

# Publications

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h-index: **107** (Google Scholar)

Citations: **58 825** (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 (56):

- 15) Löchner, J. and Schuller, B. (2023). Affect and Emotion. In Stephanidis, C. and Salvendy, G., editors, *Human-Computer Interaction: HCI Foundations and Fundamentals*, Human-Computer Interaction: Foundations, Methods, Technologies and Applications, chapter 1.8. CRC Press. 18 pages, invited contribution, to appear
- 16) 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”
- 17) 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
- 18) 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
- 19) 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
  - 20) 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
  - 21) 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
  - 22) Pokorny, 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
  - 23) 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
  - 24) 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
  - 25) 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
  - 26) 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
  - 27) 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
  - 28) 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
  - 29) 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
  - 30) 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
  - 31) 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
  - 32) 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
  - 33) 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
  - 34) 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
  - 35) 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 Cogni-*

- tion, volume 21 of *ACM Books*, chapter 5, pages 131–165. ACM Books, Morgan & Claypool, 1 edition
- 36) 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., 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 14, pages 457–472. ACM Books, Morgan & Claypool, 1 edition
- 37) 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
- 38) 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
- 39) 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
- 40) 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
- 41) 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
- 42) 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
- 43) 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
- 44) 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
- 45) Schuller, B. and Wenginger, 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
- 46) 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
- 47) 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
- 48) 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
- 49) 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
- 50) Wenginger, 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
- 51) 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
- 52) 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
- 53) Schuller, B. and Wenginger, 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
- 54) 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
- 55) 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
- 56) 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
- 57) 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
- 58) 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
- 59) 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
- 60) 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
- 61) 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
- 62) 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
- 63) 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
- 64) 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
- 65) 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%)
- 66) 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

- 67) 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, Portugal, September 12-14, 2007, Proceedings*, volume 4738/2007 of *Lecture Notes on Computer Science (LNCS)*, pages 126–138. Springer, Berlin/Heidelberg
- 68) 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
- 69) 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
- 70) 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
- 71) Schuller, B. W., Amiriparian, S., Batliner, A., Gebhard, A., Gerczuk, M., Karas, V., Kathan, A., Seizer, L., and Löchner, J. (2023a). Computational Charisma – A Brick by Brick Blueprint for Building Charismatic Artificial Intelligence. *Frontiers in Computer Science, section Human-Media Interaction*, 5(1135201):1–33. to appear (IF: 2.6 (2022))
- 72) Amin, M. M., Cambria, E., and Schuller, B. W. (2023a). Can ChatGPT’s Responses Boost Traditional Natural Language Processing? *IEEE Intelligent Systems Magazine*, 38(5):5–11. (IF: 6.4 (2022))
- 73) 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))
- 74) 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))
- 75) 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))
- 76) 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
- 77) 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))
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- 625) Keren, G., Han, J., and Schuller, B. (2018c). Scaling Speech Enhancement in Unseen Environments with Noise Embeddings. In *Proceedings The 5. International Workshop on Speech Processing in Everyday Environments, CHiME 2018, held in conjunction with Interspeech 2018*, pages 25–29, Hyderabad, India. ISCA, ISCA
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- 628) Pandit, V., Schmitt, M., Cummins, N., Graf, F., Paletta, L., and Schuller, B. (2018b). How Good Is Your Model ‘Really’? On ‘Wildness’ of the In-the-wild Speech-based Affect Recognisers. In Karpov, A., Jokisch, O., and Potapova, R., editors, *Proceedings 20. International Conference on Speech and Computer, SPECOM 2018*, volume 11096 of *LNCS*, pages 490–500, Leipzig, Germany. ISCA, Springer
- 629) Pandit, V., Cummins, N., Schmitt, M., Hantke, S., Graf, F., Paletta, L., and Schuller, B. (2018a). Tracking Authentic and In-the-wild Emotions using Speech. In *Proceedings of the first Asian Conference on Affective Computing and Intelligent Interaction (ACII Asia 2018)*, Beijing, China. AAC, IEEE. 6 pages (oral acceptance rate: 29%)
- 630) Parada-Cabaleiro, E., Costantini, G., Batliner, A., Baird, A., and Schuller, B. (2018a). Categorical vs Dimensional Perception of Italian Emotional Speech. In *Proceedings INTERSPEECH 2018, 19. Annual Conference of the International Speech Communication Association*, pages 3638–3642, Hyderabad, India. ISCA, ISCA. (acceptance rate: 54%)
- 631) Parada-Cabaleiro, E., Schmitt, M., Batliner, A., and Schuller, B. (2018c). Musical-Linguistic Annotations of Il Lauro Secco. In *Proceedings 19. International Society for Music Information Retrieval Conference, ISMIR 2018*, pages 461–467, Paris, France. ISMIR, ISMIR
- 632) Parada-Cabaleiro, E., Schmitt, M., Batliner, A., Hantke, S., Costantini, G., Scherer, K., and Schuller, B. (2018b). Identifying Emotions in Opera Singing: Implications of Adverse Acoustic Conditions. In *Proceedings 19. International Society for Music Information Retrieval Conference, ISMIR 2018*, pages 376–382, Paris, France. ISMIR, ISMIR
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- 634) Rathner, E.-M., Terhorst, Y., Cummins, N., Schuller, B., and Baumeister, H. (2018b). State of mind: Classification through self-reported affect and word use in speech. In *Proceedings INTERSPEECH 2018, 19. Annual Conference of the International Speech Communication Association*, pages 267–271, Hyderabad, India. ISCA, ISCA. (acceptance rate: 54%)
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- 637) Ren, Z., Cummins, N., Pandit, V., Han, J., Qian, K., and Schuller, B. (2018b). Learning Image-based Representations for Heart Sound Classification. In *Proceedings of the 8. International Conference on Digital Health, DH 2018*, pages 143–147, Lyon, France. ACM, ACM
- 638) Ringeval, F., Schuller, B., Valstar, M., Cowie, R., Kaya, H., Schmitt, M., Amiriparian, S., Cummins, N., Lalanne, D., Michaud, A., Ciftci, E., Gülec, H., Salah, A. A., and Pantic, M. (2018a). AVEC 2018 Workshop and Challenge: Bipolar Disorder and Cross-Cultural Affect Recognition. In Ringeval, F., Schuller, B., Valstar, M., Cowie, R., and Pantic, M., editors, *Proceedings of the 8. International Workshop on Audio/Visual Emotion Challenge, AVEC’18, co-located with the 26. ACM International Conference on Multimedia, MM 2018*, pages 3–13, Seoul, South Korea. ACM, ACM

