

Table of Contents

Theory and Fundamentals

A FastICA Algorithm for Non-negative Independent Component Analysis	1
<i>Zhijian Yuan and Erkki Oja</i>	
Blind Source Separation by Adaptive Estimation of Score Function Difference	9
<i>Samareh Samadi, Massoud Babaie-Zadeh, Christian Jutten, and Kambiz Nayebi</i>	
Exploiting Spatiotemporal Information for Blind Atrial Activity Extraction in Atrial Arrhythmias	18
<i>Francisco Castells, Jorge Igual, Vicente Zarzoso, José Joaquín Rieta, and José Millet</i>	
Gaussianizing Transformations for ICA	26
<i>Deniz Erdogmus, Yadunandana N. Rao, and José Carlos Príncipe</i>	
New Eigensystem-Based Method for Blind Source Separation	33
<i>Rubén Martín-Clemente, Susana Hornillo-Mellado, Carlos G. Puntonet, and José I. Acha</i>	
Optimization Issues in Noisy Gaussian ICA	41
<i>Jean-François Cardoso and Dinh-Tuan Pham</i>	
Optimization Using Fourier Expansion over a Geodesic for Non-negative ICA . . .	49
<i>Mark D. Plumbley</i>	
The Minimum Support Criterion for Blind Signal Extraction: A Limiting Case of the Strengthened Young's Inequality	57
<i>Sergio Cruces and Iván Durán</i>	
Accurate, Fast and Stable Denoising Source Separation Algorithms	65
<i>Harri Valpola and Jaakko Särelä</i>	
An Overview of BSS Techniques Based on Order Statistics: Formulation and Implementation Issues	73
<i>Yolanda Blanco and Santiago Zazo</i>	
Analytical Solution of the Blind Source Separation Problem Using Derivatives . . .	81
<i>Sebastien Lagrange, Luc Jaulin, Vincent Vigneron, and Christian Jutten</i>	
Approximate Joint Diagonalization Using a Natural Gradient Approach	89
<i>Arie Yeredor, Andreas Ziehe, and Klaus-Robert Müller</i>	

BSS, Classification and Pixel Demixing	97
<i>Albert Bijaoui, Danielle Nuzillard, and Tanusree Deb Barma</i>	
Blind Identification of Complex Under-Determined Mixtures	105
<i>Pierre Comon and Myriam Rajih</i>	
Blind Separation of Heavy-Tailed Signals Using Normalized Statistics	113
<i>Mohamed Sahmoudi, Karim Abed-Meraim, and Messaoud Benidir</i>	
Blind Source Separation of Linear Mixtures with Singular Matrices	121
<i>Pando Georgiev and Fabian J. Theis</i>	
Closely Arranged Directional Microphone for Source Separation	129
<i>Yusuke Katayama, Masanori Ito, Allan Kardec Barros, Yoshinori Takeuchi, Tetsuya Matsumoto, Hiroaki Kudo, Noboru Ohnishi, and Toshiharu Mukai</i>	
Estimating Functions for Blind Separation when Sources Have Variance-Dependencies	136
<i>Motoaki Kawanabe and Klaus-Robert Müller</i>	
Framework of Constrained Matrix Gradient Flows	144
<i>Gen Hori</i>	
Identifiability, Subspace Selection and Noisy ICA	152
<i>Mike Davies</i>	
Improving GRNNs in CAD Systems	160
<i>Fulgencio S. Buendía Buendía, J. Miguel Barrón-Adame, Antonio Vega-Corona, and Diego Andina</i>	
Fisher Information in Source Separation Problems	168
<i>Vincent Vigneron and Christian Jutten</i>	
Localization of P300 Sources in Schizophrenia Patients Using Constrained BSS . .	177
<i>Saeid Sanei, Loukianos Spyrou, Wenwu Wang, and Jonathon A. Chambers</i>	
On the Estimation of the Mixing Matrix for Underdetermined Blind Source Separation in an Arbitrary Number of Dimensions	185
<i>Luis Vielva, Ignacio Santamaría, Jesús Ibáñez, Deniz Erdogmus, and José Carlos Príncipe</i>	
On the Minimum ℓ_1 -Norm Signal Recovery in Underdetermined Source Separation	193
<i>Ichigaku Takigawa, Mineichi Kudo, Atsuyoshi Nakamura, and Jun Toyama</i>	
On the Strong Uniqueness of Highly Sparse Representations from Redundant Dictionaries	201
<i>Rémi Gribonval and Morten Nielsen</i>	

