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2023 Emre Çakır, Giambattista Parascandolo, Toni Heittola, Heikki Huttunen, and Tuomas Virtanen for "Convolutional Recurrent Neural Networks for Polyphonic Sound Event Detection", IEEE/ACM Transactions on Audio, Speech, and Language Processing, June 2017. Hossein Talebi and Peyman Milanfar for "NIMA: Neural Image Assessment", IEEE Transactions on Image Processing, August 2018. Timothy James O'Shea, Tamoghna Roy, and T. Charles Clancy for "Over-the-Air Deep Learning Based Radio Signal Classification", IEEE Journal of Selected Topics in Signal Processing, February 2018. Huigiang Xie, Zhijin Qin, Geoffrey Ye Li, and Biing-Hwang Juang for "Deep Learning Enabled Semantic Communication Systems", IEEE Transactions on Signal Processing, 2021. Le Trieu Phong, Yoshinori Aono, Takuya Hayashi, Lihua Wang, and Shiho Moriai for "Privacy-Preserving Deep Learning via Additively Homomorphic Encryption", IEEE Transactions on Information Forensics and Security, May 2018. 2022 Morten Kolbæk, Dong Yu, Zheng-Hua Tan, and Jesper Jensen for "Multitalker Speech Separation with Utterance-Level Permutation Invariant Training of Deep Recurrent Neural Networks", IEEE/ACM Transactions on Audio, Speech, and Language Processing, vol. 25, no. 10, October 2017. Haoran Sun, Xiangyi Chen, Qingjiang Shi, Mingyi Hong, Xiao Fu, and Nicholas D. Sidiropoulos for "Learning to Optimize: Training Deep Neural Networks for Interference Management", IEEE Transactions on Signal Processing, vol. 66, no. 20, October 2018. Fernando Gama, Joan Bruna, and Alejandro Ribeiro for "Stability Properties of Graph Neural Networks", IEEE Transactions on Signal Processing, vol. 68, September 2020. Stanley H. Chan, Xiran Wang, and Omar A. Elgendy for "Plug-and-Play ADMM for Image Restoration: Fixed-Point Convergence and Applications", IEEE Transactions on Computational Imaging, vol. 3, no. 1, January 2017.

David I Shuman, Pierre Vandergheynst, Daniel Kressner, and Pascal Frossard for "Distributed Signal Processing via Chebyshev Polynomial

Approximation", IEEE Transactions on Signal and Information Processing over Networks, vol. 4, no. 4, December 2018.

Kang Wei, Jun Li, Ming Ding, Chuan Ma, Howard H. Yang, Farokhi Farhad, Shi Jin, Tony Q. S. Quek and H. Vincent Poor for "Federated Learning With Differential Privacy: Algorithms and Performance Analysis", IEEE Transactions on Information Forensics and Security, vol. 15, April 2020.

	2021	Yi Luo and Nima Mesgarani, for "Conv-TasNet: Surpassing Ideal Time-Frequency Magnitude Masking for Speech Separation", IEEE/ACM Transactions on Audio, Speech, and Language Processing, vol. 27, no. 8, August 2019.
		Yaniv Romano, John Isidoro, and Peyman Milanfar, for "RAISR: Rapid and Accurate Image Super Resolution", IEEE Transactions on Computational Imaging, vol. 3, no. 1, January 2017.
		Liang Liu and Wei Yu, for "Massive Connectivity With Massive MIMO—Part I: Device Activity Detection and Channel Estimation", IEEE Transactions on Signal Processing, vol. 66, no. 11, June 2018.
		Yongzhi Li, Cheng Tao, Gonzalo Seco-Granados, Amine Mezghani, A. Lee Swindlehurst, and Liu Liu, for "Channel Estimation and Performance Analysis of One-Bit Massive MIMO Systems", IEEE Transactions on Signal Processing, vol. 65, no. 15, August 2017.
		Tsung-Hui Chang , Mingyi Hong , and Xiangfeng Wang , for "Multi-Agent Distributed Optimization via Inexact Consensus ADMM", <i>IEEE Transactions on Signal Processing</i> , vol. 63, no. 2, January 2015.
	2020	Po-Sen Huang, Minje Kim, Mark Hasegawa-Johnson, and Paris Smaragdis , for "Joint Optimization of Masks and Deep Recurrent Neural Networks for Monaural Source Separation", <i>IEEE/ACM Transactions on Audio, Speech, and Language Processing</i> , vol. 23, no. 12, December 2015.
		Stefania Sardellitti, Gesualdo Scutari, and Sergio Barbarossa, for "Joint Optimization of Radio and Computational Resources for Multicell Mobile-Edge Computing", IEEE Transactions on Signal and Information Processing Over Networks, vol. 1, no. 2, June 2015.
		Di Wen, Hu Han, and Anil K. Jain, for "Face Spoof Detection With Image Distortion Analysis", IEEE Transactions on Information Forensics and Security, vol. 10, no. 4, April 2015.
		Grégoire Mesnil, Yann Dauphin, Kaisheng Yao, Yoshua Bengio, Li Deng, Dilek Hakkani-Tur, Xiaodong He, Larry Heck, Gokhan Tur, Dong Yu, and Geoffrey Zweig, for "Using Recurrent Neural Networks for Slot Filling in Spoken Language Understanding", IEEE/ACM Transactions on Audio, Speech, and Language Processing, vol. 23, no. 3, March 2015.
_	2019	Martin Sundermeyer, Hermann Ney, and Ralf Schlüter, for "From Feedforward to Recurrent LSTM Neural Networks for Language Modeling", IEEE/ACM Transactions on Audio, Speech, and Language Processing, Volume 23, No. 3, March 2015.
		Dongeek Shin, Ahmed Kirmani, Vivek K Goyal, and Jeffrey H. Shapiro , for "Photon-Efficient Computational 3-D and Reflectivity Imaging With Single-Photon Detectors", <i>IEEE Transactions on Computational Imaging</i> , Volume 1, No. 2, June 2015.
		Kyong Hwan Jin, Michael T. McCann, Emmanuel Froustey, and Michael Unser, for "Deep Convolutional Neural Network for Inverse Problems in Imaging", IEEE Transactions on Image Processing, Volume 26, No. 9, September 2017.
		Yuxuan Wang, Arun Narayanan, and DeLiang Wang, for "On Training Targets for Supervised Speech Separation", IEEE/ACM Transactions on Audio, Speech, and Language Processing, Volume 22, No. 12, December 2014.
		Praneeth Netrapalli, Prateek Jain, and Sujay Sanghavi , for "Phase Retrieval Using Alternating Minimization", <i>IEEE Transactions on Signal Processing</i> , Volume 63, No. 18, September 2015.
		Chanwoo Kim and Richard M. Stern, for "Power-Normalized Cepstral Coefficients (PNCC) for Robust Speech Recognition", IEEE/ACM Transactions on Audio, Speech, and Language Processing, Volume 24, No. 7, July 2016.