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- 640) Rudovic, O., Utsumi, Y., Lee, J., Hernandez, J., Ferrer, E. C., Schuller, B., and Picard, R. W. (2018c). CultureNet: A Deep Learning Approach for Engagement Intensity Estimation from Face Images of Children with Autism. In *Proceedings 31. IEEE/RSJ International Conference on Intelligent Robots and Systems, IROS*, pages 339–346, Madrid, Spain. IEEE/RSJ, IEEE. (acceptance rate: 46.7%)
- 641) Schmid, J., Heß, P., Höß, A., and Schuller, B. (2018). Passive monitoring and geo-based prediction of mobile network vehicle-to-server communication. In *Proceedings of the 14. International Wireless Communications and Mobile Computing Conference (IWCMC 2018)*, pages 1483–1488, Limassol, Cyprus. IEEE, IEEE
- 642) Sengur, A., Demir, F., Lu, H., Amiriparian, S., Cummins, N., and Schuller, B. (2018). Compact Bilinear Deep Features for Environmental Sound Recognition. In *Proceedings International Conference on Artificial Intelligence and Data Mining, IDAP 2018*, Malatya, Turkey. IEEE, IEEE. 5 pages
- 643) Sertolli, B., Cummins, N., Sengur, A., and Schuller, B. (2018). Deep End-to-End Representation Learning for Food Type Recognition from Speech. In *Proceedings of the 20. ACM International Conference on Multimodal Interaction, ICMI*, pages 574–578, Boulder, CO. ACM, ACM
- 644) Song, S., Zhang, S., Schuller, B., Shen, L., and Valstar, M. (2018a). Noise Invariant Frame Selection: A Simple Method to Address the Background Noise Problem for Text-Independent Speaker Verification. In *Proceedings 31. International Joint Conference on Neural Networks (IJCNN)*, pages 1–8, Rio de Janeiro, Brazil. INNS/IEEE, IEEE
- 645) Tzirakis, P., Zhang, J., and Schuller, B. (2018b). End-to-End Speech Emotion Recognition using Deep Neural Networks. In *Proceedings 43. IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2018*, pages 5089–5093, Calgary, Canada. IEEE, IEEE. awarded a student travel grant (acceptance rate: 49.7%)
- 646) Vögel, H.-J., Süß, C., Ghaderi, V., Chadowitz, R., André, E., Cummins, N., Schuller, B., Härrä, J., Troncy, R., Huet, B., Önen, M., Ksentini, A., Conradt, J., Adi, A., Zadorojniy, A., Terken, J., Beskow, J., Morrison, A., Eng, K., Eyben, F., Moubayed, S. A., and Müller, S. (2018). Emotion-awareness for intelligent Vehicle Assistants: a research agenda. In Stolle, R., Broy, M., and Scholz, S., editors, *Proceedings First Workshop on Software Engineering for AI in Autonomous Systems, SEFAIAS, co-located with the 40. International Conference on Software Engineering, ICSE*, pages 11–15, Gothenburg, Sweden. ACM, ACM
- 647) Wagner, J., Baur, T., Schiller, D., Zhang, Y., Schuller, B., Valstar, M., and André<sup>1</sup>, E. (2018a). Show Me What You’ve Learned: Applying Cooperative Machine Learning for the Semi-Automated Annotation of Social Signals. In *Proceedings of the 2. Workshop on Explainable Artificial Intelligence (XAI 2018) as part of the Fairness, Interpretability, and Explainability Federation of Workshops of the 27. International Joint Conference on Artificial Intelligence and the 23. European Conference on Artificial Intelligence, IJCAI-ECAI 2018*, Stockholm, Sweden. IJCAI/AAAI. 7 pages
- 648) 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
- 649) Zhang, Z., Cristia, A., Warlaumont, A., and Schuller, B. (2018a). Automated Classification of Children’s Linguistic versus Non-Linguistic Vocalisations. In *Proceedings INTERSPEECH 2018, 19. Annual Conference of the International Speech Communication Association*, pages 2588–2592, Hyderabad, India. ISCA, ISCA. (acceptance rate: 54%)
- 650) Zhang, Z., Han, J., Qian, K., and Schuller, B. (2018f). Evolving Learning for Analysing Mood-Related Infant Vocalisation. In *Proceedings INTERSPEECH 2018, 19. Annual Conference of the International Speech Communication Association*, pages 142–146, Hyderabad, India. ISCA, ISCA. (acceptance rate: 54%)
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- 652) Schuller, B. (2017a). Big Data, Deep Learning – At the Edge of X-Ray Speaker Analysis. In *Proceedings 19. International Conference on Speech and Computer, SPECOM 2017, Hatfield, UK, 12.-16.09.2017*, Lecture Notes in Computer Science (LNCS), pages 20–34. Springer, Berlin/Heidelberg
- 653) Schuller, B., Steidl, S., Batliner, A., Bergelson, E., Krajewski, J., Janott, C., Amatuni, A., Casillas, M., Seidl, A., Soderstrom, M., Warlaumont, A., Hidalgo, G., Schnieder, S., Heiser, C., Hohenhorst, W., Herzog, M., Schmitt, M., Qian, K., Zhang, Y., Trigeorgis, G., Tzirakis, P., and Zafeiriou, S. (2017b). The INTERSPEECH 2017 Computational Paralinguistics Challenge: Addressee, Cold & Snoring. In *Proceedings INTERSPEECH 2017, 18. Annual Conference of the International Speech Communication Association*, pages 3442–3446, Stockholm, Sweden. ISCA, ISCA. (acceptance rate: 51%)

