

Publications

Björn W. Schuller

25.08.2023

h-index: **106** (Google Scholar)

Citations: **57 304** (Google Scholar)

A) BOOKS

Books Authored (7):

- 1) Amiriparian, S., Bühlmeier, A., Henkelmann, C., Schmitt, M., Schuller, B., and Zeigermann, O. (2019b). *Einstieg ins Machine Learning*. entwickler.press shortcuts. entwickler.press/S&S Media Group. 70 pages
- 2) Schuller, B. W. (2018h). *I Know What You're Thinking: The Making of Emotional Machines*. Princeton University Press. to appear
- 3) Balahur-Dobrescu, A., Taboada, M., and Schuller, B. W. (2017). *Computational Methods for Affect Detection from Natural Language*. Computational Social Sciences. Springer. to appear
- 4) Schuller, B. (2013b). *Intelligent Audio Analysis*. Signals and Communication Technology. Springer. 350 pages
- 5) Schuller, B. and Batliner, A. (2013). *Computational Paralinguistics: Emotion, Affect and Personality in Speech and Language Processing*. Wiley
- 6) Kroschel, K., Rigoll, G., and Schuller, B. (2011). *Statistische Informationstechnik*. Springer, Berlin/Heidelberg, 5 edition
- 7) Schuller, B. (2007). *Mensch, Maschine, Emotion – Erkennung aus sprachlicher und manueller Interaktion*. VDM Verlag Dr Müller, Saarbrücken. 239 pages

Books Edited (7):

- 8) Schuller, B. W., Pham, P. N., Do, S., Pattichis, C. S., and Nair, P., editors (2022g). *Health Technologies and Innovations to Effectively Respond to the COVID-19 Pandemic*. Frontiers in Digital Health. Frontiers Media, 1 edition. 197 pages
- 9) Quadrianto, N., Schuller, B. W., and Lattimore, F. R., editors (2022). *Ethical Machine Learning and Artificial Intelligence (AI)*. Frontiers in Artificial Intelligence and Frontiers in Big Data. Frontiers Media, 1 edition. 85 pages
- 10) Costin, H. N., Schuller, B. W., and Florea, A. M., editors (2020). *Recent Advances in Intelligent Assistive Technologies: Paradigms and Applications*. Intelligent Systems Reference Library. Springer, 1 edition
- 11) Oviatt, S., Schuller, B., Cohen, P., Sonntag, D., Potamianos, G., and Krüger, A., editors (2019). *The*

Handbook of Multimodal-Multisensor Interfaces Volume 3 – Multimodal Language Processing, Software Tools, Commercial Applications and Emerging Directions. Number 23 in ACM Books. ACM Books, Morgan & Claypool. 789 pages

- 12) Oviatt, S., Schuller, B., Cohen, P., Sonntag, D., Potamianos, G., and Krüger, A., editors (2018). *The Handbook of Multimodal-Multisensor Interfaces Volume 2 – Signal Processing, Architectures, and Detection of Emotion and Cognition*. Number 21 in ACM Books. ACM Books, Morgan & Claypool. 531 pages
- 13) Oviatt, S., Schuller, B., Cohen, P., Sonntag, D., Potamianos, G., and Krüger, A., editors (2017). *The Handbook of Multimodal-Multisensor Interfaces Volume 1 – Foundations, User Modeling, and Common Modality Combinations*. Number 14 in ACM Books. ACM Books, Morgan & Claypool. 661 pages
- 14) D'Mello, S., Graesser, A., Schuller, B., and Martin, J.-C., editors (2011). *Proceedings of the 4. International HUMAINE Association Conference on Affective Computing and Intelligent Interaction 2011, ACII 2011*, volume 6974/6975, Part I / Part II of *Lecture Notes on Computer Science (LNCS)*, Memphis, TN. HUMAINE Association, Springer

Contributions to Books (55):

- 15) Schuller, D. and Schuller, B. (2022b). Ist Stimme das neue Blut? KI und Stimmbiomarker zu früheren Diagnose – für jedermann, überall und jederzeit. In Pfannstiel, M., editor, *Künstliche Intelligenz im Gesundheitswesen*, chapter 26, pages 565–579. Springer, Wiesbaden, Germany. invited contribution, awarded “Buchtipps Gesundheitswirtschaftskongress 2022”
- 16) Nessiem, M. A. F., Coppock, H., Mohamed, M. M., and Schuller, B. W. (2022). Artificial Intelligence in COVID-19. In Barh, D. and de Carvalho Azevedo, V. A., editors, *Omics approaches and technologies in COVID-19*, chapter 16, pages 255–273. Elsevier, 1 edition. invited contribution
- 17) Zhao, S., Huang, Q., Tang, Y., Yao, X., Yang, J., Ding, G., and Schuller, B. W. (2022a). Computational Emotion Analysis From Images: Recent Advances and Future Directions. In Ionescu, B., Bainbridge, W., and Murray, N., editors, *Human Perception of Visual Information – Psychological and Computational*, pages 85–113. Springer
- 18) Milling, M., Pokorny, F. B., and und Björn W.Schuller, K. D. B.-P. (2021). Stimme, das neue Blut!? Künstliche Intelligenz auf dem Weg

- Erkrankungen zu “hören”. In Manzei-Gorsky, A., Schubert, C., and von Hayek, J., editors, *Technik und Gesundheit*, volume 4 of *Gesundheitsforschung. Interdisziplinäre Perspektiven (G.IP)*, pages 113–136. Nomos, 1 edition
- 19) Nessiem, M. A., Amin, M., Coppock, H., and Schuller, B. (2021a). Artificial Intelligence for Diagnosis and Monitoring of COVID-19. In Barh, D., editor, *COVID-19*. Elsevier. invited contribution
 - 20) Schuller, B. W. and McTear, M. F. (2021). Socio-cognitive Language Processing for Special User Groups. In Miehle, J., Minker, W., André, E., and Yoshino, K., editors, *Multimodal Agents for Ageing and Multicultural Societies*, Communications of NII Shonan Meetings, chapter 5, pages 87–95. Springer
 - 21) Pokorný, F. and Schuller, B. (2021). Sound Engineering. In Sammler, D., editor, *Oxford Handbook of Language and Music*, chapter 10. Oxford University Press. invited, to appear
 - 22) Karas, V. and Schuller, B. (2021a). Deep Learning for Sentiment Analysis: an Overview and Perspectives. In Pinarbasi, F. and Taskiran, M. N., editors, *Natural Language Processing for Global and Local Business*, chapter 5, pages 97–133. IGI Global
 - 23) Morency, L.-P., Sakti, S., Schuller, B. W., and Ultes, S. (2021). Multimodal Machine Learning for Social Interaction with Ageing Individuals. In Miehle, J., Minker, W., André, E., and Yoshino, K., editors, *Multimodal Agents for Ageing and Multicultural Societies*, Communications of NII Shonan Meetings, chapter 3, pages 51–70. Springer
 - 24) Amiriparian, S., Schmitt, M., Ottl, S., Gerczuk, M., and Schuller, B. (2020c). Deep Unsupervised Representation Learning for Audio-based Medical Applications. In Nanni, L., Brahnam, S., Brattin, R., Ghidoni, S., and Jain, L. C., editors, *Deep Learners and Deep Learner Descriptors for Medical Applications*, volume 186 of *Intelligent Systems Reference Library (ISRL)*, chapter 5, pages 137–164. Springer. invited contribution
 - 25) Cummins, N., Ren, Z., Mallol-Ragolta, A., and Schuller, B. (2020c). Machine learning in digital health, recent trends, and ongoing challenges. In Barh, D., editor, *Artificial Intelligence in Precision Health*, chapter 5, pages 121–148. Academic Press/Elsevier. invited contribution
 - 26) Cummins, N., Matcham, F., Klapper, J., and Schuller, B. (2020a). Artificial intelligence to aid the detection of mood disorders. In Barh, D., editor, *Artificial Intelligence in Precision Health*, chapter 10, pages 231–255. Academic Press/Elsevier. invited contribution
 - 27) Pateraki, M., Fysarakis, K., Sakkalis, V., Spanoudakis, G., Varlamis, I., Ioannidis, S., Maniadakis, M., Lourakis, M., Cummins, N., Schuller, B., Loutsetis, E., and Koutsouris, D. (2020). Biosensors and Internet of Things in smart healthcare applications: challenges and opportunities. In Dey, N., Ashour, A., Fong, S. J., and Bhatt, C., editors, *Wearable and Implantable Medical Devices*, volume 7 of *Applications in ubiquitous sensing applications for healthcare*, chapter 2, pages 25–53. Elsevier / Academic Press, 1 edition
 - 28) Schuller, D. and Schuller, B. (2020b). The Challenge of Automatic Eating Behaviour Analysis and Tracking. In Costin, H. N., Schuller, B. W., and Florea, A. M., editors, *Recent Advances in Intelligent Assistive Technologies: Paradigms and Applications*, Intelligent Systems Reference Library, pages 187–204. Springer
 - 29) Amiriparian, S., Schmitt, M., Hantke, S., Pandit, V., and Schuller, B. (2019f). Humans Inside: Cooperative Big Multimedia Data Mining. In Esposito, A., Esposito, A. M., and Jain, L. C., editors, *Innovations in Big Data Mining and Embedded Knowledge: Domestic and Social Context Challenges*, volume 159 of *Intelligent Systems Reference Library (ISRL)*, pages 235–257. Springer. invited contribution
 - 30) Pandit, V., Amiriparian, S., Schmitt, M., Qian, K., Guo, J., Matsuoka, S., and Schuller, B. (2019a). Big Data Multimedia Mining: Feature Extraction facing Volume, Velocity, and Variety. In Vrochidis, S., Huet, B., Chang, E. Y., and Kompatsiaris, I., editors, *Big Data Analytics for Large-Scale Multimedia Search*, chapter 3, pages 61–83. Wiley
 - 31) Tzirakis, P., Zafeiriou, S., and Schuller, B. (2019c). Real-world automatic continuous affect recognition from audiovisual signals. In Alameda-Pineda, X., Ricci, E., and Sebe, N., editors, *Multi-modal Behavior Analysis in the Wild: Advances and Challenges*, Computer Vision and Pattern Recognition, chapter 18, pages 387–406. Elsevier
 - 32) Cummins, N. and Schuller, B. (2019). Latest Advances in Computational Speech Analysis for Mobile Sensing. In Montag, C. and Baumeister, H., editors, *Digital Phenotyping and Mobile Sensing*, Studies in Neuroscience, Psychology and Behavioral Economics, pages 141–159. Springer, Berlin Heidelberg. invited contribution
 - 33) Schmitt, M. and Schuller, B. (2019a). Machine-based decoding of paralinguistic vocal features. In Frühholz, S. and Belin, P., editors, *The Oxford Handbook of Voice Perception*, chapter 43, pages 719–742. Oxford University Press
 - 34) Schuller, B. (2018c). Multimodal User State and Trait Recognition: An Overview. In Oviatt, S., Schuller, B., Cohen, P., Sonntag, D., Potamianos, G., and Krüger, A., editors, *The Handbook of Multimodal-Multisensor Interfaces Volume 2 – Signal Processing, Architectures, and Detection of Emotion and Cognition*, volume 21 of *ACM Books*, chapter 5, pages 131–165. ACM Books, Morgan & Claypool, 1 edition
 - 35) Bengio, S., Deng, L., Morency, L.-P., and Schuller, B. (2018). Multidisciplinary Challenge Topic: Perspectives on Predictive Power of Multimodal Deep Learning: Surprises and Future Directions. In Oviatt, S., Schuller, B., Cohen, P., Sonntag, D., Potami-

