Technical Program

Time	1	2	AMEX Auditorium	Caiçaras Club	I011	I012	I013	Patio	Poster Area
Sunday, July 10									
09:30 am-01:00 pm	Tutorial 1: Sparse Sensing for Statistical Inference	Tutorial 2: Polynomial Matrix Decompositions With Applications			Tutorial 3: Atomic Norms and Super-resolution	Tutorial 4: Graph Signal Processing: Fundamentals and Applications to Diffusion Processes			
Monday, July 11									
08:40 am-09:00 am			Welcome: Welcome Ceremony						
09:00 am-10:00 am			Plenary I: Domain-Specific Languages for Convex Optimization						
10:30 am-12:10 pm	MMIMO I: Recent Advances in Massive MIMO I	SOUND I: Distributed and Multichannel Smart Sound Processing			BayMeth: Recent Advances in Bayesian Methods for Signal Processing	MSE: Performance Bounds on the Mean Square Error: What's Up Doc?	BF: Beamforming		
12:10 pm-02:00 pm					Lunch				
02:00 pm-03:00 pm			Plenary 2: Scale Mixture Modeling of Priors for Sparse Signal Recovery						
03:00 pm-04:20 pm									ASP I: Adaptive Signal Processing and Applications I, EST: Estimation Techniques
04:20 pm-06:00 pm	TENSOR I: Tensor Signal Processing I	OPT I: Recent Trends in Optimization I			GRAPH: Signal Processing over Graphs	MIMO & Rel: Recent Results on MIMO and Relaying	DF: Direction Finding		
06:00 pm-09:00 pm								Reception: Welcome Reception	
Tuesday, July 12									
09:00 am-10:00 am			Plenary 3: The Mathematician Ramanujan and Digital Signal Processing						
10:30 am-12:10 pm	SOUND II: Distributed and Multichannel Smart Sound Processing II	MMIMO II: Recent Advances in Massive MIMO II			ALT: Signal Processing for Assisted Living Technologies	RADAR I: Radar Signal Processing: from Transmit Waveforms to Receiver Designs I	SAMP I: Structured Sampling and Covariance-Driven Estimation I		

Time							
12:10 pm-02:00 pm		Lunch					Lunch
02:00 pm-03:00 pm		Plenary 4: One-Bit Quantization in Massive MIMO Systems					
03:00 pm-04:20 pm							ASP II: Adaptive Signal Processing and Applications II, RADAR APP: Radar Applications, SAM APP: Sensor Array and Multichannel Signal Processing Applications
04:20 pm-06:00 pm	TENSOR II: Tensor Signal Processing II	MEAS I: Investigating Wireless Communication through Measurements I		INF GEO: Information Geometry for Signal Processing and Communications	OPT II: Recent Trends in Optimization II	MIMO: MIMO Systems and Applications	
07:00 pm-11:59 pm			Banquet: Banquet				

Wednesday, July 13

Time							
09:00 am-10:00 am		Plenary 5: Multi-sensor applications in aircraft technology: Embraer experience					
10:30 am-12:10 pm	MMIMO III: Recent Advances in Massive MIMO III	SAMP II: Structured Sampling and Covariance-Driven Estimation II		IMAG: Sensor Imaging and Applications	RADAR II: Radar Signal Processing: from Transmit Waveforms to Receiver Designs II	WLP I: Non-Circular Signals and Widely Linear Processing I	
12:10 pm-02:00 pm		Lunch					Lunch
02:00 pm-03:40 pm	CS: Compressive Sensing and Sparsity-Aware Techniques	DET: Detection and Signal Separation		WLP II: Non-Circular Signals and Widely Linear Processing II	MEAS II: Investigating Wireless Communication through Measurements II		
03:40 pm-04:00 pm		Closing: Closing Ceremony					

Tutorial 1: Sparse Sensing for Statistical Inference

Tutorial 2: Polynomial Matrix Decompositions With Applications

Tutorial 3: Atomic Norms and Super-resolution

Tutorial 4: Graph Signal Processing: Fundamentals and Applications to Diffusion Processes

Welcome: Welcome Ceremony

Plenary I: Domain-Specific Languages for Convex Optimization

BayMeth: Recent Advances in Bayesian Methods for Signal Processing

Cooperative Navigation and Coverage Identification with Random Gossip and Sensor Fusion
Andre R. Braga (Instituto Tecnológico de Aeronáutica & Universidade Federal do Ceara, Brazil); Carsten Fritsche (Linköping University, Sweden); Marcelo Bruno (ITA, Brazil); Fredrik Gustafsson (Linköping University, Sweden)

A Novel Algorithm for Adapting the Number of Particles in Particle Filtering
Víctor Elvira (University Carlos III of Madrid, Spain); Joaquin Míguez (Universidad Carlos III de Madrid, Spain); Petar M. Djurić (Stony Brook University, USA)

A Bayesian non parametric time-switching autoregressive model for multipath errors in GPS navigation
Audrey Giremus (Université de Bordeaux, France); Vincent Pereira (Université Bordeaux 1, France)

Modelling Time Series via Automatic Learning of Basis Functions
Felipe Tobar (Universidad de Chile, Chile); Richard Turner (University of Cambridge, United Kingdom)

Adaptive Population Importance Samplers: A General Perspective
Luca Martino (University of Helsinki, Finland); Víctor Elvira (University Carlos III of Madrid, Spain); David Luengo (Universidad Politecnica de Madrid (UPM), Spain); Francisco Louzada (Universidade de São Paulo (USP), Brazil)

BF: Beamforming

An Iterative Approach to Nonconvex QCQP with Applications in Signal Processing
Ahmad Gharanjik (KTH/ University of Luxembourg & SnT Center, Luxembourg); Bhavani Shankar Mysore R (Interdisciplinary Centre for Security, Reliability and Trust & University of Luxembourg, Luxembourg); Mojtaba Soltanalian (University of Illinois at Chicago, USA); Björn Ottersten (University of Luxembourg, Luxembourg)