2018

Ron Rubinstein, Tomer Peleg, and Michael Elad, for "Analysis K-SVD: A Dictionary-Learning Algorithm for the Analysis Sparse Model", IEEE Transactions on Signal Processing, vol. 61, no. 3, February 2013.

Yong Xu, Jun Du, Li-Rong Dai, and Chin-Hui Lee, for "A Regression Approach to Speech Enhancement Based on Deep Neural Networks", IEEE/ACM Transactions on Audio, Speech, and Language Processing, vol. 23, no. 1, January 2015.

Aliaksei Sandryhaila and José M. F. Moura, for "Discrete Signal Processing on Graphs: Frequency Analysis", IEEE Transactions on Signal Processing, vol. 62, no. 12, June 2014.

Seok-Hwan Park, Osvaldo Simeone, Onur Sahin, and Shlomo Shamai, for "Joint Precoding and Multivariate Backhaul Compression for the Downlink of Cloud Radio Access Networks", IEEE Transactions on Signal Processing, vol. 61, no. 22, November 2013.

Kun-Yu Wang, Anthony Man-Cho So, Tsung-Hui Chang, Wing-Kin Ma, and Chong-Yung Chi, for "Outage Constrained Robust Transmit Optimization for Multiuser MISO Downlinks: Tractable Approximations by Conic Optimization", IEEE Transactions on Signal Processing, vol. 62, no. 21, November 2014.

Hamid Palangi, Li Deng, Yelong Shen, Jianfeng Gao, Xiaodong He, Jianshu Chen, Xinying Song, and Rabab Ward, for "Deep Sentence Embedding Using Long Short-Term Memory Networks: Analysis and Application to Information Retrieval", IEEE/ACM Transactions on Audio, Speech, and Language Processing, vol. 24, no. 4, April 2016.

2017

Aliaksei Sandryhaila and José M. F. Moura, for the paper entitled, Discrete Signal Processing on Graphs, IEEE Transactions on Signal Processing, Volume 61, No. 7, April 2013.

Stamatios Lefkimmiatis, Aurélien Bourquard, and **Michael Unser,** for the paper entitled, Hessian-Based Norm Regularization for Image Restoration With Biomedical Applications, IEEE Transactions on Image Processing, Volume 21, No. 3, March 2012.

Vincent Christlein, Christian Riess, Johannes Jordan, Corinna Riess, and Elli Angelopoulou, for the paper entitled, An Evaluation of Popular Copy-Move Forgery Detection Approaches, IEEE Transactions on Information Forensics and Security, Volume 7, No. 6, December 2012.

Ulugbek S. Kamilov, Vivek K Goyal, and **Sundeep Rangan,** for the paper entitled, Message-Passing De-Quantization With Applications to Compressed Sensing, IEEE Transactions on Signal Processing, Volume 60, No. 12, December 2012.

Foad Sohrabi and **Wei Yu**, for the paper entitled, Hybrid Digital and Analog Beamforming Design for Large-Scale Antenna Arrays, IEEE Journal of Selected Topics in Signal Processing, Volume 10, No. 3, April 2016.

