

Tao Zhang bio



Tao Zhang received his B.S. degree in physics from Nanjing University, Nanjing, China in 1986, M.S. degree in electrical engineering from Peking University, Beijing, China in 1989, and Ph.D. degree in speech and hearing science from the Ohio-State University, Columbus, OH, USA in 1995. He joined the Advanced Research Department at Starkey Laboratories, Inc. as a Sr. Research Scientist in 2001, managed the DSP department at Laboratories, Inc. from 2004 to 2008 and the Signal Processing Research Department at Starkey Laboratories, Inc. from 2008 to 2014. He is currently Director of the Signal Processing Research department at Starkey Hearing Technologies, a global leader in providing hearing technologies.

My IEEE activities:

Dr. Tao Zhang is currently serving as the Chair of the Communication Society and Signal Processing Society Joint Chapter. Dr. Zhang has made significant contributions to signal processing research for hearing devices. Since 2004, Dr. Zhang has been actively promoting signal processing research for hearing devices in the global signal processing community. He has authored and co-authored 40+ patents and 100+ papers and presentations in the area of signal processing research for hearing devices. He has been strongly promoting perceptually motivated and bio-inspired signal processing research. In 2013, he and the late professor Philip Loizou organized and chaired the special session on Signal Processing Research for Hearing Instruments: Challenges, Solutions and Future Directions at ICASSP. The invited speakers including world-class experts such as professor Zhi-quan Luo, Brian Moore, James Kates and Mario Svirsky. In 2016, he and his colleagues organized a multi-disciplinary special session on Approaches to Improve Speech Understanding in Noise at Acoustical Society of America Spring Meeting. Eleven world-class experts presented perspectives from psychoacoustics, neuroscience and signal processing. This interdisciplinary session was so successful that many participants requested a repeat right after the session.

Dr. Zhang has been a strong proponent and supporter for emerging research including ad hoc microphone array processing and deep neural-network based speech enhancement. For example, he and his colleagues have created the first comprehensive and realistic audio database for ad hoc microphone array processing research. In addition, he has been actively engaging key researchers and planning an AASP research challenge in ad hoc microphone array processing using this database. In addition, he and professor DeLiang Wang organized and chaired a special session on speech enhancement for alleviating hearing impairment using machine learning approaches at ICASSP 2016.

Dr. Zhang believed in investing in the future of our community: our students. Over the last 5 years, he sponsored various best paper awards at ICASSP, WASPAA and HSCMA. In addition, he created the first research internship program to encourage more students to develop a career in audio and speech signal processing research. Over 25 graduate students have come through this internship program.

Dr. Zhang has been actively serving the IEEE signal processing community. He has been on the AASP Technical Committee and the Industrial Relationships Committee since 2014. He is the IEEE signal processing industry envoy for United States. He has chaired many regular lecture sessions at WASPAA, ICASSP, HSCMA and CHAT. Since 2013, he has been serving as the chair of IEEE Twin-cities Signal Processing and Communication community, Dr. Zhang has completely revitalized this community. He and his colleagues have created a stronger partnership with University of Minnesota and consistently organized at least 4 seminars and 2 IEEE distinguished lectures every year.

To promote cross-pollinations between industry and academics, Dr. Zhang has organized two research receptions for global audio and speech signal processing researchers at ICASSP. He has actively supported signal processing research in hearing instruments by providing free prototype devices to signal processing researchers, demonstrating their hearing technologies at ICASSP, inviting the NIDCD funding director to WASPAA. He created the first visiting research scientist program at Starkey to enhance research collaboration between industry and academics,