- anos, G., and Krüger, A., editors, *The Handbook of Multimodal-Multisensor Interfaces Volume 2 – Signal Processing, Architectures, and Detection of Emotion and Cognition*, volume 21, chapter 14, pages 457–472. ACM Books, Morgan & Claypool, 1 edition
- 36) Keren, G., Mousa, A. E.-D., Pietquin, O., Zafeiriou, S., and Schuller, B. (2018e). Deep Learning for Multisensorial and Multimodal Interaction. In Oviatt, S., Schuller, B., Cohen, P., Sonntag, D., Potamianos, G., and Krüger, A., editors, *The Handbook of Multimodal-Multisensor Interfaces Volume 2 – Signal Processing, Architectures, and Detection of Emotion and Cognition*, volume 21, chapter 4, pages 99–128. ACM Books, Morgan & Claypool
- 37) Marchi, E., Zhang, Y., Eyben, F., Ringeval, F., and Schuller, B. (2018). Autism and Speech, Language, and Emotion – a Survey. In Patil, H., Neustein, A., and Kulshreshtha, M., editors, *Signal and Acoustic Modeling for Speech and Communication Disorders*, volume 5 of *Speech Technology and Text Mining in Medicine and Healthcare*, chapter 6, pages 139–160. De Gruyter, Berlin. invited contribution
- 38) Schuller, B., Elkins, A., and Scherer, K. (2017a). Computational Analysis of Vocal Expression of Affect: Trends and Challenges. In Burgoon, J., Magnenat-Thalmann, N., Pantic, M., and Vinciarelli, A., editors, *Social Signal Processing*, chapter 6, pages 56–68. Cambridge University Press
- 39) Gunes, H. and Schuller, B. (2017a). Automatic Analysis of Aesthetics: Human Beauty, Attractiveness, and Likability. In Burgoon, J., Magnenat-Thalmann, N., Pantic, M., and Vinciarelli, A., editors, *Social Signal Processing*, chapter 14, pages 183–201. Cambridge University Press
- 40) Gunes, H. and Schuller, B. (2017b). Automatic Analysis of Social Emotions. In Burgoon, J., Magnenat-Thalmann, N., Pantic, M., and Vinciarelli, A., editors, *Social Signal Processing*, chapter 16, pages 213–224. Cambridge University Press
- 41) Schuller, B. (2016b). Acquisition of affect. In Tkalcic, M., De Carolis, B., de Gemmis, M., Odić, A., and Kosir, A., editors, *Emotions and Personality in Personalized Services*, Human-Computer Interaction Series, pages 57–80. Springer, 1 edition
- 42) Burkhardt, F., Pelachaud, C., Schuller, B., and Zovato, E. (2017a). EmotionML. In Dahl, D., editor, *Multimodal Interaction with W3C Standards: Towards Natural User Interfaces to Everything*, pages 65–80. Springer, Berlin/Heidelberg
- 43) Schuller, B. (2015b). Deep Learning our Everyday Emotions – A Short Overview. In Bassis, S., Esposito, A., and Morabito, F. C., editors, *Advances in Neural Networks: Computational and Theoretical Issues Emotional Expressions and Daily Cognitive Functions*, volume 37 of *Smart Innovation Systems and Technologies*, pages 339–346. Springer, Berlin Heidelberg. invited contribution
- 44) Schuller, B. and Weninger, F. (2015). Human Affect Recognition – Audio-Based Methods. In Webster, J. G., editor, *Wiley Encyclopedia of Electrical and Electronics Engineering*, pages 1–13. John Wiley & Sons, New York. invited contribution
- 45) Schuller, B. (2015g). Multimodal Affect Databases – Collection, Challenges & Chances. In Calvo, R. A., D’Mello, S., Gratch, J., and Kappas, A., editors, *Handbook of Affective Computing*, Oxford Library of Psychology, chapter 23, pages 323–333. Oxford University Press. invited contribution
- 46) Schuller, B. (2015d). Emotion Modeling via Speech Content and Prosody – in Computer Games and Elsewhere. In Yannakakis, G. and Karpouzis, K., editors, *Emotion in Games – Theory and Practice*, volume 4 of *Socio-Affective Computing*, chapter 5, pages 85–102. Springer. invited contribution
- 47) Brückner, R. and Schuller, B. (2015). Being at Odds? – Deep and Hierarchical Neural Networks for Classification and Regression of Conflict in Speech. In D’Errico, F., Poggi, I., Vinciarelli, A., and Vincze, L., editors, *Conflict and Multimodal Communication – Social research and machine intelligence*, Computational Social Sciences, pages 403–429. Springer, Berlin/Heidelberg. invited contribution
- 48) Castellano, G., Gunes, H., Peters, C., and Schuller, B. (2015). Multimodal Affect Detection for Naturalistic Human-Computer and Human-Robot Interactions. In Calvo, R. A., D’Mello, S., Gratch, J., and Kappas, A., editors, *Handbook of Affective Computing*, Oxford Library of Psychology, chapter 17, pages 246–260. Oxford University Press. invited contribution
- 49) Weninger, F., Wöllmer, M., and Schuller, B. (2015c). Emotion Recognition in Naturalistic Speech and Language – A Survey. In Konar, A. and Chakraborty, A., editors, *Emotion Recognition: A Pattern Analysis Approach*, chapter 10, pages 237–267. Wiley, 1 edition
- 50) Marchi, E., Ringeval, F., and Schuller, B. (2014c). Voice-enabled assistive robots for handling autism spectrum conditions: an examination of the role of prosody. In Neustein, A., editor, *Speech and Automata in Health Care (Speech Technology and Text Mining in Medicine and Healthcare)*, pages 207–236. De Gruyter, Boston/Berlin/Munich. invited contribution
- 51) Schuller, B. (2013d). Prosody and Phonemes: On the Influence of Speaking Style. In Hancil, S. and Hirst, D., editors, *Prosody and Iconicity*, chapter 13, pages 233–250. Benjamins
- 52) Schuller, B. and Weninger, F. (2012). Ten Recent Trends in Computational Paralinguistics. In Esposito, A., Vinciarelli, A., Hoffmann, R., and Müller, V. C., editors, *4. COST 2102 International Training School on Cognitive Behavioural Systems*, volume 7403/2012 of *Lecture Notes on Computer Science (LNCS) 7403*, pages 35–49. Springer, Berlin Heidelberg
- 53) Rotili, R., Principi, E., Wöllmer, M., Squartini, S., and Schuller, B. (2012c). Conversational Speech Recognition In Non-Stationary Reverberated Environments. In Esposito, A., Vinciarelli, A., Hoffmann,

- R., and Müller, V. C., editors, *4. COST 2102 International Training School on Cognitive Behavioural Systems*, volume 7403/2012 of *Lecture Notes on Computer Science (LNCS)*, pages 50–59. Springer, Berlin Heidelberg
- 54) Rotili, R., Principi, E., Squartini, S., and Schuller, B. (2012b). 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)*, volume 6839 of *Lecture Notes on Computer Science (LNCS)*, pages 379–386. Springer
- 55) Schuller, B. (2011c). Voice and Speech Analysis in Search of States and Traits. In Salah, A. A. and Gevers, T., editors, *Computer Analysis of Human Behavior*, *Advances in Pattern Recognition*, chapter 9, pages 227–253. Springer
- 56) Schuller, B. and Knaup, T. (2011). Learning and Knowledge-based Sentiment Analysis in Movie Review Key Excerpts. In Esposito, A., Esposito, A. M., Martone, R., Müller, V., and Scarpetta, G., editors, *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*, volume 6456/2010 of *Lecture Notes on Computer Science (LNCS)*, pages 448–472. Springer, Heidelberg, 1 edition
- 57) Schuller, B., Wöllmer, M., Eyben, F., and Rigoll, G. (2011g). Retrieval of Paralinguistic Information in Broadcasts. In Maybury, M. T., editor, *Multimedia Information Extraction: Advances in video, audio, and imagery extraction for search, data mining, surveillance, and authoring*, chapter 17, pages 273–288. Wiley, IEEE Computer Society Press
- 58) Arsić, D. and Schuller, B. (2011). Real Time Person Tracking and Behavior Interpretation in Multi Camera Scenarios Applying Homography and Coupled HMMs. In Esposito, A., Vinciarelli, A., Vicsi, K., Pelachaud, C., and Nijholt, A., editors, *Analysis of Verbal and Nonverbal Communication and Enactment: The Processing Issues, COST 2102 International Conference, Budapest, Hungary, September 7-10, 2010, Revised Selected Papers*, volume 6800/2011 of *Lecture Notes on Computer Science (LNCS)*, pages 1–18. Springer, Heidelberg
- 59) Schuller, B., Dibiasi, F., Eyben, F., and Rigoll, G. (2010a). Music Thumbnailing Incorporating Harmony- and Rhythm Structure. In Detyniecki, M., Leiner, U., and Nürnberger, A., editors, *Adaptive Multimedia Retrieval: 6. International Workshop, AMR 2008, Berlin, Germany, June 26-27, 2008. Revised Selected Papers*, volume 5811/2010 of *Lecture Notes in Computer Science (LNCS)*, pages 78–88. Springer, Berlin/Heidelberg
- 60) Batliner, A., Schuller, B., Seppi, D., Steidl, S., Devillers, L., Vidrascu, L., Vogt, T., Aharonson, V., and Amir, N. (2010a). The Automatic Recognition of Emotions in Speech. In Cowie, R., Petta, P., and Pelachaud, C., editors, *Emotion-Oriented Systems: The HUMAINE Handbook*, *Cognitive Technologies*, pages 71–99. Springer, 1 edition
- 61) Wöllmer, M., Eyben, F., Graves, A., Schuller, B., and Rigoll, G. (2010b). Improving Keyword Spotting with a Tandem BLSTM-DBN Architecture. In Sole-Casals, J. and Zaiats, V., editors, *Advances in Non-Linear Speech Processing: International Conference on Nonlinear Speech Processing, NOLISP 2009, Vic, Spain, June 25-27, 2009, Revised Selected Papers*, volume 5933/2010 of *Lecture Notes on Computer Science (LNCS)*, pages 68–75. Springer
- 62) Schuller, B., Wöllmer, M., Eyben, F., and Rigoll, G. (2009k). Spectral or Voice Quality? Feature Type Relevance for the Discrimination of Emotion Pairs. In Hancil, S., editor, *The Role of Prosody in Affective Speech*, volume 97 of *Linguistic Insights, Studies in Language and Communication*, pages 285–307. Peter Lang Publishing Group
- 63) Schuller, B., Eyben, F., and Rigoll, G. (2008e). Static and Dynamic Modelling for the Recognition of Non-Verbal Vocalisations in Conversational Speech. In André, E., Dybkjaer, L., Neumann, H., Pieraccini, R., and Weber, M., editors, *Perception in Multimodal Dialogue Systems: 4. IEEE Tutorial and Research Workshop on Perception and Interactive Technologies for Speech-Based Systems, PIT 2008, Kloster Irsee, Germany, June 16-18, 2008, Proceedings*, volume 5078/2008 of *Lecture Notes on Computer Science (LNCS)*, pages 99–110. Springer, Berlin/Heidelberg
- 64) Schuller, B., Wöllmer, M., Moosmayr, T., Ruske, G., and Rigoll, G. (2008m). Switching Linear Dynamic Models for Noise Robust In-Car Speech Recognition. In Rigoll, G., editor, *Pattern Recognition: 30. DAGM Symposium Munich, Germany, June 10-13, 2008 Proceedings*, volume 5096 of *Lecture Notes on Computer Science (LNCS)*, pages 244–253. Springer, Berlin/Heidelberg. (acceptance rate: 39%)
- 65) Vlasenko, B., Schuller, B., Wendemuth, A., and Rigoll, G. (2008b). On the Influence of Phonetic Content Variation for Acoustic Emotion Recognition. In André, E., Dybkjaer, L., Neumann, H., Pieraccini, R., and Weber, M., editors, *Perception in Multimodal Dialogue Systems: 4. IEEE Tutorial and Research Workshop on Perception and Interactive Technologies for Speech-Based Systems, PIT 2008, Kloster Irsee, Germany, June 16-18, 2008, Proceedings*, volume 5078/2008 of *Lecture Notes on Computer Science (LNCS)*, pages 217–220. Springer, Berlin/Heidelberg
- 66) Grimm, M., Kroschel, K., Harris, H., Nass, C., Schuller, B., Rigoll, G., and Moosmayr, T. (2007a). On the Necessity and Feasibility of Detecting a Driver’s Emotional State While Driving. In Paiva, A., Picard, R. W., and Prada, R., editors, *Affective Computing and Intelligent Interaction: Second International Conference, ACII 2007, Lisbon, Por-*

