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Program

Tuesday, June 28

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High Dimensional Signal Classification with Invariant Representations

Stephane Mallat (Ecole Polytechnique, France)

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Yaakov Bar-Shalom (University of Connecticut, USA)

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Xin Yuan (Hong Kong Polytechnic University, Hong Kong)

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Manuel Hobiger (BGR, Hannover, Germany); Cécile Cornou (LGIT, IRD: R157, CNRS, Université J. Fourier Grenoble, France); Pierre-Yves Bard (LGIT, LCPC, CNRS, Université J. Fourier, Grenoble, France); Nicolas Le Bihan (GIPSA-Lab, CNRS, France)

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Michael Jordan (UC Berkeley, USA)

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Flavio Ribeiro (University of São Paulo, Brazil); Vitor H Nascimento (USP, Brazil)
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Yong Zhao (University of Sheffield, United Kingdom); Wei Liu (University of Sheffield, United Kingdom)
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Zahedeh Farshad (Amirkabir University of Technology, Iran); Hamidreza AminDavar (Amirkabir University of Technology (AUT), Iran)
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Robust Adaptive Beamforming Algorithms Using Low-Complexity Mismatch Estimation

Lukas Landau (University of York & TU-Ilmenau, United Kingdom); Rodrigo C. de Lamare (University of York, United Kingdom); Martin Haardt (Ilmenau University of Technology, Germany)
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Joint Direction-of-Arrival and Order Estimation in Compressed Sensing Using Angles Between Subspaces

Mads G. Christensen (Aalborg University, Denmark); Jesper Kjær Nielsen (Aalborg University, Denmark)
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GLRT-Based Framework for the Multidimensional Statistical Resolution Limit

Mohammed El korso (Laboratoire des Signaux et Systèmes (L2S), France); Rémy Boyer (CNRS, Université Paris-Sud (UPS), Supélec, France); Alexandre Renaux (Université Paris 11, France); Sylvie Marcos (Laboratoire des Signaux et Systems, Supélec, CNRS UMR, France)
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S13: Biosignal Processing and Medical Imaging I

Probabilistic Model Definition for Physiological State Monitoring

Laure Amate (Laboratoire Informatique de Grenoble & LIG, France); Florence Forbes (INRIA, France); Julie Fontecave-Jallon (UJF-Grenoble 1 / CNRS / TIMC-IMAG UMR 5525 / PRETA Team, France); Benoit Vettier (LIG, France); Catherine Garbay (LIG/CNRS, France)
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Parameter Estimation for Hybrid Wavelet-Total Variation Regularization

Lotfi Chaari (INRIA Rhône-Alpes, France); Jean-Christophe Pesquet (Univ. Paris-Est, France); Jean-Yves Tournet (University of Toulouse & IRIT/ENSEEIH/TéSA, France); Philippe Ciuciu (LNAO, France)
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A Tolerant Algorithm for Cardiac Pulses Characterization in Ballistocardiography Signals in a Non-Invasive System

Oscar Hernandez (ITESM Campus Queretaro, Mexico); Carlos Ramirez (Tecnológico de Monterrey, Mexico); Julio Villeda (ITESM, Mexico)

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Bayesian Variational Approximation for the Joint Detection Estimation of Brain Activity in fMRI

Lotfi Chaari (INRIA Rhône-Alpes, France); Florence Forbes (INRIA, France); Philippe Ciuciu (LNAO, France); Thomas Vincent (LNAO, France); Michel Dojat (GIN, France)

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Cramér-Rao Lower Bounds for Estimating the Time Varying Delay of Surface EMG Signals

Meryem Jabloun (Université d'Orléans, France); Philippe Ravier (Université d'Orléans, France); Olivier Buttelli (Université d'Orléans, France)

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Sparse Multichannel Source Separation Using Incoherent K-SVD Method

Vahid Abolghasemi (University of Surrey, United Kingdom); Saideh Ferdowsi (University of Surrey, United Kingdom); Saeid Sanei (University of Surrey, United Kingdom)

