

Proceedings of the 1st International Workshop on the Internet of Sounds

7-8 September 2020

Online event organized by CIMIL, University of Trento

Papers published on IEEE Xplore

- “*A Deep Learning Approach for Low-Latency Packet Loss Concealment of Audio Signals in Networked Music Performance Applications*” by Prateek Verma, Alessandro Ilic Mezza, Chris Chafe, Cristina Rottondi
DOI: <https://doi.org/10.23919/FRUCT49677.2020.9210988>
Video: <https://youtu.be/xumPC6FCoaU>
- “*An Adaptive Metronome Technique for Mitigating the Impact of Latency in Networked Music Performances*” by Riccardo Battello, Luca Comanducci, Fabio Antonacci, Augusto Sarti, Stefano Delle Monache, Giovanni Cospito, Enrico Pietrocola, Filippo Berbenni
DOI: <https://doi.org/10.23919/FRUCT49677.2020.9211053>
Video: <https://youtu.be/SWPBFTkhfqs>
- “*Implementing Remote Audio as a Diagnostics Tool for Maritime Autonomous Surface Ships*” by Tychonas Michailidis, Christopher Barlow, Gordon Meadow, Eshan Rajabally
DOI: <https://doi.org/10.23919/FRUCT49677.2020.9211029>
Video: <https://youtu.be/qS8uizxDrnE>
- “*Comparative Assessment of Data Augmentation for Semi-Supervised Polyphonic Sound Event Detection*” by Lionel Delphin-Poulat, Rozenn Nicol, Cyril Plapous, Katell Peron
DOI: <https://doi.org/10.23919/FRUCT49677.2020.9211023>
Video: https://youtu.be/ahnvS_Bqa-U
- “*Towards a 5G Communication Architecture for the Internet of Musical Things*” by Marco Centenaro, Paolo Casari, Luca Turchet
DOI: <https://doi.org/10.23919/FRUCT49677.2020.9210980>
Video: https://youtu.be/ZNr_NzZ8nEg
- “*Transparent Communication Within Multiplicities*” by Angelo Fraietta, Oliver Bown, Sam Ferguson
DOI: <https://doi.org/10.23919/FRUCT49677.2020.9210989>
Video: <https://youtu.be/-kGsAikYgZI>
- “*Impact of Source Panning on a Global Metronome in Rhythmic Networked Music Performance*” by Robert Hupke, Andrea Genovese, Sripathi Sridhar, Agnieszka Roginska, Juergen Peissig
DOI: <https://doi.org/10.23919/FRUCT49677.2020.9211004>
Video: <https://youtu.be/4A1kUo7H6E8>
- “*Towards Real-Time Detection of Symbolic Musical Patterns: Probabilistic vs. Deterministic Methods*” by Nishal Silva, Carlo Fischione, Luca Turchet
DOI: <https://doi.org/10.23919/FRUCT49677.2020.9211010>
Video: https://youtu.be/BIC_E1ZWmXs
- “*Populating the Smart Musical Instruments Ontology With Data*” by Luca Turchet, Guixia Zhu, Paolo Bouquet
DOI: <https://doi.org/10.23919/FRUCT49677.2020.9210986>
Video: <https://youtu.be/Z-CDpB4ouCg>

Accepted Posters

- “[°poly°] - A Distributed and Interactive Sound Installation Based on Tangible Autonomous Agents” by Benjamin Matuszewski.
DOI: https://fruct.org/publications/acm27/files/zz_Mat.pdf
Video: <https://youtu.be/jMgOX2xJywc>
- “Demo of the timbreID-VST Plugin for Embedded Real-Time Classification of Individual Musical Instruments Timbres” by Domenico Stefani, Luca Turchet
DOI: https://fruct.org/publications/acm27/files/zz_Ste.pdf
Video: <https://youtu.be/IlqpRUxrVkJ>
- “A Comparative Study of Multilateration Methods for Single-Source Localization in Distributed Audio” by Sran Kitic, Clement Galutier, Gregory Pallone
DOI: <https://arxiv.org/abs/1910.10661>
Video: <https://youtu.be/VbCLAhWJpGI>
- “The Musical Interactivity Area - An Attempt to Map the Intersection Between Composition and Instrument Through the Use of the Gestrument Engine” by Jesper Nordin
DOI: <https://fruct.org/publications/acm27/files/Nor.pdf>
Video: https://youtu.be/I2_38PnjPPM
- “Demo of Voice-Based Interface for Soundscape Composition: Composing Soundscapes by Vocally Querying Online Sounds Repositories” by Alex Zanetti, Luca Turchet
DOI: https://fruct.org/publications/acm27/files/zz_Zan.pdf
Video: <https://youtu.be/qEIV8xPZMSc>
- “Demo of Real-Time Sound Event Detection on the Edge” by Gianmarco Cerutti, Alessio Brutti, Elisabetta Farella
DOI: https://fruct.org/publications/acm27/files/zz_Cer.pdf
Video: https://youtu.be/ZAKA3lv_SSs

Awards

Best paper award:

Verma, P., Mezza, A. I., Chafe, C., & Rottondi, C. (2020, September). A deep learning approach for low-latency packet loss concealment of audio signals in networked music performance applications. In *2020 27th Conference of Open Innovations Association (FRUCT)* (pp. 268-275). IEEE.

Best student paper award:

Hupke, R., Peissig, J., Genovese, A., Sridhar, S., & Roginska, A. (2020, September). Impact of Source Panning on a Global Metronome in Rhythmic Networked Music Performance. In *2020 27th Conference of Open Innovations Association (FRUCT)* (pp. 73-83). IEEE.

Young researcher award:

Battello, R., Comanducci, L., Antonacci, F., Sarti, A., Delle Monache, S., Cospito, G., ... & Berbenni, F. (2020, September). An adaptive metronome technique for mitigating the impact of latency in networked music performances. In *2020 27th Conference of Open Innovations Association (FRUCT)* (pp. 10-17). IEEE.

Best demo award:

Cerutti, G., Brutti, A., & Farella, E. Demo of Real-Time Sound Event Detection on the Edge.