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- 67) Vlasenko, B., Schuller, B., Wendemuth, A., and Rigoll, G. (2007b). Frame vs. Turn-Level: Emotion Recognition from Speech Considering Static and Dynamic Processing. In Paiva, A., Picard, R. W., and Prada, R., editors, *Affective Computing and Intelligent Interaction: Second International Conference, ACII 2007, Lisbon, Portugal, September 12-14, 2007, Proceedings*, volume 4738/2007 of *Lecture Notes on Computer Science (LNCS)*, pages 139–147. Springer, Berlin/Heidelberg
- 68) Schröder, M., Devillers, L., Karpouzis, K., Martin, J.-C., Pelachaud, C., Peter, C., Pirker, H., Schuller, B., Tao, J., and Wilson, I. (2007). What should a generic emotion markup language be able to represent? In Paiva, A., Picard, R. W., and Prada, R., editors, *Affective Computing and Intelligent Interaction: Second International Conference, ACII 2007, Lisbon, Portugal, September 12-14, 2007, Proceedings*, volume 4738/2007 of *Lecture Notes on Computer Science (LNCS)*, pages 440–451. Springer, Berlin/Heidelberg
- 69) Schuller, B., Ablamey, M., Müller, R., Reifinger, S., Poitschke, T., and Rigoll, G. (2006a). Speech Communication and Multimodal Interfaces. In Kraiss, K.-F., editor, *Advanced Man Machine Interaction, Signals and Communication Technology*, chapter 4, pages 141–190. Springer, Berlin/Heidelberg
- B) REFEREED JOURNAL PAPERS (276)
- 70) Amin, M. M., Cambria, E., and Schuller, B. W. (2023a). Can ChatGPT’s Responses Boost Traditional Natural Language Processing? *IEEE Intelligent Systems Magazine*, 38(6). 9 pages, to appear
- 71) Amin, M. M., Cambria, E., and Schuller, B. W. (2023c). Will Affective Computing Emerge from Foundation Models and General AI? A First Evaluation on ChatGPT. *IEEE Intelligent Systems Magazine*, 38(2):15–23. invited presentation at the Singapore Symposium on Sentiment Analysis (S3A 2023), NTU, Singapore, Singapore, 09.03.2023 (IF: 6.744 (2021))
- 72) Batliner, A., Neumann, M., Burkhardt, F., Baird, A., Meyer, S., Vu, N. T., and Schuller, B. (2023). Ethical Awareness in Paralinguistics: A Taxonomy of Applications. *International Journal of Human-Computer Interaction*, 39(9):1904–1921. (IF: 4.920 (2021))
- 73) Bayerl, S. P., Gerczuk, M., Batliner, A., Bergler, C., Amiriparian, S., Schuller, B., Nöth, E., and Riedhammer, K. (2023). Classification of Stuttering – The ComParE Challenge and Beyond. *Computer Speech and Language*, 81(101519):1–20. (IF: 3.252 (2022))
- 74) Calvo, R., Peters, D., Moradbakhti, L., Cook, D., Rizos, G., Schuller, B., Kallis, C., Wong, E., Quint, J., and Bhavsar, A. (2023). Assessing the feasibility of a text-based conversational agent for asthma support: Protocol for a mixed-methods observational study. *JMIR Research Protocols*. 12 pages, to appear
- 75) Cheng, J., Liang, R., Zhao, L., Huang, C., and Schuller, B. W. (2023). Speech Denoising and Compensation for Hearing Aids using an FT-CRN-based Metric GAN. *IEEE Signal Processing Letters*, 30:374–378. (IF: 3.201 (2022))
- 76) Coppock, H., Nicholson, G., Kiskin, I., Koutra, V., Baker, K., Budd, J., Payne, R., Karoune, E., Hurley, D., Titcomb, A., Egglestone, S., Cañadas, A. T., Butler, L., Jersakova, R., Mellor, J., Patel, S., Thornley, T., Diggle, P., Richardson, S., Packham, J., Schuller, B. W., Pigoli, D., Gilmour, S., Roberts, S., and Holmes, C. (2023b). Audio-based AI classifiers show no evidence of improved COVID-19 screening over simple symptoms checkers. *Nature Machine Intelligence*, 5. 36 pages, to appear (IF: 25.898 (2021))
- 77) Coppock, H., Akman, A., Bergler, C., Gerczuk, M., Brown, C., Chauhan, J., Grammenos, A., Hasthanasombat, A., Spathis, D., Xia, T., Cicuta, P., Han, J., Amiriparian, S., Baird, A., Stappen, L., Ottl, S., Tzirakis, P., Batliner, A., Mascolo, C., and Schuller, B. W. (2023a). A Summary of the ComParE COVID-19 Challenges. *Frontiers in Digital Health, section Health Informatics*, 5. 18 pages, to appear
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- 630) Wang, J., Strömfelt, H., and Schuller, B. W. (2018). A CNN-GRU Approach to Capture Time-Frequency Pattern Interdependence for Snore Sound Classification. In *Proceedings 26. European Signal Processing Conference (EUSIPCO)*, pages 997–1001, Rome, Italy. EURASIP, IEEE
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- 655) Guo, J., Qian, K., Schuller, B. W., and Matsuoka, S. (2017b). GPU-based Training of Autoencoders for Bird Sound Data Processing. In *Proceedings IEEE International Conference on Consumer Electronics Taiwan, ICCE-TW 2017*, Taipei, Taiwan. IEEE, IEEE. 2 pages
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- 657) Hagerer, G., Cummins, N., Eyben, F., and Schuller, B. (2017a). “Did you laugh enough today?” – Deep Neural Networks for Mobile and Wearable Laughter Trackers. In *Proceedings INTERSPEECH 2017, 18. Annual Conference of the International Speech Communication Association*, pages 2044–2045, Stockholm, Sweden. ISCA, ISCA. Show & Tell demonstration (acceptance rate: 67 %)
- 658) Hagerer, G., Pandit, V., Eyben, F., and Schuller, B. (2017c). Enhancing LSTM RNN-based Speech Overlap Detection by Artificially Mixed Data. In *Proceedings AES 56. International Conference on Semantic Audio*, pages 1–8, Erlangen, Germany. AES, Audio Engineering Society
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- 660) Han, J., Zhang, Z., Ringeval, F., and Schuller, B. (2017b). Prediction-based Learning from Continuous Emotion Recognition in Speech. In *Proceedings 42. IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2017*, pages 5005–5009, New Orleans, LA. IEEE, IEEE. (acceptance rate: 49 %)
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- 662) Hantke, S., Sagha, H., Cummins, N., and Schuller, B. (2017a). Emotional Speech of Mentally and Physically Disabled Individuals: Introducing The EmotAsS Database and First Findings. In *Proceedings INTERSPEECH 2017, 18. Annual Conference of the International Speech Communication Association*, pages 3137–3141, Stockholm, Sweden. ISCA, ISCA. (acceptance rate: 51 %)
- 663) Hantke, S., Zhang, Z., and Schuller, B. (2017b). Towards Intelligent Crowdsourcing for Audio Data Annotation: Integrating Active Learning in the Real World. In *Proceedings INTERSPEECH 2017, 18. Annual Conference of the International Speech Communication Association*, pages 3951–3955, Stockholm, Sweden. ISCA, ISCA. (acceptance rate: 51 %)
- 664) Keren, G., Kirschstein, T., Marchi, E., Ringeval, F., and Schuller, B. (2017a). End-to-end learning for dimensional emotion recognition from physiological signals. In *Proceedings 18. IEEE International Conference on Multimedia and Expo, ICME 2017*, pages 985–990, Hong Kong, China. IEEE, IEEE. (acceptance rate: 30 %)
- 665) Keren, G., Sabato, S., and Schuller, B. (2017c). Tunable Sensitivity to Large Errors in Neural Network Training. In *Proceedings of the 31. AAAI Conference on Artificial Intelligence, AAAI 17*, pages 2087–2093, San Francisco, CA. AAAI. (acceptance rate: 25 %)
- 666) Kohlschein, C., Schmitt, M., Schuller, B. W., Jeschke, S., and Werner, C. (2017). A Machine Learning Based System for the Automatic Evaluation of Aphasia Speech. In *Proceedings 2017 IEEE 19. International Conference on e-Health Networking, Applications and Services (Healthcom)*, pages 1–6, Dalian, China. IEEE, IEEE
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- 669) Parada-Cabaleiro, E., Baird, A., Batliner, A., Cummins, N., Hantke, S., and Schuller, B. (2017a). The Perception of Emotions in Noisified Non-Sense Speech. In *Proceedings INTERSPEECH 2017, 18. Annual Conference of the International Speech Communication Association*, pages 3246–3250, Stockholm, Sweden. ISCA, ISCA. (acceptance rate: 51 %)
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- 675) Ren, Z., Qian, K., Pandit, V., Zhang, Z., Yang, Z., and Schuller, B. (2017). Deep Sequential Image Features on Acoustic Scene Classification. In *Proceedings of the 2. Detection and Classification of Acoustic Scenes and Events 2017 Workshop (DCASE 2017)*, pages 113–117, Munich, Germany. IEEE, IEEE
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- 690) Zhang, Z., Weninger, F., Wöllmer, M., Han, J., and Schuller, B. (2017g). Towards Intoxicated Speech Recognition. In *Proceedings 30. International Joint Conference on Neural Networks (IJCNN)*, pages 1555–1559, Anchorage, AK. INNS/IEEE, IEEE. (acceptance rate: 67 %)
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- 692) Schuller, B., Ganascia, J.-G., and Devillers, L. (2016a). Multimodal Sentiment Analysis in the Wild: Ethical considerations on Data Collection, Annotation, and Exploitation. In Devillers, L., Schuller, B., Mower Provost, E., Robinson, P., Mariani, J., and Delaborde, A., editors, *Proceedings 1. International Workshop on ETHics In Corpus Collection, Annotation and Application (ETHI-CA² 2016)*, satellite of the 10. Language Resources and Evaluation Conference (LREC 2016), pages 29–34, Portoroz, Slovenia. ELRA, ELRA
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- 694) Schuller, B., Steidl, S., Batliner, A., Hirschberg, J., Burgoon, J. K., Baird, A., Elkins, A., Zhang, Y., Coutinho, E., and Evanini, K. (2016b). The INTERSPEECH 2016 Computational Paralinguistics Challenge: Deception, Sincerity & Native Language. In *Proceedings INTERSPEECH 2016, 17. Annual Conference of the International Speech Communication Association*, pages 2001–2005, San Francisco, CA. ISCA, ISCA. (acceptance rate: 50 %)
- 695) Abdić, I., Fridman, L., McDuff, D., Marchi, E., Reimer, B., and Schuller, B. (2016b). Driver Frustration Detection From Audio and Video. In *Proceedings of the 25. International Joint Conference on Artificial Intelligence, IJCAI 2016*, pages 1354–1360, New York City, NY. IJCAI/AAAI. (acceptance rate: 25 %)
- 696) Abdić, I., Fridman, L., Brown, D. E., Angell, W., Reimer, B., Marchi, E., and Schuller, B. (2016a). Detecting Road Surface Wetness from Audio: A Deep Learning Approach. In *Proceedings 23. International Conference on Pattern Recognition (ICPR 2016)*, pages 3458–3463, Cancun, Mexico. IAPR, IAPR
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- 698) Amiriparian, S., Pohjalainen, J., Marchi, E., Pugachevskiy, S., and Schuller, B. (2016). Is deception emotional? An emotion-driven predictive approach. In *Proceedings INTERSPEECH 2016, 17. Annual Conference of the International Speech Communication Association*, pages 2011–2015, San Francisco, CA. ISCA, ISCA. nominated for best student paper award (12 nominations for 3 awards, acceptance rate overall conference: 50 %)
- 699) Cambria, E., Poria, S., Bajpai, R., and Schuller, B. (2016a). SenticNet4: A Semantic Resource for Sentiment Analysis Based on Conceptual Primitives. In *Proceedings of the 26. International Conference on Computational Linguistics, COLING*, pages 2666–2677, Osaka, Japan. ICCL, ANLP
- 700) Coutinho, E., Hönl, F., Zhang, Y., Hantke, S., Batliner, A., Nöth, E., and Schuller, B. (2016). Assessing the Prosody of Non-Native Speakers of English: Measures and Feature Sets. In *Proceedings 10. Language Resources and Evaluation Conference (LREC 2016)*, pages 1328–1332, Portoroz, Slovenia. ELRA, ELRA
- 701) Deng, J., Cummins, N., Han, J., Xu, X., Ren, Z., Pandit, V., Zhang, Z., and Schuller, B. (2016a). The University of Passau Open Emotion Recognition System for the Multimodal Emotion Challenge. In *Proceedings of the 7. Chinese Conference on Pattern Recognition, CCPR*, pages 652–666, Chengdu, China. Springer
- 702) Dong, B., Zhang, Z., and Schuller, B. (2016). Empir-

