wagner, L. Devillers, L. Vidrascu, N. Amir, L. Kessous, and V. Aharonson, “The Relevance of Feature Type for the Automatic Classification of Emotional User States: Low Level Descriptors and Functionals,” in *Proceedings INTERSPEECH 2007, 8th Annual Conference of the International Speech Communication Association*, (Antwerp, Belgium), pp. 2253–2256, ISCA, ISCA, August 2007. (acceptance rate: 59 %, IF\* 1.05 (2010), > 100 citations)
- 473) B. Schuller, D. Seppi, A. Batliner, A. Maier, and S. Steidl, “Towards More Reality in the Recognition of Emotional Speech,” in *Proceedings 32nd IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2007*, vol. IV, (Honolulu, HI), pp. 941–944, IEEE, IEEE, April 2007. (acceptance rate: 46 %, IF\* 1.16 (2010), > 100 citations)
- 474) B. Schuller, M. Wimmer, D. Arsić, G. Rigoll, and B. Radig, “Audiovisual Behavior Modeling by Combined Feature Spaces,” in *Proceedings 32nd IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2007*, vol. II, (Honolulu, HI), pp. 733–736, IEEE, IEEE, April 2007. (acceptance rate: 46 %, IF\* 1.16 (2010))
- 475) B. Schuller, F. Eyben, and G. Rigoll, “Fast and Robust Meter and Tempo Recognition for the Automatic Discrimination of Ballroom Dance Styles,” in *Proceedings 32nd IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2007*, vol. I, (Honolulu, HI), pp. 217–220, IEEE, IEEE, April 2007. (acceptance rate: 46 %, IF\* 1.16 (2010))
- 476) B. Vlasenko, B. Schuller, A. Wendemuth, and G. Rigoll, “Combining Frame and Turn-Level Information for Robust Recognition of Emotions within Speech,” in *Proceedings INTERSPEECH 2007, 8th Annual Conference of the International Speech Communication Association*, (Antwerp, Belgium), pp. 2249–2252, ISCA, ISCA, August 2007. (acceptance rate: 59 %, IF\* 1.05 (2010))
- 477) D. Arsić, M. Hofmann, B. Schuller, and G. Rigoll, “Multi-Camera Person Tracking and Left Luggage Detection Applying



- Homographic Transformation,” in *Proceedings 10th IEEE International Workshop on Performance Evaluation of Tracking and Surveillance, PETS 2007, in association with ICCV 2007* (J. M. Ferryman, ed.), (Rio de Janeiro, Brazil), pp. 55–62, IEEE, IEEE, October 2007. (acceptance rate: 24 %, IF\* 5.05 (2010))
- 478) A. Batliner, S. Steidl, B. Schuller, D. Seppi, T. Vogt, L. Devillers, L. Vidrascu, N. Amir, L. Kessous, and V. Aharonson, “The Impact of F0 Extraction Errors on the Classification of Prominence and Emotion,” in *Proceedings 16th International Congress of Phonetic Sciences, ICPHS 2007*, (Saarbrücken, Germany), pp. 2201–2204, August 2007. (acceptance rate: 66 %)
- 479) F. Eyben, B. Schuller, S. Reiter, and G. Rigoll, “Wearable Assistance for the Ballroom-Dance Hobbyist – Holistic Rhythm Analysis and Dance-Style Classification,” in *Proceedings 8th IEEE International Conference on Multimedia and Expo, ICME 2007*, (Beijing, China), pp. 92–95, IEEE, IEEE, July 2007. (acceptance rate: 45 %, IF\* 0.88 (2010))
- 480) S. Reiter, B. Schuller, and G. Rigoll, “Hidden Conditional Random Fields for Meeting Segmentation,” in *Proceedings 8th IEEE International Conference on Multimedia and Expo, ICME 2007*, (Beijing, China), pp. 639–642, IEEE, IEEE, July 2007. (acceptance rate: 45 %, IF\* 0.88 (2010))
- 481) D. Arsić, B. Schuller, and G. Rigoll, “Suspicious Behavior Detection In Public Transport by Fusion of Low-Level Video Descriptors,” in *Proceedings 8th IEEE International Conference on Multimedia and Expo, ICME 2007*, (Beijing, China), pp. 2018–2021, IEEE, IEEE, July 2007. (acceptance rate: 45 %, IF\* 0.88 (2010))
- 482) B. Schuller and G. Rigoll, “Timing Levels in Segment-Based Speech Emotion Recognition,” in *Proceedings INTERSPEECH 2006, 9th International Conference on Spoken Language Processing, ICSLP*, (Pittsburgh, PA), pp. 1818–1821, ISCA, ISCA, September 2006
- 483) B. Schuller, N. Köhler, R. Müller, and G. Rigoll, “Recognition of Interest in Human Conversational Speech,” in *Proceedings INTERSPEECH 2006, 9th International Conference on Spoken Language Processing, ICSLP*, (Pittsburgh, PA), pp. 793–796, ISCA, ISCA, September 2006
- 484) B. Schuller, S. Reiter, and G. Rigoll, “Evolutionary Feature Generation in Speech Emotion Recognition,” in *Proceedings 7th IEEE International Conference on Multimedia and Expo, ICME 2006*, (Toronto, Canada), pp. 5–8, IEEE, IEEE, July 2006. (acceptance rate: 51 %, IF\* 0.88 (2010))
- 485) B. Schuller, F. Wallhoff, D. Arsić, and G. Rigoll, “Musical Signal Type Discrimination Based on Large Open Feature Sets,” in *Proceedings 7th IEEE International Conference on Multimedia and Expo, ICME 2006*, (Toronto, Canada), pp. 1089–1092, IEEE, IEEE, July 2006. (acceptance rate: 51 %, IF\* 0.88 (2010))
- 486) B. Schuller, D. Arsić, F. Wallhoff, and G. Rigoll, “Emotion Recognition in the Noise Applying Large Acoustic Feature Sets,” in *Proceedings 3rd International Conference on Speech Prosody, SP 2006*, (Dresden, Germany), pp. 276?–289, ISCA, ISCA, May 2006
- 487) M. Al-Hames, S. Zettl, F. Wallhoff, S. Reiter, B. Schuller, and G. Rigoll, “A Two-Layer Graphical Model for Combined Video Shot And Scene Boundary Detection,” in *Proceedings 7th IEEE International Conference on Multimedia and Expo, ICME 2006*, (Toronto, Canada), pp. 261–264, IEEE, IEEE, July 2006. (acceptance rate: 51 %, IF\* 0.88 (2010))
- 488) D. Arsić, J. Schenk, B. Schuller, F. Wallhoff, and G. Rigoll, “Submotions for Hidden Markov Model Based Dynamic Facial Action Recognition,” in *Proceedings 13th IEEE International Conference on Image Processing, ICIP 2006*, (Atlanta, GA), pp. 673–676, IEEE, IEEE, October 2006. (acceptance rate: 41 %, IF\* 0.65 (2010))
- 489) A. Batliner, S. Steidl, B. Schuller, D. Seppi, K. Laskowski, T. Vogt, L. Devillers, L. Vidrascu, N. Amir, L. Kessous, and V. Aharonson, “Combining Efforts for Improving Automatic Classification of Emotional User States,” in *Proceedings 5th Slovenian and 1st International Language Technologies Conference, ISLTC 2006*, (Ljubljana, Slovenia), pp. 240–245, Slovenian Language Technologies Society, October 2006. (> 100 citations)
- 490) S. Reiter, B. Schuller, and G. Rigoll, “A combined LSTM-RNN-HMM-Approach for Meeting Event Segmentation and Recognition,” in *Proceedings 31st IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2006*, vol. 2, (Toulouse, France), pp. 393–396, IEEE, IEEE, May 2006. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 491) S. Reiter, B. Schuller, and G. Rigoll, “Segmentation and Recognition of Meeting Events Using a Two-Layered HMM and a Combined MLP-HMM Approach,” in *Proceedings 7th IEEE International Conference on Multimedia and Expo, ICME 2006*, (Toronto, Canada), pp. 953–956, IEEE, IEEE, July 2006. (acceptance rate: 51 %, IF\* 0.88 (2010))
- 492) F. Wallhoff, B. Schuller, M. Havellek, and G. Rigoll, “Efficient Recognition of Authentic Dynamic Facial Expressions on the FEEDTUM Database,” in *Proceedings 7th IEEE International Conference on Multimedia and Expo, ICME 2006*, (Toronto, Canada), pp. 493–496, IEEE, IEEE, July 2006. (acceptance rate: 51 %, IF\* 0.88 (2010))
- 493) B. Schuller, D. Arsić, F. Wallhoff, M. Lang, and G. Rigoll, “Bioanalog Acoustic Emotion Recognition by Genetic Feature Generation Based on Low-Level-Descriptors,” in *Proceedings International Conference on Computer as a Tool, EUROCON 2005*, vol. 2, (Belgrade, Serbia and Montenegro), pp. 1292–1295, IEEE, IEEE, November 2005
- 494) B. Schuller, B. J. B. Schmitt, D. Arsić, S. Reiter, M. Lang, and G. Rigoll, “Feature Selection and Stacking for Robust Discrimination of Speech, Monophonic Singing, and Polyphonic Music,” in *Proceedings 6th IEEE International Conference on Multimedia and Expo, ICME 2005*, (Amsterdam, The Netherlands), pp. 840–843, IEEE, IEEE, July 2005. (acceptance rate: 23 %, IF\* 0.88 (2010))
- 495) B. Schuller, S. Reiter, R. Müller, M. Al-Hames, M. Lang, and G. Rigoll, “Speaker Independent Speech Emotion Recognition by Ensemble Classification,” in *Proceedings 6th IEEE International Conference on Multimedia and Expo, ICME 2005*, (Amsterdam, The Netherlands), pp. 864–867, IEEE, IEEE, July 2005. (acceptance rate: 23 %, IF\* 0.88 (2010), > 100 citations)
- 496) B. Schuller, R. J. Villar, G. Rigoll, and M. Lang, “Meta-Classifiers in Acoustic and Linguistic Feature Fusion-Based Affect Recognition,” in *Proceedings 30th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2005*, vol. 1, (Philadelphia, PA), pp. 325–328, IEEE, IEEE, March 2005. (acceptance rate: 52 %, IF\* 1.16 (2010))
- 497) D. Arsić, F. Wallhoff, B. Schuller, and G. Rigoll, “Bayesian Network Based Multi Stream Fusion for Automated Online Video Surveillance,” in *Proceedings International Conference on Computer as a Tool, EUROCON 2005*, vol. 2, (Belgrade, Serbia and Montenegro), pp. 995–998, IEEE, IEEE, November 2005
- 498) D. Arsić, F. Wallhoff, B. Schuller, and G. Rigoll, “Vision-Based Online Multi-Stream Behavior Detection Applying Bayesian Networks,” in *Proceedings 6th IEEE International Conference on Multimedia and Expo, ICME 2005*, (Amsterdam, The Netherlands), pp. 1354–1357, IEEE, IEEE, July 2005. (acceptance rate: 23 %, IF\* 0.88 (2010))
- 499) D. Arsić, F. Wallhoff, B. Schuller, and G. Rigoll, “Video Based Online Behavior Detection Using Probabilistic Multi-Stream Fusion,” in *Proceedings 12th IEEE International Conference on Image Processing, ICIP 2005*, vol. 2, (Genova, Italy), pp. 606–609, IEEE, IEEE, September 2005. (acceptance rate: about 45 %, IF\* 0.65 (2010))
- 500) R. Müller, S. Schreiber, B. Schuller, and G. Rigoll, “A System Structure for Multimodal Emotion Recognition in Meeting Environments,” in *Proceedings 2nd International Workshop on*

