

Gaussian mixture models for signal mapping and positioning

Raitoharju, M., García-Fernández, F., Hostettler, R., Piché, R. & Särkkä, S., 1 Mar 2020, In : Signal Processing. 168, 107330.

Research output: Contribution to journal › Article › Scientific › peer-review

Fusion enhancement for tracking of respiratory rate through intrinsic mode functions in photoplethysmography

Pirhonen, M. & Vehkaoja, A., 2020, In : Biomedical Signal Processing and Control. 59, 11 p., 101887.

Research output: Contribution to journal › Article › Scientific › peer-review

Online Spectrogram Inversion for Low-Latency Audio Source Separation

Magron, P. & Virtanen, T., 2020, In : IEEE Signal Processing Letters. 27, p. 306-310 5 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Functional electrical stimulation for facial pacing: Effects of waveforms on movement intensity and ratings of discomfort

Ilves, M., Rantanen, V., Venesvirta, H., Lylykangas, J., Vehkaoja, A., Mäkelä, E., Verho, J., Leikkala, J., Rautiainen, M. & Surakka, V., 2020, In : Biomedical Signal Processing and Control. 60, 7 p., 101992.

Research output: Contribution to journal › Article › Scientific › peer-review

Compressive sensed video recovery via iterative thresholding with random transforms

Belyaev, E., Codreanu, M., Juntti, M. & Egiazarian, K., 2020, In : IET Image Processing. 14, 6, p. 1187-1200 14 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Vehicle Attribute Recognition by Appearance: Computer Vision Methods for Vehicle Type, Make and Model Classification

Ni, X. & Huttunen, H., 2020, In : Journal of Signal Processing Systems.

Research output: Contribution to journal › Article › Scientific › peer-review

Digital Predistortion for Multiuser Hybrid MIMO at mmWaves

Brihuega, A., Anttila, L., Abdelaziz, M., Eriksson, T., Tufvesson, F. & Valkama, M., 2020, In : IEEE Transactions on Signal Processing. 68, p. 3603-3618 16 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Multimodal subspace support vector data description

Sohrab, F., Raitoharju, J., Iosifidis, A. & Gabbouj, M., 2020, In : Pattern Recognition. 110, 13 p., 107648.

Research output: Contribution to journal › Article › Scientific › peer-review

Self-Supervised Light Field Reconstruction Using Shearlet Transform and Cycle Consistency

Gao, Y., Bregovic, R. & Gotchev, A., 2020, In : IEEE Signal Processing Letters. 27, p. 1425-1429 5 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Bayesian receiver operating characteristic metric for linear classifiers

Hassan, S. S., Huttunen, H., Niemi, J. & Tohka, J., 1 Dec 2019, In : Pattern Recognition Letters. 128, p. 52-59 8 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Generalization of the K-SVD algorithm for minimization of β -divergence

García-Molla, V. M., San Juan, P., Virtanen, T., Vidal, A. M. & Alonso, P., 1 Sep 2019, In : Digital Signal Processing: A Review Journal. 92, p. 47-53 7 p.

Research output: Contribution to journal › Article › Scientific › peer-review

An approval of MPPT based on pv cell's simplified equivalent circuit during fast-shading conditions

Rajput, S., Averbukh, M., Yahalom, A. & Minav, T., 1 Sep 2019, In : Electronics (Switzerland). 8, 9, 14 p., 1060.

Research output: Contribution to journal › Article › Scientific › peer-review

Performance analysis of single-query 6-DoF camera pose estimation in self-driving setups

Fu, J., Pertuz, S., Matas, J. & Kämäräinen, J.-K., Sep 2019, In : Computer Vision and Image Understanding. 186, p. 58-73

Research output: Contribution to journal › Article › Scientific › peer-review

Design and implementation of a multi-sensor newborn EEG seizure and background model with inter-channel field characterization

Al-Sa'd, M. F. & Boashash, B., 1 Jul 2019, In : Digital Signal Processing: A Review Journal. 90, p. 71-99 29 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Socially inspired relaying and proactive mode selection in mmWave vehicular communications

