

2012 IEEE Statistical Signal Processing Workshop

(SSP 2012)

**Ann Arbor, Michigan, USA
5 – 8 August 2012**



IEEE Catalog Number: CFP12SAP-PRT
ISBN: 978-1-4673-0182-4

Program

R1: Opening reception

P1: Yonina Eldar: Xampling at the Rate of Innovation: Correlations, Nonlinearities, and Bounds

MA1: Special Session: Applications of Statistical Signal Processing to Geophysical/Petrophysical Data Acquisition and Processing

Analysis of Real Vector Fields on the Sphere Using Slepian Functions

A. Plattner, F. Simons and L. Wei
pp. 1-4

Incorporating Spatial Structure Into Hyperspectral Scene Analysis

J. Ash and J. Meola
pp. 5-8

A Heuristic Bayesian Design Criterion for Imaging Resolution Enhancement

M. Khodja, M. Prange and H. Djikpesse
pp. 9-12

Robust Detection of Weak Acoustic Signals in Noise Using Near Optimal Shrinkage in Radon Domain

S. Aeron, S. Bose and H. P. Valero
pp. 13-16

A Mixture of Experts Based Discretization Approach for Characterizing Subsurface Contaminant Source Zones

B. Ahmed, I. Mendoza-Sanchez, R. Khardon, L. Abriola and E. Miller
pp. 17-20

A Localized Ensemble Kalman Smoother

M. Butala
pp. 21-24

Approximate Message Passing Meets Exploration Seismology

F. Herrmann
pp. 25-28

Reconstruction of Seismic Data Via Tensor Completion

N. Kreimer and M. Sacchi
pp. 29-32

MA2: Intentionally blank

MA3: Sparse Models and Applications I

Maximum Likelihood Based Sparse and Distributed Conjoint Analysis

E. Tsakonas, J. Jaldén, N. Sidiropoulos and B. Ottersten
pp. 33-36

Preprocessing for Classification of Sparse Data: Application to Trajectory Recognition

A. Mayoue, Q. Barthélemy, S. Onis and A. Larue
pp. 37-40

Distributed Informative Sensor Determination Via Sparsity-Cognizant Matrix Decomposition

I. Schizas
pp. 41-44

Bayesian Hypothesis Test for Sparse Support Recovery Using Belief Propagation

J. Kang, H. N. Lee and K. Kim
pp. 45-48

Exact Recovery of Low-rank Plus Compressed Sparse Matrices

M. Mardani, G. Mateos and G. B. Giannakis
pp. 49-52

Correlation-Aware Techniques for Sparse Support Recovery

P. Pal and P. p. Vaidyanathan
pp. 53-56

MA4: Estimation Theory I

Sequential Bayesian Estimation with Censored Data

Y. Zheng, R. Niu and P. Varshney
pp. 57-60

Wiener Filtering of Rotation Processes Using Ordered Exponential

J. Boulanger, N. Le Bihan and J. Manton
pp. 61-64

Reducing the Gap Between Linear Biased Classical and Linear Bayesian Estimation

L. Fu-Mueller, M. Lunglmayr and M. Huemer
pp. 65-68

Multifractal Analysis of Self-Similar Processes

H. Wendt, S. Jaffard and P. Abry
pp. 69-72

The Relationship Between Transfer Entropy and Directed Information

Y. Liu and S. Aviyente
pp. 73-76

An ESPRIT-Based Parameter Estimator for Spectroscopic Data

E. Gudmundson, P. Wirfält, A. Jakobsson and M. Jansson
pp. 77-80

MA5: Array Signal Processing**Robust Prior-based Direction of Arrival Estimation**

P. Wirfält and M. Jansson
pp. 81-84

Steering Vector Estimation and Beamforming Under Uncertainties

B. Liao, S. C. Chan, K. M. Tsui and Y. Chu
pp. 85-88

Uniform Rectangular Time Reversal Arrays: Joint Azimuth and Elevation Estimation

M. Sajjadieh and A. Asif
pp. 89-92

Oblique Projection Beamforming for RFI Mitigation in Radio Astronomy

G. Hellbourg, R. Weber, C. Capdessus and A. J. Boonstra
pp. 93-96

An Iterative, Backscatter-Analysis Based Algorithm for Increasing Transmission Through a Highly-Backscattering Random Medium

C. Jin, R. R. Nadakuditi, E. Michielssen and S. Rand
pp. 97-100

Fast Tests for the Common Causality of Time-Of-Arrival Events From Their Mutual Minkowski Distances

S. Howard and S. Sirianunpiboon
pp. 101-104

MA6: Signal Processing on Graphs**Causal Conditioning and Instantaneous Coupling in Causality Graphs**