- 654) Amiriparian, S., Pugachevskiy, S., Cummins, N., Hantke, S., Pohjalainen, J., Keren, G., and Schuller, B. (2017e). CAST a database: Rapid targeted large-scale big data acquisition via small-world modelling of social media platforms. In *Proceedings 7. biannual Conference on Affective Computing and Intelligent Interaction (ACII 2017)*, pages 340–345, San Antonio, TX. AAAC, IEEE. (acceptance rate: 50 %)
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- 656) Amiriparian, S., Cummins, N., Ottl, S., Gerczuk, M., and Schuller, B. (2017a). Sentiment Analysis Using Image-based Deep Spectrum Features. In *Proceedings 2. International Workshop on Automatic Sentiment Analysis in the Wild (WASA 2017) held in conjunction with the 7. biannual Conference on Affective Computing and Intelligent Interaction (ACII 2017)*, pages 26–29, San Antonio, TX. AAAC, IEEE
- 657) Amiriparian, S., Gerczuk, M., Ottl, S., Cummins, N., Freitag, M., Pugachevskiy, S., and Schuller, B. (2017d). Snore Sound Classification Using Image-based Deep Spectrum Features. In *Proceedings INTERSPEECH 2017, 18. Annual Conference of the International Speech Communication Association*, pages 3512–3516, Stockholm, Sweden. ISCA, ISCA. (acceptance rate: 51 %)
- 658) Amiriparian, S., Freitag, M., Cummins, N., and Schuller, B. (2017c). Sequence to Sequence Autoencoders for Unsupervised Representation Learning from Audio. In *Proceedings of the 2. Detection and Classification of Acoustic Scenes and Events 2017 Workshop (DCASE 2017)*, pages 17–21, Munich, Germany. IEEE, IEEE
- 659) Baird, A., Amiriparian, S., Cummins, N., Alcorn, A. M., Batliner, A., Pugachevskiy, S., Freitag, M., Gerczuk, M., and Schuller, B. (2017a). Automatic Classification of Autistic Child Vocalisations: A Novel Database and Results. In *Proceedings INTERSPEECH 2017, 18. Annual Conference of the International Speech Communication Association*, pages 849–853, Stockholm, Sweden. ISCA, ISCA. (acceptance rate: 51 %)
- 660) Baird, A., Jorgensen, S. H., Parada-Cabaleiro, E., Hantke, S., Cummins, N., and Schuller, B. (2017b). Perception of Paralinguistic Traits in Synthesized Voices. In *Proceedings of the 11th Audio Mostly Conference on Interaction with Sound (Audio Mostly)*, London, UK. ACM, ACM. 5 pages (acceptance rate: 66 %)
- 661) Böhm, J., Eyben, F., Schmitt, M., Kosch, H., and Schuller, B. (2017). Seeking the SuperStar: Automatic Assessment of Perceived Singing Quality. In *Proceedings 30. International Joint Conference on Neural Networks (IJCNN)*, pages 1560–1569, Anchorage, AK. INNS/IEEE, IEEE. (acceptance rate: 67 %)
- 662) Brückner, R., Schmitt, M., Pantic, M., and Schuller, B. (2017). Spotting Social Signals in Conversational Speech over IP: A Deep Learning Perspective. In *Proceedings INTERSPEECH 2017, 18. Annual Conference of the International Speech Communication Association*, pages 2371–2375, Stockholm, Sweden. ISCA, ISCA. (acceptance rate: 51 %)
- 663) Burkhardt, F., Weiss, B., Eyben, F., Deng, J., and Schuller, B. (2017b). Detecting Vocal Irony. In Rehm, G. and Declerck, T., editors, *Language Technologies for the Challenges of the Digital Age. Proceedings 2017 bi-annual meeting of the German Society for Computational Linguistics and Language Technology, GSCL*, volume 10713 of *LNCS*, pages 11–22, Berlin, Germany. GSCL, Springer
- 664) Chen, T., Qian, K., Mutanen, A., Schuller, B., Järventausta, P., and Su, W. (2017). Classification of Electricity Customer Groups Towards Individualized Price Scheme Design. In *Proceedings 49. North American Power Symposium (NAPS)*, pages 1–4, Morgantown, WV. IEEE, IEEE
- 665) Cummins, N., Amiriparian, S., Hagerer, G., Batliner, A., Steidl, S., and Schuller, B. (2017a). An Image-based Deep Spectrum Feature Representation for the Recognition of Emotional Speech. In *Proceedings of the 25. ACM International Conference on Multimedia, MM 2017*, pages 478–484, Mountain View, CA. ACM, ACM. (oral acceptance rate: 7.5 %)
- 666) Cummins, N., Vlasenko, B., Sagha, H., and Schuller, B. (2017d). Enhancing speech-based depression detection through gender dependent vowel level formant features. In *Proceedings 16. Conference on Artificial Intelligence in Medicine (AIME)*, pages 209–214, Vienna, Austria. Society for Artificial Intelligence in Medicine (AIME)
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- 668) Deng, J., Eyben, F., Schuller, B., and Burkhardt, F. (2017b). Deep Neural Networks for Anger Detection from Real Life Speech Data. In *Proceedings 2. International Workshop on Automatic Sentiment Analysis in the Wild (WASA 2017) held in conjunction with the 7. biannual Conference on Affective Computing and Intelligent Interaction (ACII 2017)*, pages 1–6, San Antonio, TX. AAAC, IEEE
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- 670) Eyben, F., Unfried, M., Hagerer, G., and Schuller, B. (2017b). Automatic Multi-lingual Arousal Detection from Voice Applied to Real Product Testing Applications. In *Proceedings 42. IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2017*, pages 5155–5159, New Orleans, LA. IEEE, IEEE. (acceptance rate: 49%)
- 671) Freitag, M., Amiriparian, S., Cummins, N., Gerczuk, M., and Schuller, B. (2017a). An ‘End-to-Evolution’ Hybrid Approach for Snore Sound Classification. In *Proceedings INTERSPEECH 2017, 18. Annual Conference of the International Speech Communication Association*, pages 3507–3511, Stockholm, Sweden. ISCA, ISCA. (acceptance rate: 51%)
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- 676) 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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- 680) 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%)
- 681) 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%)
- 682) 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%)
- 683) 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%)
- 684) 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 IEEE 19. International Conference on e-Health Networking, Applications and Services (Healthcom)*, pages 1–6, Dalian, China. IEEE, IEEE
- 685) Mousa, A. E.-D. and Schuller, B. (2017). Contextual Bidirectional Long Short-Term Memory Recurrent Neural Network Language Models: A Generative Approach to Sentiment Analysis. In *Proceedings EACL 2017, 15. Conference of the European Chapter of the Association for Computational Linguistics*, pages 1023–1032, Valencia, Spain. ACL, ACL. (acceptance rate: 27% for long papers)
- 686) Parada-Cabaleiro, E., Baird, A. E., Cummins, N., and Schuller, B. (2017c). Stimulation of Psychological Listener Experiences by Semi-Automatically Com-



