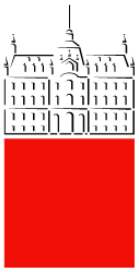
Univerza *v Ljubljani*
Fakulteta *za elektrotehniko*
Laboratorij *za digitalno obdelavo signalov, slik in videa*



Slovenska sekcija IEEE / Odbor SP-CAS

Vabimo Vas na poletno strokovno srečanje Odbora za obdelavo signalov s predavanjem programa Izbornih predavateljev IEEE.

Srečanje bo potekalo v sredo, 3. julija 2013 na Univerzi v Ljubljani, Fakulteti za elektrotehniko na Tržaški 25 v Ljubljani.

9:30

Delovno srečanje ob kavi

v Laboratoriju za Digitalno obdelavo signalov, slik in videa

11:00

Predavanje profesorja Pierre Moulin-a

Information Embedding: From Theory to Practice

v Multimedijski dvorani FE

Vljudno vabljeni!

Information Embedding: From Theory to Practice

Pierre Moulin

Watermarking, fingerprinting, and steganography applications require the secure embedding of information bits into a cover signal (such as audio, video, still images, etc.) This talk will present the fundamental concepts and outline practical approaches to such problems.

First an overview of applications is given, ranging from Digital rights management to content authentication, transaction tracking, and database annotation. Then the fundamental notions pertaining to information embedding into cover signals are presented, namely signal fidelity, robustness against an adversary, and payload. An information-theoretic model is presented for a generic data hiding problem. Analysis of this model yields the notion of data-hiding capacity and sheds light into what is the structure of good data-hiding codes. Spread-spectrum and binning codes are discussed in this context. The final part of the talk shows an application of the theory to a problem of hiding data in an image.

The lecture is supported by IEEE Signal Processing Chapter under the "Distinguished Lecturer Program" and hosted by University of Ljubljana, Faculty of Electrical Engineering.

Pierre Moulin *(F) received his doctoral degree from Washington University in St. Louis in 1990, after which he joined at Bell Communications Research in Morristown, New Jersey, as a Research Scientist. In 1996, he joined the University of Illinois at Urbana-Champaign, where he is currently Professor in the Department of Electrical and Computer Engineering, Research Professor at the Beckman Institute and the Coordinated Science Laboratory, and affiliate professor in the Department of Statistics.*

His fields of professional interest include image and video processing, compression, statistical signal processing and modeling, media security, decision theory, and information theory. Dr. Moulin has served on the editorial boards of the IEEE Transactions on Information Theory, the IEEE Transactions on Image Processing. He currently serves on the editorial boards of the Proceedings of IEEE and of Foundations and Trends in Signal Processing. He was co-founding Editor-in-Chief of the IEEE Transactions on Information Forensics and Security (2005-2008), member of the IEEE Signal Processing Society Board of Governors (2005-2007), and has served IEEE in various other capacities.

He received a 1997 Career award from the National Science Foundation and an IEEE Signal Processing Society 1997 Senior Best Paper award. He is also co-author (with Juan Liu) of a paper that received an IEEE Signal Processing Society 2002 Young Author Best Paper award. In 2003 he became IEEE Fellow and Beckman Associate of UIUC's Center for Advanced Study. In 2007-2009 he was Sony Faculty scholar at UIUC. He was plenary speaker for ICASSP 2006, ICIP 2011, and several other conferences. He is Distinguished Lecturer of the IEEE Signal Processing Society for 2012-2013.