Nasser Mohammadiha, Paris Smaragdis, and Arne Leijon, for the paper entitled, Supervised and Unsupervised Speech Enhancement Using Nonnegative Matrix Factorization, IEEE Transactions on Audio, Speech, and Language Processing, Volume 21, No. 10, October 2013.

Cees H. Taal, Richard C. Hendriks, Richard Heusdens and **Jesper Jensen**, for the paper entitled, An Algorithm for Intelligibility Prediction of Time-Frequency Weighted Noisy Speech, *IEEE Transactions on Audio*, Speech, and Language Processing, Volume 19, No. 7, September 2011.

Jun Yu, Yong Rui and **Dacheng Tao**, for the paper entitled, Click Prediction for Web Image Reranking Using Multimodal Sparse Coding, *IEEE Transactions on Image Processing*, Volume 23, Number 5, May 2014.

Chin Keong Ho and **Rui Zhang**, for the paper entitled, Optimal Energy Allocation for Wireless Communications With Energy Harvesting Constraints, *IEEE Transactions on Signal Processing*, Volume 60, No. 9, September 2012.

Ossama Abdel-Hamid, Abdel-rahman Mohamed, Hui Jiang, Li Deng, Gerald Penn and Dong Yu, for the paper entitled, Convolutional Neural Networks for Speech Recognition, IEEE/ACM Transactions on Audio, Speech, and Language Processing, Volume 22, No. 10, October 2014.

Jason T. Parker, Philip Schniter and **Volkan Cevher,** for paper entitled, 2 Part Paper: Bilinear Generalized Approximate Message Passing—Part I: Derivation and Part II: Applications, *IEEE Transactions on Signal Processing*, Volume 62, No. 22, November 2014.

Chunming Li, Chenyang Xu, Changfeng Gui and **Martin D. Fox**, for the paper entitled, Distance Regularized Level Set Evolution and Its Application to Image Segmentation, *IEEE Transactions on Image Processing*, Volume 19, Number 12, December 2010.

Junil Choi, David J. Love and **Patrick Bidigare**, for the paper entitled, Downlink Training Techniques for FDD Massive MIMO Systems: Open-Loop and Closed-Loop Training With Memory, *IEEE Journal of Selected Topics in Signal Processing*, Volume 8, Number 5, October 2014.

Xiaoyang Tan and Bill Triggs, for the paper entitled, Enhanced Local Texture Feature Sets for Face Recognition Under Difficult Lighting Conditions, *IEEE Transactions on Image Processing*, Volume 19, Number 6, June 2010.

Tomás Pevný, Patrick Bas and **Jessica Fridrich**, for the paper entitled, Steganalysis by Subtractive Pixel Adjacency Matrix, *IEEE Transactions on Information Forensics and Security*, Volume 5, Number 2, June 2010.

Mark A. Davenport, Petros T. Boufounos, Michael B. Wakin and Richard G. Baraniuk, for the paper entitled, Signal Processing With Compressive Measurements, *IEEE Journal of Selected Topics in Signal Processing*, Volume 4, Number 2, April 2010.

Moshe Mishali and **Yonina C. Eldar**, for the paper entitled, From Theory to Practice: Sub-Nyquist Sampling of Sparse Wideband Analog Signals, *IEEE Journal of Selected Topics in Signal Processing*, Volume 4, Number 2, April 2010.

Namrata Vaswani and **Wei Lu**, for the paper entitled, Modified-CS: Modifying Compressive Sensing for Problems With Partially Known Support, *IEEE Transactions on Signal Processing*, Volume 58, Number 9, September 2010.

Hiroshi Sawada, Shoko Araki and Shoji Makino, for the paper entitled, Underdetermined Convolutive Blind Source Separation via Frequency Bin-Wise Clustering and Permutation Alignment, *IEEE Transactions on Audio*, Speech, and Language Processing, Volume 19, Number 3, March 2011.

Rony Ferzli and Lina J. Karam, for the paper entitled, A No-Reference Objective Image Sharpness Metric Based on the Notion of Just Noticeable Blur (JNB), *IEEE Transactions on Image Processing*, Volume 18, Number 4, April 2009.

Federico S. Cattivelli and **Ali H. Sayed**, for the paper entitled, Diffusion LMS Strategies for Distributed Estimation, *IEEE Transactions on Signal Processing*, Volume 58, Number 3, March 2010.

Stefania Sardellitti, Jr., Massimiliano Giona and **Sergio Barbarossa**, for paper entitled, Fast Distributed Average Consensus Algorithms Based on Advection-Diffusion Processes, *IEEE Transactions on Signal Processing*, Volume 58, Number 2, February 2010.

Alexey Ozerov and **Cédric Févotte**, for the paper entitled, Multichannel Nonnegative Matrix Factorization in Convolutive Mixtures for Audio Source Separation, *IEEE Transactions on Audio*, *Speech, and Language Processing*, Volume 18, Number 3, March 2010.

Chunming Li, **Chiu-Yen Kao**, **John C. Gore** and **Zhaohua Ding**, Minimization of Region-Scalable Fitting Energy for Image Segmentation, *IEEE Transactions on Image Processing*, Volume 17, Number 10, October 2008.