P. O. Amblard and O. Michel

pp. 105-108

Graph Entropy Rate Minimization and the Compressibility of Undirected Binary Graphs

M. Bolanos, S. Aviyente and H. Radha

pp. 109-112

Toward Matched Filter Optimization for Subgraph Detection in Dynamic Networks

B. Miller and N. Bliss

pp. 113-116

Dynamic Network Summarization Using Convex Optimization

A. Mutlu and S. Aviyente

pp. 117-120

Dynamic Network Kriging

K. Rajawat, E. Dall'Anese and G. B. Giannakis

pp. 121-124

Of the Largest Eigenvalue for Modularity-Based Partitioning

Y. T. Chang, D. Pantazis and L. Richard M.

pp. 125-128

P2: Robert Ghrist: Topological signal processing

MB1: Special Session: Signal Processing Theory and Method on Graphs and Networks

On Hard Limits of Eigen-Analysis Based Planted Clique Detection

R. R. Nadakuditi

pp. 129-132

A Windowed Graph Fourier Transform

D. Shuman, B. Ricaud and P. Vandergheynst

pp. 133-136

Identifying Online Communities of Interest Using Side Information

C. Leberknight, A. Tajer, M. Chiang and H. V. Poor

pp. 137-140

Graph-Wavelet Filterbanks for Edge-Aware Image Processing

S. Narang, Y. H. Chao and A. Ortega

pp. 141-144

Transitivity Matrix of Social Network Graphs

M. Aghagolzadeh, I. Barjasteh and H. Radha

pp. 145-148

MB2: Special Session: Value of Information and Distributed Signal Processing I

A Comparison of Information Theoretic Functions for Tracking Maneuvering Targets

W. Lu, G. Zhang and S. Ferrari

pp. 149-152

Multistage Adaptive Estimation of Sparse Signals

D. Wei and A. Hero III

pp. 153-156

An Obfuscation Framework for Controlling Value of Information During Sharing

S. Chakraborty, K. R. Raghavan, M. Srivastava, C. Bisdikian and L. Kaplan

pp. 157-160

Active Learning for Large-Scale Factor Analysis

J. Silva and L. Carin

pp. 161-164

Diffusion LMS for Source and Process Estimation in Sensor Networks

R. Abdolee, B. Champagne and A. Sayed

pp. 165-168

A Gossip-based Distributed Processing Algorithm for Multiple Transmitter Localization

J. Almodovar and J. Nelson

pp. 169-172

MB3: Sparse Models and Applications II

Efficient Block and Time-Recursive Estimation of Sparse Volterra Systems

S. Adalbjörnsson, G. O. Glentis and A. Jakobsson

pp. 173-176

Equivalence of Synthesis and Atomic Formulations of Sparse Recovery

M. Fatemi, S. Dashmiz, M. H. Shafinia and V. Cevher

pp. 177-180

Discriminative Sparse Image Representation for Classification Based on a Greedy Algorithm

S. Cardona-Romero and S. Aviyente

pp. 181-184

Matrix ALPS: Accelerated Low Rank and Sparse Matrix Reconstruction

A. Kyrillidis and V. Cevher
pp. 185-188

Fast OMP: Reformulating OMP Via Iteratively Refining L2-Norm Solutions

S. H. Hsieh, C. S. Lu and S. C. Pei
pp. 189-192

Estimating Period From Sparse, Noisy Timing Data

B. Quinn, R. McKilliam and V. Clarkson
pp. 193-196

MB4: Adaptive Systems and Signal Processing I**Bayesian Estimation of Forgetting Factor in Adaptive Filtering and Change Detection**

V. Šmídl and F. Gustafsson
pp. 197-200

Subband Adaptive Convex Combination of Two NLMS Based Filters for Sparse Impulse Response Systems

S. W. Sohn, J. Lee, K. Lee, H. Choi and H. D. Bae
pp. 201-204

Adaptive Filtering in the Presence of Outliers

O. Besson and S. Bidon
pp. 205-208

LMS in Prominent System Subspace for Fast System Identification

R. Yu, Y. Song and S. Rahardja
pp. 209-212

Adaptive Filtering for Lightning Electric Field (LEF) Signals in Fractional Fourier Domain

H. Rojas and C. Cortes
pp. 213-216

Boosting Quantization for L_p Norm Distortion Measure

L. Wang, N. Piotto and D. Schonfeld
pp. 217-220

MB5: Imaging Theory and Methods

Accelerated Parallel Magnetic Resonance Imaging Reconstruction Using Joint Estimation with a Sparse Signal Model