- posed Electroacoustic Environments. In *Proceedings 18. IEEE International Conference on Multimedia and Expo, ICME 2017*, pages 1051–1056, Hong Kong, China. IEEE, IEEE. (acceptance rate: 30 %)
- 687) 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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- 689) Parada-Cabaleiro, E., Batliner, A., Baird, A. E., and Schuller, B. (2017d). The SEILS dataset: Symbolically Encoded Scores in Modern-Ancient Notation for Computational Musicology. In *Proceedings 18. International Society for Music Information Retrieval Conference, ISMIR 2017*, pages 575–581, Suzhou, China. ISMIR, ISMIR
- 690) Pokorný, F., Schuller, B., Marschik, P., Brückner, R., Nyström, P., Cummins, N., Bölte, S., Einspieler, C., and Falck-Ytter, T. (2017a). Earlier Identification of Children with Autism Spectrum Disorder: An Automatic Vocalisation-based Approach. In *Proceedings INTERSPEECH 2017, 18. Annual Conference of the International Speech Communication Association*, pages 309–313, Stockholm, Sweden. ISCA, ISCA. (acceptance rate: 51 %)
- 691) Qian, K., Janott, C., Deng, J., Heiser, C., Hohenhorst, W., Cummins, N., and Schuller, B. (2017a). Snore Sound Recognition: On Wavelets and Classifiers from Deep Nets to Kernels. In *Proceedings of the 39. Annual International Conference of the IEEE Engineering in Medicine & Biology Society, EMBC 2017*, pages 3737–3740, Jeju Island, South Korea. IEEE, IEEE
- 692) Qian, K., Ren, Z., Pandit, V., Yang, Z., Zhang, Z., and Schuller, B. (2017c). Wavelets Revisited for the Classification of Acoustic Scenes. In *Proceedings of the 2. Detection and Classification of Acoustic Scenes and Events 2017 Workshop (DCASE 2017)*, pages 108–112, Munich, Germany. IEEE, IEEE
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- 694) Ringeval, F., Schuller, B., Valstar, M., Gratch, J., Cowie, R., Scherer, S., Mozgai, S., Cummins, N., Schmitt, M., and Pantic, M. (2017a). AVEC 2017 – Real-life Depression, and Affect Recognition Workshop and Challenge. In Ringeval, F., Valstar, M., Gratch, J., Schuller, B., Cowie, R., and Pantic, M., editors, *Proceedings of the 7. International Workshop on Audio/Visual Emotion Challenge, AVEC’17, co-located with the 25. ACM International Conference on Multimedia, MM 2017*, pages 3–9, Mountain View, CA. ACM, ACM
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- 696) Tran, D. L., Walecki, R., Rudovic, O., Eleftheriadis, S., Schuller, B., and Pantic, M. (2017a). DeepCoder: Semi-parametric Autoencoder for Facial Expression Analysis. In *Proceedings International Conference on Computer Vision, ICCV 2017*, pages 3209–3218, Venice, Italy. IEEE, IEEE
- 697) Sabathé, R., Coutinho, E., and Schuller, B. (2017). Deep Recurrent Music Writer: Memory-enhanced Variational Autoencoder-based Musical Score Composition and an Objective Measure. In *Proceedings 30. International Joint Conference on Neural Networks (IJCNN)*, pages 3467–3474, Anchorage, AK. INNS/IEEE, IEEE. (acceptance rate: 67 %)
- 698) Sagha, H., Schmitt, M., Povolny, F., Giefer, A., and Schuller, B. (2017c). Predicting the popularity of a talk-show based on its emotional speech content before publication. In *Proceedings 3. International Workshop on Affective Social Multimedia Computing, INTERSPEECH 2017 Satellite Workshop, ASMMC 2017*, Stockholm, Sweden. ISCA, ISCA. 5 pages
- 699) Sagha, H., Deng, J., and Schuller, B. (2017b). The effect of personality trait, age, and gender on the performance of automatic speech valence recognition. In *Proceedings 7. biannual Conference on Affective Computing and Intelligent Interaction (ACII 2017)*, pages 86–91, San Antonio, TX. AAAC, IEEE. (acceptance rate: 50 %)
- 700) Sánchez-Rada, J. F., Iglesias, C. A., Sagha, H., Wood, I., Schuller, B., and Buitelaar, P. (2017). Multimodal Multimodel Emotion Analysis as Linked Data. In *Proceedings 3. International Workshop on Emotion and Sentiment in Social and Expressive Media (ESSEM 2017), held in conjunction with the 7. biannual Conference on Affective Computing and Intelligent Interaction (ACII 2017)*, San Antonio, TX. AAAC, IEEE. 111-116
- 701) Schmitt, M. and Schuller, B. (2017b). Recognising Guitar Effects – Which Acoustic Features Really Matter? In Eibl, M. and Gaedke, M., editors, *Proceedings INFORMATIK 2017, Lecture Notes in Informatics (LNI)*, pages 177–190, Chemnitz, Germany. GI, GI
- 702) Vlasenko, B., Sagha, H., Cummins, N., and Schuller, B. (2017). Implementing gender-dependent vowel-

- level analysis for boosting speech-based depression recognition. In *Proceedings INTERSPEECH 2017, 18. Annual Conference of the International Speech Communication Association*, pages 3266–3270, Stockholm, Sweden. ISCA, ISCA. (acceptance rate: 51%)
- 703) Walecki, R., Rudovic, O., Pavlovic, V., Schuller, B., and Pantic, M. (2017b). Deep Structured Ordinal Regression for Facial Action Unit Intensity Estimation. In *Proceedings IEEE Conference on Computer Vision and Pattern Recognition, CVPR 2017*, Honolulu, HI. IEEE, IEEE. (acceptance rate: 20%)
- 704) Zhang, Y., McGehee, W., Schmitt, M., Eyben, F., and Schuller, B. (2017b). A Paralinguistic Approach To Holistic Speaker Diarisation – Using Age, Gender, Voice Likability and Personality Traits. In *Proceedings of the 25. ACM International Conference on Multimedia, MM 2017*, pages 387–392, Mountain View, CA. ACM, ACM. (acceptance rate: 28%)
- 705) Zhang, Y., Weninger, F., and Schuller, B. (2017c). Cross-Domain Classification of Drowsiness in Speech: The Case of Alcohol Intoxication and Sleep Deprivation. In *Proceedings INTERSPEECH 2017, 18. Annual Conference of the International Speech Communication Association*, pages 3152–3156, Stockholm, Sweden. ISCA, ISCA. (acceptance rate: 51%)
- 706) Strömfelt, H. S. O., Zhang, Y., and Schuller, B. (2017). Emotion-Augmented Machine Learning: Overview of an Emerging Domain. In *Proceedings 7. biannual Conference on Affective Computing and Intelligent Interaction (ACII 2017)*, pages 305–312, San Antonio, TX. AAAC, IEEE. (acceptance rate oral: 27%)
- 707) Zhang, Y., Liu, Y., Weninger, F., and Schuller, B. (2017a). Multi-Task Deep Neural Network with Shared Hidden Layers: Breaking Down the Wall between Emotion Representations. In *Proceedings 42. IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2017*, pages 4990–4994, New Orleans, LA. IEEE, IEEE. (acceptance rate: 49%)
- 708) 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%)
- 709) Schuller, B. (2016a). 7 Essential Principles to Make Multimodal Sentiment Analysis Work in the Wild. In Bandyopadhyay, S., Das, D., Cambria, E., and Patra, B. G., editors, *Proceedings of the 4. Workshop on Sentiment Analysis where AI meets Psychology (SAAIP 2016)*, satellite of the 25. International Joint Conference on Artificial Intelligence, IJCAI 2016, volume 1619, page 1, New York City, NY. IJCAI/AAAI, CEUR. invited contribution
- 710) 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-CA<sup>2</sup> 2016)*, satellite of the 10. Language Resources and Evaluation Conference (LREC 2016), pages 29–34, Portoroz, Slovenia. ELRA, ELRA
- 711) Schuller, B. and McTear, M. (2016). Sociocognitive Language Processing – Emphasising the Soft Factors. In *Proceedings of the Seventh International Workshop on Spoken Dialogue Systems (IWSDS)*, Saariselkä, Finland. 6 pages
- 712) 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%)
- 713) 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%)
- 714) 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
- 715) Abdić, I., Fridman, L., McDuff, D., Marchi, E., Reimer, B., and Schuller, B. (2016c). Driver Frustration Detection From Audio and Video (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 237–243, Klagenfurt, Austria. GfI / ÖGAI, Springer. (acceptance rate: 45%)
- 716) 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%)
- 717) 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
- 718) Coutinho, E., Hönig, F., Zhang, Y., Hantke, S., Bat-