Amir Beck, Petre Stoica and Jian Li, for the paper entitled, Exact and Approximate Solutions of Source Localization Problems, *IEEE Transactions on Signal Processing*, Volume 56, Number 5, May 2008.

George Dahl, **Dong Yu**, **Li Deng** and **Alex Acero**, for the paper entitled, Context-Dependent Pre-Trained Deep Neural Networks for Large-Vocabulary Speech Recognition, *IEEE Transactions on Audio*, *Speech*, *and Language Processing*, Volume 20, Number 1, January 2012.

Matthew Herman and **Thomas Strohmer**, High-Resolution Radar via Compressed Sensing, *IEEE Transactions on Signal Processing*, Volume 57, Number 6, June 2009.

Robert Heath, **Jr.**, **Tao Wu**, **Young Hoon Kwon** and **Anthony Soong**, Multiuser MIMO in Distributed Antenna Systems with Out-of-Cell Interference, *IEEE Transactions on Signal Processing*, Volume 59, Number 10, October 2011.

2012	Zhi Quan, Shuguang Cui and Ali H. Sayed , for the paper entitled, Optimal Linear Cooperation for Spectrum Sensing in Cognitive Radio Networks <i>IEEE Journal of Selected Topics in Signal Processing, Volume 2, Number 1, February 2008.</i>
	Seung-Jean Kim, Kwangmoo Koh, Michael Lustig, Stephen Boyd and Dimitry Gorinevsky, for the paper entitled, An Interior-Point Method for Large-Scale l ₁ Regularized Least Squares <i>IEEE Journal of Selected Topics in Signal Processing</i> , Volume 1, Number 4, December 2007.
	David P. Wipf and Bhaskar D. Rao , for An Empirical Bayesian Strategy for Solving the Simultaneous Sparse Approximation Problem <i>IEEE Transaction on Signal Processing</i> , Volume 55, Number 7, July 2007.
	Robert Wilson, David Tse and Robert A. Scholtz for Channel Identification: Secret Sharing Using Reciprocity in Ultrawideband Channels IEEE Transactions on Information Forensics and Security, Volume 2, Number 3, September 2007.
	Yagiz Sutcu, Qiming Li and Nasir Memon for Protecting Biometric Templates with Sketch: Theory and Practice IEEE Transactions on Information Forensics and Security, Volume 2, Number 3, September 2007.
	Tuomas Virtanen , for the paper entitled, Monaural Sound Source Separation by Nonnegative Matrix Factorization with Temporal Continuity and Sparse Criteria, <i>IEEE Transactions on Audio</i> , <i>Speech</i> , <i>and Language Processing</i> , Volume 15, Number 3, March 2007.
2011	Tanya Ignatenko and Frans M. J. Willems, for the paper entitled, Biometric Systems: Privacy and Secrecy Aspects, <i>IEEE Transactions on Information Forensics and Security</i> , Volume 4, Number 4, December 2009.
	Stephen J. Wright, Robert D. Nowak and Mário A. T. Figueiredo, for the paper entitled, Sparse Reconstruction by Separable Approximation, IEEE Transactions on Signal Processing, Volume 57, Number 7, July 2009.
	Nicholas D. Sidiropoulos, Timothy N. Davidson and Zhi-Quan (Tom) Luo, for the paper entitled, Transmit Beamforming for Physical-Layer Multicasting, IEEE Transactions on Signal Processing, Volume 54, Number 6, June 2006.
	Pengfei Xia and Georgios B. Giannakis , for the paper entitled, Design and Analysis of Transmit-Beamforming based on Limited-Rate Feedback, <i>IEEE Transactions on Signal Processing</i> , Volume 54, Number 5, May 2006.