D. Weller, J. Polimeni, L. Grady, L. Wald, E. Adalsteinsson and V. Goyal

pp. 221-224

Alternating Minimization Approach for Multi-frame Image Reconstruction

J. H. Cho, S. Ramani and J. Fessler

pp. 225-228

Regularized Hyperalignment of Multi-set fMRI Data

H. Xu, A. Lorbert, P. Ramadge, S. Guntupalli and J. Haxby

pp. 229-232

fMRI Activation Detection Using a Variant of Akaike Information Criterion

A. k. Seghouane

pp. 233-236

The Value of Multispectral Observations in Photon-Limited Quantitative Tissue Analysis

Z. Harmany, X. Jiang and R. Willett

pp. 237-240

Nonparametric Methods for Full-Waveform Ladar Images

E. Buschelman and R. Martin

pp. 241-244

MB6: Monte Carlo Methods

Bayesian Model Comparison Via Path-Sampling Sequential Monte Carlo

Y. Zhou, A. Johansen and J. Aston

pp. 245-248

Distributed State Estimation for Large-scale Nonlinear Systems: A Reduced Order Particle Filter Implementation

A. Mohammadi and A. Asif

pp. 249-252

Joint Bayesian Decomposition of a Spectroscopic Signal Sequence with RJMCMC

V. Mazet, S. Faisan, A. Masson, M. A. Gaveau, L. Poisson and J. M. Mestdagh

pp. 253-256

Implementation of the Daum-Huang Exact-Flow Particle Filter

T. Ding and M. Coates

pp. 257-260

Estimation of Posterior Distributions with Population Monte Carlo Sampling and Graphical Modeling

P. Djurić and Ç. Taşdemir
pp. 261-264

MC1: Special Session: Distributed Synchronization, Localization and Beamforming

Reference-Aided Distributed Transmit Beamforming with Mobile Radios

T. Stevens and K. Kastella
pp. 265-268

Receiver-Coordinated Zero-Forcing Distributed Transmit Nullforming

D. Brown, P. Bidigare, S. Dasgupta and U. Madhow
pp. 269-272

Initial Over-the-Air Performance Assessment of Ranging and Clock Synchronization Using Radio Frequency Signal Exchange

P. Bidigare, D. Raeman, S. Pruessing, D. Scherber, U. Madhow and R. Mudumbai
pp. 273-276

Frequency Estimation in the Presence of Cycle Slips: Filter Banks and Error Bounds for Phase Unwrapping

K. Kastella, R. Mudumbai and T. Stevens
pp. 277-280

A Distributed Consensus Approach to Synchronization of RF Signals

M. M. U. Rahman, S. Dasgupta and R. Mudumbai
pp. 281-284

Loss Characterization of Distributed Space-Time Transmit Beamforming with Embedded Channel Probing

A. Margetts, E. Torkildson and D. Bliss
pp. 285-288

MC2: Special Session: Value of Information and Distributed Signal Processing II

Sensor Selection in Adversarial Setting

E. Ertin
pp. 289-292

The Value of Information in Constrained Parametric Models

T. Moore and B. Sadler
pp. 293-296

Maximum-entropy Surrogation in Network Signal Detection

D. Cochran, S. Howard, B. Moran and H. Schmitt
pp. 297-300

Theoretical Guarantees on Penalized Information Gathering

G. Papachristoudis and J. Fisher III
pp. 301-304

On-Line Gossip-Based Distributed Expectation Maximization Algorithm

G. Morral, P. Bianchi and J. Jakubowicz
pp. 305-308

Correlated Observations in Distributed Detection Systems

H. Ahmadi and A. Vosoughi
pp. 309-312

Diffusion Networks Outperform Consensus Networks

S. Y. Tu and A. Sayed
pp. 313-316

MC3: Sparse Models and Applications III**Non-Line-of-Sight Localization Using Low-rank + Sparse Matrix Decomposition**

V. Ekambaram and K. Ramchandran
pp. 317-320

Sparse FIR Estimation of Low-Order Systems

Q. Ling, W. Shi, G. Wu and Z. Tian
pp. 321-324

A Generalized Framework for Learning and Recovery of Structured Sparse Signals

J. Ziniel, S. Rangan and P. Schniter
pp. 325-328

Sample Complexity of Salient Feature Identification for Sparse Signal Processing

C. Aksoylar, G. Atia and V. Saligrama
pp. 329-332

Localization and Bearing Estimation Via Structured Sparsity Models

M. Duarte
pp. 333-336

Beyond L1-Norm Minimization for Sparse Signal Recovery

H. Mansour
pp. 337-340

MC4: Adaptive Systems and Signal Processing II

Theoretical Discussion of the Filtered-X LMS Algorithm Based on Statistical Mechanical Analysis