A Robust Beamformer with Main Beam Control
Bin Liao and Chongtao Guo (Shenzhen University, P.R. China); Lei Huang (Beijing Institute of Technology, P.R. China); Qiang Li (Shenzhen University, P.R. China); Hing Cheung So (City University of Hong Kong, Hong Kong)

On the Performance of a CFAR Matched Filter in the Presence of Signal Mismatch
Jun Liu (National Laboratory of Radar Signal Processing & Xidian University, P.R. China); Liu Hongwei (Xidian University, P.R. China)

Interpolation-and-Decimation-based Dimensionality Reduction Applied to Space-Time Processing
Aline Oliveira (Instituto de Pesquisas da Marinha, Brazil); Raimundo Sampaio-Neto (Cetuc-Puc-Rio, Brazil); Jose Mauro Fortes (PUC-Rio, Brazil); Fabian David Backx (Instituto de Pesquisas da Marinha, Brazil)

Reduced-rank Filtering on L1-norm Subspaces
Panos P. Markopoulos (Rochester Institute of Technology, USA)

MMIMO I: Recent Advances in Massive MIMO I

Channel Estimation and Uplink Achievable Rates in One-Bit Massive MIMO Systems
Yongzhi Li (Beijing Jiaotong Unversity, P.R. China); Cheng Tao (Beijing Jiaotong University, P.R. China); Liu Liu (Bejing Jiaotong University, P.R. China); Gonzalo Seco-Granados (Universitat Autonoma de Barcelona, Spain); Lee Swindlehurst (University of California at Irvine, USA)

Long-term Antenna Selection for Large-scale MIMO Links
Hans-Georg Engler and Eduard Jorswieck (TU Dresden, Germany)

Hardware Design and Optimal ADC Resolution for Uplink Massive MIMO Systems
Daniel Verenzuela and Emil Björnson (Linköping University, Sweden); Michail Matthaiou (Queen's University Belfast, United Kingdom)

Minimum BER Precoding in 1-Bit Massive MIMO Systems
Hela Jedda (Technische Universität München, Germany); Amine Mezghani (University of California, Irvine); Josef A. Nossek (TU Munich, Germany)

Optimal Pilot Length for Uplink Massive MIMO Systems with Low-Resolution ADC
Li Fan and Dan Qiao (Southeast University, P.R. China); Chao-Kai Wen (National Sun Yat-sen University, Taiwan); Michail Matthaiou (Queen's University Belfast, United Kingdom); Shi Jin (Southeast University, P.R. China)

MSE: Performance Bounds on the Mean Square Error: What's Up Doc?

New Observations on Efficiency of Variance Estimation of White Gaussian Signal with Unknown Mean
Shahar Bar and Joseph Tabrikian (Ben-Gurion University of the Negev, Israel)

Mean-Cyclic-Error Lower Bounds via Integral Transform of Likelihood-Ratio Function
Eyal Nitzan (Ben-Gurion University of the Negev, Israel); Tirza Routtenberg (Ben Gurion University of the Negev, Israel); Joseph Tabrikian (Ben-Gurion University of the Negev, Israel)

Bayesian Lower Bounds for Dense or Sparse (Outlier) Noise in the RMT Framework
Virginie Ollier (ENS Cachan - Université Paris-Saclay & SATIE - L2S, France); Rémy Boyer (Université Paris-Sud (UPS), CNRS, CentraleSupelec, France); Mohammed Nabil El Korso (Paris 10 University & LEME-EA 4416, France); Pascal Larzabal (ENS-Cachan, PARIS, France)

Lower bounds for non standard deterministic estimation
Jérôme Galy (LIRMM Montpellier, France); Eric Chaumette and François Vincent (ISAE, France); Alexandre Renaux (Universite Paris 11, France); Pascal Larzabal (ENS-Cachan, PARIS, France)

Weiss-Weinstein Bounds for Various Priors
Florian Xaver (TU Wien, Austria); Christoph F Mecklenbräuker (Vienna University of Technology, Austria); Peter Gerstoft (University of California, San Diego, USA); Gerald Matz (Vienna University of Technology, Austria)

SOUND I: Distributed and Multichannel Smart Sound Processing

Multi-microphone Speech Enhancement Informed by Auditory Scene Analysis
Axel Plinge (TU Dortmund University, Germany); Sharon Gannot (Bar-Ilan University, Israel)

Gunshot detection and localization based on Non-negative Matrix Factorization and SRP-Phat
Jennifer Lopez-Morillas, Francisco Canadas-Quesada, Pedro Vera-Candeas, Nicolas Ruiz Reyes, Raul Mata-Campos and Violeta Zafra (University of Jaen, Spain)

Affine-projection-like algorithm for active noise control over distributed networks
Christian Antoñanzas (Universidad Politecnica de Valencia & Audio and Communications Signal Processing Group at iTEAM, Spain); Miguel Ferrer (Universidad Politecnica de Valencia, Spain); María de Diego (Universitat Politècnica De València, Spain); Alberto Gonzalez (Universidad Politecnica de Valencia, Spain)

Lunch

Plenary 2: Scale Mixture Modeling of Priors for Sparse Signal Recovery

ASP I: Adaptive Signal Processing and Applications I

Sliding-window homotopy adaptive filter for estimation of sparse UWA channels
Jianghui Li and Yury Zakharov (University of York, United Kingdom)

Low-complexity correlated time-averaged variable forgetting factor mechanism for diffusion RLS algorithm in sensor networks
Ling Zhang, Yunlong Cai and Chunguang Li (Zhejiang University, P.R. China); Rodrigo C. de Lamare (Pontifical Catholic University of Rio de Janeiro & University of York, Brazil); Minjian Zhao (Zhejiang University, P.R. China)

Mixed source prior for the fast independent vector analysis algorithm
Waqas Rafique, Syed Mohsen Naqvi and Jonathon Chambers (Newcastle University, United Kingdom)