2	2010	Hiroyuki Takeda, Sina Farsiu and Peyman Milanfar, for the paper entitled, Kernel Regression for Image Processing and Reconstruction IEEE Transactions on Image Processing, Volume 16, Number 2, February 2007.
		Tülay Adali, Hualiang Li, Mike Novey and Jean-François Cardoso, for the paper entitled, Complex ICA Using Nonlinear Functions <i>IEEE Transactions on Signal Processing</i> , Volume 56, Number 9, September 2008.
		Siwei Lyu and Hany Farid , for the paper entitled, Steganalysis Using Higher-Order Image Statistics <i>IEEE Transactions on Information Forensics and Security</i> , Volume 1, Number 1, March 2006.
		Dmitry Malioutov, Müjdat Çetin and Alan S. Willsky, for the paper entitled, A Sparse Signal Reconstruction Perspective for Source Localization With Sensor Arrays <i>IEEE Transactions on Signal Processing</i> , Volume 53, Number 8, August 2005.
		Steven Thomas Smith, for the paper entitled, Statistical Resolution Limits and the Complexified Cramér-Rao Bound <i>IEEE Transactions on Signal Processing</i> , Volume 53, Number 5, May 2005.
		Jeremy Morris and Eric Fosler-Lussier, for the paper entitled, Conditional Random Fields for Integrating Local Discriminative Classifiers <i>IEEE Transactions on Audio</i> , <i>Speech</i> , <i>and Language Processing</i> , Volume 16, Number 3, March 2008.
200	2009	Zhou Wang, Alan Conrad Bovik, Hamid Rahim Sheikh and Eero P. Simoncelli, for the paper entitled, Image Quality Assessment: From Error Visibility to Structural Similarity, IEEE Transactions on Image Processing, Volume 13, Number 4, April 2004.
		Jan Lukáš, Jessica Fridrich and Miroslav Goljan, for the paper entitled, Digital Camera Identification From Sensor Pattern Noise, IEEE Transactions on Information Forensics and Security, Volume 1, Number 2, June 2006.
		Quentin H. Spencer, A. Lee Swindlehurst and Martin Haardt , for the paper entitled, Zero-Forcing Methods for Downlink Spatial Multiplexing in Multiuser MIMO Channels, <i>IEEE Transactions on Signal Processing</i> , Volume 52, Number 2, February 2004.
		Zhi-Quan (Tom) Luo and Shuzhong Zhang , for the paper entitled, Dynamic Spectrum Management: Complexity and Duality, <i>IEEE Journal of Selected Topics in Signal Processing</i> , Volume 2, Number 1, February 2008.
		Genyuan Wang and Moeness G. Amin , for the paper entitled, Imaging Through Unknown Walls Using Different Standoff Distances, <i>IEEE Transactions on Signal Processing</i> , Volume 54, Number 10, October 2006.
		Chul Min Lee and Shrikanth S. Narayanan, for the paper entitled, Toward Detecting Emotions in Spoken Dialogs, <i>IEEE Transactions on Speech and Audio Processing</i> , Volume 13, Number 2, March 2005.
7	2008	Javier Portilla, Vasily Strela, Martin J. Wainwright and Eero P. Simoncelli, for the paper entitled, Image Denoising Using Scale Mixtures of Gaussians in the Wavelet Domain, <i>IEEE Transactions on Image Processing</i> , Volume 12, Number 11, November 2003.
		Wei Yu and Tian Lan, for the paper entitled, Transmitter Optimization for the Multi-Antenna Downlink With Per-Antenna Power Constraints, <i>IEEE Transactions on Signal Processing</i> , Volume 55, Number 6, June 2007.
		Giuseppe Riccardi and Dilek Hakkani-Tür , for the paper entitled, Active Learning: Theory and Applications to Automatic Speech Recognition, <i>IEEE Transactions on Speech and Audio Processing</i> , Volume 13, Number 4, July 2005.
		Jingdong Chen, Jacob Benesty, Yiteng Huang and Simon Doclo , for the paper entitled, New Insights Into the Noise Reduction Wiener Filter, <i>IEEE Transactions on Audio</i> , <i>Speech, and Language Processing</i> , Volume 14, Number 4, July 2006.

2007	Jan Eriksson and Visa Koivunen, for the paper entitled, Identifiability, Separability, and Uniqueness of Linear ICA Models, IEEE Signal Processing Letters, Volume 11, Number 7, July 2004.
	Onur G. Guleryuz, for the paper entitled, Nonlinear Approximation Based Image Recovery Using Adaptive Sparse Reconstructions and Iterated Denoising - Part I: Theory, and Part II: Adaptive Algorithms, IEEE Transactions on Image Processing, Volume 15, Number 3, Part I and Part II, March 2006.
	Goran Dimić and Nicholas D. Sidiropoulos, for the paper entitled, On Downlink Beamforming With Greedy User Selection: Performance Analysis and a Simple New Algorithm, <i>Transactions on Signal Processing</i> , Volume 53, Number 10, October 2005.
	Holger Boche and Martin Schubert , for the paper entitled, Resource Allocation in Multiantenna Systems - Achieving Max-Min Fairness by Optimizing a Sum of Inverse SIR, <i>IEEE Transactions on Signal Processing</i> , Volume 54, Number 6, Part I, June 2006.
	Hong-Kwang Jeff Kuo and Yuqing Gao, for the paper entitled, Maximum Entropy Direct Models for Speech Recognition, IEEE Transactions on Audio, Speech, and Language Processing, Volume 14, Number 3, May 2006.
	Ashish Aggarwal, Shankar L. Regunathan and Kenneth Rose, for the paper entitled, Efficient Bit-Rate Scalability for Weighted Squared Error Optimization in Audio Coding, <i>IEEE Transactions on Audio</i> , <i>Speech</i> , <i>and Language Processing</i> , Volume 14, Number 4, July 2006.
2006	Dinggang Shen and Christos Davatzikos, for the paper entitled, HAMMER: Hierarchical Attribute Matching Mechanism for Elastic Registration, IEEE Transactions on Medical Imaging, Volume 21, Number 11, November 2002.
	Richard J. Kozick and Brian M. Sadler, for the paper entitled, Source Localization with Distributed Sensor Arrays and Partial Spatial Coherence, IEEE Transactions on Signal Processing, Volume 52, Number 3, March 2004.
	Eduard A. Jorswieck and Holger Boche , for the paper entitled, Optimal Transmission Strategies and Impact of Correlation in Multiantenna Systems with Different Types of Channel State Information, <i>IEEE Transactions on Signal Processing</i> , Volume 52, Number 12, December 2004.
	Martin Vetterli, Pina Marziliano and Thierry Blu, for the paper entitled, Sampling Signals with Finite Rate of Innovation, IEEE Transactions on Signal Processing, Volume 50, Number 6, June 2002.