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S14: Information Forensics and Security

Image Protection Based on Visual Cryptography and Statistical Property

Young-Chang Hou (Tamkang University, Taiwan)

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Anomalous Subgraph Detection Via Sparse Principal Component Analysis

Navraj Singh (Stanford University, USA); Benjamin A. Miller (MIT Lincoln Laboratory, USA); Nadya Bliss (MIT Lincoln Laboratory, USA); Patrick Wolfe (Harvard University, USA)

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One Class Support Vector Machines for Audio Abnormal Events Detection

Sébastien Lecomte (Université de Technologie de Troyes & Thales Communications, France); Regis Lengellé (University of Technology of Troyes & Institut Charles Delaunay-LM2S, France); Cédric Richard (Université de Nice Sophia-Antipolis, France); François Capman (Thales Communications, France)

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Reliable Detection of Hidden Information Based on a Non-Linear Local Model

Rémi Cogranne (University of Technology of Troyes & Educational, France); Cathel Zitzmann (UTT, France); Lionel Fillatre (Université de Technologie de Troyes, France); Igor Nikiforov (Université de Technologie de Troyes, UTT/STMR/LM2S &

UMR CNRS 6279, France); Florent Reiraint (UTT, France); Philippe Cornu (ICD - LM2S - UTT UMR STMR CNRS, France)
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Dynamic Relational Topic Model for Social Network Analysis with Noisy Links

Eric Wang (Duke University, USA); Jorge Silva (Duke University, USA); Rebecca Willett (Duke University, USA); Lawrence Carin (Duke University, USA)
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Hypothesis Testing by Using Quantized Observations

Cathel Zitzmann (UTT, France); Rémi Cogranne (University of Technology of Troyes & Educational, France); Florent Reiraint (UTT, France); Igor Nikiforov (Université de Technologie de Troyes, UTT/STMR/LM2S & UMR CNRS 6279, France); Lionel Fillatre (Université de Technologie de Troyes, France); Philippe Cornu (ICD - LM2S - UTT UMR STMR CNRS, France)
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Local Gabor Directional Pattern Histogram Sequence (LGDPHS) for Age and Gender Classification

Atsushi Higashi (University of Ritsumeikan, Japan); Yohei Fukumizu (Ritsumeikan University, Japan)
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Plenary 5

Social Learning in Adaptive Sensor Networks

Vikram Krishnamurthy (University of British Columbia, Canada)

IS5: Signal processing for Static and Dynamic Networks

Matched Filtering for Subgraph Detection in Dynamic Networks

Benjamin A. Miller (MIT Lincoln Laboratory, USA); Michelle S Beard (MIT Lincoln Laboratory, USA); Nadya Bliss (MIT Lincoln Laboratory, USA)
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Attribute Fusion in a Latent Process Model for Time Series of Graphs

Carey Priebe (Johns Hopkins University, USA); Nam Lee (Johns Hopkins University, USA); Youngser Park (Johns Hopkins University, USA); Minh Tang (Johns Hopkins University, USA)
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A Shrinkage Approach to Tracking Dynamic Networks

Kevin S Xu (University of Michigan, USA); Mark Kliger (Medasense Biometrics Ltd., Israel); Alfred Hero iii (University of Michigan, USA)
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Learnability of Latent Position Network Models

David Choi (Harvard University, USA); Patrick Wolfe (Harvard University, USA)
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Graph Relational Features for Speaker Recognition and Mining

Zahi Karam (MIT / MIT LL, USA); William Campbell (MIT Lincoln Laboratory, USA); Najim Dehak (Massachusetts Institute of Technology, USA)
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Applying Classical Detection and Tracking Theory to Networks

James P Ferry (Metron, Inc., USA)
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Subspace-based Frequency Estimation Utilizing Prior Information