- Machine Learning for Multimodal Interaction, MLMI 2005* (S. Renals and S. Bengio, eds.), (Edinburgh, UK), July 2005. 2 pages
- 501) F. Wallhoff, B. Schuller, and G. Rigoll, "Speaker Identification – Comparing Linear Regression Based Adaptation and Acoustic High-Level Features," in *Proceedings 31. Jahrestagung für Akustik, DAGA 2005*, (Munich, Germany), pp. 221–222, DEGA, DEGA, March 2005
- 502) F. Wallhoff, D. Arsić, B. Schuller, J. Stadermann, A. Störmer, and G. Rigoll, "Hybrid Profile Recognition on the Mugshot Database," in *Proceedings International Conference on Computer as a Tool, EUROCON 2005*, vol. 2, (Belgrade, Serbia and Montenegro), pp. 1405–1408, IEEE, IEEE, November 2005
- 503) B. Schuller, G. Rigoll, and M. Lang, "Multimodal Music Retrieval for Large Databases," in *Proceedings 5th IEEE International Conference on Multimedia and Expo, ICME 2004*, vol. 2, (Taipei, Taiwan), pp. 755–758, IEEE, IEEE, June 2004. Special Session Novel Techniques for Browsing in Large Multimedia Collections (acceptance rate: 30 %, IF\* 0.88 (2010))
- 504) B. Schuller, G. Rigoll, and M. Lang, "Discrimination of Speech and Monophonic Singing in Continuous Audio Streams Applying Multi-Layer Support Vector Machines," in *Proceedings 5th IEEE International Conference on Multimedia and Expo, ICME 2004*, vol. 3, (Taipei, Taiwan), pp. 1655–1658, IEEE, IEEE, June 2004. (acceptance rate: 30 %, IF\* 0.88 (2010))
- 505) B. Schuller, G. Rigoll, and M. Lang, "Emotion Recognition in the Manual Interaction with Graphical User Interfaces," in *Proceedings 5th IEEE International Conference on Multimedia and Expo, ICME 2004*, vol. 2, (Taipei, Taiwan), pp. 1215–1218, IEEE, IEEE, June 2004. (acceptance rate: 30 %, IF\* 0.88 (2010))
- 506) B. Schuller, R. Müller, G. Rigoll, and M. Lang, "Applying Bayesian Belief Networks in Approximate String Matching for Robust Keyword-based Retrieval," in *Proceedings 5th IEEE International Conference on Multimedia and Expo, ICME 2004*, vol. 3, (Taipei, Taiwan), pp. 1999–2002, IEEE, IEEE, June 2004. (acceptance rate: 30 %, IF\* 0.88 (2010))
- 507) B. Schuller, G. Rigoll, and M. Lang, "Speech Emotion Recognition Combining Acoustic Features and Linguistic Information in a Hybrid Support Vector Machine-Belief Network Architecture," in *Proceedings 29th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2004*, vol. I, (Montreal, Canada), pp. 577–580, IEEE, IEEE, May 2004. (acceptance rate: 54 %, IF\* 1.16 (2010), > 200 citations)
- 508) R. Müller, B. Schuller, and G. Rigoll, "Enhanced Robustness in Speech Emotion Recognition Combining Acoustic and Semantic Analysis," in *Proceedings HUMAINE Workshop From Signals to Signs of Emotion and Vice Versa*, (Santorini, Greece), p. 2 pages, HUMAINE, September 2004
- 509) R. Müller, B. Schuller, and G. Rigoll, "Belief Networks in Natural Language Processing for Improved Speech Emotion Recognition," in *Proceedings 1st International Workshop on Machine Learning for Multimodal Interaction, MLMI 2004* (S. Bengio and H. Bourlard, eds.), (Martigny, Switzerland), June 2004. 1 page
- 510) B. Schuller, G. Rigoll, and M. Lang, "Sprachliche Emotionserkennung im Fahrzeug," in *Proc. 45. Fachausschusssitzung Anthropotechnik, Entscheidungsunterstützung für die Fahrzeug- und Prozessführung*, vol. DGLR Bericht 2003-04, (Neubiberg, Germany), pp. 227–240, Deutsche Gesellschaft für Luft- und Raumfahrt, Deutsche Gesellschaft für Luft- und Raumfahrt, October 2003
- 511) B. Schuller, G. Rigoll, and M. Lang, "Hidden Markov Model-based Speech Emotion Recognition," in *Proceedings 4th IEEE International Conference on Multimedia and Expo, ICME 2003*, vol. I, (Baltimore, MD), pp. 401–404, IEEE, IEEE, July 2003. (acceptance rate: 58 %, IF\* 0.88 (2010))
- 512) B. Schuller, M. Zobl, G. Rigoll, and M. Lang, "A Hybrid Music Retrieval System using Belief Networks to Integrate Queries and Contextual Knowledge," in *Proceedings 4th IEEE International Conference on Multimedia and Expo, ICME 2003*, vol. I, (Baltimore, MD), pp. 57–60, IEEE, IEEE, July 2003. (acceptance rate: 58 %, IF\* 0.88 (2010))
- 513) B. Schuller, G. Rigoll, and M. Lang, "HMM-Based Music Retrieval Using Stereophonic Feature Information and Frame-length Adaptation," in *Proceedings 4th IEEE International Conference on Multimedia and Expo, ICME 2003*, vol. II, (Baltimore, MD), pp. 713–716, IEEE, IEEE, July 2003. (acceptance rate: 58 %, IF\* 0.88 (2010))
- 514) B. Schuller, G. Rigoll, and M. Lang, "Hidden Markov Model-based Speech Emotion Recognition," in *Proceedings 28th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2003*, vol. II, (Hong Kong, China), pp. 1–4, IEEE, IEEE, April 2003. (acceptance rate: 54 %, IF\* 1.16 (2010), > 300 citations)
- 515) M. Zobl, M. Geiger, B. Schuller, G. Rigoll, and M. Lang, "A Realtime System for Hand-Gesture Controlled Operation of In-Car Devices," in *Proceedings 4th IEEE International Conference on Multimedia and Expo, ICME 2003*, vol. III, (Baltimore, MD), pp. 541–544, IEEE, IEEE, July 2003. (acceptance rate: 58 %, IF\* 0.88 (2010))
- 516) B. Schuller, "Towards intuitive speech interaction by the integration of emotional aspects," in *Proceedings IEEE International Conference on Systems, Man and Cybernetics, SMC 2002*, vol. 6, (Yasmine Hammamet, Tunisia), IEEE, IEEE, October 2002. 6 pages
- 517) B. Schuller, F. Althoff, G. McGlaun, M. Lang, and G. Rigoll, "Towards Automation of Usability Studies," in *Proceedings IEEE International Conference on Systems, Man and Cybernetics, SMC 2002*, vol. 5, (Yasmine Hammamet, Tunisia), IEEE, IEEE, October 2002. 6 pages
- 518) B. Schuller, M. Lang, and G. Rigoll, "Multimodal Emotion Recognition in Audiovisual Communication," in *Proceedings 3rd IEEE International Conference on Multimedia and Expo, ICME 2002*, vol. 1, (Lausanne, Switzerland), pp. 745–748, IEEE, IEEE, February 2002. (acceptance rate: 50 %, IF\* 0.88 (2010))
- 519) B. Schuller, M. Lang, and G. Rigoll, "Automatic Emotion Recognition by the Speech Signal," in *Proceedings 6th World Multiconference on Systemics, Cybernetics and Informatics, SCI 2002*, vol. IX, (Orlando, FL), pp. 367–372, SCI, SCI, July 2002
- 520) B. Schuller and M. Lang, "Integrative rapid-prototyping for multimodal user interfaces," in *Proceedings USEWARE 2002, Mensch – Maschine – Kommunikation /Design*, vol. VDI report #1678, (Darmstadt, Germany), pp. 279–284, VDI, VDI-Verlag, June 2002
- 521) F. Althoff, K. Geiss, G. McGlaun, B. Schuller, and M. Lang, "Experimental Evaluation of User Errors at the Skill-Based Level in an Automotive Environment," in *Proceedings International Conference on Human Factors in Computing Systems, CHI 2002*, (Minneapolis, MN), pp. 782–783, ACM, ACM, April 2002. (acceptance rate: 15 %, IF\* 6.37 (2010))
- 522) F. Althoff, G. McGlaun, B. Schuller, M. Lang, and G. Rigoll, "Evaluating Misinterpretations during Human-Machine Communication in Automotive Environments," in *Proceedings 6th World Multiconference on Systemics, Cybernetics and Informatics, SCI 2002*, vol. VII, (Orlando, FL), SCI, SCI, July 2002. 5 pages
- 523) G. McGlaun, F. Althoff, B. Schuller, and M. Lang, "A new technique for adjusting distraction moments in multitasking non-field usability tests," in *Proceedings International Conference on Human Factors in Computing Systems, CHI 2002*, (Minneapolis, MN), pp. 666–667, ACM, ACM, April 2002. (acceptance rate: 15 %, IF\* 6.37 (2010))
- 524) B. Schuller, F. Althoff, G. McGlaun, and M. Lang, "Navigation in virtual worlds via natural speech," in *Proceedings 9th International Conference on Human-Computer Interaction, HCI 2001* (C. Stephanidis, ed.), (New Orleans, LA), pp. 19–21,