On the Robustness of the Set-Membership NLMS Algorithm
Hamed Yazdanpanah (Federal University of Rio de Janeiro, Brazil); Markus V.S. Lima (Universidade Federal do Rio de Janeiro - UFRJ, Brazil); Paulo Diniz (UniversidadeFederal do Rio de Janeiro, Brazil)

Incremental multiple error filtered-X LMS for node-specific active noise control over wireless acoustic sensor networks
Jorge Plata-Chaves (Katholieke Universiteit Leuven (KU Leuven), Belgium); Alexander Bertrand (KU Leuven & iMinds Medical IT, Belgium); Marc Moonen (KU Leuven, Belgium)

Serial-Inspired Diffusion Based on Message Passing for Distributed Estimation in Adaptive Networks
Cornelius Healy (Newcastle University, United Kingdom); Rodrigo C. de Lamare (Pontifical Catholic University of Rio de Janeiro & University of York, Brazil)

Selective Detection with Adaptive Channel Estimation for MIMO OFDM
Mohammed Kashoob (The University of York, United Kingdom); Yury Zakharov (University of York, United Kingdom)

Efficient Linearized Bregman Iteration for Sparse Adaptive Filters and Kaczmarz Solvers
Michael Lunglmayr and Mario Huemer (Johannes Kepler University Linz, Austria)

EST: Estimation Techniques

Location Estimation In Multipath Environments With Unsynchronized Base Stations
Oded Bialer (University of Tel-Aviv, Israel); Dan Raphaeli and Anthony J. Weiss (Tel Aviv University, Israel)

Power and Direction of Transmission Estimation for a Directive Source: Identifiability Analysis and Estimation Algorithm
Sina Maleki (University of Luxembourg, Luxembourg); Philippe Ciblat (Telecom ParisTech, France); Bhavani Shankar Mysore R (Interdisciplinary Centre for Security, Reliability and Trust & University of Luxembourg, Luxembourg); Symeon Chatzinotas (University of Luxembourg, Luxembourg); Björn Ottersten (University of Luxembourg, Luxembourg)

Analysis of the Bayesian Cramér-Rao in Astrometry
Alex Mauricio Echeverria, Jorge Silva and Marcos Orchard (University of Chile, Chile); Rene A Mendez (Universidad de Chile & Millenium Institute of Asrtrophysics, Chile)

Mobile Nonlinear Sensor Calibration Using Informed Semi-Nonnegative Matrix Factorization with a Vandermonde Factor
Clément Dorffer, Matthieu Puigt, Gilles Delmaire and Gilles Roussel (Université du Littoral Côte d'Opale, France)

A Monte Carlo scheme for node-specific inference over wireless sensor networks
Luca Martino (University of Helsinki, Finland); Jorge Plata (Unversity KU Leuven, Belgium); Francisco Louzada (Universidade de São Paulo (USP), Brazil)

DF: Direction Finding

Wideband Sparse Bayesian Learning for DOA Estimation from Multiple Snapshots
Peter Gerstoft (University of California, San Diego, USA); Christoph F Mecklenbräuker (Vienna University of Technology, Austria)

Joint frequency and direction of arrival estimation with space-time array
Achanna Anil Kumar (TCS Innovation Labs, India); Sirajudeen Gulam Razul (Nanyang Technological University,

Singapore); Girish Chandra (Tata Consultancy Services, India); Chong Meng Samson See (TL@NTU, Singapore); P. Balamuralidhar (Tata Consultancy Services, India)

Single Snapshot DOA Estimation in the Presence of Mutual Coupling for Arbitrary Array structures
Ahmet M Elbir and T. Engin Tuncer (Middle East Technical University, Turkey)

Performance Improvement for Wideband DOA estimation with White Noise Reduction Based on Uniform Linear Arrays
Mohammad Reza Anbiyaei and Wei Liu (University of Sheffield, United Kingdom); Desmond McLernon (The University of Leeds, United Kingdom)

Array of Sensors: A Spatiotemporal-State-Space Model for Target Trajectory Tracking
Athanassios Manikas and Vidhya Sridhar (Imperial College London, United Kingdom); Yousif I. Kamil (Schlumberger London Technology Centre, United Kingdom)

GRAPH: Signal Processing over Graphs

Tell me where you are and I tell you where you are going: Estimation of dynamic mobility graphs
Marcelo Fiori (Universidad de la República, Uruguay); Mariano Tepper (Duke University, USA); Pablo Muse (Facultad de Ingeniería, UDELAR, Uruguay); Guillermo Sapiro (Duke University, USA)

Subsampling for Graph Power Spectrum Estimation
Sundeep Prabhakar Chepuri and Geert Leus (Delft University of Technology, The Netherlands)

Plant-wide Fault Detection Using Graph Signal Processing
Diego Silva (Universidade Federal do Rio Grande do Norte, Brazil); Antonio Ortega (University of Southern California, USA)

Stationary Graph Processes: Nonparametric Spectral Estimation
Santiago Segarra (University of Pennsylvania, USA); Antonio G. Marques (Universidad Rey Juan Carlos, Spain); Geert Leus (Delft University of Technology, The Netherlands); Alejandro Ribeiro (University of Pennsylvania, USA)

MIMO & Rel: Recent Results on MIMO and Relaying

Stream Selection Methods for Non-regenerative MIMO Relay Networks
Cong Sun (School of Sciences, Beijing University of Posts and Telecommunications, P.R. China); Eduard Jorswieck (TU Dresden, Germany)

Relaying with Finite Blocklength: Challenge vs. Opportunity
Yulin Hu and Anke Schmeink (RWTH Aachen University, Germany); James Gross (KTH Royal Institute of Technology, Sweden)

Joint MSINR and Relay Selection Algorithms for Distributed Beamforming
Hang Ruan (University of York, United Kingdom); Rodrigo C. de Lamare (Pontifical Catholic University of Rio de Janeiro & University of York, Brazil)