Petter Wirfält (KTH Royal Institute of Technology, Sweden); Guillaume Bouleux (Saint Etienne University, France); Magnus Jansson (KTH Royal Institute of Technology, Sweden); Petre Stoica (Uppsala University, Sweden)
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Direction-of-Arrival Estimation of FM Sources Based on Robust Spatial Time-Frequency Distribution Matrices

Waqas Sharif (Darmstadt University of Technology & Signal Processing Group, Germany); Yacine Chakhchoukh (TU Darmstadt, Germany); Abdelhak M Zoubir (Darmstadt University of Technology, Germany)
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Time-frequency Dependent Voice Activity Detection Based on a Simple Threshold Test

Juergen Freudenberger (University of Applied Sciences Constance & Institute for System Dynamics (ISD), Germany); Sebastian Stenzel (University of Applied Sciences Constance & Institute for System Dynamics (ISD), Germany)
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Parameter Estimation of Short-time Multi-component Signals Using Damped-amplitude & Polynomial-frequency Model

Zhongyang Li (Gipsa-lab, France); Nadine Martin (GIPSA-lab, INPG-CNRS, France); Michelle Vieira (Gipsa-lab, INPG-CNRS, France); Philippe Gueguen (ISTerre, Grenoble University/CNRS/LCPC, France)

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Wavelet-Based Medical Infrared Image Noise Reduction Using Local Model for Signal and Noise

Rahele Kafieh (Isfahan University of Medicine, Iran); Hossein Rabbani (Amirkabir University of Technology, Iran)

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Robust Estimation of the Memory Parameter of Gaussian Time Series Using Wavelets

Olaf Kouamo (TelecomParisTech, France); Céline Lévy-Leduc (CNRS LTCI TelecomParisTech, France); Eric Moulines (Ecole Nationale Supérieure des Télécommunications (ENST), France)

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MP Based Detection of Synchronized Motions Across the Instrumental Climate Record

Peter Carl (IAMARIS, Applied Marine and Limnic Studies, Germany)

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Nonnegative Signal Reconstruction From Compressive Samples Via a Difference Map ECME Algorithm

Kun Qiu (Iowa State University, USA); Aleksandar Dogandzic (Iowa State University, USA)

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Online Maximum-Likelihood Estimation for Latent Factor Models

David Rohde (Telecom Paristech, France); Olivier Cappé (LTCI, Telecom Paris Tech, CNRS, France)

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Robust Space-Time Parameters Estimation in Heavy Interference Environments

Nafiseh Shahbazi (Amirkabir University of Technology, Iran); Hamidreza AminDavar (Amirkabir University of Technology (AUT), Iran)

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Performance of an Optimal Receiver in the Presence of Alpha-Stable and Gaussian Noises

Hassan K. Khalil (USTL, Lille1, France); Clavier Laurent (IEMN & Institut TELECOM, TELECOM Lille 1, France); François Septier (Institut TELECOM/ TELECOM Lille1, France); Laurence Marsalle (USTL, Lille1, France); Gwenaelle Castellan (USTL, Lille1, France)

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Li Song (CNRS UMR 8506, Université Paris-Sud, France); Pascal Bondon (LSS CNRS, France)
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Stability Analysis and Fast Damped-Gauss-Newton Algorithm for INDSCAL Tensor Decomposition

Zbynek Koldovsky (Technical University of Liberec, Czech Republic); Petr Tichavsky (Academy of Sciences of the Czech Republic, Czech Republic); Anh Huy Phan (RIKEN, Japan)
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Fast Level Set Estimation From Projection Measurements

Kalyani Krishnamurthy (Duke University, USA); Waheed U. Bajwa (Duke University, USA); Rebecca Willett (Duke University, USA); Robert Calderbank (Duke University, USA)
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Abdourrahmane M Atto (University of Bordeaux, France); Yannick Berthoumieu (IMS Laboratory - University Bordeaux, France)
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Nonlinear Estimation Using Central Difference Information Filter

Guoliang Liu (University of Goettingen, Germany); Florentin Wörgötter (University of Goettingen, Germany); Irene Markelić (University of Goettingen, Germany)
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Clustered Radio Interferometric Calibration

