



IEEE Distinguished Lecture Tour

Signal Enhancement in Consumer Products

Dr Akihiko (Ken) Sugiyama

14th September 2015

3.30–6pm

Building 500

Exhibition Space

Ground Level

Chemistry Precinct

Manning Road Entrance

Curtin University

Refreshments will be provided
following the lecture

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Summary:

This lecture presents the A to Z of signal enhancement when it is applied to consumer products such as cellphone handsets, digital still cameras and camcorders, PCs and tablet computers, TV receivers, and gaming controllers. Starting from basic single channel signal enhancement in the frequency domain, it continues on to two-channel processing and multi-channel processing also known as microphone arrays. Types of noise to be covered include environmental noise, mechanical noise, impact (or transient) noise and wind noise. Problems and solutions that include recent topics are discussed for each application from a viewpoint of the algorithm and implementation. Sound demonstrations will be provided to help audience understand the effect of solutions.

Biography:

Akihiko Sugiyama (a.k.a. Ken Sugiyama), affiliated with NEC Information and Media Processing Labs., has been engaged in a wide variety of research projects in signal processing such as audio coding and interference/noise control. His team developed the world's first Silicon Audio in 1994, the ancestor of iPod. He served as Chair of Audio and Acoustic Signal Processing Tech. Committee, IEEE Signal Processing Society (SPS) [2011-2012], as associate editors for several journals such as IEEE Trans. SP [1994-1996], as the Secretary and a Member at Large to the Conference Board of SPS [2010-2011], as a member of the Awards Board of SPS [2015-], and as the Chair of Japan Chapter of SPS [2010-2011]. He was a Technical Program Chair for ICASSP2012. He has contributed to 16 chapters of books and is the inventor of over 150 registered patents with more pending applications in the field of signal processing in Japan and overseas. He received 13 awards such as the 2002 IEICE Best Paper Award, the 2006 IEICE Achievement Award, and the 2013 Ichimura Industry Award. He is Fellow of IEEE and IEICE, and a Distinguished Lecturer for IEEE SPS. He is also known as a big host for a total of over 70 internship students.