Gerald D. T. Schuller, **Bin Yu**, **Dawei Huang** and **Bernd Edler** for the paper entitled, Perceptual Audio Coding Using Adaptive Pre- and Post-Filters and Lossless Compression, *Transactions on Speech and Audio Processing*, Volume 10, Number 6, September 2002.

2005	Wade Trappe, Min Wu, Z. Jane Wang and K.J. Ray Liu, for the paper entitled, Anti-collusion Fingerprinting for Multimedia, IEEE Transactions on Signal Processing, Special Issue on Signal Processing for Data Hiding in Digital Media and Secure Content Delivery, Volume 51, Number 4, April 2003.
	A. Lee Swindlehurst and Geert Leus, for the paper entitled, Blind and Semi-Blind Equalization for Generalized Space-Time Block Codes, IEEE Transactions on Signal Processing, Volume 50, Number 10, October 2002.
	Roberto López-Valcarce, for the paper entitled, Realizable Linear and Decision Feedback Equalizers: Properties and Connections, <i>IEEE Transactions on Signal Processing</i> , Volume 52, Number 3, March 2004.
	Shrikanth Narayanan and Alexandros Potamianos, for the paper entitled, Creating Conversational Interfaces for Children, <i>IEEE Transactions on Speech and Audio Processing</i> , Volume 10, Number 2, February 2002.
2004	Kenneth Rose and Shankar L. Regunathan, for the paper entitled, Toward Optimality in Scalable Predictive Coding, IEEE Transactions on Image Processing, Volume 10, Number 7, July 2001.
	Sergiy A. Vorobyov, Alex B. Gershman and Zhi-Quan Luo, for the paper entitled, Robust Adaptive Beamforming Using Worst-Case Performance Optimization: A Solution to the Signal Mismatch Problem, <i>IEEE Transactions on Signal Processing</i> , Volume 51, Number 2, February 2003.
	Min Dong and Lang Tong, for the paper entitled, Optimal Design and Placement of Pilot Symbols for Channel Estimation, IEEE Transactions on Signal Processing, Volume 50, Number 12, December 2002.
	Enrico Bocchieri and Brian Kan-Wing Mak, for the paper entitled, Subspace Distribution Clustering Hidden Markov Model, IEEE Transactions on Speech and Audio Processing, Volume 9, Number 3, March 2001.
2003	Tony F. Chan and Luminita A. Vese, for the paper entitled, Active Contours Without Edges, <i>IEEE Transactions on Image Processing</i> , Volume 10, Number 2, February 2001.
	Jean-Jacques Fuchs, for the paper entitled, On the Application of the Global Matched Filter to DOA Estimation with Uniform Circular Arrays, <i>IEEE Transactions on Signal Processing</i> , Volume 49, Number 4, April 2001.
	Jaume Riba, Josep Sala and Gregori Vázquez, for the paper entitled, Conditional Maximum Likelihood Timing Recovery: Estimators and Bounds, IEEE Transactions on Signal Processing, Volume 49, Number 4, April 2001.
	Thierry Blu and Michael Unser , for the paper entitled, Wavelets, Fractals, and Radial Basis Functions, <i>IEEE Transactions on Signal Processing</i> , Volume 50, Number 3, March 2002.

