

2nd Symposium on Security and Privacy in Speech Communication (SPSC) joined with 2nd VoicePrivacy Challenge Workshop

Incheon, Korea, September 23-24, 2022

Speech and voice are media through which we express ourselves. Speech communication can be used to command virtual assistants, to transport emotion, or to identify oneself. How can we strengthen security and privacy for speech representation types in user-centric human/machine interaction? Interdisciplinary exchange is in high demand. The need to better understand and develop user-centric security solutions and privacy safeguards in speech communication is of growing importance for commercial, forensic, and government applications. The SPSC Symposium is a platform to seek better designed services and products, as well as better informed policy papers for legislators and governance. The symposium was organized jointly by the International Speech and Communication Association (ISCA) special interest group on Security and Privacy in Speech Communication (ISCA SPSC-SIG) and with the VoicePrivacy Challenge (VPC) organizing committee.

The second edition of the Symposium on Security and Privacy in Speech Communication (SPSC Symposium 2022) aimed to lay the first building blocks required to address these important and timely questions. It brought together researchers and practitioners across multiple disciplines – more specifically: signal processing, cryptography, security, human-computer interaction, law, and anthropology. The SPSC Symposium highlighted the results of the VoicePrivacy 2022 Challenge, which focuses on developing anonymization solutions for speech technology. This year, the VoicePrivacy Challenge attracted 43 registered teams from 17 countries worldwide. The overview presentation of the VoicePrivacy Challenge design, objectives, and analysis of submitted systems, as well as a plenary discussion of the outcomes of the current edition and perspectives of the future ones, formed a key component of the Symposium program. In total, 6 presentations, devoted to the anonymization systems developed for the VoicePrivacy 2022 Challenge, were given by the participants. A tutorial on speech anonymization given by Emmanuel Vincent (INRIA, France) and Xin Wang (National Institute of Informatics, Japan) prefaced the above presentations.

For the second edition of the SPSC Symposium, we generated an interesting program, including keynotes, tutorials and invited talks. The keynote speeches covered different perspectives on the topic: Bart van der Sloot (Tilburg University, Netherlands) introduced *“Deepfakes: regulatory challenges for the synthetic society”* and Jon Stine (The Open Voice Network, USA) presented *“The Five Issues Between Voice and Its Value”*. We furthermore had two invited talks. Pawel Kamocki (Institute for German Language, Germany) extended the topic towards the legal perspective with his talk *“Choose a pseudonym. Legal perspective on pseudonymisation of speech data”*, while Zhizheng Wu (Chinese University of Hong Kong - CUHK) introduced spoofing counter-measures with his talk on *“Detecting manipulated and synthetic audio”*. The accepted submissions were presented in three sessions, focusing on aspects *“Privacy and security using speech and speaker recognition techniques”* and the *“VoicePrivacy Challenge”* submissions.

For this hybrid event, we attracted more than 200 registered participants (on-site and online) from all over the world. We would like to thank ISCA for their financial support, the Incheon National University (Korea) for allowing us to use their facilities as on-site venue, and Hyundai Asan for their support with the local organization. We would furthermore like to thank all the reviewers for their work and comments on the submissions, and all the on-site and remote participants for their interest and lively participation.

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