S. Miyoshi and Y. Kajikawa

pp. 341-344

Extended UFIR Filtering of Nonlinear Models Corrupted by White Gaussian Noise

O. Ibarra-Manzano, F. Ramirez-Echeverria and Y. Shmaliy

pp. 345-348

Studies of Optimal Memory for Discrete-Time FIR Filters in State-Space

F. Ramirez-Echeverria, A. Sarr, O. Ibarra-Manzano and Y. Shmaliy

pp. 349-352

Lag-Recursive Estimation of the Average Autocorrelation of an Arbitrarily Time-Variant System Response

L. Peng and H. Lev-Ari

pp. 353-356

MC5: Speech Signal Processing

Speech Enhancement Combined with Dereverberation and Acoustic Echo Reduction for Time Varying Systems

M. Togami and Y. Kawaguchi

pp. 357-360

A New Regularized TVAR-based Algorithm for Recursive Detection of Nonstationarity and Its Application to Speech Signals

Y. Chu, S. C. Chan, Z. Zhang and K. M. Tsui

pp. 361-364

Phase Difference of Filter-stable Part-tones as Acoustic Feature

Z. Tüske, F. Drepper and R. Schlüter

pp. 365-368

BaNa: A Hybrid Approach for Noise Resilient Pitch Detection

He Ba, Na Yang, I. Demirkol and W. Heinzelman

pp. 369-372

Audio Forensics Using Acoustic Environment Traces

H. Zhao and H. Malik

pp. 373-376

MC6: Information Forensics and Security

Probabilistic Reasoning for Streaming Anomaly Detection

K. Carter and W. Streilein

pp. 377-380

Relay Selection and Scaling Law in Destination Assisted Physical Layer Secrecy Systems

Y. Liu and A. Petropulu

pp. 381-384

System State Estimation in the Presence of False Information Injection

R. Niu and L. Huie

pp. 385-388

Outage Constrained Secrecy Rate Maximization Using Cooperative Jamming

S. Luo, J. Li and A. Petropulu

pp. 389-392

New Statistic in P-value Estimation for Anomaly Detection

J. Qian and V. Saligrama

pp. 393-396

P3: Robert Nowak: Adaptive Sensing and Active Learning

TA1: Special Session: Challenges in High-Dimensional Learning

The Performance of Deterministic Matched Subspace Detectors When Using Subspaces Estimated From Noisy, Missing Data

N. Asendorf, R. T. Suryaprakash and R. R. Nadakuditi

pp. 397-400

Sequentially Designed Compressed Sensing

J. Haupt, R. Baraniuk, R. Castro and R. Nowak

pp. 401-404

Sensing Aware Dimensionality Reduction for Nearest Neighbor Classification of High Dimensional Signals

Z. Sun, W. Karl, P. Ishwar and V. Saligrama

pp. 405-408

Fast Global Convergence of Gradient Methods for Solving Regularized M-estimation

A. Agarwal, S. Negahban and M. Wainwright

pp. 409-412

Simple Algorithms for Sparse Linear Regression with Uncertain Covariates

Y. Chen and C. Caramanis

pp. 413-415

Greedy Dirty Models: A New Algorithm for Multiple Sparse Regression

A. Jalali and S. Sanghavi

pp. 416-419

TA2: Intentionally Blank

TA3: Biological and Biomedical Applications

Muscle Activity Detection From Myoelectric Signals Based on the AR-GARCH Model

G. Rasool, N. Bouaynaya and K. Iqbal

pp. 420-423

A Wavelet Clustering Technique for the Identification of Functionally Connected Regions in the Rat Brain Using Resting State fMRI

A. Medda, L. Hoffmann, M. Willis, M. Magnuson and S. Keilholz

pp. 424-427

Comparison of Gaussian Process Models for Single-Trial Event-Related Potentials

M. R. Mestre and W. Fitzgerald

pp. 428-431

Accelerated Time-of-Flight Mass Spectrometry

M. Ibrahimi, A. Montanari and G. Moore

pp. 432-435

Describing the Structure of a Macro Molecular Complex as a Random Signal in Noise and a Maximum Likelihood Reconstruction

Q. Wang and P. Doerschuk

pp. 436-439

EEG Signal Classification with Super-Dirichlet Mixture Model

Z. Ma, Z. H. Tan and S. Prasad

pp. 440-443

Classification of EEG Recordings Without Perfectly Time-Locked Events

J. Meng, L. Meriño, K. A. Robbins and Y. Huang

pp. 444-447

TA4: Estimation Theory II

Charrelation-Based Estimation of the Parameters of Non-Gaussian Autoregressive Processes