Reliability of ICA Estimates with Mutual Information	209
<i>Harald Stögbauer, Ralph G. Andrzejak, Alexander Kraskov, and Peter Grassberger</i>	
Robust ICA for Super-Gaussian Sources	217
<i>Frank C. Meinecke, Stefan Harmeling, and Klaus-Robert Müller</i>	
Robustness of Prewhitening Against Heavy-Tailed Sources	225
<i>Aiyoun Chen and Peter J. Bickel</i>	
Simultaneous Extraction of Signal Using Algorithms Based on the Nonstationarity	233
<i>Juan Charneco Fernández</i>	
Space-Time Variant Blind Source Separation with Additive Noise	240
<i>Ivica Kopriva and Harold Szu</i>	
The Use of ICA in Speckle Noise	248
<i>D. Blanco, B. Mulgrew, S. McLaughlin, D.P. Ruiz, and M.C. Carrion</i>	
Theoretical Method for Solving BSS-ICA Using SVM	256
<i>Carlos G. Puntonet, Juan Manuel Górriz, Moisés Salmerón, and Susana Hornillo-Mellado</i>	
Wavelet De-noising for Blind Source Separation in Noisy Mixtures	263
<i>Bertrand Rivet, Vincent Vigneron, Anisoara Paraschiv-Ionescu, and Christian Jutten</i>	

Linear Mixture Models

A Gaussian Mixture Based Maximization of Mutual Information for Supervised Feature Extraction	271
<i>José M. Leiva-Murillo and Antonio Artés-Rodríguez</i>	
Blind Separation of Nonstationary Sources by Spectral Decorrelation	279
<i>Shahram Hosseini and Yannick Deville</i>	
Delayed AMUSE – A Tool for Blind Source Separation and Denoising	287
<i>Ana R. Teixeira, Ana Maria Tomé, Elmar W. Lang, and Kurt Stadthanner</i>	
Dimensionality Reduction in ICA and Rank- (R_1, R_2, \dots, R_N) Reduction in Multilinear Algebra	295
<i>Lieven De Lathauwer and Joos Vandewalle</i>	
Linear Multilayer Independent Component Analysis Using Stochastic Gradient Algorithm	303
<i>Yoshitatsu Matsuda and Kazunori Yamaguchi</i>	

Minimax Mutual Information Approach for ICA of Complex-Valued Linear Mixtures	311
<i>Jian-Wu Xu, Deniz Erdogmus, Yadunandana N. Rao, and José Carlos Príncipe</i>	
Signal Reconstruction in Sensor Arrays Using Temporal-Spatial Sparsity Regularization	319
<i>Dmitri Model and Michael Zibulevsky</i>	
Underdetermined Source Separation with Structured Source Priors	327
<i>Emmanuel Vincent and Xavier Rodet</i>	
A Grassmann-Rayleigh Quotient Iteration for Dimensionality Reduction in ICA	335
<i>Lieven De Lathauwer, Luc Hoegaerts, and Joos Vandewalle</i>	
An Approach of Moment-Based Algorithm for Noisy ICA Models	343
<i>Daisuke Ito and Noboru Murata</i>	
Geometrical ICA-Based Method for Blind Separation of Super-Gaussian Signals	350
<i>Manuel Rodríguez-Álvarez, Fernando Rojas Ruiz, Rubén Martín-Clemente, Ignacio Rojas Ruiz, and Carlos G. Puntonet</i>	
A Novel Method to Recover N Sources from N-1 Observations and Its Application to Digital Communications	358
<i>Adriana Dapena</i>	
A Sufficient Condition for Separation of Deterministic Signals Based on Spatial Time-Frequency Representations	366
<i>Nadège Thirion-Moreau, El Mostafa Fadaili, and Eric Moreau</i>	
Adaptive Robust Super-exponential Algorithms for Deflationary Blind Equalization of Instantaneous Mixtures	374
<i>Masanori Ito, Masashi Ohata, Mitsuru Kawamoto, Toshiharu Mukai, Yujiro Inouye, and Noboru Ohnishi</i>	
Application of Gaussian Mixture Models for Blind Separation of Independent Sources	382
<i>Koby Todros and Joseph Tabrikian</i>	
Asymptotically Optimal Blind Separation of Parametric Gaussian Sources	390
<i>Eran Doron and Arie Yeredor</i>	
Bayesian Approach for Blind Separation of Underdetermined Mixtures of Sparse Sources	398
<i>Cédric Févotte, Simon J. Godsill, and Patrick J. Wolfe</i>	
Blind Source Separation Using the Block-Coordinate Relative Newton Method	406
<i>Alexander M. Bronstein, Michael M. Bronstein, and Michael Zibulevsky</i>	