Lawrence Erlbaum, August 2001

- 525) F. Althoff, G. McGlaun, B. Schuller, P. Morguet, and M. Lang, "Using Multimodal Interaction to Navigate in Arbitrary Virtual VRML Worlds," in *Proceedings 3rd International Workshop on Perceptive User Interfaces, PUI 2001*, (Orlando, FL), ACM, ACM, November 2001. 8 pages (acceptance rate: 29%)

#### D) PATENTS (5)

- 526) F. Eyben, K. Scherer, and B. Schuller, "A Method for Automatic Affective State Inference and Automated Affective State Inference System," April 2017. audEERING GmbH, European patent, pending
- 527) B. Schuller, F. Weninger, C. Kirst, and P. Grosche, "Apparatus and Method for Improving a Perception of a Sound Signal," November 2013. WO2015070918 A1, Huawei Technologies Co Ltd, Technische Universität München, international patent, pending
- 528) C. Joder, F. Weninger, B. Schuller, and D. Virette, "Method for Determining a Dictionary of Base Components from an Audio Signal," November 2012. EP73149, Huawei Technologies Co Ltd, Technische Universität München, European/US patent, pending
- 529) C. Joder, F. Weninger, B. Schuller, and D. Virette, "Method and Device for Reconstructing a Target Signal from a Noisy Input Signal," November 2012. US9536538 (B2), Huawei Technologies Co Ltd, Technische Universität München, US patent, granted
- 530) F. Burkhardt and B. Schuller, "Method and system for training speech processing devices," November 2009. EP2325836, Deutsche Telekom AG, Technische Universität München, European patent, pending

#### E) OTHER

##### Theses (3):

- 531) B. Schuller, *Intelligent Audio Analysis – Speech, Music, and Sound Recognition in Real-Life Conditions*. Habilitation thesis, Technische Universität München, Munich, Germany, July 2012. 313 pages
- 532) B. Schuller, *Automatische Emotionserkennung aus sprachlicher und manueller Interaktion*. Doctoral thesis, Technische Universität München, Munich, Germany, June 2006. 244 pages
- 533) B. Schuller, "Automatisches Verstehen gesprochener mathematischer Formeln," diploma thesis, Technische Universität München, Munich, Germany, October 1999

##### Editorials / Edited Volumes (51):

- 534) B. Schuller, "Editorial: Transactions on Affective Computing – Challenges and Chances," *IEEE Transactions on Affective Computing*, vol. 8, pp. 1–2, January–March 2017. (IF: 3.466, 5-year IF: 3.871 (2013))
- 535) B. W. Schuller, L. Paletta, P. Robinson, N. Sabouret, and G. N. Yannakakis, "Guest Editorial: Computational Intelligence in Serious Digital Games," *IEEE Transactions on Computational Intelligence and AI in Games, Special Issue on Computational Intelligence in Serious Digital Games*, 2017. (IF: 1.481 (2014))
- 536) F. Ringeval, M. Valstar, J. Gratch, B. Schuller, R. Cowie, and M. Pantic, eds., *Proceedings of the 7th International Workshop on Audio/Visual Emotion Challenge, AVEC'17, co-located with MM 2017*, (Mountain View, CA), ACM, ACM, October 2017. to appear
- 537) M. Soleymani, B. Schuller, and S.-F. Chang, "Guest Editorial: Multimodal Sentiment Analysis and Mining in the Wild," *Image and Vision Computing, Special Issue on Multimodal Sentiment Analysis and Mining in the Wild*, vol. 35, 2017. 2 pages, to appear (IF: 1.766, 5-Year IF: 2.584 (2015))
- 538) S. Squartini, B. Schuller, A. Uncini, and C.-K. Ting, "Guest Editorial: Computational Intelligence for End-to-End Audio