A. Slapak and A. Yeredor

pp. 448-451

SURE-based Blind Gaussian Deconvolution

F. Xue and T. Blu

pp. 452-455

A Statistical Inference Method for a Subset of Long-range Dependent FARIMA Processes

M. Mossberg

pp. 456-459

Linearity Conditions for Optimal Estimation From Multiple Noisy Measurements

E. Akyol, K. Viswanatha and K. Rose

pp. 460-463

A Two-Stage Denoising Filter: The Preprocessed Yaroslavsky Filter

J. Salmon, R. Willett and E. Arias-Castro

pp. 464-467

Analytical Precision Limits in Slitless Spectroscopy

F. Oktem and F. Kamalabadi

pp. 468-471

TA5: Communication Systems I

Bayesian Sparse Channel Estimation and Tracking

C. Chen and M. Zoltowski

pp. 472-475

Parameter Estimation Techniques for Polynomial Phase and Phase Coded Waveforms in Multi-Channel Systems

S. Sirianunpiboon, S. Howard and S. Elton

pp. 476-479

Power Allocation for Distributed Detection in a Multiple-Ring Cluster

S. Laitrakun and E. Coyle

pp. 480-483

Particle Filtering Based Data Detection in a Flat-Fading Relay-Based Communication System

T. Ghirmai

pp. 484-487

MIMO Broadcast DFE Transceiver Design with Bit Allocation Under QoS Constraints

C. H. Liu and P. p. Vaidyanathan

pp. 488-491

The Density of Costas Arrays and Three-Free Permutations

B. Correll

pp. 492-495

Random Jitter Beamforming for Point-and-Link Communications

B. J. Kwak

pp. 496-499

On the Distribution of Valid Pages with Greedy Garbage Collection for NAND Flash

B. Peleato, R. Agarwal and J. Cioffi

pp. 500-503

TA6: Sensor Networks I

Resolving a Variable Number of Hypotheses with Multiple Sensors

J. Gubner and L. Scharf

pp. 504-507

Radio Frequency Tomography in Mobile Networks

B. Hamilton, X. Ma, R. Baxley and S. Matechik

pp. 508-511

Temporally Staggered Sensing for Field Estimation with Quantized Data in Wireless Sensor Networks

S. Liu, E. Masazade and P. Varshney

pp. 512-515

Least Favorable Distributions for the Design of Sensor Detection Systems in Non-Circular Regions of Interest

B. Fonseca Jr and J. Gubner

pp. 516-519

How Valid is the Regularly-Spaced Grid Assumption in RSS Source Localization Sensor Networks?

R. Martin

pp. 520-523

Full Order Distributed Particle Filters for Intermittent Connections: Feedback From Fusion Filters to Local Filters Improves Performance

A. Mohammadi and A. Asif
pp. 524-527

Continuous-time Distributed Estimation with Asymmetric Mixing

V. Nascimento and A. Sayed
pp. 528-531

P4: Persi Diaconis: Adding numbers and determinantal point processes

TB1: Special Session: Radar Applications of Compressive Sensing

Multistatic RADAR Change Detection Using Sparse Imaging Methods

M. Brennan, C. Kreucher and B. Shapo
pp. 532-535

Reusable Low-Error Compressive Sampling Schemes Through Privacy

A. Gilbert, B. Hemenway, M. Strauss, D. Woodruff and M. Wootters
pp. 536-539

Compressive Sensing and 3-D Radar Imaging

M. Stuff, B. Thelen, J. Garbarino and N. Subotic
pp. 540-543

Minimum L1 Norm SAR Image Formation

C. Coleman, S. Connell, E. Gabl and J. Walter
pp. 544-547

Compressed Sensing for MIMO RADAR: A Stochastic Perspective

Z. Tian and E. Blasch
pp. 548-551

TB2: Special Session: Signal Processing for Complex Biological Systems and Large-Scale Omics Data I

Analyzing Pathway Design From Drug Perturbation Experiments

N. Berlow, R. Pal, L. Davis and C. Keller
pp. 552-555

A Non-parametric Bayesian Clustering for Gene Expression Data

L. Wang and X. Wang
pp. 556-559

Inference of Genetic Regulatory Networks Using Regularized Likelihood with Covariance Estimation

