

IEEE Tappan Zee Subsection Joint Meeting with Westchester Chapters of ASME & SME Presents

Speech Recognition, Full Speaker Diarization, Bird Song Recognition and More

Dr. Homayoon Beigi, President
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Wednesday April 19, 2017 at 6:30 PM

All are invited – Please Post

Abstract: The latest achievements in speech recognition, speaker recognition in, and event detection using deep learning will be discussed, and other techniques, designed and implemented over more than two and a half decades. A system will be demonstrated which takes any media and splits it into segments, labeling each segment with the corresponding speaker. It also transcribes what was said in the media, providing timestamps for each segment. The system is also demonstrated to listen to the songs of birds and to identify their species and subspecies. It is also shown to be used to transcribe the commands in an airplane cockpit, etc. The robustness of the system with respect to echo, applause, and other noises is demonstrated and discussed.

Bio: Homayoon Beigi earned his BS, MS, and PhD from Columbia University in 1984, 1985 and 1990 respectively. The author of the first and only comprehensive textbook on Speaker Recognition, for three decades, he has been involved in research and development in Biometrics, Pattern Recognition and Internet-Commerce. He has developed the award-winning RecoMadeEasy® Speaker Recognition and the multiple-award winning, CommerceMadeEasy® software. He has been an Adjunct Professor since 1995, teaching graduate level Speaker, Speech, Handwriting and Applied Signal Recognition, as well as Control Systems courses at the CS, ME, and EE departments of Columbia University. He was a Research Staff Member at the IBM T.J. Watson Research Center from 1991 to 2001, working on Speaker Recognition, ASR, LM, Search, Handwriting Recognition, Control, and NN Learning. He developed the SAFE Audio ANSI standard and was an active liaison in the US delegation of the ISO/SC37-JTC1-WG3 and the VoiceXML Forum on Speaker Biometrics. His other research includes Structural Health Prognosis, Image Compression, Kinematics, Financial Optimization, and Zero-Gravity Fluid Dynamics. His "Fundamentals of Speaker Recognition" has been downloaded by more than 42,000 times. His is the recipient of two IEEE best paper awards and 10 issued patents and over 70 peer-reviewed publications. He has been an Associate Editor of the AutoSoft Journal, Editor of the BISC Handwriting Recognition, Senior Member of IEEE, on Advisory Board of IEEE Spectrum, and reviewer for the Pattern Recognition Journal, IEEE PAMI, and IEEE Transactions on NN, IET Signal Processing Journal, the International Journal of Control, AIAA Journal, ICASSP, Interspeech, and more.

Location: Seminar will be held in **Room 15-F53** (entrance floor) at the New York Medical College **Annex Building on Rt. 9A, 19 Skyline Drive**, Hawthorne, NY 10532. **Directions: From Route 9A North** – Make right turn on to the south end of Skyline Dr. At the sign for 19 Skyline Dr. turn right and park **behind** the large trapezoidal building. Enter the **back** center of the building at the base of the large blue pole at the back. Security staff at the entrance will let you in. If there is no Security Guard at desk push intercom button in entrance hallway to talk to Security.

Registration: Required and requested by close of business on Wednesday, April 19, 2017 at: <https://events.vtools.ieee.org/m/45049> See Tappan Zee Subsection website event page at http://www.ewh.ieee.org/r1/new_york/tz/ for more details.

Refreshments: Refreshments will be offered at 6:30 PM, presentation starts at 7:00 PM.

Seminar Coordinator: Robert M. Pellegrino, Chair, IEEE Tappan Zee Subsection