- ical Mode Decomposition: A Data-Enrichment Perspective on Speech Emotion Recognition. In Sánchez-Rada, J. F. and Schuller, B., editors, *Proceedings 6. International Workshop on Emotion and Sentiment Analysis (ESA 2016)*, satellite of the 10. Language Resources and Evaluation Conference (LREC 2016), pages 71–75, Portoroz, Slovenia. ELRA, ELRA. (acceptance rate: 74%)
- 703) Guo, J., Qian, K., Xu, H., Janott, C., Schuller, B. W., and Matsuoka, S. (2016). GPU-Based Fast Signal Processing for Large Amounts of Snore Sound Data. In *Proceedings IEEE 5. Global Conference on Consumer Electronics, GCCE*, pages 523–524, Kyoto, Japan. IEEE, IEEE. (acceptance rate: 66%)
- 704) Hantke, S., Batliner, A., and Schuller, B. (2016a). Ethics for Crowdsourced Corpus Collection, Data Annotation and its Application in the Web-based Game iHEARu-PLAY. In Devillers, L., Schuller, B., Mower Provost, E., Robinson, P., Mariani, J., and Delaborde, A., editors, *Proceedings 1. International Workshop on ETHics In Corpus Collection, Annotation and Application (ETHI-CA² 2016)*, satellite of the 10. Language Resources and Evaluation Conference (LREC 2016), pages 54–59, Portoroz, Slovenia. ELRA, ELRA. (oral acceptance rate: 45%)
- 705) Hantke, S., Marchi, E., and Schuller, B. (2016b). Introducing the Weighted Trustability Evaluator for Crowdsourcing Exemplified by Speaker Likability Classification. In *Proceedings 10. Language Resources and Evaluation Conference (LREC 2016)*, pages 2156–2161, Portoroz, Slovenia. ELRA, ELRA
- 706) Keren, G., Deng, J., Pohjalainen, J., and Schuller, B. (2016a). Convolutional Neural Networks and Data Augmentation for Classifying Speakers’ Native Language. In *Proceedings INTERSPEECH 2016, 17. Annual Conference of the International Speech Communication Association*, pages 2393–2397, San Francisco, CA. ISCA, ISCA. (acceptance rate: 50%)
- 707) Keren, G. and Schuller, B. (2016a). 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)*, pages 3412–3419, Vancouver, Canada. INNS/IEEE, IEEE
- 708) Li, Y., Tao, J., Schuller, B., Shan, S., Jiang, D., and Jia, J. (2016). MEC 2016: The Multimodal Emotion Recognition Challenge of CCPR 2016. In *Proceedings of the 7. Chinese Conference on Pattern Recognition, CCPR*, pages 667–678, Chengdu, China. Springer
- 709) Marchi, E., Tonelli, D., Xu, X., Ringeval, F., Deng, J., Squartini, S., and Schuller, B. (2016c). 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, pages 1–5, Budapest, Hungary. EUSIPCO, IEEE
- 710) Marchi, E., Eyben, F., Hagerer, G., and Schuller, B. W. (2016a). Real-time Tracking of Speakers’ Emotions, States, and Traits on Mobile Platforms. In *Proceedings INTERSPEECH 2016, 17. Annual Conference of the International Speech Communication Association*, pages 1182–1183, San Francisco, CA. ISCA, ISCA. Show & Tell demonstration (acceptance rate: 50%)
- 711) Marchi, E., Tonelli, D., Xu, X., Ringeval, F., Deng, J., Squartini, S., and Schuller, B. (2016d). 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. 1 page
- 712) Mousa, A. E.-D. and Schuller, B. (2016). Deep Bidirectional Long Short-Term Memory Recurrent Neural Networks for Grapheme-to-Phoneme Conversion utilizing Complex Many-to-Many Alignments. In *Proceedings INTERSPEECH 2016, 17. Annual Conference of the International Speech Communication Association*, pages 2836–2840, San Francisco, CA. ISCA, ISCA. (acceptance rate: 50%)
- 713) Pokorný, F. B., Marschik, P. B., Einspieler, C., and Schuller, B. W. (2016a). Does She Speak RTT? Towards an Earlier Identification of Rett Syndrome Through Intelligent Pre-linguistic Vocalisation Analysis. In *Proceedings INTERSPEECH 2016, 17. Annual Conference of the International Speech Communication Association*, pages 1953–1957, San Francisco, CA. ISCA, ISCA. (acceptance rate: 50%)
- 714) Pokorný, F. B., Peharz, R., Roth, W., Zohrer, M., Pernkopf, F., Marschik, P. B., and Schuller, B. W. (2016b). Manual Versus Automated: The Challenging Routine of Infant Vocalisation Segmentation in Home Videos to Study Neuro(mal)development. In *Proceedings INTERSPEECH 2016, 17. Annual Conference of the International Speech Communication Association*, pages 2997–3001, San Francisco, CA. ISCA, ISCA. (acceptance rate: 50%)
- 715) Qian, K., Janott, C., Zhang, Z., Heiser, C., and Schuller, B. (2016). Wavelet Features for Classification of VOTE Snore Sounds. In *Proceedings 41. IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2016*, pages 221–225, Shanghai, China. IEEE, IEEE. (acceptance rate: 45%)
- 716) Pantic, M., Evers, V., Deisenroth, M., Merino, L., and Schuller, B. (2016). Social and Affective Robotics Tutorial. In *Proceedings of the 24. ACM International Conference on Multimedia, MM 2016*, pages 1477–1478, Amsterdam, The Netherlands. ACM, ACM. (acceptance rate short paper: 30%)
- 717) Pohjalainen, J., Ringeval, F., Zhang, Z., and Schuller, B. (2016). Spectral and Cepstral Audio Noise Reduc-