- liner, 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
- 719) 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
- 720) Dong, B., Zhang, Z., and Schuller, B. (2016). Empirical 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%)
- 721) 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%)
- 722) 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-CA<sup>2</sup> 2016)*, satellite of the 10. Language Resources and Evaluation Conference (LREC 2016), pages 54–59, Portoroz, Slovenia. ELRA, ELRA. (oral acceptance rate: 45%)
- 723) 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
- 724) 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%)
- 725) 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
- 726) 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
- 727) 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
- 728) 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%)
- 729) 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
- 730) 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%)
- 731) 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%)
- 732) 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%)
- 733) Qian, K., Janott, C., Zhang, Z., Heiser, C., and Schuller, B. (2016). Wavelet Features for Classifi-

- cation 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 %)
- 734) 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 %)
- 735) Pohjalainen, J., Ringeval, F., Zhang, Z., and Schuller, B. (2016). Spectral and Cepstral Audio Noise Reduction Techniques in Speech Emotion Recognition. In *Proceedings of the 24. ACM International Conference on Multimedia, MM 2016*, pages 670–674, Amsterdam, The Netherlands. ACM, ACM. (acceptance rate short paper: 30 %)
- 736) 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 %)
- 737) 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
- 738) 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 %)
- 739) 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 %)
- 740) 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)
- 741) 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)
- 742) 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 %)
- 743) 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
- 744) 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 %)
- 745) 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 %)
- 746) 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 %)
- 747) 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, co-located with the 24. ACM International Conference on Multimedia, MM 2016*, pages 3–10, Amsterdam, The Netherlands. ACM, ACM

- 748) 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
- 749) Valstar, M., Gratch, J., Schuller, B., Ringeval, F., Cowie, R., and Pantic, M. (2016b). Summary for AVEC 2016: Depression, Mood, and Emotion Recognition 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 %)
- 750) 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
- 751) 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 %)
- 752) 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 %)
- 753) 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 %)
- 754) 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
- 755) 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 %)
- 756) 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 %)
- 757) 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
- 758) 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 %)
- 759) 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 %)
- 760) 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
- 761) 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
- 762) 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

- 763) Schuller, B., Marchi, E., Baron-Cohen, S., Lassalle, A., O'Reilly, H., Pigat, D., Robinson, P., Davies, I., Baltusaitis, 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 %)
- 764) 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 %)
- 765) 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 Nateness, 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 %)
- 766) 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 %)
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- 768) 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
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- 835) Deng, J., Zhang, Z., Marchi, E., and Schuller, B. (2013). Sparse Autoencoder-based Feature Transfer Learning for Speech Emotion Recognition. In *Proceedings 5. biannual Humaine Association Conference on Affective Computing and Intelligent Interaction (ACII 2013)*, pages 511–516, Geneva, Switzerland. HUMAINE Association, IEEE. (acceptance rate oral: 31 %)
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- 837) Eyben, F., Weninger, F., Paletta, L., and Schuller, B. (2013d). The acoustics of eye contact – Detecting visual attention from conversational audio cues. In *Proceedings 6. Workshop on Eye Gaze in Intelligent Human Machine Interaction: GAZEIN 2013, held in conjunction with the 15. International Conference on Multimodal Interaction, ICMI 2013*, pages 7–12, Sydney, Australia. ACM, ACM. (acceptance rate: 38 %)
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- 840) Eyben, F., Weninger, F., Squartini, S., and Schuller, B. (2013f). Real-life Voice Activity Detection with LSTM Recurrent Neural Networks and an Application to Hollywood Movies. In *Proceedings 38. IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, pages 483–487, Vancouver, Canada. IEEE, IEEE. (acceptance rate: 53 %)
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- 843) Geiger, J. T., Schuller, B., and Rigoll, G. (2013d). Large-Scale Audio Feature Extraction and SVM for Acoustic Scene Classification. In *Proceedings of the 2013 IEEE Workshop on Applications of Signal Processing to Audio and Acoustics, WASPAA 2013*, pages 1–4, New Paltz, NY. IEEE, IEEE
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- 1111) Paletta, L., Schuller, B., Robinson, P., and Sabouret, N., editors (2014a). *IDGEI 2014 – 2. International Workshop on Intelligent Digital Games for Empowerment and Inclusion*, Haifa, Israel. ACM, ACM. held in conjunction with the 19. International Conference on Intelligent User Interfaces, IUI 2014
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- 1118) Cambria, E., Schuller, B., Liu, B., Wang, H., and Havasi, C. (2013a). Guest Editor's Introduction: Knowledge-based Approaches to Concept-Level Sentiment Analysis. *IEEE Intelligent Systems Magazine, Special Issue on Statistical Approaches to Concept-Level Sentiment Analysis*, 28(2):12–14. (IF: 2.596 (2017))
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- 1120) Epps, J., Chen, F., Oviatt, S., Mase, K., Sears, A., Jokinen, K., and Schuller, B. (2013). ICMI 2013 Chairs' Welcome. In *Proceedings of the 15. ACM International Conference on Multimodal Interaction, ICMI*, pages 3–4, Sydney, Australia. ACM, ACM. editorial, (acceptance rate: 37 %)
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- 1122) Hartmann, K., Böck, R., Becker-Asano, C., Gratch, J., Schuller, B., and Scherer, K. R., editors (2013b). *Proceedings of the Workshop on Emotion representation and modelling in Human-Computer-Interaction-Systems, ERM4HCI 2013*, Sydney, Australia. ACM, ACM. held in conjunction with the 15. ACM International Conference on Multimodal Interaction, ICMI 2013
- 1123) Hartmann, K., Böck, R., Becker-Asano, C., Gratch, J., Schuller, B., and Scherer, K. R. (2013a). ERM4HCI 2013 -? The 1. Workshop on Emotion Representation and Modelling in Human-Computer-Interaction-Systems. In Hartmann, K., Böck, R., Becker-Asano, C., Gratch, J., Schuller, B., and Scherer, K. R., editors, *Proceedings of the Workshop on Emotion representation and modelling in Human-Computer-Interaction-Systems, ERM4HCI 2013*, Sydney, Australia. ACM, ACM. held in conjunction with the 15. ACM International Conference on Multimodal Interaction, ICMI 2013
- 1124) Müller, M., Narayanan, S. S., and Schuller, B., editors (2013). *Report from Dagstuhl Seminar 13451 – Computational Audio Analysis*, volume 3 of *Dagstuhl Reports*, Dagstuhl, Germany. Schloss Dagstuhl, Leibniz-Zentrum fuer Informatik, Dagstuhl Publishing. 28 pages
- 1125) Paletta, L., Itti, L., Schuller, B., and Fang, F., editors (2013). *Proceedings of the 6. International Symposium on Attention in Cognitive Systems 2013, ISACS 2013*, volume 1307.6170, Beijing, China. arxiv.org, Springer. held in conjunction with the 23. International Joint Conference on Artificial Intelligence, IJCAI 2013
- 1126) Schuller, B., Valstar, M., Cowie, R., and Pantic, M. (2012f). AVEC 2012: the continuous audio/visual emotion challenge – an introduction. In Morency, L.-P., Bohus, D., Aghajan, H. K., Cassell, J., Nijholt, A., and Epps, J., editors, *Proceedings of the 14. ACM International Conference on Multimodal Interaction, ICMI*, pages 361–362, Santa Monica, CA. ACM, ACM. (acceptance rate: 36 %)
- 1127) Schuller, B., Douglas-Cowie, E., and Batliner, A. (2012a). Guest Editorial: Special Section on Naturalistic Affect Resources for System Building and Evaluation. *IEEE Transactions on Affective Computing, Special Issue on Naturalistic Affect Resources for System Building and Evaluation*, 3(1):3–4. (IF: 3.466 (2013))
- 1128) Devillers, L., Schuller, B., Batliner, A., Rosso, P., Douglas-Cowie, E., Cowie, R., and Pelachaud, C., editors (2012). *Proceedings of the 4. International Workshop on EMOTION SENTIMENT & SOCIAL SIGNALS 2012 (ES? 2012) – Corpora for Research on Emotion, Sentiment & Social Signals*, Istanbul, Turkey. ELRA, ELRA. held in conjunction with LREC 2012
- 1129) Epps, J., Cowie, R., Narayanan, S., Schuller, B., and Tao, J. (2012). Editorial Emotion and Mental State Recognition from Speech. *EURASIP Journal on Advances in Signal Processing, Special Issue on Emotion and Mental State Recognition from Speech*, 2012(15). 2 pages (acceptance rate: 38 %, IF: 1.012 (2010))
- 1130) Squartini, S., Schuller, B., and Hussain, A. (2012). Cognitive and Emotional Information Processing for Human-Machine Interaction. *Cognitive Computation, Special Issue on Cognitive and Emotional Information Processing for Human-Machine Interaction*, 4(4):383–385. (IF: 4.287 (2018))
- 1131) Schuller, B., Steidl, S., and Batliner, A. (2011c). 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*, 53(9/10):1059–1061. (acceptance rate: 38 %, IF: 1.267 (2011))
- 1132) Schuller, B., Valstar, M., Cowie, R., and Pantic, M., editors (2011d). *Proceedings of the First International Audio/Visual Emotion Challenge and Workshop, AVEC 2011*, volume 6975, Part II of *Lecture Notes on Computer Science (LNCS)*, Memphis, TN. HUMAINE Association, Springer. held in conjunction with the International HUMAINE Association