Optimal Transmission with Per-antenna Power Constraints for Multiantenna Bidirectional Broadcast Channels
Phuong L. Cao (KTH Royal Institute of Technology, Sweden); Tobias J. Oechtering (KTH Royal Institute of Technology & School of Electrical Engineering, EE, Sweden); Mikael Skoglund (KTH Royal Institute of Technology, Sweden)

On Quantization and Network Coding in Wireless Relay Networks
Alister G. Burr and Qinhui Huang (University of York, United Kingdom)

OPT I: Recent Trends in Optimization I

Algorithms for discrete nonlinear optimization in FICO Xpress
Pietro Belotti (Fair Isaac Europe Ltd, United Kingdom); Timo Berthold (Fair Isaac Germany GmbH, Germany); Kelligton Neves (Fair Isaac do Brasil Ltda, Brazil)

Distributed Fractional Programming in Matched Multiple Access Channels
Alessio Zappone and Eduard Jorswieck (TU Dresden, Germany); Amir Leshem (Bar-Ilan University, Israel)

Robust MISO downlink: An efficient algorithm for improved beamforming directions
Mostafa Medra and Timothy N. Davidson (McMaster University, Canada)

TENSOR I: Tensor Signal Processing I

Performance bounds for coupled models
Chengfang Ren and Rodrigo Cabral Farias (CNRS, University Grenoble Alpes, France); Pierre Olivier Amblard (GIPSA-LAB, CNRS, Grenoble, France); Pierre Comon (CNRS, University Grenoble Alpes, France)

Analytical Performance Evaluation of Multi-Dimensional Tensor-ESPRIT-Based Algorithms for Strictly Non-Circular Sources
Jens Steinwandt, Florian Roemer and Martin Haardt (Ilmenau University of Technology, Germany)

Rectified ALS Algorithm for Multidimensional Harmonic Retrieval
Rémy Boyer (Université Paris-Sud (UPS), CNRS, CentraleSupelec, France); Pierre Comon (CNRS, University Grenoble Alpes, France)

A coupled Joint Eigenvalue Decomposition Algorithm for Canonical Polyadic Decomposition of Tensors
Rémi André and Xavier Luciani (Université de Toulon, France); Eric Moreau (University of Toulon & LSIS UMR CNRS 7296, France)

Enhanced Block Term Decomposition for Atrial Activity Extraction in Atrial Fibrillation ECG
Lucas Ribeiro (Federal University of Ceará, Brazil); André de Almeida (Federal University of Ceará & Wireless Telecom Research Group - GTEL, Brazil); Vicente Zarzoso (University of Nice Sophia Antipolis, France)

Reception: Welcome Reception

Plenary 3: The Mathematician Ramanujan and Digital Signal Processing

ALT: Signal Processing for Assisted Living Technologies

Prediction of stride interval time series
Etienne Zahnd, Jennifer Brach and Subashan Perera (University of Pittsburgh, USA); Ervin Sejdić (Univerisity of Pittsburgh, USA)

Effect of Data Representations on Deep Learning in Fall Detection
Branka Jokanovic, Moeness G. Amin and Fauzia Ahmad (Villanova University, USA)

Multi-Sensor Range-Doppler Radar Monitoring for Fall Detection
Baris Erol and Moeness G. Amin (Villanova University, USA)

Ultra-wideband Radar and Vision Based Human Motion Classification for Assisted Living
Zhichong Zhou and Jun Zhang (University of Denver, USA); Yimin D. Zhang (Temple University, USA)

MMIMO II: Recent Advances in Massive MIMO II

Improving Spectral Efficiency in Large-Array FDD Systems with Hybrid Beamforming
Daniel Araújo (Federal University of Ceará, Brazil); Eleftherios Karipidis (Ericsson Research, Sweden); André de Almeida (Federal University of Ceará & Wireless Telecom Research Group - GTEL, Brazil); João Cesar Mota (Wireless Telecom Research Group - Federal University of Ceará, Brazil)

A Channel Matching Based Hybrid Analog-Digital Strategy for Massive Multi-User MIMO Downlink Systems
Jianshu Zhang and Martin Haardt (Ilmenau University of Technology, Germany); Ilya Soloveychik (HUJI, Israel); Ami Wiesel (Hebrew University in Jerusalem, Israel)

Simplified Matrix Polynomial-Aided Block Diagonalization Precoding for Massive MIMO Systems
Wence Zhang (Pontifical Catholic University of Rio de Janeiro, Brazil); Rodrigo C. de Lamare (Pontifical Catholic University of Rio de Janeiro & University of York, Brazil); Cunhua Pan (University of Kent, United Kingdom); Ming Chen (Southeast University, P.R. China); Jian-xin Dai (School of Science, Nanjing University of Posts and Telecommunications, China); Bingyang Wu (Southeast University, P.R. China)

Large-Scale Iterative Decision Feedback with Constellation Constraints Receiver for Cloud Radio Access Networks
César A Medina (PUC-Rio & Pontificia Universidade Católica do Rio de Janeiro, Brazil); Rodrigo C. de Lamare (Pontifical Catholic University of Rio de Janeiro & University of York, Brazil)

D2D CSI Feedback for D2D Aided Massive MIMO Communications
Laura Cottatellucci (EURECOM, France)

RADAR I: Radar Signal Processing: from Transmit Waveforms to Receiver Designs I

Performance Analysis of a Persymmetric Adaptive Matched Filter
Jun Liu (Xidian University, P.R. China); Hongbin Li (Stevens Institute of Technology, USA); Braham Himed (AFRL, USA)

Coordinated Waveform Design and Receiver Filter Optimization for Cognitive Radar Networks
Gaia Rossetti and Sangarapillai Lambotharan (Loughborough University, United Kingdom)

One-bit Compressive Sampling with Time-Varying Thresholds for Sparse Parameter Estimation
Christopher D Gianelli, Luzhou Xu and Jian Li (University of Florida, USA); Petre Stoica (Uppsala University, Sweden)

