

Keynote Speakers III



Dr. Dong Yu

“Voice Enhancement, Separation, and Compression”

Abstract: We have seen significant progress in voice processing in the past several years. In this talk, I will introduce a series of techniques developed at Tencent AI Lab on voice enhancement, separation, and compression and their applications in real-world scenarios such as music separation, in-car voice processing, and online meetings. I will describe the key paradigm change behind all these advancements and the solutions to new problems observed in the new paradigm.

Short Bio: Dr. Dong Yu is an IEEE Fellow, an ISCA Fellow, and an ACM distinguished scientist. He currently works at Tencent AI Lab as a distinguished scientist and vice general manager. Prior to joining Tencent in 2017, he worked as a principal researcher at Microsoft Research (Redmond), where he had been since 1998. He has concentrated his research on speech recognition and processing, as well as natural language processing in recent years. He has two monographs and over 300 papers to his credit. His work has been widely cited, and he has received the prestigious IEEE Signal Processing Society best paper award in 2013, 2016, and 2020, as well as the 2021 NAACL best long paper award. He was a forerunner in the use of deep learning techniques in automatic speech recognition.

Dr. Dong Yu is currently serving as the chair of the IEEE Speech and Language Processing Technical Committee (SLTC). He has served on the editorial boards of numerous journals and magazines, as well as on the organizing and technical committees of numerous conferences and workshops, including serving as the technical co-chair of ICASSP 2021.

Personal website: <https://sites.google.com/view/dongyu888/>

complete the diagnosis of tumor subtypes. In the platform deployed at PLAGH, the diagnostic models of all organs are embedded. The platform supports all digital scanners on the market. We have also connected the platform with the information system in the hospital, so that we can obtain information about the samples and export the diagnostic report. Thus, the platform can be seamlessly embedded into the diagnostic process for pathologists, improving their working efficiency. Every day, all slides supported by the intelligent diagnostic platform are scanned and uploaded, and pathologists can use digital slides and artificial intelligence in the interface of the information system in their daily diagnoses, and issue reports with a single click. In this report, we will introduce the large-scale application of the AI pathology diagnosis platform in the real world.

Biography:

Doctor Shuhao Wang, the co-founder and CTO of Thorough Future, has a Ph.D. from Tsinghua University, was a postdoctoral fellow at the Institute for Interdisciplinary Information Sciences, Tsinghua University, and an assistant researcher at Baidu, NovuMind, and JD, and has more than 20 national patents, and has published many academic papers in top journals/conferences such as Nature Communications, Modern Pathology, ICCV, etc. He received the Elite Award of “30 New Generation Digital Economy Talents” at the World Internet Conference 2019. Dr. Shuhao Wang has extensive experience in the implementation of cutting-edge AI techniques and has a background in medical AI research for many years.