Hybridizing Genetic Algorithms with ICA in Higher Dimension	414
<i>Juan Manuel Górriz, Carlos G. Puntonet, Moisés Salmerón, and Fernando Rojas Ruiz</i>	
ICA Using Kernel Entropy Estimation with NlogN Complexity	422
<i>Sarit Shwartz, Michael Zibulevsky, and Yoav Y. Schechner</i>	
Soft-LOST: EM on a Mixture of Oriented Lines	430
<i>Paul D. O’Grady and Barak A. Pearlmutter</i>	
Some Gradient Based Joint Diagonalization Methods for ICA	437
<i>Bijan Afsari and Perinkulam S. Krishnaprasad</i>	
Underdetermined Independent Component Analysis by Data Generation	445
<i>Sang Gyun Kim and Chang D. Yoo</i>	

Convolutional Models

Batch Mutually Referenced Separation Algorithm for MIMO Convolutional Mixtures	453
<i>Ali Mansour</i>	
Frequency Domain Blind Source Separation for Many Speech Signals	461
<i>Ryo Mukai, Hiroshi Sawada, Shoko Araki, and Shoji Makino</i>	
ICA Model Applied to Multichannel Non-destructive Evaluation by Impact-Echo	470
<i>Addisson Salazar, Luis Vergara, Jorge Igual, Jorge Gosálbez, and Ramón Miralles</i>	
Monaural Source Separation Using Spectral Cues	478
<i>Barak A. Pearlmutter and Anthony M. Zador</i>	
Multichannel Speech Separation Using Adaptive Parameterization of Source PDFs	486
<i>Kostas Kokkinakis and Asoke K. Nandi</i>	
Non-negative Matrix Factor Deconvolution; Extraction of Multiple Sound Sources from Monophonic Inputs	494
<i>Paris Smaragdis</i>	
Optimal Sparse Representations for Blind Deconvolution of Images	500
<i>Alexander M. Bronstein, Michael M. Bronstein, Michael Zibulevsky, and Yehoshua Y. Zeevi</i>	
Separation of Convolutional Mixtures of Cyclostationary Sources: A Contrast Function Based Approach	508
<i>Pierre Jallon, Antoine Chevreuil, Philippe Loubaton, and Pascal Chevalier</i>	