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- 718) Ringeval, F., Marchi, E., Grossard, C., Xavier, J., Chetouani, M., Cohen, D., and Schuller, B. (2016). Automatic Analysis of Typical and Atypical Encoding of Spontaneous Emotion in the Voice of Children. In *Proceedings INTERSPEECH 2016, 17. Annual Conference of the International Speech Communication Association*, pages 1210–1214, San Francisco, CA. ISCA, ISCA. (acceptance rate: 50%)
- 719) Rynkiewicz, A., Schuller, B., Marchi, E., Piana, S., Camurri, A., Lassalle, A., and Baron-Cohen, S. (2016b). An Investigation of the ‘Female Camouflage Effect’ in Autism Using a New Computerized Test Showing Sex/Gender Differences during ADOS-2. In *Proceedings 15. Annual International Meeting For Autism Research (IMFAR 2016)*, Baltimore, MD. International Society for Autism Research (INSAR), INSAR. 1 page
- 720) Sagha, H., Deng, J., Gavryukova, M., Han, J., and Schuller, B. (2016a). Cross Lingual Speech Emotion Recognition using Canonical Correlation Analysis on Principal Component Subspace. In *Proceedings 41. IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2016*, pages 5800–5804, Shanghai, China. IEEE, IEEE. (acceptance rate: 45%)
- 721) Sagha, H., Matejka, P., Gavryukova, M., Povolny, F., Marchi, E., and Schuller, B. (2016c). Enhancing multilingual recognition of emotion in speech by language identification. In *Proceedings INTERSPEECH 2016, 17. Annual Conference of the International Speech Communication Association*, pages 2949–2953, San Francisco, CA. ISCA, ISCA. (acceptance rate: 50%)
- 722) Sánchez-Rada, J. F., Schuller, B., Patti, V., Buitelaar, P., Vulcu, G., Burkhardt, F., Clavel, C., Petychakis, M., and Iglesias, C. A. (2016). Towards a Common Linked Data Model for Sentiment and Emotion Analysis. In Sánchez-Rada, J. F. and Schuller, B., editors, *Proceedings 6. International Workshop on Emotion and Sentiment Analysis (ESA 2016), satellite of the 10. Language Resources and Evaluation Conference (LREC 2016)*, pages 48–54, Portoroz, Slovenia. ELRA, ELRA. (acceptance rate: 42% for long papers)
- 723) Schmitt, M., Janott, C., Pandit, V., Qian, K., Heiser, C., Hemmert, W., and Schuller, B. (2016a). A Bag-of-Audio-Words Approach for Snore Sounds’ Excitation Localisation. In *Proceedings 12th ITG Conference on Speech Communication*, volume 267 of *ITG-Fachbericht*, pages 230–234, Paderborn, Germany. ITG/VDE, IEEE/VDE. nominated for best student paper award (4 nominations for 2 awards)
- 724) Schmitt, M., Ringeval, F., and Schuller, B. (2016c). At the Border of Acoustics and Linguistics: Bag-of-Audio-Words for the Recognition of Emotions in Speech. In *Proceedings INTERSPEECH 2016, 17. Annual Conference of the International Speech Communication Association*, pages 495–499, San Francisco, CA. ISCA, ISCA. (acceptance rate: 50%)
- 725) Schmitt, M., Marchi, E., Ringeval, F., and Schuller, B. (2016b). Towards Cross-lingual Automatic Diagnosis of Autism Spectrum Condition in Children’s Voices. In *Proceedings 12th ITG Conference on Speech Communication*, volume 267 of *ITG-Fachbericht*, pages 264–268, Paderborn, Germany. ITG/VDE, IEEE/VDE
- 726) Telespan, M. and Schuller, B. (2016). Audio Watermarking Based on Empirical Mode Decomposition and Beat Detection. In *Proceedings 41. IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2016*, pages 2124–2128, Shanghai, China. IEEE, IEEE. (acceptance rate: 45%)
- 727) Trigeorgis, G., Ringeval, F., Brückner, R., Marchi, E., Nicolaou, M., Schuller, B., and Zafeiriou, S. (2016b). Adieu Features? End-to-End Speech Emotion Recognition using a Deep Convolutional Recurrent Network. In *Proceedings 41. IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2016*, pages 5200–5204, Shanghai, China. IEEE, IEEE. winner of the IEEE Spoken Language Processing Student Travel Grant 2016 (acceptance rate: 45%)
- 728) Trigeorgis, G., Nicolaou, M. A., Schuller, B., and Zafeiriou, S. (2016a). Deep Canonical Time Warping. In *Proceedings IEEE Conference on Computer Vision and Pattern Recognition, CVPR 2016*, pages 5110–5118, Las Vegas, NV. IEEE, IEEE. (acceptance rate: ~25%)
- 729) Valstar, M., Gratch, J., Schuller, B., Ringeval, F., Lalanne, D., Torres Torres, M., Scherer, S., Stratou, G., Cowie, R., and Pantic, M. (2016d). AVEC 2016: Depression, Mood, and Emotion Recognition Workshop and Challenge. In Valstar, M., Gratch, J., Schuller, B., Ringeval, F., Cowie, R., and Pantic, M., editors, *Proceedings of the 6. International Workshop on Audio/Visual Emotion Challenge, AVEC’16, collocated with the 24. ACM International Conference on Multimedia, MM 2016*, pages 3–10, Amsterdam, The Netherlands. ACM, ACM
- 730) Valstar, M., Pelachaud, C., Heylen, D., Cafaro, A., Dermouche, S., Ghitulescu, A., André, E., Baur, T., Wagner, J., Durieu, L., Aylett, M., Blaise, P., Coutinho, E., Schuller, B., Zhang, Y., Theune, M., and van Waterschoot, J. (2016e). Ask Alice; an Artificial Retrieval of Information Agent. In Morency, L.-P., Busso, C., and Pelachaud, C., editors, *Proceedings of the 18. ACM International Conference on Multimodal Interaction, ICMI*, pages 419–420, Tokyo, Japan. ACM, ACM
- 731) Valstar, M., Gratch, J., Schuller, B., Ringeval, F., Cowie, R., and Pantic, M. (2016b). Summary for AVEC 2016: Depression, Mood, and Emotion Recog-

- inition Workshop and Challenge. In *Proceedings of the 24. ACM International Conference on Multimedia, MM 2016*, pages 1483–1484, Amsterdam, The Netherlands. ACM, ACM. (acceptance rate short paper: 30 %)
- 732) Vlasenko, B., Schuller, B., and Wendemuth, A. (2016). 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*, pages 1–6, Salerno, Italy. IEEE, IEEE
- 733) Wegener, R., Kohlschein, C., Jeschke, S., and Schuller, B. (2016). Automatic Detection of Textual Triggers of Reader Emotion in Short Stories. In Sánchez-Rada, J. F. and Schuller, B., editors, *Proceedings 6. International Workshop on Emotion and Sentiment Analysis (ESA 2016), satellite of the 10. Language Resources and Evaluation Conference (LREC 2016)*, pages 80–84, Portoroz, Slovenia. ELRA, ELRA. (acceptance rate: 74 %)
- 734) Weninger, F., Ringeval, F., Marchi, E., and Schuller, B. (2016a). Discriminatively trained recurrent neural networks for continuous dimensional emotion recognition from audio. In *Proceedings of the 25. International Joint Conference on Artificial Intelligence, IJCAI 2016*, pages 2196–2202, New York City, NY. IJCAI/AAAI. (acceptance rate: 25 %)
- 735) Weninger, F., Ringeval, F., Marchi, E., and Schuller, B. (2016b). Discriminatively Trained Recurrent Neural Networks for Continuous Dimensional Emotion Recognition from Audio (Extended Abstract). In Friedrich, G., Helmert, M., and Wotawa, F., editors, *KI 2016: Advances in Artificial Intelligence 39. Annual German Conference on AI*, volume LNCS Volume 9904/2016, pages 310–315, Klagenfurt, Austria. GfI / ÖGAI, Springer. (acceptance rate: 45 %)
- 736) Xu, X., Deng, J., Gavryukova, M., Zhang, Z., Zhao, L., and Schuller, B. (2016). Multiscale Kernel Locally Penalised Discriminant Analysis Exemplified by Emotion Recognition in Speech. In Morency, L.-P., Busso, C., and Pelachaud, C., editors, *Proceedings of the 18. ACM International Conference on Multimodal Interaction, ICMI*, pages 233–237, Tokyo, Japan. ACM, ACM
- 737) Zhang, Z., Ringeval, F., Dong, B., Coutinho, E., Marchi, E., and Schuller, B. (2016d). Enhanced Semi-Supervised Learning for Multimodal Emotion Recognition. In *Proceedings 41. IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2016*, pages 5185–5189, Shanghai, China. IEEE, IEEE. (acceptance rate: 45 %)
- 738) Zhang, Z., Ringeval, F., Han, J., Deng, J., Marchi, E., and Schuller, B. (2016e). Facing Realism in Spontaneous Emotion Recognition from Speech: Feature Enhancement by Autoencoder with LSTM Neural Networks. In *Proceedings INTERSPEECH 2016, 17. Annual Conference of the International Speech Communication Association*, pages 3593–3597, San Francisco, CA. ISCA, ISCA. (acceptance rate: 50 %)
- 739) Zhang, Y., Weninger, F., Batliner, A., Hönl, F., and Schuller, B. (2016a). Language Proficiency Assessment of English L2 Speakers Based on Joint Analysis of Prosody and Native Language. In Morency, L.-P., Busso, C., and Pelachaud, C., editors, *Proceedings of the 18. ACM International Conference on Multimodal Interaction, ICMI*, pages 274–278, Tokyo, Japan. ACM, ACM
- 740) Zhang, Y., Weninger, F., Ren, Z., and Schuller, B. (2016b). Sincerity and Deception in Speech: Two Sides of the Same Coin? A Transfer- and Multi-Task Learning Perspective. In *Proceedings INTERSPEECH 2016, 17. Annual Conference of the International Speech Communication Association*, pages 2041–2045, San Francisco, CA. ISCA, ISCA. (acceptance rate: 50 %)
- 741) Zhang, Y., Zhou, Y., Shen, J., and Schuller, B. (2016c). Semi-autonomous Data Enrichment Based on Cross-task Labelling of Missing Targets for Holistic Speech Analysis. In *Proceedings 41. IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2016*, pages 6090–6094, Shanghai, China. IEEE, IEEE. (acceptance rate: 45 %)
- 742) Zhang, Y. and Schuller, B. (2016). 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. 3 pages
- 743) Deng, J., Xu, X., Zhang, Z., Frühholz, S., Grandjean, D., and Schuller, B. (2016b). 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. 6 pages
- 744) Schuller, B., Vlasenko, B., Eyben, F., Wöllmer, M., Stuhlsatz, A., Wendemuth, A., and Rigoll, G. (2015f). Cross-Corpus Acoustic Emotion Recognition: Variances and Strategies (Extended Abstract). In *Proceedings 6. biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, pages 470–476, Xi'an, China. AAC, IEEE. invited for the Special Session on Most Influential Articles in IEEE Transactions on Affective Computing
- 745) Schuller, B., Marchi, E., Baron-Cohen, S., Lassalle, A., O'Reilly, H., Pigat, D., Robinson, P., Davies, I., Baltrusaitis, T., Mahmoud, M., Golan, O., Friedenson, S., Tal, S., Newman, S., Meir, N., Shillo, R., Camurri, A., Piana, S., Staglianò, A., Bölte, S., Lundqvist, D., Berggren, S., Baranger, A., Sullings, N., Sezgin, M., Alyuz, N., Rynkiewicz, A., Ptaszek, K., and Ligmann, K. (2015a). Recent developments and results of ASC-Inclusion: An Integrated Internet-Based Environment for Social Inclusion of Children with Autism Spectrum Conditions. In Paletta, L., Schuller, B., Robinson, P., and Sabouret, N., editors, *Proceedings of the of the 3. International Workshop*