Simplified Performance Comparison Metric Based on Asymptotic Threshold Ranking for MIMO Radar Estimation
Qian He (University of Electronic Science and Technology of China, P.R. China); Xiongwei Wu (UESTC, P.R. China); Rick Blum (Lehigh University, USA)

Low-Complexity Robust Radar-Embedded Sidelobe Level Modulation using Linear Constrained Optimization Design
Aline Oliveira (Instituto de Pesquisas da Marinha, Brazil); Raimundo Sampaio-Neto (Cetuc-Puc-Rio, Brazil); Jose Mauro Fortes (PUC-Rio, Brazil)

SAMP I: Structured Sampling and Covariance-Driven Estimation I

Two-dimensional DOA Estimation Using Parallel Coprime Subarrays
Si Qin (Villanova University, USA); Yimin D. Zhang (Temple University, USA); Moeness G. Amin (Villanova University, USA)

Spatial Spectral Estimation Using a Co-prime Sensor Array With the Min Processor
Yang Liu and John Buck (University of Massachusetts Dartmouth, USA)

Deterministic Fourier-Based Dictionary Design for Sparse Reconstruction
Dyonisius Dony Ariananda (Universitas Gadjah Mada, Indonesia); Hadi Jamali-Rad (Shell Global Solutions, The Netherlands); Zijian Tang (Shell Global Solutions International B. V., The Netherlands); Geert Leus (Delft University of Technology, The Netherlands); Xander Campman (Shell Global Solutions International B. V., The

Netherlands)

New Cramér-Rao Bound Expressions for Coprime and Other Sparse Arrays
Chun-Lin Liu (California Institute of Technology, USA); P. p. Vaidyanathan (Cal Tech., USA)

Comparison of Comb and Pulse Train Signal Designs for Active Sonar
Jonathan Soli and Granger Hickman (Duke University, USA)

SOUND II: Distributed and Multichannel Smart Sound Processing II

Multi-task wireless acoustic sensor network for node-specific speech enhancement and DOA estimation
Amin Hassani (KU Leuven, Belgium); Jorge Plata-Chaves (Katholieke Universiteit Leuven (KU Leuven), Belgium); Alexander Bertrand (KU Leuven & iMinds Medical IT, Belgium); Marc Moonen (KU Leuven, Belgium)

Improving learning efficiency in multi-objective simulated annealing programming for sound environment classification
Alberto Cocaña-Fernández, Jose Ranilla and Luciano Sanchez (University of Oviedo, Spain); Roberto Gil-Pita and Héctor Adrián Sánchez-Hevia (University of Alcalá, Spain)

Distributed and collaborative sound environment information extraction in binaural hearing aids
Roberto Gil-Pita, Héctor Adrián Sánchez-Hevia and Cosme Llerena (University of Alcalá, Spain); Inmaculada Mohino-Herranz (University of Alcala, Spain); Manuel Utrilla and Manuel Rosa (University of Alcalá, Spain)

Lunch

Plenary 4: One-Bit Quantization in Massive MIMO Systems

ASP II: Adaptive Signal Processing and Applications II

Adaptation with Reduced-size Message Pass to Precoder Selection in Multi-cell MIMO Systems
Igor M. Guerreiro (Federal University of Ceara - UFC & Wireless Telecommunications Research Group - GTEL, Brazil); Dennis Hui (Ericsson Research, USA); Charles Casimiro Cavalcante (Federal University of Ceará, Brazil)

Adaptive sparse linear prediction: A promising tool for blind deconvolution
Kenji Nose Filho and João Romano (State University of Campinas, Brazil)

Decentralized Cooperative Detection Based on Averaging Consensus
Wassim Suleiman (TU Darmstadt & Institut für Nachrichtentechnik, Germany); Marius Pesavento (Technische Universität Darmstadt & Merckstr. 25, Germany); Abdelhak M Zoubir (Darmstadt University of Technology, Germany)

Privacy Preserving Decentralized Power System State Estimation with Phasor Measurement Units
Neelabh Kashyap and Stefan Werner (Aalto University, Finland); Yih-Fang Huang (University of Notre Dame, USA); Reza Arablouei (CSIRO, Australia)

An ℓ_1-norm Linearly Constrained Affine Projection Algorithm
José Andrade, Jr. (Federal University of Rio de Janeiro (UFRJ) & Brazilian Navy, Brazil); Marcello Campos (Federal University of Rio de Janeiro, Brazil); José Antonio Apolinário Jr. (IME, Brazil)

Position Estimation from Range Measurements Using Adaptive Networks
Guilherme Vicinansa (Universidade de São Paulo, Brazil); Yannick Bergamo and Cassio Lopes (University of São Paulo, Brazil)

Empirical Signal Decomposition for Acoustic Noise Perception
Leonardo Zão (Instituto Militar de Engenharia, Brazil); Rosângela Fernandes Coelho (Instituto Militar de Engenharia (IME) & Laboratory of Acoustic Signal Processing (LASP), Brazil)

Low-complexity Affine Projection Subband Algorithm for Robust Adaptive Filtering in Impulsive Noise
Mariane R Petraglia and Diego B. Haddad (Federal University of Rio de Janeiro, Brazil); Elias Marques (UFRJ & INPI, Brazil)

RADAR APP: Radar Applications

On Spatial Aspect Decorrelation in SAR and ISAR
Stefan Brisken (Fraunhofer FHR, Germany); Hai-Tan Tran (DSTO, Australia)

Using Wavelet Packets to Analyze FM LPI Radar Signals
Sergio Neves, Aline Oliveira, Rafael Serra, Luiz Eugênio Segadilha and Fátima Monteiro (Instituto de Pesquisas da Marinha, Brazil); Jean-marc Lopez (DGA-Technique Navale)

Sparse Antenna Array Design for Directional Modulation
Bo Zhang and Wei Liu (University of Sheffield, United Kingdom); Xiaoming Gou (Beijing Institute of Technology, P.R. China)

Compressive Sensing in Time Reversal Radars: Incoherency Analysis
Mohammad Sajjadieh (York University, Canada); Amir Asif (Concordia University, Canada)