A Continuous Time Balanced Parametrization Approach to Multichannel Blind Deconvolution	516
<i>Liang Suo Ma and Ah Chung Tsoi</i>	
A Frequency-Domain Normalized Multichannel Blind Deconvolution Algorithm for Acoustical Signals	524
<i>Seung H. Nam and Seungkwon Beack</i>	
A Novel Hybrid Approach to the Permutation Problem of Frequency Domain Blind Source Separation	532
<i>Wenwu Wang, Jonathon A. Chambers, and Saeid Sanei</i>	
Application of Geometric Dependency Analysis to the Separation of Convolved Mixtures	540
<i>Samer Abdallah and Mark D. Plumbley</i>	
Blind Deconvolution of SISO Systems with Binary Source Based on Recursive Channel Shortening	548
<i>Konstantinos I. Diamantaras and Theophilos Papadimitriou</i>	
Blind Deconvolution Using the Relative Newton Method	554
<i>Alexander M. Bronstein, Michael M. Bronstein, and Michael Zibulevsky</i>	
Blind Equalization Using Direct Channel Estimation	562
<i>Hyung-Min Park, Sang-Hoon Oh, and Soo-Young Lee</i>	
Blind MIMO Identification Using the Second Characteristic Function	570
<i>Eran Eidinger and Arie Yeredor</i>	
Blind Signal Separation of Convolutional Mixtures: A Time-Domain Joint-Diagonalization Approach	578
<i>Marcel Joho</i>	
Characterization of the Sources in Convolutional Mixtures: A Cumulant-Based Approach	586
<i>Susana Hornillo-Mellado, Carlos G. Puntonet, Rubén Martín-Clemente, Manuel Rodríguez-Álvarez, and Juan Manuel Górriz</i>	
CICAAR: Convolutional ICA with an Auto-regressive Inverse Model	594
<i>Mads Dyrholm and Lars Kai Hansen</i>	
Detection by SNR Maximization: Application to the Blind Source Separation Problem	602
<i>Bernard Xerri and Bruno Borloz</i>	
Estimating the Number of Sources for Frequency-Domain Blind Source Separation	610
<i>Hiroshi Sawada, Stefan Winter, Ryo Mukai, Shoko Araki, and Shoji Makino</i>	

Estimating the Number of Sources in a Noisy Convolutional Mixture Using BIC . . .	618
<i>Rasmus Kongsgaard Olsson and Lars Kai Hansen</i>	
Evaluation of Multistage SIMO-Model-Based Blind Source Separation Combining Frequency-Domain ICA and Time-Domain ICA	626
<i>Satoshi Ukai, Hiroshi Saruwatari, Tomoya Takatani, Kiyohiro Shikano, Ryo Mukai, and Hiroshi Sawada</i>	
On Coefficient Delay in Natural Gradient Blind Deconvolution and Source Separation Algorithms	634
<i>Scott C. Douglas, Hiroshi Sawada, and Shoji Makino</i>	
On the FIR Inversion of an Acoustical Convolutional Mixing System: Properties and Limitations	643
<i>Markus Hofbauer</i>	
Overcomplete BSS for Convolutional Mixtures Based on Hierarchical Clustering . .	652
<i>Stefan Winter, Hiroshi Sawada, Shoko Araki, and Shoji Makino</i>	
Penalty Function Approach for Constrained Convolutional Blind Source Separation	661
<i>Wenwu Wang, Jonathon A. Chambers, and Saeid Sanei</i>	
Permutation Alignment for Frequency Domain ICA Using Subspace Beamforming Methods	669
<i>Nikolaos Mitianoudis and Mike Davies</i>	
QML Blind Deconvolution: Asymptotic Analysis	677
<i>Alexander M. Bronstein, Michael M. Bronstein, Michael Zibulevsky, and Yehoshua Y. Zeevi</i>	
Super-exponential Methods Incorporated with Higher-Order Correlations for Deflationary Blind Equalization of MIMO Linear Systems	685
<i>Kiyotaka Kohno, Yujiro Inouye, and Mitsuru Kawamoto</i>	
Nonlinear ICA and BSS	
Blind Maximum Likelihood Separation of a Linear-Quadratic Mixture	694
<i>Shahram Hosseini and Yannick Deville</i>	
Markovian Source Separation in Post-nonlinear Mixtures	702
<i>Anthony Larue, Christian Jutten, and Shahram Hosseini</i>	
Non-linear ICA by Using Isometric Dimensionality Reduction	710
<i>John A. Lee, Christian Jutten, and Michel Verleysen</i>	
Postnonlinear Overcomplete Blind Source Separation Using Sparse Sources	718
<i>Fabian J. Theis and Shun-ichi Amari</i>	