G. Rasool, N. Bouaynaya, H. Fathallah-Shaykh and D. Schonfeld
pp. 560-563

Optimal Classifiers Within a Bayesian Framework

L. Dalton and E. Dougherty
pp. 564-567

Optimal Cancer Therapy Based on a Tumor Growth Inhibition Model

M. R. Yousefi, A. Datta and E. Dougherty
pp. 568-571

Gene Deletion Data Based Genomic Regulatory Network Inference

L. Wang and X. Wang
pp. 572-575

TB3: Compressive Sensing I

Compressive Subspace Fitting for Multiple Measurement Vectors

J. Kim, O. Lee and J. C. Ye
pp. 576-579

The Restricted Isometry Property for Echo State Networks with Applications to Sequence Memory Capacity

H. L. Yap, A. Charles and C. Rozell
pp. 580-583

Online Search Orthogonal Matching Pursuit

A. Weinstein and M. Wakin
pp. 584-587

Optimal Estimation with Arbitrary Error Metrics in Compressed Sensing

J. Tan, D. Carmon and D. Baron
pp. 588-591

Compressive Demodulation of Mutually Interfering Signals

Y. Xie, Y. Chi, L. Applebaum and R. Calderbank
pp. 592-595

TB4: Machine Learning and Pattern Recognition I

Efficient Batch-Mode Active Learning of Random Forest

H. Nguyen, J. Yadegar, B. Kong and H. Wei
pp. 596-599

One-class Machines Based on the Coherence Criterion

Z. Noumir, P. Honeine and C. Richard

pp. 600-603

Dictionary Adaptation for Online Prediction of Time Series Data with Kernels

C. Saidé, R. Lengellé, P. Honeine, C. Richard and R. Achkar

pp. 604-607

Hierarchical Clustering Using Randomly Selected Measurements

B. Eriksson

pp. 608-611

k-Subspaces with Missing Data

L. Balzano, A. Szlam, B. Recht and R. Nowak

pp. 612-615

A Combined Approach to Multi-label Multi-task Learning

D. Motamedvaziri, V. Saligrama and D. Castañón

pp. 616-619

Multiscale Online Tracking of Manifolds

Y. Xie, J. Huang and R. Willett

pp. 620-623

TB5: Sensor Networks II**Multi-sensor Networked State Estimation with Delayed and Irregularly-spaced Observations**

B. Yan, H. Lev-Ari and A. Stanković

pp. 624-627

Almost Sure Convergence of Consensus Algorithms by Relaxed Projection Mappings

O. Slučiak and M. Rupp

pp. 628-631

Bounded Confidence Opinion Dynamics with Network Constraints and Localized Distributed Averaging

M. Rabbat

pp. 632-635

Energy-Efficient Quickest Change Detection in Sensor Networks

T. Banerjee and V. Veeravalli

pp. 636-639

Collaborative Sensor Scheduling for Space Situational Awareness

T. Hobson and V. Clarkson

pp. 640-643

Channel-aware M-ary Distributed Detection: Optimal and Suboptimal Fusion Rules

N. Maleki and A. Vosoughi

pp. 644-647

Distributed Pareto-Optimal Solutions Via Diffusion Adaptation

J. Chen and A. Sayed

pp. 648-651

TB6: Time-Frequency Analysis**A New Non-redundant Complex Hilbert Wavelet Transforms**

L. Wei and T. Blu

pp. 652-655

Some Comments on Multitaper Estimates of Autocorrelation

D. Thomson

pp. 656-659

Multicomponent Signal Denoising with Synchrosqueezing

S. Meignen, T. Oberlin and S. McLaughlin

pp. 660-663

Reverberant Speech Separation Based on Audio-visual Dictionary Learning and Binaural Cues

Q. Liu, W. Wang, P. Jackson and M. Barnard

pp. 664-667

Exploiting Correlated Discriminant Features in Time Frequency and Space for Characterization and Robust Classification of Image RSVP Events with EEG Data

J. Meng, L. Meriño, K. A. Robbins and Y. Huang

pp. 668-671

TC1: Special Session: Statistical Signal Processing and the Engineering of Materials**Application of FIB/SEM/EDXS Tomographic Spectral Imaging and Multivariate Statistical Analysis to the Analysis of Localized Corrosion**

P. Kotula, M. Van Benthem and N. Sorensen

pp. 672-675

Bayesian Image Segmentation of Transmission Electron Tomography 3D Reconstructions

L. Drummy
pp. 676-679

Bayesian Tomographic Reconstruction for High Angle Annular Dark Field (HAADF) Scanning Transmission Electron Microscopy (STEM)

S. Venkatakrishnan, L. Drummy, M. Jackson, M. De Graef, J. Simmons and C. Bouman
pp. 680-683

Discrete Image Reconstruction for Material Quantification

A. Tuysuzoglu, W. Karl, D. Castañón and M. S. Ünlü
pp. 684-687

Joint Deconvolution/Segmentation of Microscope Images of Materials

D. W. Kim and M. Comer
pp. 688-691

TC2: Special Session: Signal Processing for Complex Biological Systems and Large-Scale Omics Data II

