ISCA Distinguished Lecturers Program
Announcement for 2014

Purpose

ISCA started the Distinguished Lecturers Program in 2006. The purpose is to send Distinguished Lecturers to travel to different parts of the world to give lectures to help promote research activities on speech science and technologies.

Distinguished Lecturers for 2015

1. Distinguished Lecturers have been selected for 2015-2016:

   (1) Prof. Helen Meng,
   Chairman & Professor, the Department of Systems Engineering and Engineering Management, The Chinese University of Hong Kong

   (2) Prof. Shrikanth Narayanan,
   Andrew J Viterbi Professor of Engineering, University of Southern California, USA

2. Possible Talk Topics

   (1) Prof. Helen Meng,
   Chair & Professor, the Department of Systems Engineering and Engineering Management, The Chinese University of Hong Kong

   Proposed Talks: Helen's research interests are in multilingual speech and language processing, information processing a retrieval, multimodal human-computer interaction and computer-aided language learning systems. Possible lecture topics include:

   i. Lecture 1: "Development of Automatic Speech Recognition and Synthesis" Technologies to Support Chinese Learners of English - the CUHK Experience This talk presents ongoing research in the development of speech technologies that strives to raise the efficacy of computer-aided pronunciation training, especially for Chinese learners of English. Acoustic-phonetics is used to predict possible segmental and supra-segmental realizations that constitute mispronunciations in L2 English.
   ii. Lecture 2: "Multimodal Processing of Speech-based Interactions" Speech constitutes the primary form of human communication and research in automatic speech processing has largely focused on the audio modality. However, human communication is inherently multimodal, which involves also expressions, gaze, gestures, posture, movement and position, etc. Much can be gained in human-computer interaction by jointly processing information available in multiple modalities. This talk presents an overview of related activities, and lays out a set of challenges for multimodal speech processing.
   iii. Lecture 3: "Modeling the Expressivity of Textual Semantics for Text-to-Audiovisual Speech Synthesis in Avatar Animation" This talk describes expressive text-to-speech synthesis techniques for spoken dialog systems, where the expressivity is driven by the message content. We adapt the three-dimensional pleasure-arousal-dominance (PAD) model for describing expressivity in input lexical semantics and dialog acts, used for modifying speech prosody, including visual prosody of head motions and facial expressions.
   iv. Lecture 4: "Conference Publication Analytics for Interspeech" This talk presents analytics of Interspeech 2014 papers based on topic modeling. We observe possible topic trends and new sub-areas that may illustrate the development of our field. Such analytics, when applied across multiple areas, may also help us understand the organization or structure of research topics and their evolution.

(2) Prof. Shrikanth Narayanan,
   Andrew J Viterbi Professor of Engineering, University of Southern California, USA

Proposed Talks: Shri Narayanan's talks will emphasize interdisciplinary approaches in the study of human speech communication, and their technology applications; these can target a broad audience of speech scientists, engineers, linguists, psychologists, clinicians, etc. Sample lecture topics include:

i. Lecture 1: "Speech Production: Measurements, Models & Applications." This talk will review recent advances in speech production measurements (including imaging), data resources, and analysis/modeling as well as illustrate their use in linguistic research, clinical applications and technology applications in speech recognition and speaker modeling.

v. Lecture 2: "Modeling Emotions using Verbal and Nonverbal Cues." This talk will review modeling human emotions using speech and language, and will discuss emotion representation, annotations, signal features, interplay between verbal and nonverbal cues, and techniques for automated modeling and recognition.

ii. Lecture 3: "Enriched Speech and Spoken Language Processing: Techniques and Applications." This talk will review the range of techniques available to extract rich information from the speech signal (from linguistic prosodic characterization to paralinguistic speaker state and speaker trait information) and how they could be incorporated within applications such as speech translation and learning assessment.

iii. Lecture 4: "Behavioral Signal Processing with Speech and Language." This talk will discuss the opportunities and challenges for speech and language processing in behavioral computing. Examples will be drawn from real life applications, notably in mental health and well being (Autism, Addiction, Martial Therapy, etc.) to illustrate methodologies and their use in practice.

iv. Lecture 5: "Processing Children's Speech and Language." This talk will discuss analysis and recognition of children's speech (both typically developing, and not) with applications in learning assessment and disorders such as Autism Spectrum Disorder.

v. Lecture 6: "Extraction of linguistic and paralinguistic information from audio-visual data." Audio-visual data have been a key enabler of human observational research and practice. The confluence of sensing, communication and computing technologies is allowing capture and access to data, in diverse forms and modalities, in ways that were unimaginable even a few years ago. Importantly, these data afford the analysis and interpretation of multimodal cues of verbal and non-verbal human behavior. These signals carry crucial information about not only a person's intent and identity but also underlying attitudes and emotions. Automatically capturing these cues, although vastly challenging, offers the promise of not just efficient data processing but in tools for discovery that enable hitherto unimagined insights. Recent computational approaches that have leveraged judicious use of both data and knowledge have yielded significant advances in this regards, for example in deriving rich information from multimodal sources including human speech, language, and videos of visual behavior. This talk will focus on some of the advances and challenges in gathering such data and creating algorithms for machine processing of such cues. It will also introduce some of the freely available resources for research.

Above 2 Distinguished Lecturers are available in April 1st 2015 to Dec 31th 2016.

Regions Covered by the Program

   ISCA Board has identified the following regions as under-represented in ISCA programs and covered by this program: Africa, China, India, Eastern Europe, Latin America, South and West Asia.

Distinguished Lecturers Tours

Distinguished Lecturers Tours are arranged by ISCA upon invitation only. The local hosts should be

responsible for making and funding the local arrangements including accommodation and meals, and ISCA will pay travel costs. A Distinguished Lecturer Tour is realizable when at least three lectures, preferably in at least two different cities in the regions defined above, can be arranged.

To Arrange a Distinguished Lecturer Tour

The local hosts wishing to arrange a Distinguished Lecturer Tour should contact Satoshi Nakamura (s-nakamura@is.naist.jp), the chair of the ISCA Geographical Outreach Committee. It may be helpful but not necessary if the local hosts can contact the Distinguished Lecturers directly for detailed arrangements such as travel schedule and lecture titles. But the final decision will be made by the ISCA Geographical Outreach Committee considering the travel funds available.

More Details

More details of this Program can be found at ISCA website,
(http://www.isca-speech.org/iscaweb/index.php?option=com_content&view=article&id=62&Itemid=7)