Sanaz Kazemi (University of Groningen, The Netherlands); Sarod Yatawatta (Kapteyn Institute/ASTRON, The Netherlands); Saleem Zaroubi (University of Groningen, The Netherlands)
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Kamal Boudjelaba (University of Orléans, France); Chikouche Djamel (University of M'sila & LIS Laboratory, University of setif, Algeria); Frédéric Ros (University of Orléans, France)
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Aurelia Fraysse (Université Paris Sud, France); Thomas Rodet (Université, France)
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Compressive RF Sensing Using a Physical Source of Entropy

Daniel Rogers (Johns Hopkins University Applied Physics Laboratory, USA); Radmil Elks (Johns Hopkins University Applied Physics Laboratory, USA); Sang (Peter) Chin (Johns Hopkins University Applied Physics Laboratory, USA); Michael Wayne (University of Illinois at Urbana-Champaign, USA)
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Domenico Ciuonzo (Seconda Università di Napoli - Facoltà di Ingegneria, Italy); Francesco A. N. Palmieri (Seconda Università di Napoli, Italy)
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Leonardo T Duarte (University of Campinas, Brazil); Ricardo Suyama (Universidade Federal do ABC, Brazil); Romis Ribeiro Attux (State University of Campinas - Unicamp, Brazil); João Romano (State University of Campinas, Brazil); Christian Jutten (GIPSA-Lab, France)
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S18: Adaptive Systems and Signal Processing II

Filtering of Stochastic Signal Sets: A New Piecewise Interpolation Technique

Anatoli Torokhti (University of South Australia, Australia)
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Performance Analysis of Signed Correlation Algorithm with Recursive Estimation of Signed Data Covariance for Fast Convergent and Robust Adaptive Filters

Shin'ichi Koike (Consultant, Japan)
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Efficient Reconstruction of Block-Sparse Signals

Joel Goodman (Naval Research Laboratory, USA); Keith Forsythe (MIT Lincoln Laboratory, USA); Benjamin A. Miller (MIT Lincoln Laboratory, USA)
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GLRT-Based Cooperative Spectrum Sensing for Cognitive Radio with Rank Information

Xitao Gong (RWTH Aachen University, Germany); Adrian Ispas (RWTH Aachen University, Germany); Gerd H. Ascheid (RWTH Aachen University, Germany)
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Novel Design of Oversampled GDFT Filter Banks for Application to Subband Based Blind Source Separation

Bo Peng (University of Sheffield, United Kingdom); Wei Liu (University of Sheffield, United Kingdom); Danilo Mandic (Imperial College, London, United Kingdom)

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Marcos H Maruo (Federal University of Santa Catarina, Brazil); Jose Carlos Moreira Bermudez (Federal University of Santa Catarina, Brazil); Leonardo Resende (Universidade Federal de Santa Catarina, Brazil)

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Multivariate Dictionary Learning and Shift & 2D Rotation Invariant Sparse Coding

Quentin Barthélemy (Université de Grenoble & CEA, France); Anthony Larue (CEA, France); Aurélien Mayoue (CEA, France); David Mercier (CEA, France); Jerome I. Mars (Grenoble Institute of Technology, France)

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On Nonhomogeneous Activity Estimation in Gamma Spectrometry Using Sparse Signal Representation

Thomas Trigano (Shamoon College of Engineering & Hebrew University of Jerusalem, Israel); Yann Sepulcre (Shamoon College of Engineering, Israel); Michael Roitman (Shamoon College of Engineering, Israel); Uriel Aferiat (Shamoon College of Engineering, Israel)

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Sparse Bayesian Hierarchical Mixture of Experts

Iman Mossavat (Eindhoven University of Technology, The Netherlands); Oliver Amft (TU Eindhoven, The Netherlands)

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High Order Neural Network Based Solution for Approximating the Average Likelihood Ratio

