UNIVERSITY of RWANDA

IEEE Advancing Technology for Humanity

Distinguished Lecture Topics and Summaries by   Akihiko Sugiyama Also Known as **Ken**

Akihiko Sugiyama Also Known as **Ken**

ADDRESS, E-MAIL, PHONE:
Akihiko Sugiyama
Yahoo! JAPAN Research, Yahoo Japan Corporation
Kioi Tower, Tokyo Garden Terrace Kioicho, 1-3 Kioicho, Chiyoda-ku, Tokyo 102-8282, Japan
e-mail: a.sugiyama@ieee.org
phone: +81-80-4797-4880

Akihiko Sugiyama

Contact Person:
Prof. Nelson Ijumba DVC AAR- UR
Local Co-ordination: Dr Bajpai Gaurav Ag CIO
Mobile: +250788678812
Venue Co-ordinator: Dr. Omololu Akin-Ojo
Mobile: +250787266585

Venue: ICTP EAIFR (Top Floor) Einstein Building (Former KIST -2)
Nyarugenge Campus   CST-UR
Date 16th August 2019
Time: 2pm-5pm

Title-1 (2 pm:3:30 pm)

1. Signal Processing for Robot Audition: How signal processing helps a robot recognize user commands in adverse environment

Summary

This lecture presents an overview of signal processing for robot audition. Human-robot communication is essentially supported by speech recognition whose performance is known to be seriously degraded in adverse environment. To help a robot recognize commands given by the user, four signal processing techniques are useful, namely, direction-of-arrival (DOA) estimation, noise cancellation, echo cancellation, and beam forming. Problems in these techniques which are specific to human-robot communication are identified and solutions to those problems are presented. Video demonstrations in the talk will help audience understand effects of these techniques.

Title-2 (3:30 pm -5 pm)

2. Easy and lazy technical writing for engineers and scientists: A step-by-step guide to establish a good logical structure

Summary

This lecture presents an easy and lazy way in a step-by-step manner to prepare technical papers targeting at novices such as entry-level engineers and young scientists including students. A good logic is a key to good papers, however, it is not easy for unexperienced authors to establish. As a solution, "Slides First" is proposed and explained in details with examples. Slides help the authors build a solid logic for the paper, which directly benefits them by making reviewers understand the point of the paper easily and clearly, leading to a higher review score. There is a specific order of preparation to make the process most efficient. The highlight is a three point analysis for which templates are provided to clarify the value, the trick, and a user benefit of the paper. These three points naturally lead to a good paper title that can also be used in the abstract. This lecture is unique in the point that it tells how drafting should proceed, not what a draft should include, which is the difference from technical writing books and websites.

Short Biography

Akihiko Sugiyama (a.k.a. Ken Sugiyama), affiliated with Yahoo! JAPAN Research after 38 years at NEC Corporation, has been engaged in a wide variety of research projects in signal processing such as audio coding and interference/noise control. His team in NEC developed the Silicon Audio, the world's first all solid-state audio player and a precursor of iPod, in 1994. He served as the Chair of Audio and Acoustic Signal Processing Technical Committee, IEEE Signal Processing Society (SPS) [2011-2012], as associate editors for several journals such as IEEE Trans. Signal Processing [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 [2015-2017], as the Chair of Japan Chapter of SPS [2010-2011], and serves as a member of IEEE Fellow Committee. He was a Technical Program Chair for ICASSP2012. He has contributed to 17 chapters of books and is the inventor of 217 registered patents with more pending applications in the field of signal processing in Japan and overseas. He received 17 awards such as the 2002 IEICE Best Paper Award, the 2006 and the 2018 IEICE Achievement Award, and the 2013 Ichimura Industry Award. He has delivered 121 invited talks in 52 cities of 19 countries. He is Fellow of IEEE and IEICE, and a Distinguished Lecturer for IEEE SPS [2014-2015] and for IEEE CE (Consumer Electronics Society) [2017-2018].