XVIII Table of Contents

Second-Order Blind Source Separation Based on Multi-dimensional Autocovariances	726
<i>Fabian J. Theis, Anke Meyer-Bäse, and Elmar W. Lang</i>	
Separating a Real-Life Nonlinear Mixture of Images	734
<i>Luís B. Almeida and Miguel Faria</i>	
Independent Slow Feature Analysis and Nonlinear Blind Source Separation	742
<i>Tobias Blaschke and Laurenz Wiskott</i>	
Nonlinear PCA/ICA for the Structure from Motion Problem	750
<i>Jun Fujiki, Shotaro Akaho, and Noboru Murata</i>	
Plugging an Histogram-Based Contrast Function on a Genetic Algorithm for Solving PostNonLinear-BSS	758
<i>Fernando Rojas Ruiz, Carlos G. Puntonet, Ignacio Rojas Ruiz, Manuel Rodríguez-Álvarez, and Juan Manuel Górriz</i>	
Post-nonlinear Independent Component Analysis by Variational Bayesian Learning	766
<i>Alexander Ilin and Antti Honkela</i>	
Temporal Decorrelation as Preprocessing for Linear and Post-nonlinear ICA	774
<i>Juha Karvanen and Toshihisa Tanaka</i>	
Tree-Dependent and Topographic Independent Component Analysis for fMRI Analysis	782
<i>Anke Meyer-Bäse, Fabian J. Theis, Oliver Lange, and Carlos G. Puntonet</i>	
Using Kernel PCA for Initialisation of Variational Bayesian Nonlinear Blind Source Separation Method	790
<i>Antti Honkela, Stefan Harmeling, Leo Lundqvist, and Harri Valpola</i>	
Speech Processing Applications	
A Geometric Approach for Separating Several Speech Signals	798
<i>Massoud Babaie-Zadeh, Ali Mansour, Christian Jutten, and Farrokh Marvasti</i>	
A Novel Method for Permutation Correction in Frequency-Domain in Blind Separation of Speech Mixtures	807
<i>Christine Serviere and Dinh-Tuan Pham</i>	
Convulsive Acoustic Mixtures Approximation to an Instantaneous Model Using a Stereo Boundary Microphone Configuration	816
<i>Juan Manuel Sanchis, Francisco Castells, and José Joaquín Rieta</i>	
DOA Detection from HOS by FOD Beamforming and Joint-Process Estimation	824
<i>Pedro Gómez Vilda, R. Martínez, Agustín Álvarez Marquina, Victor Nieto Lluis, María Victoria Rodellar Biarge, F. Díaz, and F. Rodríguez</i>	

Nonlinear Postprocessing for Blind Speech Separation	832
<i>Dorothea Kolossa and Reinhold Orglmeister</i>	
Real-Time Convolutional Blind Source Separation Based on a Broadband Approach	840
<i>Robert Aichner, Herbert Buchner, Fei Yan, and Walter Kellermann</i>	
A New Approach to the Permutation Problem in Frequency Domain Blind Source Separation	849
<i>Koutaro Kamata, Xuebin Hu, and Hidefumi Kobatake</i>	
Adaptive Cross-Channel Interference Cancellation on Blind Source Separation Outputs	857
<i>Changkyu Choi, Gil-Jin Jang, Yongbeom Lee, and Sang Ryong Kim</i>	
Application of the Mutual Information Minimization to Speaker Recognition / Verification Improvement	865
<i>Jordi Solé-Casals and Marcos Faúndez-Zanuy</i>	
Single Channel Speech Enhancement: MAP Estimation Using GGD Prior Under Blind Setup	873
<i>Rajkishore Prasad, Hiroshi Saruwatari, and Kiyohiro Shikano</i>	
Stable and Low-Distortion Algorithm Based on Overdetermined Blind Separation for Convolutional Mixtures of Speech	881
<i>Tsuyoki Nishikawa, Hiroshi Saruwatari, Kiyohiro Shikano, and Atsunobu Kaminuma</i>	
Two Channel, Block Adaptive Audio Separation Using the Cross Correlation of Time Frequency Information	889
<i>Daniel Smith, Jason Lukasiak, and Ian Burnett</i>	
Underdetermined Blind Separation of Convolutional Mixtures of Speech with Directivity Pattern Based Mask and ICA	898
<i>Shoko Araki, Shoji Makino, Hiroshi Sawada, and Ryo Mukai</i>	
Image Processing Applications	
A Digital Watermarking Technique Based on ICA Image Features	906
<i>Wei Lu, Jian Zhang, Xiaobing Sun, and Kanzo Okada</i>	
A Model for Analyzing Dependencies Between Two ICA Features in Natural Images	914
<i>Mika Inki</i>	
An Iterative Blind Source Separation Method for Convolutional Mixtures of Images	922
<i>Marc Castella and Jean-Christophe Pesquet</i>	