2002	Michail K. Tsatsanis, Ruifeng Zhang and Subrata Banerjee, for the paper entitled, Network-Assisted Diversity for Random Access Wireless Networks, IEEE Transactions on Signal Processing, Volume 48, Number 3, March 2000.
	Vitor H. Nascimento and Ali H. Sayed, for the paper entitled, On the Learning Mechanism of Adaptive Filters, IEEE Transactions on Signal Processing, Volume 48, Number 6, June 2000.
	Mark J. F. Gales, for the paper entitled, Semi-Tied Covariance Matrices for Hidden Markov Models, IEEE Transactions on Speech and Audio Processing, Volume 7, Number 3, May 1999.
	Scott C. Douglas, for the paper entitled, Fast Implementations of the Filtered-X LMS and LMS Algorithms for Multichannel Active Noise Control, IEEE Transactions on Speech and Audio Processing, Volume 7, Number 4, July 1999.
2001	David Taubman , for the paper entitled, High Performance Scalable Image Compression with EBCOT, <i>IEEE Transactions on Image Processing</i> , Volume 9, Number 7, July 2000.
	Guido M. Schuster and Aggelos K. Katsaggelos, for the paper entitled, An Optimal Polygonal Boundary Encoding Scheme in the Rate Distortion Sense, <i>IEEE Transactions on Image Processing</i> , Volume 7, Number 1, January 1998.
	Nicholas D. Sidiropoulos, Rasmus Bro and Georgios B. Giannakis, for the paper entitled, Parallel Factor Analysis in Sensor Array Processing, IEEE Transactions on Signal Processing, Volume 48, Number 8, August 2000.
	Jacob Benesty, Dennis R. Morgan and Man Mohan Sondhi, for the paper entitled, A Better Understanding and an Improved Solution to the Specific Problems of Stereophonic Acoustic Echo Cancellation, <i>IEEE Transactions on Speech and Audio Processing</i> , Volume 6, Number 2, March 1998.
2000	Anna Scaglione, Georgios B. Giannakis and Sergio Barbarossa, for the paper entitled, Redundant Filterbank Precoders and Equalizers, Part I and II, IEEE Transactions on Signal Processing, Volume 47, Number 7, July 1999.
	Makund Padmanabhan, Lalit R. Bahl and David Nahamoo, for the paper entitled, Partitioning the Feature Space of a Classifier with linear Hyperplanes, IEEE Transactions on Speech and Audio Processing, Volume 7, Number 3, May 1999.
1999	Ingemar J. Cox, Joe Kilian, F. Thompson Leighton and Talal Shamoon, for the paper entitled, Secure Spread Spectrum Watermarking for Multimedia, IEEE Transactions on Image Processing, Volume 6, Number 12, December 1997.
	Johan A. K. Suykens, Joos Vandewalle and Bart L. R. De Moor , for the paper entitled, NLq Theory: Checking and Imposing Stability of Recurrent Neural Networks for Nonlinear Modeling, <i>IEEE Transactions on Signal Processing</i> , Volume 45, Number 11, November 1997.
	Petre Stoica and Mats Viberg , for the paper entitled, Maximum Likelihood Parameter and Rank Estimation in Reduced-Rank Multivariate Linear Regressions, <i>IEEE Transactions on Signal Processing</i> , Volume 44, Number 12, December 1996.
	Mari Ostendorf, Vassilios V. Digalakis and Owen A. Kimball, for the paper entitled, From MM's to segment models: A Unified View of Stochastic Modeling for Speech Recognition, IEEE Transactions on Speech and Audio Processing, Volume 4, Number 5, September 1996.

1998	A. Said and W. A. Pearlman, for the paper entitled, An Image Multiresolution Representation for Lossless and Lossy Compression, <i>IEEE Transactions on Image Processing</i> , Volume 5, Number 9, September 1996.
	Shun-ichi Amari and Jean-François Cardoso, for the paper entitled, Blind Source Separation - Semiparametric Statistical Approach, IEEE Transactions on Signal Processing, Volume 45, Number 11, November 1997.
	R. A. Sukkar and CH. Lee, for the paper entitled, Vocabulary Independent Discriminative Utterance Verification for Nonkeyword Rejection in Subword Based Speech Recognition, <i>IEEE Transactions on Speech and Audio Processing</i> , Volume 4, Number 6, November 1996.
	Alfred O. Hero, III, Jeffrey A. Fessler and Mohammad Usman, for the paper entitled, Exploring Estimator Bias-Variance Tradeoffs Using the Uniform CR Bound, IEEE Transactions on Signal Processing, Volume 44, Number 8, August 1996.
1997	Pierre Moulin , for the paper entitled, A Multiscale Relaxation Algorithm for SNR Maximization in Nonorthogonal Subband Coding, <i>IEEE Transactions on Image Processing</i> , Volume 4, Number 9, September 1995.
	Alan V. McCree and Thomas P. Barnwell, III, for the paper entitled, A Mixed Excitation LPC Vocoder Model for Low Bit Rate Speech Coding, IEEE Transactions on Speech and Audio Processing, Volume 3, Number 4, July 1995.
	Eric Moulines, Pierre Duhamel, Jean-François Cardoso and Sylvie Mayrargue, for the paper entitled, Subspace Methods for the Blind Identification of Multichannel FIR Filters, IEEE Transactions on Signal Processing, Volume 43, Number 2, February 1995.
1996	Balas K. Natarajan, for the paper entitled, Filtering Random Noise from Deterministic Signals via Data Compression, IEEE Transactions on Signal Processing, Volume 43, Number 11, November 1995.
	Kannan Ramchandran and Martin Vetterli, for the paper entitled, Best Wavelet Packet Bases in a Rate-Distortion Sense, IEEE Transactions on Image Processing, Volume 2, Number 2, April 1993.
	Sun-Yuan Kung, K. I. Diamantaras and J. S. Taur, for the paper entitled, Adaptive Principal Component Extraction (APEX) and Applications, <i>IEEE Transactions on Signal Processing</i> , Volume 42, Number 5, May 1994.
	Jean-Luc Gauvain and Chin-Hui Lee, for the paper entitled, Maximum <i>a Posteriori</i> Estimation for Multivariate Gaussian Mixture Observations of Markov Chains, <i>IEEE Transactions on Speech and Audio Processing</i> , Volume 2, Number 2, April 1994.
1995	Michael Unser, Akram Aldroubi and Murray Eden, for the paper entitled, B-Spline Signal Processing: Part I - Theory, IEEE Transactions on Signal Processing, Volume 41, Number 2, February 1993.
	Jenq-Neng Hwang, Shyh-Rong Lay and Alan Lippman, for the paper entitled, Nonparametric Multivariate Density Estimation: A Comparative Study, IEEE Transactions on Signal Processing, Volume 42, Number 10, October 1994.
	Kuldip K. Paliwal and Bishnu S. Atal, for the paper entitled, Efficient Vector Quantization of LPC Parameters at 24 Bits/Frame, IEEE Transactions on Speech and Audio Processing, Volume 1, Number 1, January 1993.