Base Calling Error Rates in Next-Generation DNA Sequencing

S. Manohar and H. Vikalo
pp. 692-695

Causal Compressive Sensing for Gene Network Inference

Mo Deng, A. Emad and O. Milenkovic
pp. 696-699

Basis-Expansion Factor Models for Uncovering Transcription Factor Regulatory Network

M. Sanchez-Castillo, J. Meng, I. T. Luna and Y. Huang
pp. 700-703

Joint State and Parameter Estimation for Boolean Dynamical Systems

U. Braga-Neto
pp. 704-707

Statistical Assessment of Gene Fusion Detection Algorithms Using RNA Sequencing Data

V. Varadan, A. Janevski, S. Kamalakaran, N. Banerjee, L. Harris and N. Dimitrova
pp. 708-711

Adaptive Experimental Design for Drug Combinations

M. Park, M. Nassar, B. Evans and H. Vikalo

pp. 712-715

TC3: Compressive Sensing II

Restricted Isometry Property in Coded Aperture Compressive Spectral Imaging

H. Arguello and G. Arce

pp. 716-719

Compressive LADAR in Realistic Environments

D. Sale, C. Rozell, J. Romberg and A. Lanterman

pp. 720-723

Subspace Detection of High-Dimensional Vectors Using Compressive Sampling

M. Azizyan and A. Singh

pp. 724-727

Near-Isometric Linear Embeddings of Manifolds

C. Hegde, A. Sankaranarayanan and R. Baraniuk

pp. 728-731

Grouped Incoherent Measurements for Compressive Sensing

A. Polak, M. Duarte and D. Goeckel

pp. 732-735

Compressive Asynchronous Decomposition of Heart Sounds

A. Can, E. Sejdić, O. Alkishriwo and L. Chaparro

pp. 736-739

TC4: Machine Learning and Pattern Recognition II

Regularized Joint Density Estimation for Multi-Instance Learning

B. Behmardi, F. Briggs, X. Fern and R. Raich

pp. 740-743

An Asymptotically Convex Approach to Discriminative Coding

R. Raj

pp. 744-747

A Bootstrap Interval Estimator for Bayes' Classification Error

C. Hawes and C. Priebe

pp. 748-751

Learning Kernel Combination From Noisy Pairwise Constraints

T. Yang, R. Jin and A. Jain

pp. 752-755

Real Adaboost for Content Identification

R. Naini and P. Moulin

pp. 756-759

Estimating Intrinsic Dimension Via Clustering

B. Eriksson and M. Crovella

pp. 760-763

TC5: Radar Signal Processing I**Maneuvering Target Tracking Based on SDE Driven by GARCH Volatility**

M. Hajiramezanali and H. Amindavar

pp. 764-767

A Graphical Model Representation of the Track-Oriented Multiple Hypothesis Tracker

A. Frank, P. Smyth and A. Ihler

pp. 768-771

A Track-Before-Detect Procedure for Sparse Data

E. Grossi, M. Lops and L. Venturino

pp. 772-775

MIMO Radar Detection with Heterogeneous Propagation Losses

X. Song, P. Willett, S. Zhou and J. Glaz

pp. 776-779

Theoretical Multidimensional Resolution Limit for MIMO Radar Based on the Chernoff Distance

D. Tran, R. Boyer, A. Renaux, S. Marcos and P. Larzabal

pp. 780-783

TC6: Computer Systems and Networks**Mapping Equivalence Under Iterative Dynamics for Symbolic Sequences**

L. Wang and D. Schonfeld

pp. 784-787

Probabilistic Graphical Model for Flash Memory Programming

B. Peleato, R. Agarwal and J. Cioffi

pp. 788-791

Detection Performance of M-ary Relay Trees with Non-binary Message Alphabets

Z. Zhang, E. Chong, A. Pezeshki, B. Moran and S. Howard

pp. 792-795

Estimation of Flow Distributions Tails From Sampled Traffic

N. Antunes and V. Pipiras

pp. 796-799

R2: Banquet Reception

B1: Banquet

P5: Yoram Bresler: The invention of Compressive Sensing and Recent Results: from Spectrum-Blind Sampling and Image Compression on the Fly to New Solutions with Realistic Performance Guarantees

P6: Randy Moses: Radar Signal Processing

WA1: Special Session: Applications of Random Matrix Theory in Underwater Acoustic Signal Processing