Astrophysical Source Separation Using Particle Filters	930
<i>Mauro Costagli, Ercan E. Kuruoğlu, and Alijah Ahmed</i>	
Independent Component Analysis in the Watermarking of Digital Images	938
<i>Juan José Murillo-Fuentes</i>	
Spatio-chromatic ICA of a Mosaiced Color Image	946
<i>David Alleysson and Sabine Süsstrunk</i>	
An Extended Maximum Likelihood Approach for the Robust Blind Separation of Autocorrelated Images from Noisy Mixtures	954
<i>Ivan Gerace, Francesco Cricco, and Anna Tonazzini</i>	
Blind Separation of Spatio-temporal Data Sources	962
<i>Hilit Unger and Yehoshua Y. Zeevi</i>	
Data Hiding in Independent Components of Video	970
<i>Jiande Sun, Ju Liu, and Huibo Hu</i>	
Biomedical Applications	
3D Spatial Analysis of fMRI Data on a Word Perception Task	977
<i>Ingo R. Keck, Fabian J. Theis, Peter Gruber, Elmar W. Lang, Karsten Specht, and Carlos G. Puntonet</i>	
Decomposition of Synthetic Multi-channel Surface-Electromyogram Using Independent Component Analysis	985
<i>Gonzalo A. García, Kazuya Maekawa, and Kenzo Akazawa</i>	
Denoising Using Local ICA and a Generalized Eigendecomposition with Time-Delayed Signals	993
<i>Peter Gruber, Kurt Stadlthanner, Ana Maria Tomé, Ana R. Teixeira, Fabian J. Theis, Carlos G. Puntonet, and Elmar W. Lang</i>	
MEG/EEG Source Localization Using Spatio-temporal Sparse Representations .	1001
<i>Alexey Polonsky and Michael Zibulevsky</i>	
Reliable Measurement of Cortical Flow Patterns Using Complex Independent Component Analysis of Electroencephalographic Signals	1009
<i>Jörn Anemüller, Terrence J. Sejnowski, and Scott Makeig</i>	
Sensor Array and Electrode Selection for Non-invasive Fetal Electrocardiogram Extraction by Independent Component Analysis	1017
<i>Frédéric Vrins, Christian Jutten, and Michel Verleysen</i>	
A Comparison of Time Structure and Statistically Based BSS Methods in the Context of Long-Term Epileptiform EEG Recordings	1025
<i>Christopher J. James and Christian W. Hesse</i>	

A Framework for Evaluating ICA Methods of Artifact Removal from Multichannel EEG	1033
<i>Kevin A. Glass, Gwen A. Frishkoff, Robert M. Frank, Colin Davey, Joseph Dien, Allen D. Malony, and Don M. Tucker</i>	
A New Method for Eliminating Stimulus Artifact in Transient Evoked Otoacoustic Emission Using ICA	1041
<i>Ju Liu, Yu Du, Jing Li, and Kaibao Nie</i>	
An Efficient Time-Frequency Approach to Blind Source Separation Based on Wavelets	1048
<i>Christian W. Hesse and Christopher J. James</i>	
Blind Deconvolution of Close-to-Orthogonal Pulse Sources Applied to Surface Electromyograms	1056
<i>Ales Holobar and Damjan Zazula</i>	
Denoising Mammographic Images Using ICA	1064
<i>P. Mayo, Francisco Rodenas Escriba, and Gumersindo Verdú Martín</i>	
Independent Component Analysis of Pulse Oximetry Signals Based on Derivative Skew	1072
<i>Paul F. Stetson</i>	
Mixing Matrix Pseudostationarity and ECG Preprocessing Impact on ICA-Based Atrial Fibrillation Analysis	1079
<i>José Joaquín Rieta, César Sánchez, Juan Manuel Sanchis, Francisco Castells, and José Millet</i>	
‘Signal Subspace’ Blind Source Separation Applied to Fetal Magnetocardiographic Signals Extraction	1087
<i>Giulia Barbatì, Camillo Porcaro, and Carlo Salustri</i>	
Suppression of Ventricular Activity in the Surface Electrocardiogram of Atrial Fibrillation	1095
<i>Mathieu Lema, Jean-Marc Vesin, Zenichi Ihara, and Lukas Kappenberger</i>	
Unraveling Spatio-temporal Dynamics in fMRI Recordings Using Complex ICA	1103
<i>Jörn Anemüller, Jeng-Ren Duann, Terrence J. Sejnowski, and Scott Makeig</i>	
Wavelet Domain Blind Signal Separation to Analyze Supraventricular Arrhythmias from Holter Registers	1111
<i>César Sánchez, José Joaquín Rieta, Francisco Castells, Raúl Alcaraz, and José Millet</i>	
Other Applications	
A New Auditory-Based Index to Evaluate the Blind Separation Performance of Acoustic Mixtures	1118
<i>Juan Manuel Sanchis, José Joaquín Rieta, Francisco Castells, and José Millet</i>	