SAM APP: Sensor Array and Multichannel Signal Processing Applications

Array Interpolation Based on Multivariate Adaptive Regression Splines
Marco Marinho (University of Brasilia, Brazil); Joao Paulo Carvalho Lustosa da Costa (University of Brasília & Ilmenau University of Technology and Fraunhofer Institute for Integrated Circuits IIS, Brazil); Felix Antreich (German Aerospace Center (DLR), Germany); André de Almeida (Federal University of Ceará & Wireless Telecom

Research Group - GTEL, Brazil); Giovanni Del Galdo (Fraunhofer Institute for Integrated Circuits IIS & Technische Universität Ilmenau, Germany); Edison Pignaton de Freitas (Federal University of Rio Grande do Sul, Brazil); Alexey Vinel (Halmstad University, Sweden)

Low-Complexity DoA Estimation Based on Hermitian EVDs
Tadeu Ferreira (Fluminense Federal University, Brazil); Sergio Lima Netto (UFRJ, Brazil); Marcello Campos (Federal University of Rio de Janeiro, Brazil); Paulo Diniz (UniversidadeFederal do Rio de Janeiro, Brazil)

Order-Controlled Multiple Shift SBR2 Algorithm for Para-Hermitian Polynomial Matrices
Zeliang Wang and John G McWhirter (Cardiff University, United Kingdom); Jamie Corr and Stephan Weiss (University of Strathclyde, United Kingdom)

INF GEO: Information Geometry for Signal Processing and Communications

Median Burg robust spectral estimation for inhomogeneous and stationary segments
Alexis Decurninge (Huawei Technologies, France); Frederic Barbaresco (Thales Air Systems, France)

Parameters estimate of Riemannian Gaussian distribution in the manifold of covariance matrices
Paolo Zanini (Gipsa-Lab, University of Grenoble Alpes, France); Marco Congedo (GIPSA-lab, France); Salem Said (Université de Bordeaux, Laboratoire IMS, Signal and Image Group, France); Yannick Berthoumieu (University of Bordeaux, France); Christian Jutten (GIPSA-Lab, France)

Riemannian Coding for Covariance Interpolation in Massive MIMO Frequency Division Duplex Systems
Alexis Decurninge (Huawei Technologies, France); Maxime Guillaud (Huawei Technologies & Mathematical and Algorithmic Sciences Lab, France); Dirk Slock (EURECOM, France)

Clustering Using The Fisher-Rao Distance
Joao Strapasson (FCA- University of Campinas, Brazil); Julianna Pinele (University of Campinas, Brazil); Sueli I. R. Costa (State University of Campinas-UNICAMP (Brazil), Brazil)

Modified Maximum Likelihood Estimator
David de Souza, Charles Casimiro Cavalcante and Rui F Vigelis (Federal University of Ceará, Brazil)

MEAS I: Investigating Wireless Communication through Measurements I

Experimental Assessment of 5G-Candidate Modulation Schemes at Extreme Speeds
José Rodríguez-Piñeiro (University of A Coruña, Spain); Martin Lerch (TU Wien, Austria); Tomás Domínguez-Bolaño and José A. García-Naya (University of A Coruña, Spain); Sebastian Caban (Vienna University of Technology, Austria); Luis Castedo (University of A Coruña, Spain)

Experimental Evaluation of FBMC-OQAM Channel Estimation Based on Multiple Auxiliary Symbols
Ronald Nissel (TU Wien, Austria); Sebastian Caban (Vienna University of Technology, Austria); Markus Rupp (TU Wien, Austria)

Experimental Signal-Quality Characterization of a High-Capacity mmWave Link for Backhaul Applications
Nicholas Preyss and Andreas Burg (EPFL, Switzerland)

Resolving the Angular Profile of 60 GHz Wireless Channels by Delay-Doppler Measurements
Erich Zöchmann (TU Wien, Austria); Sebastian Caban (Vienna University of Technology, Austria); Martin Lerch and Markus Rupp (TU Wien, Austria)

Frequency-Domain Analysis of Linear Periodically Time-Varying FBMC Systems
Tobias Laas (Technische Universität München, Germany); Leonardo Gomes Baltar (Intel Corporation, Germany); Josef A. Nossek (TU Munich, Germany)

MIMO: MIMO Systems and Applications

Comparing Antenna Selection and Hybrid Precoding for Millimeter Wave Wireless Communications
Erich Zöchmann, Stefan Schwarz and Markus Rupp (TU Wien, Austria)

Adaptive Limited Feedback Scheme for Stream Selection Based Interference Alignment in Heterogeneous Networks
Esra Aycan (İzmir Institute of Technology, Turkey); Berna Özbek (Izmir Institute of Technology, Turkey); Didier Le Ruyet (CNAM, France)

Interference Mitigation based on Precoded SRS
Lászlon Costa (Federal University of Ceará & Wireless Telecom Research Group (GTEL), Brazil); Darlan C. Moreira (Federal University of Ceará, Brazil); Sara Sandberg and Arne Simonsson (Ericsson Research, Sweden); Yuri C. B. Silva (Federal University of Ceará & Wireless Telecom Research Group (GTEL), Brazil)

Beamforming Designs for Multiuser Transmissions in FDD Massive MIMO Systems Using Partial CSIT
Ming-Fu Tang, Szu-Yu Wang and Borching Su (National Taiwan University, Taiwan)

Avoiding divergence in the constant modulus algorithm for blind equalization of MIMO systems
Flávio Renê Miranda Pavan (University of Sao Paulo, Brazil); Magno T. M. Silva (University of São Paulo, Brazil); Maria D. Miranda (University of Sao Paulo, Brazil)

OPT II: Recent Trends in Optimization II

l1 Adaptive Trend Filter via Fast Coordinate Descent
Mario Souto (PUC-Rio, Brazil)

Low-Rank Robust Adaptive Beamforming Techniques using Joint Iterative Optimization