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- 1134) Law, E. L.-C., Folstad, A., Grudin, J., and Schuller, B. (2021). Executive Summary. *Dagstuhl Reports, Report from Dagstuhl Seminar 21381 – Conversational Agent as Trustworthy Autonomous System (Trust-CA)*, 11(8):76–77. 39 pages
- 1135) Ozbay, A. G., Tzirakis, P., Rizos, G., Schuller, B., and Laizet, S. (2019). Convolutional Neural Networks for the Solution of the 2D Poisson Equation with Arbitrary Dirichlet Boundary Conditions, Mesh Sizes and Grid Spacings. *Bulletin of the American Physical Society – 72. Annual Meeting of the APS Division of Fluid Dynamics*, 64. 1 page
- 1136) Pokorný, F. B., Schuller, B. W., Tomantschger, I., Zhang, D., Einspieler, C., and Marschik, P. B. (2016f). Intelligent pre-linguistic vocalisation analysis: a promising novel approach for the earlier identification of Rett syndrome. *Wiener Medizinische Wochenschrift*, 166(11–12):382–383. Rett Syndrome – RTT50.1 (IF: 0.56 (2015))
- 1137) Schuller, B. (2013a). Approaching Cross-Audio Computer Audition. *Dagstuhl Reports*, 3(11):22–22
- 1138) Metze, F., Anguera, X., Ewert, S., Gemmeke, J., Kolossa, D., Provost, E. M., Schuller, B., and Serrà, J. (2013). Learning of Units and Knowledge Representation. *Dagstuhl Reports*, 3(11):13–13
- 1139) Schuller, B., Fridenzon, S., Tal, S., Marchi, E., Batliner, A., and Golan, O. (2012b). Learning the Acoustics of Autism-Spectrum Emotional Expressions – A Children’s Game? *Neuropsychiatrie de l’Enfance et de l’Adolescence*, 60(5S):32. invited contribution
- 1140) Schuller, B. (2011b). Next Gen Music Analysis: Some Inspirations from Speech. *Dagstuhl Reports*, 1(1):93–93
- 1141) Ewert, S., Goto, M., Grosche, P., Kaiser, F., Yoshii, K., Kurth, F., Mauch, M., Müller, M., Peeters, G., Richard, G., and Schuller, B. (2011). Signal Models for and Fusion of Multimodal Information. *Dagstuhl Reports*, 1(1):97–97
- 1142) Schuller, B., Schuller, B., and Schuller, B. (2011). *Deutscher Psychotherapie Kongress, DPK*, Berlin, Germany. DGP. 1 page, to appear
- 1143) Keinert, M., Böhme, S., Eskofier, B., Schuller, B., and Berking, M. (2023a). Breathe your stress away – Preliminary results of a randomized controlled study investigating a breath-based approach-avoidance modification training in individuals with elevated stress. In *Proceedings 2. Deutscher Psychotherapie Kongress, DPK*, Berlin, Germany. DGP. 1 page, to appear
- 1144) Löchner, J., Sander, L. B., Seifert, C., Vogel, L., Schuller, B., Schoedel, R., Santangelo, P., and Terhorst, Y. (2023). How to E-mental Health? Pitching Practical Guidelines for Developing, Conducting, and Evaluating Assessment and Intervention E-mental Health Studies. In *Proceedings 2. Deutscher Psychotherapie Kongress, DPK*, Berlin, Germany. DGP. 1 page, to appear
- 1145) Meixner, M., Eskofier, B., Schuller, B., and Berking, M. (2023). Study protocol of a Multimodal Approach-Avoidance Modification Training targeting dysfunctional Beliefs in Alcohol use Disorders. In *Proceedings 2. Deutscher Psychotherapie Kongress, DPK*, Berlin, Germany. DGP. 1 page, to appear
- 1146) Streit, H., Beitner, L., Rupp, L., Keinert, M., Meixner, M., Wichmann, L., Hager, M., Eskofier, B., Schuller, B., and Berking, M. (2023). Multimodal, Valence-enhanced Approach-Avoidance Modification Training in Social Phobia and other Mental Disorders: Study protocol of Seven Randomized Controlled Trials. In *Proceedings 2. Deutscher Psychotherapie Kongress, DPK*, Berlin, Germany. DGP. 1 page, to appear
- 1147) Wichmann, L. J., Eskofier, B., Schuller, B., and Berking, M. (2023). A New Path to Better Sleep: Changing Sleep-related Dysfunctional Beliefs via a Smartphone-based Approach-Avoidance Training in Insomnia Disorder. In *Proceedings 2. Deutscher Psychotherapie Kongress, DPK*, Berlin, Germany. DGP. 1 page, to appear
- 1148) Amiriparian, S., Christ, L., Kathan, A., Müller, N., König, A. S., and Schuller, B. (2022a). Speech-Based Spontaneous Humour Recognition Utilising Deep Spectrum and Acoustic Features. In *Proceedings 32. International Society of Humor Studies Conference, ISHS*, Bertinoro, Italy. ISHS, ISHS. 1 page, to appear
- 1149) Bauer, J., Gerczuk, M., Ebert, D. D., Schuller, B., and Berking, M. (2022). Paralinguistic Speech Characteristics in Major Depression: Machine-Learning-based Assessment of Symptom Severity and Remission Status From Voice. In *Proceedings 1. Deutscher Psychotherapie Kongress, DPK*, Berlin, Germany. DGP. 1 page, to appear