An Application of ICA to Identify Vibratory Low-Level Signals Generated by Termites	1126
<i>Juan Jose G. de la Rosa, Carlos G. Puntonet, Juan Manuel Górriz, and Isidro Lloret</i>	
Application of Blind Source Separation to a Novel Passive Location	1134
<i>Gaoming Huang, Luxi Yang, and Zhenya He</i>	
Blind Source Separation in the Adaptive Reduction of Inter-channel Interference for OFDM	1142
<i>Rafael Boloix-Tortosa and Juan José Murillo-Fuentes</i>	
BSS for Series of Electron Energy Loss Spectra	1150
<i>Danielle Nuzillard and Noël Bonnet</i>	
HOS Based Distinctive Features for Preliminary Signal Classification	1158
<i>Maciej Pędzisz and Ali Mansour</i>	
ICA as a Preprocessing Technique for Classification	1165
<i>V. Sanchez-Poblador, Enric Monte-Moreno, and Jordi Solé-Casals</i>	
Joint Delay Tracking and Interference Cancellation in DS-CDMA Systems Using Successive ICA for Oversaturated Data	1173
<i>Tapani Ristaniemi and Toni Huovinen</i>	
Layered Space Frequency Equalisation for MIMO-MC-CDMA Systems in Frequency Selective Fading Channels	1181
<i>Sonu Punnoose, Xu Zhu, and Asoke K. Nandi</i>	
Multiuser Detection and Channel Estimation in MIMO OFDM Systems via Blind Source Separation	1189
<i>Luciano Sarperi, Asoke K. Nandi, and Xu Zhu</i>	
Music Transcription with ISA and HMM	1197
<i>Emmanuel Vincent and Xavier Rodet</i>	
On Shift-Invariant Sparse Coding	1205
<i>Thomas Blumensath and Mike Davies</i>	
Reliability in ICA-Based Text Classification	1213
<i>Xavier Sevillano, Francesc Alías, and Joan Claudi Socoró</i>	
Source Separation on Astrophysical Data Sets from the WMAP Satellite	1221
<i>Guillaume Patanchon, Jacques Delabrouille, and Jean-François Cardoso</i>	
Multidimensional ICA for the Separation of Atrial and Ventricular Activities from Single Lead ECGs in Paroxysmal Atrial Fibrillation Episodes	1229
<i>Francisco Castells, Cibeles Mora, José Millet, José Joaquín Rieta, César Sánchez, and Juan Manuel Sanchis</i>	

Music Indexing Using Independent Component Analysis with Pseudo-generated Sources	1237
<i>E.S. Gopi, R. Lakshmi, N. Ramya, and S.M. Shereen Farzana</i>	

Invited Contributions

Lie Group Methods for Optimization with Orthogonality Constraints	1245
<i>Mark D. Plumbley</i>	

A Hierarchical ICA Method for Unsupervised Learning of Nonlinear Dependencies in Natural Images	1253
<i>Hyun-Jin Park and Te-Won Lee</i>	

Author Index	1263
-------------------------------	------

Independent Component Analysis and Blind Signal
Separation

Fifth International Conference, ICA 2004, Granada,
Spain, September 22-24, 2004, Proceedings

Puntonet, C.G.; Prieto, A. (Eds.)

2004, XLVI, 1270 p., Softcover

ISBN: 978-3-540-23056-4