

# **Signal Processing Everywhere—a Perspective on History, Synergies and Opportunities**

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## **ABSTRACT**

Signal processing techniques and technologies are truly ubiquitous in the devices and services that we take for granted in this age of information. The Field of Interest (FOI) of the IEEE Signal Processing Society <http://www.signalprocessingsociety.org/about-sps/scope-mission/> succinctly describes the fundamental components and aims of what is, and likely to be in the foreseeable future, broadly defined as signal processing. This statement also highlights the blurred lines and convergence of approaches with a number of other fields such as computing, information theory, communications and networking, and machine intelligence.

This talk will provide a perspective on the history of the development of modern signal processing as manifested in the growth and technical diversification of the IEEE Signal Processing Society. A number of examples are provided to illustrate the trends in the field and some likely future directions made possible by developments in sensing, computational and communication technologies, and opportunities ranging from entertainment to grand challenge problems in energy and health care.

### **Speaker's Short Bio:**

Mos Kaveh is the Centennial Professor of Electrical and Computer Engineering, and the Associate Dean for Research and Planning for the College of Science and Engineering at the University of Minnesota. He served as the Head of his department from 1990 -2005. His research and educational activities have been on a variety of areas of signal and image processing and digital communications, including the processing of sensor array signals, image reconstruction and tomography and wireless communications. Dr. Kaveh is the President of the IEEE Signal Processing Society (SPS) for 2010-2011, and has served this Society in a number of editorial and leadership positions over the past three decades. His recognitions and honors from the IEEE include Fellow of IEEE, a 1986 IEEE ASSP Senior (best paper) Award, the 1988 IEEE ASSP Meritorious Service Award, an IEEE Third Millennium Medal, and the 2000 Society Award of the IEEE Signal Processing Society.