- Processing," *IEEE Transaction on Emerging Topics in Computational Intelligence, Special Issue of Computational Intelligence for End-to-End Audio Processing*, 2017. to appear
- 539) K. Veselkov and B. Schuller, "Guest Editorial: Translational data analytics and health informatics," *Methods, Special Issue on on Translational data analytics and health informatics*, 2017. to appear (IF: 3.503, 5-year IF: 3.789 (2015))
- 540) B. Schuller, "Editorial: Transactions on Affective Computing – Changes and Continuance," *IEEE Transactions on Affective Computing*, vol. 7, pp. 1–2, January–March 2016. (IF: 3.466, 5-year IF: 3.871 (2013))
- 541) L. Devillers, B. Schuller, E. Mower Provost, P. Robinson, J. Mariani, and A. Delaborde, eds., *Proceedings of the 1st International Workshop on ETHics In Corpus Collection, Annotation and Application (ETHI-CA<sup>2</sup> 2016)*, (Portoroz, Slovenia), ELRA, ELRA, May 2016. Satellite of the 10th Language Resources and Evaluation Conference (LREC 2016)
- 542) F. Ringeval, B. Schuller, M. Valstar, J. Gratch, R. Cowie, and M. Pantic, "Introduction to the Special Section on Multimedia Computing and Applications of Socioaffective Behaviors in the Wild," *ACM Transactions on Multimedia Computing, Communications and Applications*, 2016. editorial, to appear (IF: 0.904 (2013))
- 543) J. Sánchez-Rada and B. Schuller, eds., *Proceedings of the 6th International Workshop on Emotion and Sentiment Analysis (ESA 2016)*, (Portoroz, Slovenia), ELRA, ELRA, May 2016. Satellite of the 10th Language Resources and Evaluation Conference (LREC 2016)
- 544) M. Valstar, J. Gratch, B. Schuller, F. Ringeval, R. Cowie, and M. Pantic, eds., *Proceedings of the 6th International Workshop on Audio/Visual Emotion Challenge, AVEC'16, co-located with MM 2016*, (Amsterdam, The Netherlands), ACM, ACM, October 2016
- 545) K. Hartmann, I. Siegert, B. Schuller, L.-P. Morency, A. A. Salah, and R. Böck, eds., *Proceedings of the Workshop on Emotion Representations and Modelling for Companion Systems, ERM4CT 2015*, (Seattle, WA), ACM, ACM, November 2015. held in conjunction with the 17th ACM International Conference on Multimodal Interaction, ICMI 2015
- 546) K. Hartmann, I. Siegert, B. Schuller, L.-P. Morency, A. A. Salah, and R. Böck, "ERM4CT 2015 ?- Workshop on Emotion Representations and Modelling for Companion Systems," in *Proceedings of the Workshop on Emotion Representations and Modelling for Companion Systems, ERM4CT 2015* (K. Hartmann, I. Siegert, B. Schuller, L.-P. Morency, A. A. Salah, and R. Böck, eds.), (Seattle, WA), ACM, ACM, November 2015. 2 pages, held in conjunction with the 17th ACM International Conference on Multimodal Interaction, ICMI 2015
- 547) E. Cambria, B. Schuller, Y. Xia, and B. White, "New Avenues in Knowledge Bases for Natural Language Processing," *Knowledge-Based Systems, Special Issue on New Avenues in Knowledge Bases for Natural Language Processing*, vol. C, no. 108, pp. 1–4, 2016. editorial (IF: 3.058, 5-year IF: 2.920 (2013))
- 548) B. Schuller, S. Steidl, A. Batliner, A. Vinciarelli, F. Burkhardt, and R. van Son, "Introduction to the Special Issue on Next Generation Computational Paralinguistics," *Computer Speech and Language, Special Issue on Next Generation Computational Paralinguistics*, vol. 29, pp. 98–99, January 2015. editorial (acceptance rate: 23 %, IF: 1.812, 5-year IF: 1.776 (2013))
- 549) L. Paletta, B. W. Schuller, P. Robinson, and N. Sabouret, "IDGEI 2015: 3rd international workshop on intelligent digital games for empowerment and inclusion," in *Proceedings of the 20th ACM International Conference on Intelligent User Interfaces, IUI 2015*, (Atlanta, GA), pp. 450–452, ACM, ACM, March 2015
- 550) L. Paletta, B. Schuller, P. Robinson, and N. Sabouret, eds., *IDGEI 2015 ?- 3rd International Workshop on Intelligent Digital Games for Empowerment and Inclusion*, (Atlanta, GA),

- ACM, ACM, March 2015. held in conjunction with the 20th International Conference on Intelligent User Interfaces, IUI 2015
- 551) F. Ringeval, B. Schuller, M. Valstar, R. Cowie, and M. Pantic, eds., *Proceedings of the 5th International Workshop on Audio/Visual Emotion Challenge, AVEC'15, co-located with MM 2015*, (Brisbane, Australia), ACM, ACM, October 2015
- 552) F. Ringeval, B. Schuller, M. Valstar, R. Cowie, and M. Pantic, "AVEC 2015 Chairs' Welcome," in *Proceedings of the 5th International Workshop on Audio/Visual Emotion Challenge, AVEC'15, co-located with the 23rd ACM International Conference on Multimedia, MM 2015* (F. Ringeval, B. Schuller, M. Valstar, R. Cowie, and M. Pantic, eds.), (Brisbane, Australia), p. iii, ACM, ACM, October 2015
- 553) B. Schuller, S. Steidl, A. Batliner, A. Vinciarelli, F. Burkhardt, and R. van Son, "Introduction to the Special Issue on Next Generation Computational Paralinguistics," *Computer Speech and Language, Special Issue on Next Generation Computational Paralinguistics*, vol. 29, pp. 98–99, January 2015. editorial (acceptance rate: 23 %, IF: 1.812, 5-year IF: 1.776 (2013))
- 554) B. Schuller, T. H. Falk, V. Parsa, and E. Nöth, "Introduction to the Special Issue on Atypical Speech & Voices: Corpora, Classification, Coaching & Conversion," *EURASIP Journal on Audio, Speech, and Music Processing, Special Issue on Atypical Speech & Voices: Corpora, Classification, Coaching & Conversion*, 2015. to appear (IF: 0.630 (2012))
- 555) B. Schuller, P. Buitelaar, L. Devillers, C. Pelachaud, T. Declerck, A. Batliner, P. Rosso, and S. Gaines, eds., *Proceedings of the 5th International Workshop on Emotion Social Signals, Sentiment & Linked Open Data (ES<sup>3</sup>LOD 2014)*, (Reykjavik, Iceland), ELRA, ELRA, May 2014. Satellite of the 9th Language Resources and Evaluation Conference (LREC 2014), (acceptance rate: 72 %)
- 556) H. Gunes, B. Schuller, O. Celiktutan, E. Sariyanidi, and F. Eyben, eds., *Proceedings of the Personality Mapping Challenge & Workshop (MAPTRAITS 2014)*, (Istanbul, Turkey), ACM, ACM, November 2014. Satellite of the 16th ACM International Conference on Multimodal Interaction (ICMI 2014)
- 557) H. Gunes, B. Schuller, O. Celiktutan, E. Sariyanidi, and F. Eyben, "MAPTRAITS'14 Foreword," in *Proceedings of the Personality Mapping Challenge & Workshop (MAPTRAITS 2014), Satellite of the 16th ACM International Conference on Multimodal Interaction (ICMI 2014)*, (Istanbul, Turkey), p. iii, ACM, ACM, November 2014
- 558) K. Hartmann, R. Böck, B. Schuller, and K. R. Scherer, eds., *Proceedings of the 2nd Workshop on Emotion representation and modelling in Human-Computer-Interaction-Systems, ERM4HCI 2014*, (Istanbul, Turkey), ACM, ACM, November 2013. held in conjunction with the 16th ACM International Conference on Multimodal Interaction, ICMI 2014
- 559) K. Hartmann, K. R. Scherer, B. Schuller, and R. Böck, "Welcome to the ERM4HCI 2014!," in *Proceedings of the 2nd Workshop on Emotion representation and modelling in Human-Computer-Interaction-Systems, ERM4HCI 2014* (K. Hartmann, R. Böck, B. Schuller, and K. Scherer, eds.), (Istanbul, Turkey), p. iii, ACM, ACM, November 2014. held in conjunction with the 16th ACM International Conference on Multimodal Interaction, ICMI 2014
- 560) L. Paletta, B. W. Schuller, P. Robinson, and N. Sabouret, "IDGEI 2014: 2nd international workshop on intelligent digital games for empowerment and inclusion," in *Proceedings of the companion publication of the 19th international conference on Intelligent User Interfaces, IUI Companion 2014*, (Haifa, Israel), pp. 49–50, ACM, ACM, February 2014
- 561) L. Paletta, B. Schuller, P. Robinson, and N. Sabouret, eds., *IDGEI 2014 ?- 2nd International Workshop on Intelligent Digital Games for Empowerment and Inclusion*, (Haifa, Israel), ACM, ACM, February 2014. held in conjunction with the 19th International Conference on Intelligent User Interfaces, IUI 2014
- 562) L. Paletta, B. Schuller, P. Robinson, and N. Sabouret, eds., *Proceedings of the 2nd International Workshop on Digital Games for Empowerment and Inclusion, IDGEI 2014*, (Haifa, Israel), ACM, ACM, February 2014. held in conjunction with the 19th International Conference on Intelligent User Interfaces, IUI 2014
- 563) M. Valstar, B. Schuller, J. Krajewski, R. Cowie, and M. Pantic, "AVEC 2014: the 4th International Audio/Visual Emotion Challenge and Workshop," in *Proceedings of the 22nd ACM International Conference on Multimedia, MM 2014*, (Orlando, FL), pp. 1243–1244, ACM, ACM, November 2014
- 564) A. A. Salah, J. Cohn, B. Schuller, O. Aran, L.-P. Morency, and P. R. Cohen, "ICMI 2014 Chairs' Welcome," in *Proceedings of the 16th ACM International Conference on Multimodal Interaction, ICMI*, (Istanbul, Turkey), pp. iii–v, ACM, ACM, November 2014. editorial, (acceptance rate: 40 %, IF\* 1.77 (2010))
- 565) B. Schuller, L. Paletta, and N. Sabouret, "Intelligent Digital Games for Empowerment and Inclusion – An Introduction," in *Proceedings 1st International Workshop on Intelligent Digital Games for Empowerment and Inclusion (IDGEI 2013) held in conjunction with the 8th Foundations of Digital Games 2013 (FDG)* (B. Schuller, L. Paletta, and N. Sabouret, eds.), (Chania, Greece), ACM, SASDG, May 2013. 2 pages
- 566) B. Schuller, M. Valstar, R. Cowie, J. Krajewski, and M. Pantic, eds., *Proceedings of the 3rd ACM international workshop on Audio/visual emotion challenge*, (Barcelona, Spain), ACM, ACM, October 2013. held in conjunction with the 21st ACM international conference on Multimedia, ACM MM 2013
- 567) J. Epps, F. Chen, S. Oviatt, K. Mase, A. Sears, K. Jokinen, and B. Schuller, "ICMI 2013 Chairs' Welcome," in *Proceedings of the 15th ACM International Conference on Multimodal Interaction, ICMI*, (Sydney, Australia), pp. 3–4, ACM, ACM, December 2013. editorial, (acceptance rate: 37 %, IF\* 1.77 (2010))
- 568) K. Hartmann, R. Böck, C. Becker-Asano, J. Gratch, B. Schuller, and K. R. Scherer, eds., *Proceedings of the Workshop on Emotion representation and modelling in Human-Computer-Interaction-Systems, ERM4HCI 2013*, (Sydney, Australia), ACM, ACM, December 2013. held in conjunction with the 15th ACM International Conference on Multimodal Interaction, ICMI 2013
- 569) K. Hartmann, R. Böck, C. Becker-Asano, J. Gratch, B. Schuller, and K. R. Scherer, "ERM4HCI 2013 -? The 1st Workshop on Emotion Representation and Modelling in Human-Computer-Interaction-Systems," in *Proceedings of the Workshop on Emotion representation and modelling in Human-Computer-Interaction-Systems, ERM4HCI 2013* (K. Hartmann, R. Böck, C. Becker-Asano, J. Gratch, B. Schuller, and K. R. Scherer, eds.), (Sydney, Australia), ACM, ACM, December 2013. held in conjunction with the 15th ACM International Conference on Multimodal Interaction, ICMI 2013
- 570) M. Müller, S. S. Narayanan, and B. Schuller, eds., *Report from Dagstuhl Seminar 13451 – Computational Audio Analysis*, vol. 3 of *Dagstuhl Reports*, (Dagstuhl, Germany), Schloss Dagstuhl, Leibniz-Zentrum fuer Informatik, Dagstuhl Publishing, November 2013. 28 pages
- 571) L. Paletta, L. Itti, B. Schuller, and F. Fang, eds., *Proceedings of the 6th International Symposium on Attention in Cognitive Systems 2013, ISACS 2013*, LNAI, (Beijing, P.R. China), arxiv.org, Springer, August 2013. held in conjunction with the 23rd International Joint Conference on Artificial Intelligence, IJCAI 2013
- 572) B. Schuller, M. Valstar, R. Cowie, and M. Pantic, "AVEC 2012: the continuous audio/visual emotion challenge – an introduction," in *Proceedings of the 14th ACM International Conference on Multimodal Interaction, ICMI* (L.-P. Morency, D. Bohus, H. K. Aghajan, J. Cassell, A. Nijholt, and J. Epps,

