

# Publications by Björn W. Schuller

3 July 2017

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

Current citation count: **15 096** (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*

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- 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))
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- 582) 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))
- 583) 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))
- 584) 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
- 585) 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):

- 586) 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))
- 587) B. Schuller, "Approaching Cross-Audio Computer Audition," *Dagstuhl Reports*, vol. 3, pp. 22–22, November 2013
- 588) F. Metze, 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
- 589) 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
- 590) B. Schuller, "Next Gen Music Analysis: Some Inspirations from Speech," *Dagstuhl Reports*, vol. 1, no. 1, pp. 93–93, 2011
- 591) 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

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- 592) 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
- 593) 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
- 594) 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
- 595) 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
- 596) B. Schuller, "Zaangazowanie aby wzmacniac kompetencje: emocjonalnie inteligentne roboty i gry komputerow dla dzieci z autyzmem," in *Proceedings "Swiatowe innowacje laczące medycynę, inżynierię oraz technologie w diagnozowaniu i terapii autyzmu"* (A. Rynkiewicz and K. Grabowski, eds.), (Rzeszow, Poland), pp. 62–64, SOLIS RADIUS, September 2016
- 597) 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
- 598) 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
- 599) 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
- 600) 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
- 601) 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
- 602) 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
- 603) 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
- 604) 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
- 605) 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
- 606) 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
- 607) 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
- 608) 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
- 609) 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 %)
- 610) 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 %)
- 611) 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 %)
- 612) 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 %)
- 613) 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):

- 614) 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
- 615) 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
- 616) 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, NAG/DAGA 2009*, (Rotterdam, The Netherlands), pp. 361–364, Acoustical Society of the Netherlands, DEGA, DEGA, March 2009. invited contribution
- 617) 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
- 618) 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
- 619) 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
- 620) 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
- 621) 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))
- 622) 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
- 623) 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
- 624) 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
- 625) 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
- 626) 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)
- 627) 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
- 628) 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
- 629) Z. Zhang, F. Wenginger, 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
- 630) 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
- 631) 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
- 632) M. Wöllmer, M. Kaiser, F. Eyben, F. Wenginger, 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
- 633) F. Wenginger, 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
- 634) W. Han, Z. Zhang, J. Deng, M. Wöllmer, F. Wenginger, 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
- 635) F. Wenginger 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))
- 636) F. Wenginger, 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
- 637) 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
- 638) 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), FLReNet, February 2010. invited contribution, 2 pages
- 639) 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, ACII 2009*, vol. 1, (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?
- 640) 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
- 641) 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
- 642) 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,

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- 643) 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):

- 644) 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
- 645) 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
- 646) 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
- 647) 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
- 657) G. Keren and B. Schuller, "Convolutional RNN: an Enhanced Model for Extracting Features from Sequential Data," *arxiv.org*, February 2016. 8 pages
- 658) G. Keren, S. Sabato, and B. Schuller, "Tunable Sensitivity to Large Errors in Neural Network Training," *arxiv.org*, November 2016. 10 pages
- 659) M. Schmitt and B. Schuller, "openXBOW – Introducing the Passau Open-Source Crossmodal Bag-of-Words Toolkit," *arxiv.org*, May 2016. 9 pages
- 660) 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
- 661) 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
- 662) G. Trigeorgis, K. Bousmalis, S. Zafeiriou, and B. Schuller, "A deep matrix factorization method for learning attribute representations," *arxiv.org*, September 2015. 15 pages
- 663) 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):

- 648) F. Eyben and B. Schuller, "openSMILE:) The Munich Open-Source Large-Scale Multimedia Feature Extractor," *ACM SIGMM Records*, vol. 6, December 2014
- 649) 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
- 650) 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
- 651) 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
- 652) 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):

- 653) G. Keren, S. Sabato, and B. Schuller, "Fast Single-Class Classification and the Principle of Logit Separation," *arxiv.org*, May 2017. 11 pages
- 654) 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
- 655) 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
- 656) 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