*Abstracts in Conference and Challenge Proceedings (50)*

- 1142) Beitner, L., Streit, H., Eskofier, B., Schuller, B., and Berking, M. (2023). Modifying Dysfunctional Beliefs in Panic Disorder Through a Multimodal Approach-Avoidance-Modification-Training: Study Protocol for a Randomized Controlled Trial. In *Proceedings 2. Deutscher Psychotherapie Kongress, DPK*, Berlin, Germany. DGP. 1 page, to appear
- 1150) Berking, M., Keinert, M., Böhme, S., Rupp, L. H., Capito, K., Eskofier, B., Schuller, B., Schindler-Gmelch, L., and Streit, H. (2022). Emotions-basierte Varianten von Annäherungs-Vermeidungs-Modifikationstrainings als Maßnahme zur Reduktion

- erhöhten Stresserlebens: Ergebnisse einer Pilotstudie. In *Proceedings 1. Deutscher Psychotherapie Kongress, DPK*, Berlin, Germany. DGP. 1 page, to appear
- 1151) Kahveci, S., Houben, K., Aulbach, M., Rupp, L., Keinert, E. M., Boehme, S., Streit, H., Schuller, B., Eskofier, B., Berking, M., Zech, H., van Dijk, W., van Alebeek, H., Veling, H., Blechert, J., and Rinck, M. (2022). Measuring and modifying approach-avoidance behavior for better health outcomes: new experimental paradigms and frameworks. In *Proceedings Kongress der Deutschen Gesellschaft für Verhaltensmedizin (DGVM)*, Salzburg, Austria. DGVM, DGVM. 1 page, to appear
- 1152) Kathan, A., Amiriparian, S., Christ, L., Müller, N., König, A. S., and Schuller, B. W. (2022a). A Personalised Approach to Humour Recognition. In *Proceedings 32. International Society of Humor Studies Conference, ISHS*, Bertinoro, Italy. ISHS, ISHS. 1 page, to appear
- 1153) Keinert, M., Böhme, S., Schindler-Gmelch, L., Streit, H., Rupp, L. H., Eskofier, B., Schuller, B., and Berking, M. (2022). An Anger-based Approach-Avoidance Modification Training Targeting Dysfunctional Beliefs in Individuals with Elevated Stress – Results from a Randomized Controlled Pilot Study. In *Proceedings Kongress der Deutschen Gesellschaft für Verhaltensmedizin (DGVM)*, Salzburg, Austria. DGVM, DGVM. 1 page, to appear
- 1154) Rupp, L. H., Keinert, M., Böhme, S., Schindler-Gmelch, L., Streit, H., Schuller, B., Eskofier, B., and Berking, M. (2022a). Let It Go – A Randomized Controlled Pilot Study Exploring the Utility of Sadness in an Emotion-Based Approach-Avoidance Modification Training in the Context of Stress. In *Proceedings 1. Deutscher Psychotherapie Kongress, DPK*, Berlin, Germany. DGP. 1 page, to appear
- 1155) Rupp, L. H., Keinert, M., Böhme, S., Schindler-Gmelch, L., Streit, H., Schuller, B., Eskofier, B., and Berking, M. (2022b). Let It Go – A Randomized Controlled Pilot Study Exploring the Utility of Sadness in an Emotion-Based Approach-Avoidance Modification Training in the Context of Stress. In *Proceedings Kongress der Deutschen Gesellschaft für Verhaltensmedizin (DGVM)*, Salzburg, Austria. DGVM, DGVM. 1 page, to appear
- 1156) Streit, H., Keinert, M. E., Rupp, L. H., Schindler-Gmelch, L. M., Böhme, S., Eskofier, B., Schuller, B., and Berking, M. (2022). Disgust-based Approach-Avoidance Modification Training for Individuals Suffering from Elevated Stress: A Randomized Controlled Pilot Study. In *Proceedings Kongress der Deutschen Gesellschaft für Verhaltensmedizin (DGVM)*, Salzburg, Austria. DGVM, DGVM. 1 page, to appear
- 1157) Schuller, B. (2021b). The Treacherous Language of Alzheimer: Exposed by Agent AI. In *Proceedings 2. International Symposium on Artificial Intelligence for Prevention & Intervention in Dementia Care, held in conjunction with the 3. Krems Dementia Conference, AIDEM*, Krems, Austria. invited, 1 page, to appear
- 1158) Ristl, C., Baird, A., Schuller, B., and Nikitin, J. (2021). Assessing the Effects of Prosociality on Emotional State Using Daily-Life Audio Data. In *Proceedings Society for Ambulatory Assessment Conference, SAA*, Zurich, Switzerland. SAA. 1 page, to appear
- 1159) Pokorny, F., Bartl-Pokorny, K. D., Schuller, B., Marschik, P., Daniela, K., Nyström, P., Bölte, S., and Falck-Ytter, T. (2020b). Analyse prälinguistischer Vokalisationen von Kindern mit Autismus-Spektrum-Störung. In *Proceedings Wissenschaftliche Tagung Autismus-Spektrum, WTAS*, Göttingen, Germany. Wissenschaftliche Gesellschaft Autismus-Spektrum (WGAS) e. V., WGAS. 1 page
- 1160) Schuller, B. W., Schuller, D. M., Burkhardt, F., and Eyben, F. (2019e). Sprache als Biomarker für psychische Störungen: Werkzeuge zur aktuellen automatischen Analyse. In *Proceedings 11. Workshopkongress und 37. Symposium der Fachgruppe Klinische Psychologie und Psychotherapie der DGPs*, Erlangen/Germany. DGPs, DGPs. 1 page, invited for the Special Session on “E-mental health meets diagnostic: multidisziplinäre Ansätze zur Erfassung transdiagnostischer Faktoren”
- 1161) Stappen, L., Cummins, N., Messner, E.-M., Mallol-Ragolta, A., Baumeister, H., and Schuller, B. (2019a). Attention-based Neural Networks for the Detection of Objective Linguistic Markers in Depressive Spoken and Written Language. In *Proceedings 16. International Pragmatics Conference (IPrA)*, Hong Kong, China. International Pragmatics Association (IPrA), IPrA. 1 page, to appear
- 1162) Schuller, B. (2018b). Emotion Sensing at Your Wrist. In *2. Workshop on emotion awareness for pervasive computing with mobile and wearable devices (EmotionAware 2018) in conjunction with the 2018 IEEE International Conference on Pervasive Computing and Communications (PerCom 2018)*, Athens, Greece. IEEE, IEEE. 1 page, to appear
- 1163) Schuller, B. (2018f). State of Mind Sensing from Speech: State of Matters and What Matters. In *Speech, Music and Mind 2018 (SMM18): Detecting and Influencing Mental States with Audio, satellite workshop of Interspeech 2018*, Hyderabad, India. ISCA, ISCA. 1 page
- 1164) Baird, A., Amiriparian, S., Rynkiewicz, A., and Schuller, B. (2018a). Echolalic Autism Spectrum Condition Vocalisations: Brute-Force and Deep Spectrum Features. In *Proceedings International Paediatric Conference (IPC 2018)*, Rzeszów, Poland. Polish Society of Social Medicine and Public Health. 2 pages
- 1165) Shen, J., Ainger, E., Alcorn, A. M., Babović Dimitrijević, S., Baird, A., Chevalier, P., Cummins, N., Li, J. J., Marchi, E., Marinoiu, E., Olaru, V., Pantic, M., Pellicano, E., Petrović, S., Petrović, V., Schadenberg, B. R., Schuller, B., Skendzić, S., Sminchisescu, C., Tavassoli, T., Tran, L., Vlasenko, B., Zanfir, M., Ev-