The Performance of MUSIC-based DOA in White Noise with Missing Data

R. T. Suryaprakash and R. R. Nadakuditi

pp. 800-803

Passive Acoustic Monitoring Using Random Matrix Theory

R. Menon, P. Gerstoft and W. Hodgkiss

pp. 804-807

Analytical Characterization of the MPDR-based Power Estimators in Snapshot Scarce Regime

M. Pajovic, J. Preisig and A. Baggeroer

pp. 808-811

Mean Squared Error Performance of Adaptive Matched Field Localization Under Environmental Uncertainty

N. Lee, C. Richmond and V. Kmelnitsky

pp. 812-815

Experimental Validation of a Random Matrix Theory Model for Dominant Mode Rejection Beamformer Notch Depth

K. Wage, J. Buck, M. Dzieciuch and P. Worcester

pp. 816-819

A Random Matrix Theory Model for the Dominant Mode Rejection Beamformer Notch Depth

J. Buck and K. Wage

pp. 820-823

Approximate Eigenvalue Distribution of a Cylindrically Isotropic Noise Sample Covariance Matrix

S. Tuladhar, J. Buck and K. Wage
pp. 824-827

WA2: Intentionally Blank

WA3: Communication Systems II

Quantized Network Coding for Sparse Messages

M. Nabaee and F. Labeau
pp. 828-831

Time-Domain Impulse Injection Method for Crest Factor Reduction of OFDM Signals

Z. Yu, R. Baxley and G. T. Zhou
pp. 832-835

Robust Interference Channel Transmission Using Sparsity Enhanced Mismatch Model

C. Y. Chang and C. Fung
pp. 836-839

Optimal SIMO MLSE Receivers for the Detection of Linear Modulation Corrupted by Noncircular Interference

S. Sallem, J. P. Delmas and P. Chevalier
pp. 840-843

Branch and Bound Algorithm for Code Spread OFDM

A. Elghariani and M. Zoltowski
pp. 844-847

Fast Adaptive Decision-Selection Equalizer Convergence Using a Tree-Structured Algorithm

D. Sebald
pp. 848-851

WA4: Radar Signal Processing II

Improved Variational Inference for Tracking in Clutter

J. Pacheco and E. Suderth
pp. 852-855

Test Statistics for Synthetic Aperture Radar Coherent Change Detection

M. Cha, R. Phillips and P. Wolfe

pp. 856-859

Time Reversal MIMO Radar for Angle-Doppler Estimation

F. Foroozan and A. Asif

pp. 860-863

Waveform Scheduling Via Directed Information in Cognitive Radar

P. Setlur, N. Devroye and Z. Cheng

pp. 864-867

Coordinating Complementary Waveforms Across Time and Frequency

W. Dang, A. Pezeshki, S. Howard and B. Moran

pp. 868-871

WA5: Multivariate Statistical Analysis

Optimal Linear Correction in LMMSE Estimation Using Moments of the Complex Inverse Wishart Distribution

J. Serra and M. Nájar

pp. 872-875

Nonparametric Low-Rank Tensor Imputation

J. A. Bazerque, G. Mateos and G. B. Giannakis

pp. 876-879

On the Convexity in Kronecker Structured Covariance Estimation

A. Wiesel

pp. 880-883

Kronecker Graphical Lasso

T. Tsilgkaridis, A. Hero III and S. Zhou

pp. 884-887

Hyperspherical Phase Synchrony for Quantifying Multivariate Phase Synchronization

A. Mutlu and S. Aviyente

pp. 888-891

Overcoming Noise, Avoiding Curvature: Optimal Scale Selection for Tangent Plane Recovery

D. Kaslovsky and F. Meyer

pp. 892-895

Non-Parametric Prediction of the Mid-Price Dynamics in a Limit Order Book

D. Palguna and I. Pollak

pp. 896-899

WA6: Detection Theory

Signal Classification by Power Spectral Density: An Approach Via Riemannian Geometry

K. M. Wong and Y. Li

pp. 900-903

Decision Trees for Heterogeneous Dose-Response Signal Analysis

K. Varshney, M. Singh and J. Wang

pp. 904-907

A Selection Criterion for Piecewise Stationary Long-Memory Models

Li Song and P. Bondon

pp. 908-911

Statistical Detection of LSB Matching in the Presence of Nuisance Parameters

R. Cogranne, C. Zitzmann, F. Retraint, I. Nikiforov, L. Fillatre and P. Cornu

pp. 912-915

Detection of Gaussian Signals in Unknown Time-Varying Channels

D. Romero, J. Vía, R. López-Valcarce and I. Santamaría

pp. 916-919

Two Stage Decision System

K. Trapeznikov, V. Saligrama and D. Castañón

pp. 920-923

GP: Government Panel Session, Panel organizer: Liyi Dai, ARO