- eds.), (Santa Monica, CA), pp. 361–362, ACM, ACM, October 2012. (acceptance rate: 36 %, IF\* 1.77 (2010))
- 573) B. Schuller, S. Steidl, and A. Batliner, “Introduction to the Special Issue on Paralinguistics in Naturalistic Speech and Language,” *Computer Speech and Language, Special Issue on Paralinguistics in Naturalistic Speech and Language*, vol. 27, pp. 1–3, January 2013. editorial (acceptance rate: 36 %, IF: 1.812, 5-year IF: 1.776 (2013))
- 574) H. Gunes and B. Schuller, “Introduction to the Special Issue on Affect Analysis in Continuous Input,” *Image and Vision Computing, Special Issue on Affect Analysis in Continuous Input*, vol. 31, pp. 118–119, February 2013. (IF: 1.723, 5-Year IF: 1.743 (2011))
- 575) B. Schuller, E. Douglas-Cowie, and A. Batliner, “Guest Editorial: Special Section on Naturalistic Affect Resources for System Building and Evaluation,” *IEEE Transactions on Affective Computing, Special Issue on Naturalistic Affect Resources for System Building and Evaluation*, vol. 3, pp. 3–4, January–March 2012. (IF: 3.466, 5-year IF: 3.871 (2013))
- 576) E. Cambria, A. Hussain, B. Schuller, and N. Howard, “Guest Editorial Introduction Affective Neural Networks and Cognitive Learning Systems for Big Data Analysis,” *Neural Networks, Special Issue on Affective Neural Networks and Cognitive Learning Systems for Big Data Analysis*, vol. 58, pp. 1–3, October 2014. editorial (IF: 2.182, 5-year IF: 2.477 (2012))
- 577) E. Cambria, B. Schuller, B. Liu, H. Wang, and C. Havasi, “Guest Editor’s Introduction: Knowledge-based Approaches to Concept-Level Sentiment Analysis,” *IEEE Intelligent Systems Magazine, Special Issue on Statistical Approaches to Concept-Level Sentiment Analysis*, vol. 28, pp. 12–14, March/April 2013. (IF: 2.570, 5-year IF: 2.632 (2010))
- 578) E. Cambria, B. Schuller, B. Liu, H. Wang, and C. Havasi, “Guest Editor’s Introduction: Statistical Approaches to Concept-Level Sentiment Analysis,” *IEEE Intelligent Systems Magazine, Special Issue on Statistical Approaches to Concept-Level Sentiment Analysis*, vol. 28, pp. 6–9, May/June 2013. (IF: 2.570, 5-year IF: 2.632 (2010))
- 579) L. Devillers, B. Schuller, A. Batliner, P. Rosso, E. Douglas-Cowie, R. Cowie, and C. Pelachaud, eds., *Proceedings of the 4th International Workshop on EMOTION SENTIMENT & SOCIAL SIGNALS 2012 (ES? 2012) – Corpora for Research on Emotion, Sentiment & Social Signals*, (Istanbul, Turkey), ELRA, ELRA, May 2012. held in conjunction with LREC 2012
- 580) J. Epps, R. Cowie, S. Narayanan, B. Schuller, and J. Tao, “Editorial Emotion and Mental State Recognition from Speech,” *EURASIP Journal on Advances in Signal Processing, Special Issue on Emotion and Mental State Recognition from Speech*, vol. 2012, no. 15, 2012. 2 pages (acceptance rate: 38 %, IF: 1.012, 5-Year IF: 1.136 (2010))
- 581) S. Squartini, B. Schuller, and A. Hussain, “Cognitive and Emotional Information Processing for Human-Machine Interaction,” *Cognitive Computation, Special Issue on Cognitive and Emotional Information Processing for Human-Machine Interaction*, vol. 4, pp. 383–385, August 2012. (IF: 1.000 (2011))
- 582) B. Schuller, S. Steidl, and A. Batliner, “Introduction to the Special Issue on Sensing Emotion and Affect – Facing Realism in Speech Processing,” *Speech Communication, Special Issue Sensing Emotion and Affect ?- Facing Realism in Speech Processing*, vol. 53, pp. 1059–1061, November/December 2011. (acceptance rate: 38 %, IF: 1.267, 5-year IF: 1.526 (2011))
- 583) B. Schuller, M. Valstar, R. Cowie, and M. Pantic, eds., *Proceedings of the First International Audio/Visual Emotion Challenge and Workshop, AVEC 2011*, vol. 6975, Part II of *Lecture Notes on Computer Science (LNCS)*, (Memphis, TN), HUMAINE Association, Springer, October 2011. held in conjunction with the International HUMAINE Association Conference on Affective Computing and Intelligent Interaction 2011, ACII 2011
- 584) L. Devillers, B. Schuller, R. Cowie, E. Douglas-Cowie, and A. Batliner, eds., *Proceedings of the 3rd International Workshop on EMOTION: Corpora for Research on Emotion and Affect*, (Valletta, Malta), ELRA, ELRA, May 2010. Satellite of 7th International Conference on Language Resources and Evaluation (LREC 2010) (acceptance rate: 69 %, IF\* 1.37 (2010))
- Abstracts in Journals (6):*
- 585) F. B. Pokorny, B. W. Schuller, I. Tomantschger, D. Zhang, C. Einspieler, and P. B. Marschik, “Intelligent pre-linguistic vocalisation analysis: a promising novel approach for the earlier identification of Rett syndrome,” *Wiener Medizinische Wochenschrift*, vol. 166, pp. 382–383, July 2016. Rett Syndrome – RTT50.1 (IF: 0.56 (2015))
- 586) B. Schuller, “Approaching Cross-Audio Computer Audition,” *Dagstuhl Reports*, vol. 3, pp. 22–22, November 2013
- 587) F. Metzke, X. Anguera, S. Ewert, J. Gemmeke, D. Kolossa, E. M. Provost, B. Schuller, and J. Serrà, “Learning of Units and Knowledge Representation,” *Dagstuhl Reports*, vol. 3, pp. 13–13, November 2013
- 588) B. Schuller, S. Fridenzon, S. Tal, E. Marchi, A. Batliner, and O. Golan, “Learning the Acoustics of Autism-Spectrum Emotional Expressions – A Children’s Game?,” *Neuropsychiatrie de l’Enfance et de l’Adolescence*, vol. 60, p. 32, July 2012. invited contribution
- 589) B. Schuller, “Next Gen Music Analysis: Some Inspirations from Speech,” *Dagstuhl Reports*, vol. 1, no. 1, pp. 93–93, 2011
- 590) S. Ewert, M. Goto, P. Grosche, F. Kaiser, K. Yoshii, F. Kurth, M. Mauch, M. Müller, G. Peeters, G. Richard, and B. Schuller, “Signal Models for and Fusion of Multimodal Information,” *Dagstuhl Reports*, vol. 1, no. 1, pp. 97–97, 2011
- Abstracts in Conference/Challenge Proceedings (22)*
- 591) N. Cummins, S. Hantke, S. Schnieder, J. Krajewski, and B. Schuller, “Classifying the Context and Emotion of Dog Barks: A Comparison of Acoustic Feature Representations,” in *Proceedings Pre-Conference on Affective Computing 2017 SAS Annual Conference*, (Boston, MA), pp. 14–15, Society for Affective Science (SAS), April 2017
- 592) J. Guo, K. Qian, B. Schuller, and S. Matsuoka, “GPU Processing Accelerates Training Autoencoders for Bird Sounds Data,” in *Proceedings 2017 GPU Technology Conference (GTC)*, (San Jose, CA), NVIDIA, May 2017. 1 page
- 593) F. B. Pokorny, B. W. Schuller, K. D. Bartl-Pokorny, D. Zhang, C. Einspieler, and P. B. Marschik, “In a bad mood? Automatic audio-based recognition of infant fussing and crying in videotaped vocalisations,” in *Proceedings 2017 13th International Infant Cry Workshop*, (Castel Noarna-Rovereto, Italy), July 2017. 1 page
- 594) B. Schuller, “Engage to Empower: Emotionally Intelligent Computer Games & Robots for Autistic Children,” in *Proceedings “The world innovations combining medicine, engineering and technology in autism diagnosis and therapy”* (A. Rynkiewicz and K. Grabowski, eds.), (Rzeszow, Poland), pp. 65–67, SOLIS RADIUS, September 2016
- 595) B. Schuller, “Zaangażowanie aby wzmacniać kompetencje: emocjonalnie inteligentne roboty i gry komputerowe dla dzieci z autyzmem,” in *Proceedings “Światowe innowacje łączące medycynę, inżynierię oraz technologię w diagnostyce i terapii autyzmu”* (A. Rynkiewicz and K. Grabowski, eds.), (Rzeszow, Poland), pp. 62–64, SOLIS RADIUS, September 2016
- 596) F. B. Pokorny, B. W. Schuller, K. D. Bartl-Pokorny, C. Einspieler, and P. B. Marschik, “Contributing to the early identification of Rett syndrome: Automated analysis of vocalisations from the pre-regression period,” in *Proceedings Symposium of the Austrian Physiological Society 2016*, (Graz, Austria), ÖPG, ÖPG, October 2016. 1 page, Best Poster award 3rd place
- 597) F. B. Pokorny, B. W. Schuller, R. Peharz, F. Pernkopf, K. D. Bartl-Pokorny, C. Einspieler, and P. B. Marschik, “Contributing to the early identification of neurodevelopmental disorders: The