David Mata-Moya (University of Alcalá, Spain); Maria -Pilar Jarabo-Amores (Alcala university, Spain); Jaime Martín de Nicolás-Presa (University of Alcala, Spain)

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Shape Priors for MAP Segmentation of Alloy Micrographs Using Graph Cuts

Landis Huffman (MITRE Corp., USA); Jeff Simmons (AFRL, Wright-Patterson Air Force Base, USA); Marc De Graef (Carnegie Mellon University, USA); Ilya Pollak (Purdue University, USA)

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Damped Gauss-Newton Algorithm for Nonnegative Tucker Decomposition

Anh Huy Phan (RIKEN, Japan); Petr Tichavsky (Academy of Sciences of the Czech Republic, Czech Republic); Andrzej S Cichocki (RIKEN BSI, Laboratory for Advanced Brain Signal Processing, Japan)

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pyMEF - A Framework for Exponential Families in Python

Olivier Schwander (École Polytechnique, France); Frank Nielsen (Ecole Polytechnique, France)

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Performance of Statistical Inference Methods for the Energy Estimation of Multiple Sources

Romain Couillet (Supélec & Ecole Centrale Paris, France); Maxime Guillaud (Vienna University of Technology, Austria)

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Asymptotic Analysis of a Consistent Subspace Estimator for Observations of Increasing Dimension

Xavier Mestre (CTTC, Spain); Pascal Vallet (Université Paris-Est Marne-la-Vallée, France); Philippe Loubaton (Université de Marne La Vallée, France); Walid Hachem (Telecom-paristech, France)

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Boaz Nadler (Weizmann Institute of Science, Israel); Iain Johnstone (Stanford University, USA)

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Pascal Vallet (Université Paris-Est Marne-la-Vallée, France); Walid Hachem (Telecom-paristech, France); Philippe Loubaton (Université de Marne La Vallée, France); Xavier Mestre (CTTC, Spain); Jamal Najim (CNRS, France)

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An Improved MUSIC Algorithm Based on Low Rank Perturbation of Large Random Matrices

Pascal Vallet (Université Paris-Est Marne-la-Vallée, France); Walid Hachem (Telecom-paristech, France); Philippe Loubaton (Université de Marne La Vallée, France); Xavier Mestre (CTTC, Spain); Jamal Najim (CNRS, France)