Hang Ruan (University of York, United Kingdom); Rodrigo C. de Lamare (Pontifical Catholic University of Rio de Janeiro & University of York, Brazil)

An Optimal Polarization Tracking Algorithm for Lithium-Niobate-based Polarization Controllers
Joaquim Dias Garcia and Gustavo Amaral (Pontifical Catholic University of Rio de Janeiro, Brazil)

TENSOR II: Tensor Signal Processing II

Shift Invariance, Incomplete Arrays and Coupled CPD: a Case Study
Mikael Sorensen (Leuven, Belgium); Lieven De Lathauwer (K.U.Leuven, Belgium)

Modeling time warping in tensor decomposition
Bertrand Rivet (GIPSA-Lab, Grenoble INP, France); Jeremy Cohen (CNRS Gipsa-lab, France)

Joint Analysis of Multiple Datasets by Cross-Cumulant Tensor (Block) Diagonalization
Dana Lahat (Gipsa-Lab, France); Christian Jutten (GIPSA-Lab, France)

On JEVD of Semi-Definite Positive Matrices and CPD of Nonnegative Tensors
Rémi André (Université de Toulon, France); Laurent Albera (Université de Rennes1 & Inserm, France); Xavier Luciani (Université de Toulon, France); Eric Moreau (University of Toulon & LSIS UMR CNRS 7296, France)

Banquet: Banquet

Plenary 5: Multi-sensor applications in aircraft technology: Embraer experience

IMAG: Sensor Imaging and Applications

Switched-Randomized Robust PCA for Foreground and Background Separation in Video Surveillance
Maboud Farzaneh Kaloorazi (Pontifical Catholic University of Rio de Janeiro, Brazil); Rodrigo C. de Lamare (Pontifical Catholic University of Rio de Janeiro & University of York, Brazil)

Super-Resolution in SAR Imaging: Analysis With the Atomic Norm
Zhihui Zhu and Gongguo Tang (Colorado School of Mines, USA); Pawan Setlur (Wright State University & Wright State Research Institute, USA); Sandeep Gogineni (Wright State University, USA); Michael Wakin (Colorado School of Mines, USA); Muralidhar Rangaswamy (AFRL, USA)

Sparsity-Driven Radar Auto-Focus Imaging Under Over-Wavelength Position Perturbations
Dehong Liu (Mitsubishi Electric Research Laboratories, USA)

Acoustic Image Estimation using Fast Transforms
Vitor H Nascimento (USP, Brazil); Mateus Silva (University of Sao Paulo, Brazil); Bruno S Masiero (University of Campinas, Brazil)

Channelized Facies Recovery based on Weighted Compressed Sensing
Hernan Calderon and Felipe Santibanez (Universidad de Chile, Chile); Jorge Silva (University of Chile, Chile); Julian Ortiz and Alvaro Egana (Universidad de Chile, Chile)

MMIMO III: Recent Advances in Massive MIMO III

Wireless Energy Harvesting Massive MIMO Relays
Gayan Amarasuriya (Southern Illinois University, USA); Shang Liu (Beijing University of Posts and Telecommunications, P.R. China); H. Vincent Poor (Princeton University, USA)

Full-Duplex Massive MIMO with Physical Layer Network Coding for the Two-Way Relay Channel
Francisco A. Monteiro (Instituto de Telecomunicações & ISCTE - University Institute of Lisbon, Portugal); João S Lemos (Instituto de Telecomunicações/Instituto Superior Técnico, Portugal)

Parallel Low-Complexity M-PSK Detector for Large-Scale MIMO Systems
Ganapati Hegde (Technische Universität Darmstadt Germany); Yang Yang (Intel Deutschland GmbH, Germany); Christian Steffens (Technische Universität Darmstadt, Germany); Marius Pesavento (Technische Universität Darmstadt & Merckstr. 25, Germany)

Downlink Path-Based Precoding in FDD Massive MIMO Systems Without CSI Feedback
Ming-Fu Tang, Chih-Chi Chen and Borching Su (National Taiwan University, Taiwan)

On One-Bit Quantized ZF Precoding for the Multiuser Massive MIMO Downlink
Amodh Kant Saxena (University of California, Irvine, USA); Inbar Fijalkow (ETIS / ENSEA - University Cergy-Pontoise - CNRS, France); Lee Swindlehurst (University of California at Irvine, USA)

RADAR II: Radar Signal Processing: from Transmit Waveforms to Receiver Designs II

Joint Optimization of Transmit Beam-Width and Time-On-Target in Sea-Search Radars
Emanuele Grossi (University of Cassino and Southern Lazio & Consorzio Nazionale Inter-universitario per le Telecomunicazioni (CNIT), Italy); Marco Lops (University of Cassino & CNIT - Consorzio Universitario Nazionale per le Telecomunicazioni, Italy); Luca Venturino (Universita' degli Studi di Cassino e del Lazio Merdionale & Consorzio Nazionale Interuniversitario per le Telecomunicazioni (CNIT), Italy)

Optimizing Polarimetric Radar Waveform and Filter Bank for Extended Targets in Clutter
Xu Cheng (National University of Defense Technology, P.R. China); Augusto Aubry (Universita degli studi di Napoli, Italy); Domenico Ciuonzo (University of Naples Federico II, Italy); Antonio De Maio (University of Naples "Federico II", Italy); Yongzhen Li and Xuesong Wang (National University of Defense Technology, P.R. China)

Radar System Design for Dual-Functionality Platforms

Aboulnasr Hassanien and Moeness G. Amin (Villanova University, USA)

Ambiguity Function for Sequential Antenna Selection

Shahar Villeval (General Motors & General Motors, Israel); Joseph Tabrikian (Ben-Gurion University of the Negev, Israel); Igal Bilik (General Motors, Israel)

SAMP II: Structured Sampling and Covariance-Driven Estimation II

Synthetic Aperture Imaging with Thinned Linear Sensor Arrays for Medical Ultrasound