- retrospective analysis of pre-linguistic vocalisations in home video material,” in *Proceedings IX Congreso Internacional y XIV Nacional de Psicología Clínica*, (Santander, Spain), November 2016. 1 page
- 598) F. B. Pokorny, B. W. Schuller, R. Peharz, F. Pernkopf, K. D. Bartl-Pokorny, C. Einspieler, and P. B. Marschik, “Retrospektive Analyse frühkindlicher Lautäußerungen in „Home-Videos“: Ein signalanalytischer Ansatz zur Früherkennung von Entwicklungsstörungen,” in *Proceedings 42. Österreichische Linguistiktagung, ÖLT*, (Graz, Austria), November 2016. 1 page
- 599) O. Rudovic, V. Evers, M. Pantic, B. Schuller, and S. Petrovic, “DE-ENIGMA Robots: Playfully Empowering Children with Autism,” in *Proceedings XI Autism-Europe International Congress*, (Edinburgh, Scotland), Autism Europe, The National Autistic Society, September 2016. 1 page
- 600) O. Rudovic, J. Lee, B. Schuller, and R. Picard, “Automated Measurement of Engagement of Children with Autism Spectrum Conditions during Human-Robot Interaction (HRI),” in *Proceedings XI Autism-Europe International Congress*, (Edinburgh, Scotland), Autism Europe, The National Autistic Society, September 2016. 1 page
- 601) B. Schuller, “Modelling User Affect and Sentiment in Intelligent User Interfaces: a Tutorial Overview,” in *Proceedings of the 20th ACM International Conference on Intelligent User Interfaces, IUI 2015*, (Atlanta, GA), pp. 443–446, ACM, ACM, March 2015
- 602) F. B. Pokorny, C. Einspieler, D. Zhang, A. Kimmerle, K. D. Bartl-Pokorny, B. W. Schuller, and S. Bölte, “The Voice of Autism: An Acoustic Analysis of Early Vocalisations,” in *COST ESSEA Conference 2014 Book of Abstracts*, (Toulouse, France), September 2014. 1 page
- 603) B. Schuller, “Interfaces Seeing and Hearing the User,” in *Proceedings The Rank Prize Funds Symposium on Natural User Interfaces, Augmented Reality and Beyond: Challenges at the Intersection of HCI and Computer Vision*, (Grasmere, UK), The Rank Prize Funds, The Rank Prize Funds, November 2013. invited contribution, 1 page
- 604) G. Ferroni, E. Marchi, F. Eyben, S. Squartini, and B. Schuller, “Onset Detection Exploiting Wavelet Transform with Bidirectional Long Short-Term Memory Neural Networks,” in *Proceedings Annual Meeting of the MIREX 2013 community as part of the 14th International Conference on Music Information Retrieval*, (Curitiba, Brazil), ISMIR, ISMIR, November 2013. 3 pages
- 605) G. Ferroni, E. Marchi, F. Eyben, L. Gabrielli, S. Squartini, and B. Schuller, “Onset Detection Exploiting Adaptive Linear Prediction Filtering in DWT Domain with Bidirectional Long Short-Term Memory Neural Networks,” in *Proceedings Annual Meeting of the MIREX 2013 community as part of the 14th International Conference on Music Information Retrieval*, (Curitiba, Brazil), ISMIR, ISMIR, November 2013. 4 pages
- 606) H. Gunes and B. Schuller, “Dimensional and Continuous Analysis of Emotions for Multimedia Applications: a Tutorial Overview,” in *Proceedings of the 20th ACM International Conference on Multimedia, MM 2012*, (Nara, Japan), ACM, ACM, October 2012. 2 pages
- 607) M. Schröder, S. Pammi, H. Gunes, M. Pantic, M. Valstar, R. Cowie, G. McKeown, D. Heylen, M. ter Maat, F. Eyben, B. Schuller, M. Wöllmer, E. Bevacqua, C. Pelachaud, and E. de Sevin, “Come and Have an Emotional Workout with Sensitive Artificial Listeners!,” in *Proceedings 9th IEEE International Conference on Automatic Face & Gesture Recognition and Workshops, FG 2011*, (Santa Barbara, CA), pp. 646–646, IEEE, IEEE, March 2011
- 608) F. Eyben and B. Schuller, “Music Classification with the Munich openSMILE Toolkit,” in *Proceedings Annual Meeting of the MIREX 2010 community as part of the 11th International Conference on Music Information Retrieval*, (Utrecht, Netherlands), ISMIR, ISMIR, August 2010. 2 pages (acceptance rate: 61 %)
- 609) F. Eyben and B. Schuller, “Tempo Estimation from Tatum and Meter Vectors,” in *Proceedings Annual Meeting of the MIREX 2010 community as part of the 11th International Conference on Music Information Retrieval*, (Utrecht, Netherlands), ISMIR, ISMIR, August 2010. 1 page (acceptance rate: 61 %)
- 610) S. Böck, F. Eyben, and B. Schuller, “Beat Detection with Bidirectional Long Short-Term Memory Neural Networks,” in *Proceedings Annual Meeting of the MIREX 2010 community as part of the 11th International Conference on Music Information Retrieval*, (Utrecht, Netherlands), ISMIR, ISMIR, August 2010. 2 pages (acceptance rate: 61 %)
- 611) S. Böck, F. Eyben, and B. Schuller, “Onset Detection with Bidirectional Long Short-Term Memory Neural Networks,” in *Proceedings Annual Meeting of the MIREX 2010 community as part of the 11th International Conference on Music Information Retrieval*, (Utrecht, Netherlands), ISMIR, ISMIR, August 2010. 2 pages (acceptance rate: 61 %)
- 612) S. Böck, F. Eyben, and B. Schuller, “Tempo Detection with Bidirectional Long Short-Term Memory Neural Networks,” in *Proceedings Annual Meeting of the MIREX 2010 community as part of the 11th International Conference on Music Information Retrieval*, (Utrecht, Netherlands), ISMIR, ISMIR, August 2010. 3 pages (acceptance rate: 61 %)
- Invited Papers (30):*
- 613) B. Schuller, M. Wöllmer, F. Eyben, G. Rigoll, and D. Arsić, “Semantic Speech Tagging: Towards Combined Analysis of Speaker Traits,” in *Proceedings AES 42nd International Conference* (K. Brandenburg and M. Sandler, eds.), (Ilmenau, Germany), pp. 89–97, AES, Audio Engineering Society, July 2011. invited contribution
- 614) B. Schuller, S. Can, and H. Feussner, “Robust Key-Word Spotting in Field Noise for Open-Microphone Surgeon-Robot Interaction,” in *Proceedings 5th Russian-Bavarian Conference on Bio-Medical Engineering, RBC-BME 2009*, (Munich, Germany), pp. 121–123, July 2009. invited contribution
- 615) B. Schuller, A. Lehmann, F. Weninger, F. Eyben, and G. Rigoll, “Blind Enhancement of the Rhythmic and Harmonic Sections by NMF: Does it help?,” in *Proceedings International Conference on Acoustics including the 35th German Annual Conference on Acoustics, NAG/DAGA 2009*, (Rotterdam, The Netherlands), pp. 361–364, Acoustical Society of the Netherlands, DEGA, DEGA, March 2009. invited contribution
- 616) B. Schuller, “Speaker, Noise, and Acoustic Space Adaptation for Emotion Recognition in the Automotive Environment,” in *Proceedings 8th ITG Conference on Speech Communication*, vol. 211 of *ITG-Fachbericht*, (Aachen, Germany), ITG, VDE-Verlag, October 2008. invited contribution, 4 pages
- 617) B. Schuller, M. Wöllmer, T. Moosmayr, and G. Rigoll, “Robust Spelling and Digit Recognition in the Car: Switching Models and Their Like,” in *Proceedings 34. Jahrestagung für Akustik, DAGA 2008*, (Dresden, Germany), pp. 847–848, DEGA, DEGA, March 2008. invited contribution, Structured Session Sprachakustik im Kraftfahrzeug
- 618) B. Schuller, F. Eyben, and G. Rigoll, “Beat-Synchronous Data-driven Automatic Chord Labeling,” in *Proceedings 34. Jahrestagung für Akustik, DAGA 2008*, (Dresden, Germany), pp. 555–556, DEGA, DEGA, March 2008. invited contribution, Structured Session Music Processing
- 619) B. Schuller, S. Can, C. Scheuermann, H. Feussner, and G. Rigoll, “Robust Speech Recognition for Human-Robot Interaction in Minimal Invasive Surgery,” in *Proceedings 4th Russian-Bavarian Conference on Bio-Medical Engineering, RBC-BME 2008*, (Zelenograd, Russia), pp. 197–201, July 2008. invited contribution
- 620) B. Schuller, R. Müller, B. Hörnler, A. Höthker, H. Konosu, and G. Rigoll, “Audiovisual Recognition of Spontaneous Interest within Conversations,” in *Proceedings 9th ACM International*