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Masao Yamagishi (Tokyo Institute of Technology, Japan); Isao Yamada (Tokyo Institute of Technology, Japan)
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Jonathan Bosse (Thales group, France); Anne Ferreol (Thales Communications, France); Pascal Larzabal (ENS-Cachan, PARIS, France)
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Mohammad Rostami (University of Waterloo, Canada); Massoud Babaie-Zadeh (Sharif University of Technology, Iran); Samareh Samadi (GIPSA-LAB, Grenoble INP & CIPCE, University of Tehran, France); Christian Jutten (GIPSA-Lab, France)
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SayedMasoud Hashemi (University of Toronto, Canada); Soosan Beheshti (Ryerson, Canada)
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Fabiano de Sousa Chaves (Nokia Institute of Technology, Brazil); João Romano (State University of Campinas, Brazil); Mohamed Abbas-Turki (ENS-Cachan, France); Hisham Abou-Kandil (ENS-Cachan, France)
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Mahdi Parchami (Amirkabir University of Technology, Iran); Hamidreza AminDavar (Amirkabir University of Technology (AUT), Iran); James A. Ritcey (University of Washington, USA)
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Peter Sherman (Iowa State University, USA)
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Pouyan Parvazi (TU Darmstadt, Germany); Marius Pesavento (Technische Universität Darmstadt, Germany); Alex Gershman (Darmstadt University of Technology, Germany)
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Federico Penna (Politecnico di Torino, Italy); Henk Wymeersch (Chalmers University of Technology, Sweden); Vladimir Savić (Universidad Politecnica de Madrid, Spain)
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Silvia Paris (Université de Nice-Sophia Antipolis, France); David Mary (Université de Nice Sophia-Antipolis, France); Andréa Ferrari (University of Nice, France)
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Emrah Akyol (UCSB, USA); Kumar Viswanatha (UCSB, USA); Kenneth Rose (University of California, Santa Barbara, USA)
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Ángel F. García-Fernández (Universidad Politécnica de Madrid, Spain); Jesús Grajal (Universidad Politécnica de Madrid, Spain)
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Paul Deignan (L-3 Communications, USA)
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Anna Cohen (Tel-Aviv University, Israel); Arie Yeredor (Tel-Aviv University, Israel)
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Emilie Niaf (INSERM U1032 & CREATIS, France); Rémi Flamary (LITIS EA 4108, INSA-Université de Rouen, France); Carole Lartizien (Creatis & University of Lyon, France); Stéphane Canu (INSA/Université de Rouen, France)
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Florian Maire (ONERA, France); Eric Moulines (Ecole Nationale Supérieure des Télécommunications (ENST), France); Randal Douc (Institut Telecom, France)
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Kush Varshney (IBM Thomas J. Watson Research Center, USA)
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Kumar Sricharan (University of Michigan, Ann Arbor, USA); Alfred Hero iii (University of Michigan, USA)
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Stéphan Cléménçon (Institut Télécom Télécom ParisTech CNRS LTCI, France); Marine Depecker (CEA & LIST Institute, France)
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Til Aach (RWTH Aachen University, Germany); Hartmut Führ (RWTH Aachen University, Germany)
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Florin-Marian Birleanu (GIPSA-Lab, Grenoble INP, France); Cornel Ioana (INPG, France); Cedric Gervaise (ENSIETA, Brest, France); Jocelyn Chanussot (Grenoble Institute of Technology, France); Alexandru Serbanescu (Military Technical Academy, Bucharest, Romania); Gheorghe Serban (University of Pitesti, Romania)
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Lorenzo Galleani (Politecnico di Torino, Italy)
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Jan Hendrik Metzen (University of Bremen, Germany); Su Kyoung Kim (German Research Center for Artificial Intelligence GmbH, Bremen, Germany); Timo Duchrow (German Research Center for Artificial Intelligence GmbH, Bremen, Germany); Elsa Andrea Kirchner (German Research Center for Artificial Intelligence GmbH, Bremen, Germany); Frank Kirchner (German Research Center for Artificial Intelligence (DFKI) GmbH, Bremen, Germany)
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Fabrice Caland (Centre de Recherche en Automatique de Nancy, France); Sebastian Miron (CRAN, Nancy Université, CNRS, France); David Brie (CRAN, Nancy Université, CNRS, France); Christian Mustin (LIMOS, Université Henri Poincaré, Nancy I, France)
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Mirek Pawlak (University of Manitoba, Canada)
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Zacharie Irace (University of Toulouse - IRIT/ENSEEIH, France); Marcelo Pereyra (University of Toulouse, France); Nicolas Dobigeon (University of Toulouse, France); Hadj Batatia (University of Toulouse - IRIT/ENSEEIH, France)
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Sophie Achard (GIPSA-lab, CNRS, France); Jean-François Coeurjolly (Grenoble University, France); Romain Marcillaud (GIPSA-lab, Grenoble-INP, France); Jonas Richiardi (EPFL, Switzerland)
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Florent Chatelain (GIPSA-lab, Grenoble-INP, France); Sophie Achard (GIPSA-lab, CNRS, France); Olivier Michel (INPG, France); Cédric Gouy-Pailler (CEA, LIST, France)
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Nicolas Gallego (Universidad de Antioquia, Colombia); David Fernández (Universidad de Antioquia, Colombia)
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Samareh Samadi (GIPSA-LAB, Grenoble INP & CIPCE, University of Tehran, France); Ladan Amini (GIPSA-LAB, Grenoble INP, France); Hamid Soltanian-Zadeh (University of Tehran, Iran); Christian Jutten (GIPSA-Lab, France)
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