- ers, V., and De-Enigma, C. (2018). Autism Data Goes Big: A Publicly-Accessible Multi-Modal Database of Child Interactions for Behavioural and Machine Learning Research. In *Proceedings 17. Annual International Meeting For Autism Research (IMFAR 2018)*, pages 288–289, Rotterdam, The Netherlands. International Society for Autism Research (INSAR), INSAR
- 1166) Zhang, Z., Warlaumont, A., Schuller, B., Yetish, G., Scaff, C., Colleran, H., Stieglitz, J., and Cristia, A. (2018g). Developing computational measures of vocal maturity from daylong recordings. In *16èmes Rencontres du Réseau Français de Phonologie (RFP 2018)*, Paris, France. RFP, RFP. 1 page
- 1167) Schuller, B. (2017e). Mental health monitoring in the pocket as a life changer? The AI view. In *Proceedings 9. Scientific Meeting of the International Society for Research on Internet Interventions, ISR II 2017*, Berlin, Germany. Society for Research on Internet Interventions (SR II), Elsevier. 1 page
- 1168) Rynkiewicz, A., Grabowski, K., Lassalle, A., Baron-Cohen, S., Schuller, B., Cummins, N., Baird, A., Hadjikhani, N., Podgorska-Bednarz, J., Pieniazek, A., Lucka, I., Mazur, A., and Tabarkiewicz, J. (2017). Humanoid Robots and Modern Technology in ADOS-2 and BOSCC to Support the Clinical Evaluation and Therapy of Patients with Autism Spectrum Condition (ASC) / Roboty humanoidalne oraz nowe technologie w ADOS-2 i BOSCC, wspierające diagnostykę kliniczną i terapie osób ze stanami ze spektrum autyzmu. In *Proceedings XXIX Ogólnopolska Konferencja Sekcji Naukowej Psychiatrii Dzieci i Młodzieży Polskiego Towarzystwa Psychiatrycznego*, Katowice, Poland. Polskie Towarzystwo Psychiatryczne, PTP. 3 pages
- 1169) Cummins, N., Hantke, S., Schnieder, S., Krajewski, J., and Schuller, B. (2017b). 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*, pages 14–15, Boston, MA. Society for Affective Science (SAS)
- 1170) Guo, J., Qian, K., Schuller, B., and Matsuoka, S. (2017a). GPU Processing Accelerates Training Autoencoders for Bird Sounds Data. In *Proceedings 2017 GPU Technology Conference (GTC)*, San Jose, CA. NVIDIA. 1 page
- 1171) 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
- 1172) 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
- 1173) 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
- 1174) 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 technologię w diagnozowaniu i terapii autyzmu”*, pages 62–64, Rzeszów, Poland. SOLIS RADIUS
- 1175) 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
- 1176) 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
- 1177) 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
- 1178) 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
- 1179) 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
- 1180) 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
- 1181) 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
- 1182) 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
- 1183) 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
- 1184) 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
- 1185) 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
- 1186) 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
- 1187) 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 %)
- 1188) 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 %)
- 1189) 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 %)
- 1190) 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 %)
- 1191) 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):*
- 1192) Schuller, B. (2023). Empathische Maschinen – KI zwischen Angst und Hoffnung. *MedienConcret*. 7 pages, to appear
- 1193) 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
- 1194) 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
- 1195) 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
- 1196) 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
- 1197) 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
- 1198) 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
- 1199) 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
- 1200) 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
- 1201) 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
- 1202) 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%)
- 1203) 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
- 1204) 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
- 1205) 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
- 1206) 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
- 1207) 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%)
- 1208) 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
- 1209) 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
- 1210) 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
- 1211) 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
- 1212) 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
- 1213) 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
- 1214) 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
- 1215) 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, Con-*

- trol, and Signal Processing, ISCCSP 2012*, pages 1–4, Rome, Italy. IEEE, IEEE. invited contribution, Special Session Interactive Behaviour Analysis
- 1216) 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 %)
- 1217) 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
- 1218) 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
- 1219) Devillers, L. and Schuller, B. (2010). The Essential Role of Language Resources for the Future of Affective 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
- 1220) 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?
- 1221) 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
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