Juan Ramirez, Jr., Nick Bottenus, Gregg Trahey and Jeffrey Krolik (Duke University, USA)

A Method to Solve the Permutation Problem in Blind Source Deconvolution for Audio Signals Based on Phase Linearity Estimation

Hidekazu Fukai (Gifu University, Japan)

A Subspace Method for Array Covariance Matrix Estimation

Mostafa Rahmani and George Atia (University of Central Florida, USA)

Finite Sample Analysis of Covariance Compression Using Structured Samplers

Heng Qiao and Piya Pal (University of Maryland, College Park, USA)

High Order Super Nested Arrays

Chun-Lin Liu (California Institute of Technology, USA); P. p. Vaidyanathan (Cal Tech., USA)

WLP I: Non-Circular Signals and Widely Linear Processing I

On Spectral Noncircularity of Natural Signals

Scott Wisdom, Les Atlas and James Pitton (University of Washington, USA)

Widely-Linear Gaussian Sum Filter

Arash Mohammadi (Concordia University, Canada); Argin Margoosian and Konstantinos Plataniotis (University of Toronto, Canada)

On the Characterization, Generation, and Efficient Estimation of the Complex Multivariate GGD

Rami Mowakeaa and Zois Boukouvalas (University of Maryland, Baltimore County, USA); Charles Casimiro Cavalcante (Federal University of Ceará, Brazil); Tulay Adali (University of Maryland, Baltimore County, USA)

Lunch

CS: Compressive Sensing and Sparsity-Aware Techniques

Point and Beam-Sparse Radio Astronomical Source Recovery Using Non-Negative Least Squares

Shahrzad Naghibzadeh and Ahmad Mouri Sardarabadi (Delft University of Technology, The Netherlands); Alle-Jan van der Veen (TU Delft, The Netherlands)

Practical Sub-Nyquist Sampling via Array-based Compressed Sensing Receiver Architecture

Andrew Bolstad and James Vian (MIT Lincoln Laboratory, USA); Jonathan Chisum (University of Notre Dame, USA); Youngho Suh (MIT Lincoln Laboratory, USA)

Correlation Learning on Joint Support Recovery for More Sources than Measurements

Sung-En Chiu and Bhaskar Rao (University of California, San Diego, USA)

Revisiting Maximal Response-Based Local Identification of Overcomplete Dictionaries

Zahra Shakeri and Waheed U. Bajwa (Rutgers University, USA)

Differential phase-contrast computed tomography reconstruction based on the projection theorem for Laplacian image

Naoki Sunaguchi (Gunma University, Japan); Tetsuya Yuasa (Yamagata University & Graduate School of Science and Engineering, Japan); Rajiv Gupta (Massachusetts General Hospital, USA); Shu Ichihara (Nagoya Medical Center, Japan); Masami Ando (Tokyo University of Science, Japan)

DET: Detection and Signal Separation

Privacy-aware decentralized detection using linear precoding

Xin He, Wee Peng Tay and Meng Sun (Nanyang Technological University, Singapore)

Improving the Scan Statistic to Design Sensor Detection Systems

Benedito J. B. Fonseca, Jr (Northern Illinois University, USA)

On Parameter Estimation of A Swerling IV Target With Gaussian Receiver Noise

Xiufeng Song (Faraday Future); Peter Willett and Shengli Zhou (University of Connecticut, USA)

A multi-objective approach for blind source extraction

Guilherme Dean Pelegrina (University of Campinas & School of Applied Sciences, Brazil); Leonardo T Duarte (University of Campinas, Brazil)

Multi-Sensor Signal Processing on a PSD Matrix Manifold

Max Wong, Jian-Kang Zhang and Huiying Jiang (McMaster University, Canada)

MEAS II: Investigating Wireless Communication through Measurements II

Prototyping and Measurements for a LiFi System

Kun Chen Hu, Ana Garcia Armada and Matilde Sánchez-Fernández (Universidad Carlos III de Madrid, Spain); Antonio Royo (Uvax Concepts, Spain)

Quantifying the Repeatability of Wireless Channels by Quantized Channel State Information
Martin Lerch and Sebastian Caban (TU Wien, Vienna, Austria); Erich Zöchmann and Markus Rupp (TU Wien, Austria)

Antenna Selection in Massive MIMO Systems: Full-array Selection or Subarray Selection?
Yuan Gao (University of Duisburg-Essen, Germany); Thomas Kaiser (Universität Duisburg-Essen, Germany)

Adaptive Self-Interference Cancelation in LTE-A Carrier Aggregation FDD Direct-Conversion Transceivers
Andreas Gebhard (Johannes Kepler University Linz, Austria); Ram Sunil Kanumalli (Danube Mobile Communications Engineering GmbH & Co KG); Burkhard Neurauter (Danube Mobile Communications Engineering GmbH & Co KG, Austria); Mario Huemer (Johannes Kepler University Linz, Austria)

WLP II: Non-Circular Signals and Widely Linear Processing II

Sparsity-Aware Direction Finding for Strictly Non-Circular Sources Based on Rank Minimization
Jens Steinwandt (Ilmenau University of Technology, Germany); Christian Steffens (Technische Universität Darmstadt, Germany); Marius Pesavento (Technische Universität Darmstadt & Merckstr. 25, Germany); Martin Haardt (Ilmenau University of Technology, Germany)

Reception Filter Impact on Widely Linear FRESH Receiver Performance for SAIC/MAIC with Frequency Offsets
Pascal Chevalier (CNAM, France); Jean-Pierre Delmas (Telecom-Sudparis, France); Rémi Chauvat (CNAM, France)

Widely-linear transceiver design for amplify-and-forward MIMO relaying
Donatella Darsena (University of Napoli Parthenope, Italy); Giacinto Gelli (University of Napoli - Federico II, Italy); Ivan Iudice (CIRA - Italian Aerospace Research Centre, Italy); Francesco Verde (University of Napoli Federico II & National Inter-University Consortium for Telecommunications, Italy)

Closing: Closing Ceremony