- on *Intelligent Digital Games for Empowerment and Inclusion (IDGEI 2015)* as part of the 20. ACM International Conference on Intelligent User Interfaces, *IUI 2015*, Atlanta, GA. ACM, ACM. 9 pages, best paper award (long talk acceptance rate: 36%)
- 746) Schuller, B. (2015h). Speech Analysis in the Big Data Era. In *Text, Speech, and Dialogue – Proceedings of the 18. International Conference on Text, Speech and Dialogue, TSD 2015*, volume 9302 of *Lecture Notes in Computer Science (LNCS)*, pages 3–11. Springer. satellite event of INTERSPEECH 2015, invited contribution (acceptance rate: 50%)
- 747) Schuller, B., Steidl, S., Batliner, A., Hantke, S., Hönl, F., Orozco-Arroyave, J. R., Nöth, E., Zhang, Y., and Wenginger, F. (2015c). The INTERSPEECH 2015 Computational Paralinguistics Challenge: Degree of Nativeness, Parkinson’s & Eating Condition. In *Proceedings INTERSPEECH 2015, 16. Annual Conference of the International Speech Communication Association*, pages 478–482, Dresden, Germany. ISCA, ISCA. (acceptance rate: 51%)
- 748) Azaïs, L., Payan, A., Sun, T., Vidal, G., Zhang, T., Coutinho, E., Eyben, F., and Schuller, B. (2015). Does my Speech Rock? Automatic Assessment of Public Speaking Skills. In *Proceedings INTERSPEECH 2015, 16. Annual Conference of the International Speech Communication Association*, pages 2519–2523, Dresden, Germany. ISCA, ISCA. (acceptance rate: 51%)
- 749) Coutinho, E., Trigeorgis, G., Zafeiriou, S., and Schuller, B. (2015). Automatically Estimating Emotion in Music with Deep Long-Short Term Memory Recurrent Neural Networks. In Larson, M., Ionescu, B., Sjöberg, M., Anguera, X., Poignant, J., Riegler, M., Eskevich, M., Hauff, C., Sutcliffe, R., Jones, G. J., Yang, Y.-H., Soleymani, M., and Papadopoulos, S., editors, *Proceedings MediaEval 2015 Multimedia Benchmark Workshop, satellite of Interspeech 2015*, volume 1436, Wurzen, Germany. CEUR. 3 pages
- 750) Deng, J., Zhang, Z., Eyben, F., and Schuller, B. (2015). Autoencoder-based Unsupervised Domain Adaptation for Speech Emotion Recognition. In *Proceedings 40. IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2015*, pages 1068–1072, Brisbane, Australia. IEEE, IEEE
- 751) Eyben, F., Huber, B., Marchi, E., Schuller, D., and Schuller, B. (2015a). Robust Real-time Affect Analysis and Speaker Characterisation on Mobile Devices. In *Proceedings 6. biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, pages 778–780, Xi’an, China. AAAC, IEEE. (acceptance rate: 55%)
- 752) Feraru, S., Schuller, D., and Schuller, B. (2015). Cross-Language Acoustic Emotion Recognition: An Overview and Some Tendencies. In *Proceedings 6. biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, pages 125–131, Xi’an, China. AAAC, IEEE. (acceptance rate oral: 28%)
- 753) Gentsch, K., Coutinho, E., Eyben, F., Schuller, B., and Scherer, K. R. (2015). 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. 1 page
- 754) Hantke, S., Eyben, F., Appel, T., and Schuller, B. (2015). iHEARu-PLAY: Introducing a game for crowdsourced data collection for affective computing. In *Proceedings 1. International Workshop on Automatic Sentiment Analysis in the Wild (WASA 2015) held in conjunction with the 6. biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, pages 891–897, Xi’an, China. AAAC, IEEE. (acceptance rate: 60%)
- 755) Marchi, E., Vesperini, F., Eyben, F., Squartini, S., and Schuller, B. (2015c). A Novel Approach for Automatic Acoustic Novelty Detection Using a Denoising Autoencoder with Bidirectional LSTM Neural Networks. In *Proceedings 40. IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2015*, pages 1996–2000, Brisbane, Australia. IEEE, IEEE
- 756) Marchi, E., Vesperini, F., Wenginger, F., Eyben, F., Squartini, S., and Schuller, B. (2015d). Non-Linear Prediction with LSTM Recurrent Neural Networks for Acoustic Novelty Detection. In *Proceedings 2015 International Joint Conference on Neural Networks (IJCNN)*, Killarney, Ireland. INNS/IEEE, IEEE
- 757) Marchi, E., Schuller, B., Baron-Cohen, S., Golan, O., Bölte, S., Arora, P., and Hüb-Umbach, R. (2015a). Typicality and Emotion in the Voice of Children with Autism Spectrum Condition: Evidence Across Three Languages. In *Proceedings INTERSPEECH 2015, 16. Annual Conference of the International Speech Communication Association*, pages 115–119, Dresden, Germany. ISCA, ISCA. (acceptance rate: 51%)
- 758) Marchi, E., Schuller, B., Baron-Cohen, S., Lassalle, A., O’Reilly, H., Pigat, D., Golan, O., Friedenson, S., Tal, S., Bölte, S., Berggren, S., Lundqvist, D., and Elfström, M. S. (2015b). Voice Emotion Games: Language and Emotion in the Voice of Children with Autism Spectrum Condition. In Paletta, L., Schuller, B., Robinson, P., and Sabouret, N., editors, *Proceedings of the 3. International Workshop on Intelligent Digital Games for Empowerment and Inclusion (IDGEI 2015)* as part of the 20. ACM International Conference on Intelligent User Interfaces, *IUI 2015*, Atlanta, GA. ACM, ACM. 9 pages (long talk acceptance rate: 36%)
- 759) Metallinou, A., Wöllmer, M., Katsamanis, A., Eyben, F., Schuller, B., and Narayanan, S. (2015). Context-Sensitive Learning for Enhanced Audiovisual Emotion Classification (Extended Abstract). In *Proceedings 6. biannual Conference on Affective Computing*

- and *Intelligent Interaction (ACII 2015)*, pages 463–469, Xi’an, China. AAAC, IEEE. invited for the Special Session on Most Influential Articles in IEEE Transactions on Affective Computing
- 760) Newman, S., Golan, O., Baron-Cohen, S., Bölte, S., Rynkiewicz, A., Baranger, A., Schuller, B., Robinson, P., Camurri, A., Sezgin, M., Meir-Goren, N., Tal, S., Fridenson-Hayo, S., Lassalle, A., Berggren, S., Sullings, N., Pigat, D., Ptaszek, K., Marchi, E., Piana, S., and Baltrusaitis, T. (2015). ASC-Inclusion – a Virtual World Teaching Children with ASC about Emotions. In *Proceedings 14. Annual International Meeting For Autism Research (IMFAR 2015)*, Salt Lake City, UT. International Society for Autism Research (INSAR), INSAR. 1 page
- 761) Pohl, P. and Schuller, B. (2015). Digital Analysis of Vocal Operants. In *Proceedings 2015 Meeting of the Experimental Analysis of Behaviour Group (EABG)*, London, UK. EABG, EABG. 1 pager
- 762) Pokorný, F., Graf, F., Pernkopf, F., and Schuller, B. (2015). Detection of Negative Emotions in Speech Signals Using Bags-of-Audio-Words. In *Proceedings 1. International Workshop on Automatic Sentiment Analysis in the Wild (WASA 2015) held in conjunction with the 6. biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, pages 879–884, Xi’an, China. AAAC, IEEE. (acceptance rate: 60%)
- 763) Qian, K., Zhang, Z., Ringeval, F., and Schuller, B. (2015). Bird Sounds Classification by Large Scale Acoustic Features and Extreme Learning Machine. In *Proceedings 3. IEEE Global Conference on Signal and Information Processing, GlobalSIP, Machine Learning Applications in Speech Processing Symposium*, pages 1317–1321, Orlando, FL. IEEE, IEEE. (acceptance rate: 45%)
- 764) Ringeval, F., Marchi, E., Méhu, M., Scherer, K., and Schuller, B. (2015b). Face Reading from Speech – Predicting Facial Action Units from Audio Cues. In *Proceedings INTERSPEECH 2015, 16. Annual Conference of the International Speech Communication Association*, pages 1977–1981, Dresden, Germany. ISCA, ISCA. (acceptance rate: 51%)
- 765) Ringeval, F., Schuller, B., Valstar, M., Cowie, R., and Pantic, M. (2015d). AVEC 2015: The 5. International Audio/Visual Emotion Challenge and Workshop. In *Proceedings of the 23. ACM International Conference on Multimedia, MM 2015*, pages 1335–1336, Brisbane, Australia. ACM, ACM. (acceptance rate: 25%)
- 766) Ringeval, F., Schuller, B., Valstar, M., Jaiswal, S., Marchi, E., Lalanne, D., Cowie, R., and Pantic, M. (2015f). AV+EC 2015 – The First Affect Recognition Challenge Bridging Across Audio, Video, and Physiological Data. In Ringeval, F., Schuller, B., Valstar, M., Cowie, R., and Pantic, M., editors, *Proceedings of the 5. International Workshop on Audio/Visual Emotion Challenge, AVEC’15, co-located with the 23. ACM International Conference on Multimedia, MM 2015*, pages 3–8, Brisbane, Australia. ACM, ACM
- 767) Sabouret, N., Schuller, B., Paletta, L., Marchi, E., Jones, H., and Youssef, A. B. (2015). 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. 8 pages, Gold Paper Award
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- 1151) Pokorny, F. B., Schuller, B. W., Bartl-Pokorny, K. D., Zhang, D., Einspieler, C., and Marschik, P. B. (2017b). In a bad mood? Automatic audio-based recognition of infant fussing and crying in video-taped vocalisations. In *Proceedings 2017 13th International Infant Cry Workshop*, Castel Noarna-Rovereto, Italy. 1 page
- 1152) Zhang, Y. and Schuller, B. (2017). Towards Human-like Holistic Machine Perception of Affective Social Behaviour. In *Proceedings 12th Workshop on Women in Machine Learning (WiML 2017), satellite event of NIPS 2017*, Long Beach, CA. NIPS, NIPS. 1 page
- 1153) Schuller, B. (2016e). Engage to Empower: Emotionally Intelligent Computer Games & Robots for Autistic Children. In Rynkiewicz, A. and Grabowski, K., editors, *Proceedings “The world innovations combining medicine, engineering and technology in autism diagnosis and therapy”*, pages 65–67, Rzeszów, Poland. SOLIS RADIUS
- 1154) Schuller, B. (2016f). Zaangażowanie aby wzmocnić kompetencje: emocjonalnie inteligentne roboty i gry komputerowe dla dzieci z autyzmem. In Rynkiewicz, A. and Grabowski, K., editors, *Proceedings “Światowe innowacje łączące medycynę, inżynierię oraz technologie w diagnozowaniu i terapii autyzmu”*, pages 62–64, Rzeszów, Poland. SOLIS RADIUS
- 1155) Pokorny, F. B., Schuller, B. W., Bartl-Pokorny, K. D., Einspieler, C., and Marschik, P. B. (2016c). 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. 1 page, Best Poster award 3. place
- 1156) Pokorny, F. B., Schuller, B. W., Peharz, R., Pernkopf, F., Bartl-Pokorny, K. D., Einspieler, C., and Marschik, P. B. (2016d). 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. 1 page
- 1157) Pokorny, F. B., Schuller, B. W., Peharz, R., Pernkopf, F., Bartl-Pokorny, K. D., Einspieler, C., and Marschik, P. B. (2016e). Retrospektive Analyse frühkindlicher Lautäußerungen in „Home-Videos“: Ein signalanalytischer Ansatz zur Früherkennung von Entwicklungsstörungen. In *Proceedings 42. Österreichische Linguistiktagung, ÖLT*, Graz, Austria. 1 page
- 1158) Rudovic, O., Evers, V., Pantic, M., Schuller, B., and Petrović, S. (2016a). DE-ENIGMA Robots: Playfully Empowering Children with Autism. In *Proceedings XI Autism-Europe International Congress*, Edinburgh, Scotland. Autism Europe, The National Autistic Society. 1 page
- 1159) Rudovic, O., Lee, J., Schuller, B., and Picard, R. (2016b). 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. 1 page
- 1160) Schuller, B. (2015f). Modelling User Affect and Sentiment in Intelligent User Interfaces: a Tutorial Overview. In *Proceedings of the 20. ACM International Conference on Intelligent User Interfaces, IUI 2015*, pages 443–446, Atlanta, GA. ACM, ACM
- 1161) Pokorny, F. B., Einspieler, C., Zhang, D., Kimmerle, A., Bartl-Pokorny, K. D., Schuller, B. W., and Bölte, S. (2014). The Voice of Autism: An Acoustic Analysis of Early Vocalisations. In *COST ESSEA Conference 2014 Book of Abstracts*, Toulouse, France. 1 page
- 1162) Schuller, B. (2013c). 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. invited contribution, 1 page
- 1163) Ferroni, G., Marchi, E., Eyben, F., Squartini, S., and Schuller, B. (2013b). 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 14. International Conference on Music Information Retrieval*, Curitiba, Brazil. ISMIR, ISMIR. 3 pages
- 1164) Ferroni, G., Marchi, E., Eyben, F., Gabrielli, L., Squartini, S., and Schuller, B. (2013a). 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 14. International Conference on Music Information Retrieval*, Curitiba, Brazil. ISMIR, ISMIR. 4 pages