1994	Petros Maragos, James F. Kaiser and Thomas F. Quatieri , for the paper entitled, Energy Separation in Signal Modulations with Application to Speech Analysis, <i>IEEE Transactions on Signal Processing</i> , Volume 41, Number 10, October 1993.
	Chin-Hui Lee, Chih-Heng Lin and Biing-Hwang Juang, for the paper entitled, A Study on Speaker Adaptation of the Parameters of Continuous Density Hidden Markov Models, <i>IEEE Transactions on Signal Processing</i> , Volume 39, Number 4, April 1991.
	Phu D. Hoang and Jan M. Rabaey, for the paper entitled, Scheduling of DSP Programs onto Multiprocessors for Maximum Throughput, <i>IEEE Transactions on Signal Processing</i> , Volume 41, Number 6, June 1993.
1993	Arnaud E. Jacquin, for the paper entitled, Image Coding Based on a Fractal Theory of Iterated Contractive Image Transformations, IEEE Transactions on Image Processing, Volume 1, Number 1, January 1992.
	Biing-Hwang Juang and Shigeru Katagiri , for the paper entitled, Discriminative Learning for Minimum Error Classification, <i>IEEE Transactions on Signal Processing</i> , Volume 40, Number 12, December 1992.
	Michael W. Marcellin, Thomas R. Fischer and Jerry D. Gibson, for the paper entitled, Predictive Trellis Coded Quantization of Speech, IEEE Transactions, Volume 38, Number 1, January 1990.
	KuoJuey Ray Liu, Shih-Fu Hsieh and Kung Yao, for the paper entitled, Systolic Block Householder Transformation for RLS Algorithm with Two-Level Pipelined Implementation, <i>IEEE Transactions on Signal Processing</i> , Volume 40, Number 4, April 1992.
1992	Henrique S. Malvar and David H. Staelin, for the paper entitled, The LOT: Transform Coding Without Blocking Effects, <i>IEEE Transactions on Acoustics</i> , <i>Speech</i> , and <i>Signal Processing</i> , Volume 37, Number 4, April 1989.
	Duncan M. Dlugos and Robert A. Scholt , for the paper entitled, Acquisition of Spread Spectrum Signals by an Adaptive Array, <i>IEEE Transactions on Acoustics</i> , Speech, and Signal Processing, Volume 37, Number 8, August 1989
	Rajeev Jain, Paul T. Yang and Toshiaki Yoshino, for the paper entitled, Firgen: A Computer-Aided Design System for High Performance FIR Filter Integrated Circuits, IEEE Transactions on Signal Processing, Volume 39, Number 7, July 1991.
1991	Martin Vetterli and Didier Le Gall for the paper entitled, Perfect Reconstruction FIR Filter Banks: Some Properties and Factorizations, IEEE Transactions on Acoustics, Speech, and Signal Processing, Volume 37, Number 7, July 1989.
	Mark J. T. Smith and Steven L. Eddins, for the paper entitled, Analysis/Synthesis Techniques for Subband Image Coding, IEEE Transactions on Acoustics, Speech and Signal Processing, Volume 38, Number 8, August 1990.
	Lalit R. Bahl, Peter F. Brown, Peter V. de Souza and Robert L. Mercer, for the paper entitled, A Tree-Based Statistical Language Model for Natural Language Speech Recognition, <i>IEEE Transactions on Acoustics</i> , Speech and Signal Processing, Volume 37, Number 7, July 1989.

1990	S. G. Mallat.
	R. H. Clergeot, A. Ouamri and S. Tressens.
	T. Hanazawa, G. Hinton, K. J. Lang, K. Shikano and A. Waibel.
	R. F. Lyon and C. Mead.
1989	J. A. Cadzow.
	A. Nehorai and P. Stoica.
	R. J. McAulay and T. F. Quatieri.
1988	P. P. Vaidyanathan.
.,,,,	Y. Bresler and A. Macovski.
	Y. Rockah and P. M. Schultheiss.
	S. Furui.
	Y. Kaneda and M. Miyoshi.
1987	Y. Bresler and A. Macovsk.
	S. D. O'Neil and J. W. Woods.
	G. F. Boudreaux-Bartels and T. W. Parks.
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	J. P. lanniello.
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.,,,,	
	A. J. Barabell and M. Kaveh.
	S. S. Evertt and G. S. Kang.
	N. J. Bershad, P. L. Feintuch and F. A. Reed.

1985	M. R. Civanlar and H. J. Trussell.
	A. E. Rosenberg and K. L. Shipley.
	T. Kailath and M. Wax.