- Conference on Multimodal Interfaces, ICMI 2007*, (Nagoya, Japan), pp. 30–37, ACM, ACM, November 2007. invited contribution, Special Session on Multimodal Analysis of Human Spontaneous Behaviour (acceptance rate: 56 %, IF\* 1.77 (2010))
- 621) B. Schuller, G. Rigoll, M. Grimm, K. Kroschel, T. Moosmayr, and G. Ruske, “Effects of In-Car Noise-Conditions on the Recognition of Emotion within Speech,” in *Proceedings 33. Jahrestagung für Akustik, DAGA 2007*, (Stuttgart, Germany), pp. 305–306, DEGA, DEGA, March 2007. invited contribution, Structured Session Sprachakustik im Kraftfahrzeug
- 622) B. Schuller, J. Stadermann, and G. Rigoll, “Affect-Robust Speech Recognition by Dynamic Emotional Adaptation,” in *Proceedings 3rd International Conference on Speech Prosody, SP 2006*, (Dresden, Germany), ISCA, ISCA, May 2006. invited contribution, Special Session Prosody in Automatic Speech Recognition, 4 pages
- 623) B. Schuller, M. Lang, and G. Rigoll, “Recognition of Spontaneous Emotions by Speech within Automotive Environment,” in *Proceedings 32. Jahrestagung für Akustik, DAGA 2006*, (Braunschweig, Germany), pp. 57–58, DEGA, DEGA, March 2006. invited contribution, Structured Session Sprachakustik im Kraftfahrzeug
- 624) B. Schuller and G. Rigoll, “Self-learning Acoustic Feature Generation and Selection for the Discrimination of Musical Signals,” in *Proceedings 32. Jahrestagung für Akustik, DAGA 2006*, (Braunschweig, Germany), pp. 285–286, DEGA, DEGA, March 2006. invited contribution, Structured Session Music Processing
- 625) B. Schuller, R. Müller, M. Lang, and G. Rigoll, “Speaker Independent Emotion Recognition by Early Fusion of Acoustic and Linguistic Features within Ensembles,” in *Proceedings Interspeech 2005, Eurospeech*, (Lisbon, Portugal), pp. 805–809, ISCA, ISCA, September 2005. invited contribution, Special Session Emotional Speech Analysis and Synthesis: Towards a Multimodal Approach (acceptance rate: 61 %, IF\* 1.05 (2010), > 100 citations)
- 626) B. Schuller, M. Lang, and G. Rigoll, “Robust Acoustic Speech Emotion Recognition by Ensembles of Classifiers,” in *Proceedings 31. Jahrestagung für Akustik, DAGA 2005*, (Munich, Germany), pp. 329–330, DEGA, DEGA, March 2005. invited contribution, Structured Session Automatische Spracherkennung in gestörter Umgebung
- 627) B. Schuller, G. Rigoll, and M. Lang, “Matching Monophonic Audio Clips to Polyphonic Recordings,” in *Proceedings 31. Jahrestagung für Akustik, DAGA 2005*, (Munich, Germany), pp. 299–300, DEGA, DEGA, March 2005. invited contribution, Structured Session Music Processing
- 628) Z. Zhang, F. Weninger, and B. Schuller, “Towards Automatic Intoxication Detection from Speech in Real-Life Acoustic Environments,” in *Proceedings of Speech Communication; 10. ITG Symposium* (T. Fingscheidt and W. Kellermann, eds.), (Braunschweig, Germany), pp. 1–4, ITG, IEEE, September 2012. invited contribution
- 629) C. Joder and B. Schuller, “Exploring Nonnegative Matrix Factorisation for Audio Classification: Application to Speaker Recognition,” in *Proceedings of Speech Communication; 10. ITG Symposium* (T. Fingscheidt and W. Kellermann, eds.), (Braunschweig, Germany), pp. 1–4, ITG, IEEE, September 2012. invited contribution
- 630) J. Deng, W. Han, and B. Schuller, “Confidence Measures for Speech Emotion Recognition: a Start,” in *Proceedings of Speech Communication; 10. ITG Symposium* (T. Fingscheidt and W. Kellermann, eds.), (Braunschweig, Germany), pp. 1–4, ITG, IEEE, September 2012. invited contribution
- 631) M. Wöllmer, M. Kaiser, F. Eyben, F. Weninger, B. Schuller, and G. Rigoll, “Fully Automatic Audiovisual Emotion Recognition – Voice, Words, and the Face,” in *Proceedings of Speech Communication; 10. ITG Symposium* (T. Fingscheidt and W. Kellermann, eds.), (Braunschweig, Germany), pp. 1–4, ITG, IEEE, September 2012. invited contribution
- 632) F. Weninger, M. Wöllmer, and B. Schuller, “Sparse, Hierarchical and Semi-Supervised Base Learning for Monaural Enhancement of Conversational Speech,” in *Proceedings 10th ITG Conference on Speech Communication* (T. Fingscheidt and W. Kellermann, eds.), (Braunschweig, Germany), pp. 1–4, ITG, IEEE, September 2012. invited contribution
- 633) W. Han, Z. Zhang, J. Deng, M. Wöllmer, F. Weninger, and B. Schuller, “Towards Distributed Recognition of Emotion in Speech,” in *Proceedings 5th International Symposium on Communications, Control, and Signal Processing, ISCCSP 2012*, (Rome, Italy), pp. 1–4, IEEE, IEEE, May 2012. invited contribution, Special Session Interactive Behaviour Analysis
- 634) F. Weninger and B. Schuller, “Fusing Utterance-Level Classifiers for Robust Intoxication Recognition from Speech,” in *Proceedings MMCogEmS 2011 Workshop (Inferring Cognitive and Emotional States from Multimodal Measures)*, held in conjunction with the 13th International Conference on Multimodal Interaction, ICMI 2011, (Alicante, Spain), ACM, ACM, November 2011. invited contribution, 2 pages (acceptance rate: 39 %, IF\* 1.77 (2010))
- 635) F. Weninger, B. Schuller, C. Liem, F. Kurth, and A. Hanjalic, “Music Information Retrieval: An Inspirational Guide to Transfer from Related Disciplines,” in *Multimodal Music Processing* (M. Müller and M. Goto, eds.), vol. Seminar 11041 of *Dagstuhl Follow-Ups*, (Schloss Dagstuhl, Germany), pp. 195–215, 2012. invited contribution
- 636) M. Wöllmer, N. Klebert, and B. Schuller, “Switching Linear Dynamic Models for Recognition of Emotionally Colored and Noisy Speech,” in *Proceedings 9th ITG Conference on Speech Communication*, vol. 225 of *ITG-Fachbericht*, (Bochum, Germany), ITG, VDE-Verlag, October 2010. invited contribution, Special Session Bayesian Methods for Speech Enhancement and Recognition, 4 pages
- 637) L. Devillers and B. Schuller, “The Essential Role of Language Resources for the Future of Affective Computing Systems: A Recognition Perspective,” in *Proceedings 2nd European Language Resources and Technologies Forum: Language Resources of the future – the future of Language Resources*, (Barcelona, Spain), FLAReNet, February 2010. invited contribution, 2 pages
- 638) S. Steidl, B. Schuller, D. Seppi, and A. Batliner, “The Hinterland of Emotions: Facing the Open-Microphone Challenge,” in *Proceedings 3rd International Conference on Affective Computing and Intelligent Interaction and Workshops, ACHI 2009*, vol. I, (Amsterdam, The Netherlands), pp. 690–697, HUMAINE Association, IEEE, September 2009. invited contribution, Special Session Recognition of Non-Prototypical Emotion from Speech – The final frontier?
- 639) P. Baggia, F. Burkhardt, C. Pelachaud, C. Peter, B. Schuller, I. Wilson, and E. Zovato, “Elements of an EmotionML 1.0,” tech. rep., W3C, November 2008
- 640) A. Batliner, D. Seppi, B. Schuller, S. Steidl, T. Vogt, J. Wagner, L. Devillers, L. Vidrascu, N. Amir, and V. Aharonson, “Patterns, Prototypes, Performance,” in *Pattern Recognition in Medical and Health Engineering, Proceedings HSS-Cooperation Seminar Ingenieurwissenschaftliche Beiträge für ein leistungsfähigeres Gesundheitssystem* (J. Hornegger, K. Höller, P. Ritt, A. Borsdorf, and H.-P. Niedermeier, eds.), (Wildbad Kreuth, Germany), pp. 85–86, July 2008. invited contribution
- 641) M. Grimm, K. Kroschel, B. Schuller, G. Rigoll, and T. Moosmayr, “Acoustic Emotion Recognition in Car Environment Using a 3D Emotion Space Approach,” in *Proceedings 33. Jahrestagung für Akustik, DAGA 2007*, (Stuttgart, Germany), pp. 313–314, DEGA, DEGA, March 2007. invited contribution, Structured Session Sprachakustik im Kraftfahrzeug
- 642) G. Rigoll, R. Müller, and B. Schuller, “Speech Emotion Recognition Exploiting Acoustic and Linguistic Information Sources,” in *Proceedings 10th International Conference Speech and Computer, SPECOM 2005* (G. Kokkinakis, ed.), vol. 1, (Patras,