- 1165) Gunes, H. and Schuller, B. (2012). Dimensional and Continuous Analysis of Emotions for Multimedia Applications: a Tutorial Overview. In *Proceedings of the 20. ACM International Conference on Multimedia, MM 2012*, Nara, Japan. ACM, ACM. 2 pages
- 1166) Schröder, M., Pammi, S., Gunes, H., Pantic, M., Valstar, M., Cowie, R., McKeown, G., Heylen, D., ter Maat, M., Eyben, F., Schuller, B., Wöllmer, M., Bevacqua, E., Pelachaud, C., and de Sevin, E. (2011). Come and Have an Emotional Workout with Sensitive Artificial Listeners! In *Proceedings 9. IEEE International Conference on Automatic Face & Gesture Recognition and Workshops, FG 2011*, pages 646–646, Santa Barbara, CA. IEEE, IEEE
- 1167) Eyben, F. and Schuller, B. (2010a). 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, The Netherlands. ISMIR, ISMIR. 2 pages (acceptance rate: 61%)
- 1168) Eyben, F. and Schuller, B. (2010b). 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, The Netherlands. ISMIR, ISMIR. 1 page (acceptance rate: 61%)
- 1169) Böck, S., Eyben, F., and Schuller, B. (2010a). 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, The Netherlands. ISMIR, ISMIR. 2 pages (acceptance rate: 61%)
- 1170) Böck, S., Eyben, F., and Schuller, B. (2010b). 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, The Netherlands. ISMIR, ISMIR. 2 pages (acceptance rate: 61%)
- 1171) Böck, S., Eyben, F., and Schuller, B. (2010c). 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, The Netherlands. ISMIR, ISMIR. 3 pages (acceptance rate: 61%)
- Invited Papers (32):*
- 1172) Amiriparian, S., Julka, S., Cummins, N., and Schuller, B. (2018d). Deep Convolutional Recurrent Neural Networks for Rare Sound Event Detection. In *Proceedings 44. Jahrestagung für Akustik, DAGA 2018*, Munich, Germany. DEGA, DEGA. 4 pages, invited contribution, Structured Session Deep Learning for Audio
- 1173) Schmitt, M. and Schuller, B. (2018). Deep Recurrent Neural Networks for Emotion Recognition in Speech. In *Proceedings 44. Jahrestagung für Akustik, DAGA 2018*, Munich, Germany. DEGA, DEGA. 4 pages, invited contribution, Structured Session Deep Learning for Audio
- 1174) Schuller, B., Wöllmer, M., Eyben, F., Rigoll, G., and Arsić, D. (2011h). Semantic Speech Tagging: Towards Combined Analysis of Speaker Traits. In Brandenburg, K. and Sandler, M., editors, *Proceedings AES 42. International Conference*, pages 89–97, Ilmenau, Germany. AES, Audio Engineering Society. invited contribution
- 1175) Schuller, B., Can, S., and Feussner, H. (2009b). Robust Key-Word Spotting in Field Noise for Open-Microphone Surgeon-Robot Interaction. In *Proceedings 5. Russian-Bavarian Conference on Bio-Medical Engineering, RBC-BME 2009*, pages 121–123, Munich, Germany. invited contribution
- 1176) Schuller, B., Lehmann, A., Weninger, F., Eyben, F., and Rigoll, G. (2009e). Blind Enhancement of the Rhythmic and Harmonic Sections by NMF: Does it help? In *Proceedings International Conference on Acoustics including the 35. German Annual Conference on Acoustics, NAG/DAGA 2009*, pages 361–364, Rotterdam, The Netherlands. Acoustical Society of the Netherlands, DEGA, DEGA. invited contribution
- 1177) Schuller, B. (2008). Speaker, Noise, and Acoustic Space Adaptation for Emotion Recognition in the Automotive Environment. In *Proceedings 8. ITG Conference on Speech Communication*, volume 211 of *ITG-Fachbericht*, Aachen, Germany. ITG, VDE-Verlag. invited contribution, 4 pages
- 1178) Schuller, B., Wöllmer, M., Moosmayr, T., and Rigoll, G. (2008k). Robust Spelling and Digit Recognition in the Car: Switching Models and Their Like. In *Proceedings 34. Jahrestagung für Akustik, DAGA 2008*, pages 847–848, Dresden, Germany. DEGA, DEGA. invited contribution, Structured Session Sprachakustik im Kraftfahrzeug
- 1179) Schuller, B., Eyben, F., and Rigoll, G. (2008d). Beat-Synchronous Data-driven Automatic Chord Labeling. In *Proceedings 34. Jahrestagung für Akustik, DAGA 2008*, pages 555–556, Dresden, Germany. DEGA, DEGA. invited contribution, Structured Session Music Processing
- 1180) Schuller, B., Can, S., Scheuermann, C., Feussner, H., and Rigoll, G. (2008b). Robust Speech Recognition for Human-Robot Interaction in Minimal Invasive Surgery. In *Proceedings 4. Russian-Bavarian Conference on Bio-Medical Engineering, RBC-BME 2008*, pages 197–201, Zelenograd, Russia. invited contribution
- 1181) Schuller, B., Müller, R., Hörnler, B., Höthker, A., Konosu, H., and Rigoll, G. (2007c). Audiovisual Recognition of Spontaneous Interest within Conversations. In *Proceedings 9. ACM International Conference on Multimodal Interfaces, ICMI 2007*, pages 30–37, Nagoya, Japan. ACM, ACM. invited contribution, Special Session on Multimodal Analysis of Human

- Spontaneous Behaviour (acceptance rate: 56%)
- 1182) Schuller, B., Rigoll, G., Grimm, M., Kroschel, K., Moosmayr, T., and Ruske, G. (2007d). Effects of In-Car Noise-Conditions on the Recognition of Emotion within Speech. In *Proceedings 33. Jahrestagung für Akustik, DAGA 2007*, pages 305–306, Stuttgart, Germany. DEGA, DEGA. invited contribution, Structured Session Sprachakustik im Kraftfahrzeug
- 1183) Schuller, B., Stadermann, J., and Rigoll, G. (2006f). Affect-Robust Speech Recognition by Dynamic Emotional Adaptation. In *Proceedings 3. International Conference on Speech Prosody, SP 2006*, Dresden, Germany. ISCA, ISCA. invited contribution, Special Session Prosody in Automatic Speech Recognition, 4 pages
- 1184) Schuller, B., Lang, M., and Rigoll, G. (2006d). Recognition of Spontaneous Emotions by Speech within Automotive Environment. In *Proceedings 32. Jahrestagung für Akustik, DAGA 2006*, pages 57–58, Braunschweig, Germany. DEGA, DEGA. invited contribution, Structured Session Sprachakustik im Kraftfahrzeug
- 1185) Schuller, B. and Rigoll, G. (2006a). Self-learning Acoustic Feature Generation and Selection for the Discrimination of Musical Signals. In *Proceedings 32. Jahrestagung für Akustik, DAGA 2006*, pages 285–286, Braunschweig, Germany. DEGA, DEGA. invited contribution, Structured Session Music Processing
- 1186) Schuller, B., Müller, R., Lang, M., and Rigoll, G. (2005c). Speaker Independent Emotion Recognition by Early Fusion of Acoustic and Linguistic Features within Ensembles. In *Proceedings Interspeech 2005, Eurospeech*, pages 805–809, Lisbon, Portugal. ISCA, ISCA. invited contribution, Special Session Emotional Speech Analysis and Synthesis: Towards a Multimodal Approach (acceptance rate: 61%)
- 1187) Schuller, B., Lang, M., and Rigoll, G. (2005b). Robust Acoustic Speech Emotion Recognition by Ensembles of Classifiers. In *Proceedings 31. Jahrestagung für Akustik, DAGA 2005*, pages 329–330, Munich, Germany. DEGA, DEGA. invited contribution, Structured Session Automatische Spracherkennung in gestörter Umgebung
- 1188) Schuller, B., Rigoll, G., and Lang, M. (2005e). Matching Monophonic Audio Clips to Polyphonic Recordings. In *Proceedings 31. Jahrestagung für Akustik, DAGA 2005*, pages 299–300, Munich, Germany. DEGA, DEGA. invited contribution, Structured Session Music Processing
- 1189) Zhang, Z., Weninger, F., and Schuller, B. (2012). Towards Automatic Intoxication Detection from Speech in Real-Life Acoustic Environments. In Fingscheidt, T. and Kellermann, W., editors, *Proceedings of Speech Communication; 10. ITG Symposium*, pages 1–4, Braunschweig, Germany. ITG, IEEE. invited contribution
- 1190) Joder, C. and Schuller, B. (2012a). Exploring Non-negative Matrix Factorisation for Audio Classification: Application to Speaker Recognition. In Fingscheidt, T. and Kellermann, W., editors, *Proceedings of Speech Communication; 10. ITG Symposium*, pages 1–4, Braunschweig, Germany. ITG, IEEE. invited contribution
- 1191) Deng, J., Han, W., and Schuller, B. (2012). Confidence Measures for Speech Emotion Recognition: a Start. In Fingscheidt, T. and Kellermann, W., editors, *Proceedings of Speech Communication; 10. ITG Symposium*, pages 1–4, Braunschweig, Germany. ITG, IEEE. invited contribution
- 1192) Wöllmer, M., Kaiser, M., Eyben, F., Weninger, F., Schuller, B., and Rigoll, G. (2012b). Fully Automatic Audiovisual Emotion Recognition – Voice, Words, and the Face. In Fingscheidt, T. and Kellermann, W., editors, *Proceedings of Speech Communication; 10. ITG Symposium*, pages 1–4, Braunschweig, Germany. ITG, IEEE. invited contribution
- 1193) Weninger, F., Wöllmer, M., and Schuller, B. (2012h). Sparse, Hierarchical and Semi-Supervised Base Learning for Monaural Enhancement of Conversational Speech. In Fingscheidt, T. and Kellermann, W., editors, *Proceedings 10. ITG Conference on Speech Communication*, pages 1–4, Braunschweig, Germany. ITG, IEEE. invited contribution
- 1194) Han, W., Zhang, Z., Deng, J., Wöllmer, M., Weninger, F., and Schuller, B. (2012c). Towards Distributed Recognition of Emotion in Speech. In *Proceedings 5. International Symposium on Communications, Control, and Signal Processing, ISCCSP 2012*, pages 1–4, Rome, Italy. IEEE, IEEE. invited contribution, Special Session Interactive Behaviour Analysis
- 1195) Weninger, F. and Schuller, B. (2011b). 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. invited contribution, 2 pages (acceptance rate: 39%)
- 1196) Weninger, F., Schuller, B., Liem, C., Kurth, F., and Hanjalic, A. (2012e). Music Information Retrieval: An Inspirational Guide to Transfer from Related Disciplines. In Müller, M. and Goto, M., editors, *Multimodal Music Processing*, volume Seminar 11041 of *Dagstuhl Follow-Ups*, pages 195–215, Schloss Dagstuhl, Germany. invited contribution
- 1197) Wöllmer, M., Klebert, N., and Schuller, B. (2010e). Switching Linear Dynamic Models for Recognition of Emotionally Colored and Noisy Speech. In *Proceedings 9. ITG Conference on Speech Communication*, volume 225 of *ITG-Fachbericht*, Bochum, Germany. ITG, VDE-Verlag. invited contribution, Special Session Bayesian Methods for Speech Enhancement and Recognition, 4 pages
- 1198) Devillers, L. and Schuller, B. (2010). The Essential Role of Language Resources for the Future of Affec-

- tive Computing Systems: A Recognition Perspective. In *Proceedings 2. European Language Resources and Technologies Forum: Language Resources of the future – the future of Language Resources*, Barcelona, Spain. FLReNet. invited contribution, 2 pages
- 1199) Steidl, S., Schuller, B., Seppi, D., and Batliner, A. (2009). The Hinterland of Emotions: Facing the Open-Microphone Challenge. In *Proceedings 3. International Conference on Affective Computing and Intelligent Interaction and Workshops, ACII 2009*, volume I, pages 690–697, Amsterdam, The Netherlands. HUMAINE Association, IEEE. invited contribution, Special Session Recognition of Non-Prototypical Emotion from Speech – The final frontier?
- 1200) Baggia, P., Burkhardt, F., Pelachaud, C., Peter, C., Schuller, B., Wilson, I., and Zovato, E. (2008). Elements of an EmotionML 1.0. Technical report, W3C
- 1201) Batliner, A., Seppi, D., Schuller, B., Steidl, S., Vogt, T., Wagner, J., Devillers, L., Vidrascu, L., Amir, N., and Aharonson, V. (2008b). Patterns, Prototypes, Performance. In Hornegger, J., Höller, K., Ritt, P., Borsdorf, A., and Niedermeier, H.-P., editors, *Pattern Recognition in Medical and Health Engineering, Proceedings HSS-Cooperation Seminar Ingenieurwissenschaftliche Beiträge für ein leistungsfähigeres Gesundheitssystem*, pages 85–86, Wildbad Kreuth, Germany. invited contribution
- 1202) Grimm, M., Kroschel, K., Schuller, B., Rigoll, G., and Moosmayr, T. (2007b). Acoustic Emotion Recognition in Car Environment Using a 3D Emotion Space Approach. In *Proceedings 33. Jahrestagung für Akustik, DAGA 2007*, pages 313–314, Stuttgart, Germany. DEGA, DEGA. invited contribution, Structured Session Sprachakustik im Kraftfahrzeug
- 1203) Rigoll, G., Müller, R., and Schuller, B. (2005). Speech Emotion Recognition Exploiting Acoustic and Linguistic Information Sources. In Kokkinakis, G., editor, *Proceedings 10. International Conference Speech and Computer, SPECOM 2005*, volume 1, pages 61–67, Patras, Greece. invited contribution
- Forewords (7):*
- 1204) Schuller, B. (2021a). Preface. In Shao, X., Qian, K., Zhou, L., Wang, X., and Zhao, Z., editors, *Proceedings of the 8. China Conference on Sound and Music Technology, Selected Papers from CSMT*, volume 761 of *Lecture Notes in Electrical Engineering*, pages V–VI, Taiyuan, China. Shanghai Computer Music Association, Springer
- 1205) Schuller, B. (2020). Computers Hearing Children’s Cries and Pathologies – A Foreword. In Neustein, A. and Patil, H. A., editors, *Acoustic Analysis of Pathologies From Infancy to Young Adulthood*, volume 7 of *De Gruyter Series in Speech Technology and Text Analytics in Medicine and Healthcare*, pages VII–X. DeGruyter
- 1206) Tao, J., Schuller, B., and Campbell, N. (2018). ACII Asia 2018 – AAAC Asian Conference on Affective Computing and Intelligent Interaction in Beijing. In *Proceedings first Asian Conference on Affective Computing and Intelligent Interaction (ACII Asia 2018)*, Beijing, China. AAAC, IEEE. 1 page
- 1207) Schuller, B. (2015a). A decade of encouraging speech processing “outside of the box” – a Foreword. In Esposito, A., Faundez-Zanuy, M., Esposito, A. M., Cordasco, G., Drugman, T., Solé-Casals, J., and Morabito, C. F., editors, *Recent Advances in Nonlinear Speech Processing – 7. International Conference, NOLISP 2015, Vietri sul Mare, Italy, May 18–19, 2015, Proceedings*, volume 48, Smart Innovation, Systems and Technologies of *Smart Innovation Systems and Technologies*, pages 3–4. Springer. invited
- 1208) Cowie, R., Ji, Q., Tao, J., Gratch, J., and Schuller, B. (2015). Foreword ACII 2015 – Affective Computing and Intelligent Interaction at Xi’an. In *Proceedings 6. biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, Xi’an, China. AAAC, IEEE. 2 pages
- 1209) Schuller, B. (2015e). Foreword. In Cambria, E. and Hussain, A., editors, *Sentic Computing – A Common-Sense-Based Framework for Concept-Level Sentiment Analysis*, pages v–vi. Springer, 2 edition. invited foreword
- 1210) Schuller, B. (2015i). Supervisor’s Foreword. In Eyben, F., editor, *Real-time Speech and Music Classification by Large Audio Feature Space Extraction*. Springer. invited foreword, 2 pages
- Reviewed Technical Newsletter Contributions (5):*
- 1211) Eyben, F. and Schuller, B. (2014). openSMILE:) The Munich Open-Source Large-Scale Multimedia Feature Extractor. *ACM SIGMM Records*, 6(4)
- 1212) Schuller, B., Steidl, S., and Batliner, A. (2013g). The INTERSPEECH 2013 Computational Paralinguistics Challenge – A Brief Review. *Speech and Language Processing Technical Committee (SLTC) Newsletter*
- 1213) Schuller, B., Steidl, S., Batliner, A., Schiel, F., and Krajewski, J. (2012e). The INTERSPEECH 2011 Speaker State Challenge – A review. *Speech and Language Processing Technical Committee (SLTC) Newsletter*
- 1214) Schuller, B. and Devillers, L. (2010a). Emotion 2010 – On Recent Corpora for Research on Emotion and Affect. *ELRA Newsletter, LREC 2010 Special Issue*, 15(1–2):18–18
- 1215) Schuller, B., Steidl, S., Batliner, A., and Jurcicek, F. (2009i). The INTERSPEECH 2009 Emotion Challenge – Results and Lessons Learnt. *Speech and Language Processing Technical Committee (SLTC) Newsletter*
- Technical Reports and Preprints (180):*
- 1216) Schuller, B. W., Amiriparian, S., Batliner, A., Gebhard, A., Gerzcuk, M., Karas, V., Kathan, A., Seizer, L., and Löchner, J. (2023a). Computational Charisma

- A Brick by Brick Blueprint for Building Charismatic Artificial Intelligence. *arxiv.org*, (2301.00142). 24 pages
- 1217) Schuller, B. W., Batliner, A., Amiriparian, S., Barnhill, A., Gerczuk, M., Triantafyllopoulos, A., Baird, A., Tzirakis, P., Gagne, C., Cowen, A. S., Lackovic, N., Caraty, M.-J., and Montacié, C. (2023c). The ACM Multimedia 2023 Computational Paralinguistics Challenge: Emotion Share & Requests. *arxiv.org*, (2304.14882). 5 pages
- 1218) Amin, M. M., Cambria, E., and Schuller, B. W. (2023b). Can ChatGPT’s Responses Boost Traditional Natural Language Processing? *arxiv.org*, (2307.04648). 9 pages
- 1219) Amin, M. M., Cambria, E., and Schuller, B. W. (2023d). Will Affective Computing Emerge from Foundation Models and General AI? A First Evaluation on ChatGPT. *arxiv.org*, (2303.03186). 9 pages, invited presentation at the Singapore Symposium on Sentiment Analysis (S3A 2023), NTU, Singapore, Singapore, 09.03.2023
- 1220) Burkhardt, F., Wagner, J., Wierstorf, H., Eyben, F., and Schuller, B. (2023e). Speech-based Age and Gender Prediction with Transformers. *arxiv.org*, (2306.16962). 5 pages
- 1221) Burkhardt, F., Reichel, U., Eyben, F., and Schuller, B. (2023c). Going Retro: Astonishingly Simple Yet Effective Rule-Based Prosody Modelling for Speech Synthesis Simulating Emotion Dimensions. In Draxler, C., editor, *Proceedings 34. (International) Conference on Electronic Processing of Speech Signals (Elektronische Sprachsignalverarbeitung), ESSV*, volume 105, pages 56–63, Munich, Germany. TUDpress
- 1222) Christ, L., Amiriparian, S., Baird, A., Kathan, A., Müller, N., Klug, S., Gagne, C., Tzirakis, P., Meßner, E.-M., König, A., Cowen, A., Cambria, E., and Schuller, B. W. (2023). The MuSe 2023 Multimodal Sentiment Analysis Challenge: Mimicked Emotions, Cross-Cultural Humour, and Personalisation. *arxiv.org*, (2305.03369). 10 pages
- 1223) Düsterhöft, A., Burkhardt, F., and Schuller, B. W. (2023). Happy or Evil Laughter? Analysing a Database of Natural Audio Samples. *arxiv.org*, (2305.14023). 4 pages
- 1224) Gerczuk, M., Triantafyllopoulos, A., Amiriparian, S., Kathan, A., Bauer, J., Berking, M., and Schuller, B. (2023c). Zero-Shot Personalisation of Speech Foundation Models for Depressed Mood Monitoring. *SSRN Cell Press Sneak Peak*. 5 pages
- 1225) Jing, X., Chang, Y., Yang, Z., Xie, J., Triantafyllopoulos, A., and Schuller, B. W. (2023b). U-DiT TTS: U-Diffusion Vision Transformer for Text-to-Speech. *arxiv.org*, (2305.13195). 5 pages
- 1226) Latif, S., Usama, M., Malik, M. I., and Schuller, B. W. (2023c). Can Large Language Models Aid in Annotating Speech Emotional Data? Uncovering New Frontiers. *arxiv.org*, (2307.06090). 9 pages
- 1227) Latif, S., Shoukat, M., Shamshad, F., Usama, M., Cuayáhuitl, H., and Schuller, B. W. (2023b). Sparks of Large Audio Models: A Survey and Outlook. *arxiv.org*, (2308.12792). 32 pages
- 1228) Lian, Z., Sun, H., Sun, L., Zhao, J., Liu, Y., Liu, B., Yi, J., Wang, M., Cambria, E., Zhao, G., Schuller, B. W., and Tao, J. (2023). MER 2023: Multi-label Learning, Modality Robustness, and Semi-Supervised Learning. *arxiv.org*, (2304.08981). 10 pages
- 1229) Malik, I., Latif, S., Jurdak, R., and Schuller, B. (2023b). A Preliminary Study on Augmenting Speech Emotion Recognition using a Diffusion Model. *arxiv.org*, (2305.11413). 6 pages
- 1230) Müller, N., Klug, S., König, A. S., Kathan, A., Christ, L., Schuller, B., and Amiriparian, S. (2023b). Executive Laughter and Social Approval: An Explorative Machine Learning Study. *arxiv.org*, (2305.09485). 38 pages
- 1231) Rajapakshe, T., Rana, R., Khalifa, S., Sisman, B., and Schuller, B. (2023). Improving Speech Emotion Recognition Performance using Differentiable Architecture Search. *arxiv.org*, (2305.14402). 5 pages
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