Greece), pp. 61–67, October 2005. invited contribution

#### Forewords (4):

- 643) B. Schuller, “A decade of encouraging speech processing “outside of the box” ?- a Foreword.,” in *Recent Advances in Nonlinear Speech Processing – 7th International Conference, NOLISP 2015, Vietri sul Mare, Italy, May 18–19, 2015, Proceedings* (A. Esposito, M. Faundez-Zanuy, A. M. Esposito, G. Cordasco, T. Drugman, J. Sol?-Casals, and C. F. Morabito, eds.), vol. 48, Smart Innovation, Systems and Technologies of *Smart Innovation Systems and Technologies*, pp. 3–4, Springer, 2015. invited
- 644) R. Cowie, Q. Ji, J. Tao, J. Gratch, and B. Schuller, “Foreword ACII 2015 – Affective Computing and Intelligent Interaction at Xi’an.” in *Proc. 6th biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, (Xi’an, P.R. China), AAAC, IEEE, September 2015. 2 pages
- 645) B. Schuller, “Foreword,” in *Sentic Computing – A Common-Sense-Based Framework for Concept-Level Sentiment Analysis* (E. Cambria and A. Hussain, eds.), pp. v–vi, Springer, 2 ed., 2015. invited foreword
- 646) B. Schuller, “Supervisor’s Foreword,” in *Real-time Speech and Music Classification by Large Audio Feature Space Extraction* (F. Eyben, ed.), Springer, 2015. invited foreword, 2 pages
- 658) M. Schmitt and B. Schuller, “openXBOW – Introducing the Pas-sau Open-Source Crossmodal Bag-of-Words Toolkit,” *arxiv.org*, May 2016. 9 pages
- 659) I. Abdić, L. Fridman, E. Marchi, D. E. Brown, W. Angell, B. Reimer, and B. Schuller, “Detecting Road Surface Wetness from Audio: A Deep Learning Approach,” *arxiv.org*, December 2015. 5 pages
- 660) A. E.-D. Mousa, E. Marchi, and B. Schuller, “The IC-STM+TUM+UP Approach to the 3rd CHIME Challenge: Single-Channel LSTM Speech Enhancement with Multi-Channel Correlation Shaping Dereverberation and LSTM Language Models,” *arxiv.org*, October 2015. 9 pages
- 661) G. Trigeorgis, K. Bousmalis, S. Zafeiriou, and B. Schuller, “A deep matrix factorization method for learning attribute representations,” *arxiv.org*, September 2015. 15 pages
- 662) F. Weninger, B. Schuller, F. Eyben, M. Wöllmer, and G. Rigoll, “A Broadcast News Corpus for Evaluation and Tuning of German LVCSR Systems,” *arxiv.org*, December 2014. 4 pages

#### Reviewed Technical Newsletter Contributions (5):

- 647) F. Eyben and B. Schuller, “openSMILE:) The Munich Open-Source Large-Scale Multimedia Feature Extractor,” *ACM SIGMM Records*, vol. 6, December 2014
- 648) B. Schuller, S. Steidl, and A. Batliner, “The INTERSPEECH 2013 Computational Paralinguistics Challenge – A Brief Review,” *Speech and Language Processing Technical Committee (SLTC) Newsletter*, November 2013
- 649) B. Schuller, S. Steidl, A. Batliner, F. Schiel, and J. Krajewski, “The INTERSPEECH 2011 Speaker State Challenge – A review,” *Speech and Language Processing Technical Committee (SLTC) Newsletter*, February 2012
- 650) B. Schuller and L. Devillers, “Emotion 2010 ?- On Recent Corpora for Research on Emotion and Affect,” *ELRA Newsletter, LREC 2010 Special Issue*, vol. 15, no. 1–2, pp. 18–18, 2010
- 651) B. Schuller, S. Steidl, A. Batliner, and F. Jurcicek, “The INTERSPEECH 2009 Emotion Challenge – Results and Lessons Learnt,” *Speech and Language Processing Technical Committee (SLTC) Newsletter*, October 2009

#### Technical Reports (11):

- 652) G. Keren, S. Sabato, and B. Schuller, “Fast Single-Class Classification and the Principle of Logit Separation,” *arxiv.org*, May 2017. 11 pages
- 653) D. L. Tran, R. Walecki, O. Rudovic, S. Eleftheriadis, B. Schuller, and M. Pantic, “DeepCoder: Semi-parametric Variational Autoencoders for Facial Action Unit Intensity Estimation,” *arxiv.org*, April 2017. 11 pages
- 654) P. Tzirakis, G. Trigeorgis, M. A. Nicolaou, B. Schuller, and S. Zafeiriou, “End-to-End Multimodal Emotion Recognition using Deep Neural Networks,” *arxiv.org*, April 2017. 9 pages
- 655) Z. Zhang, J. Geiger, J. Pohjalainen, A. E.-D. Mousa, and B. Schuller, “Deep Learning for Environmentally Robust Speech Recognition: An Overview of Recent Developments,” *arxiv.org*, May 2017. 14 pages
- 656) G. Keren and B. Schuller, “Convolutional RNN: an Enhanced Model for Extracting Features from Sequential Data,” *arxiv.org*, February 2016. 8 pages
- 657) G. Keren, S. Sabato, and B. Schuller, “Tunable Sensitivity to Large Errors in Neural Network Training,” *arxiv.org*, November 2016. 10 pages