Moltchanov, D., Kovalchukov, R., Gerasimenko, M., Andreev, S., Koucheryavy, Y. & Gerla, M., 1 Jun 2019, In : IEEE Internet of Things Journal. 6, 3, p. 5172-5183 12 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Deep Learning for Audio Signal Processing

Purwins, H., Li, B., Virtanen, T., Schlüter, J., Chang, S. Y. & Sainath, T., 1 May 2019, In : IEEE Journal on Selected Topics in Signal Processing. 13, 2, p. 206-219 14 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Convolutional low-resolution fine-grained classification

Cai, D., Chen, K., Qian, Y. & Kämäräinen, J.-K., Mar 2019, In : Pattern Recognition Letters. 119, p. 166-171
Research output: Contribution to journal > Article > Scientific > peer-review

ALMARVI System Solution for Image and Video Processing in Healthcare, Surveillance and Mobile Applications

Al-Ars, Z., van der Vlugt, S., Jääskeläinen, P. & van der Linden, F., Jan 2019, In : Journal of Signal Processing Systems. 91, 1, p. 1-7
Research output: Contribution to journal > Article > Scientific > peer-review

Video coding of dynamic 3D point cloud data

Schwarz, S., Sheikhipour, N., Fakour Sevom, V. & Hannuksela, M. M., 2019, In : APSIPA Transactions on Signal and Information Processing. 12 p., e31.
Research output: Contribution to journal > Article > Scientific > peer-review

Digital Predistortion for 5G Small Cell: GPU Implementation and RF Measurements

Pascual Campo, P., Lampu, V., Meirhaeghe, A., Boutellier, J., Anttila, L. & Valkama, M., 2019, In : Journal of Signal Processing Systems. 12 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Cascade of Boolean detector combinations

Mahkonen, K., Virtanen, T. & Kämäräinen, J., Dec 2018, In : Eurasip Journal on Image and Video Processing. 2018, 61.
Research output: Contribution to journal > Article > Scientific > peer-review

Toward Efficient Execution of RVC-CAL Dataflow Programs on Multicore Platforms

Hautala, I., Boutellier, J., Nyländén, T. & Silvén, O., Nov 2018, In : Journal of Signal Processing Systems. 90, 11, p. 1507-1517 11 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Skew-t Filter and Smoother with Improved Covariance Matrix Approximation

Nurminen, H., Ardeshiri, T., Piche, R. & Gustafsson, F., Nov 2018, In : IEEE Transactions on Signal Processing. 66, 21, p. 5618-5633
Research output: Contribution to journal > Article > Scientific > peer-review

Deep Learning Case Study for Automatic Bird Identification

Niemi, J. & Tanttu, J., 29 Oct 2018, In : Applied Sciences (Switzerland). 8, 11, 15 p., 2089.
Research output: Contribution to journal > Article > Scientific > peer-review

Benchmark database for fine-grained image classification of benthic macroinvertebrates

Raitoharju, J., Riabchenko, E., Ahmad, I., Iosifidis, A., Gabbouj, M., Kiranyaz, S., Tirronen, V., Ärje, J., Kärkkäinen, S. & Meissner, K., 1 Oct 2018, In : Image and Vision Computing. 78, p. 73-83 11 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Nonlocality-Reinforced Convolutional Neural Networks for Image Denoising

Cruz, C., Foi, A., Katkovnik, V. & Egiazarian, K., 1 Aug 2018, In : IEEE Signal Processing Letters. 25, 8, p. 1216-1220 5 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Summarization of User-Generated Sports Video by Using Deep Action Recognition Features

Tejero-de-Pablos, A., Nakashima, Y., Sato, T., Yokoya, N., Linna, M. & Rahtu, E., Aug 2018, In : IEEE Transactions on Multimedia. 20, 8, p. 2000-2011

Research output: Contribution to journal › Article › Scientific › peer-review

Stabilization to trajectories for parabolic equations

Phan, D. & Rodrigues, S. S., 1 Jun 2018, In : Mathematics of Control, Signals, and Systems. 30, 2, 11.

Research output: Contribution to journal › Article › Scientific › peer-review

Delay-Accuracy Trade-off in Opportunistic Time-of-Arrival Localization

Daniel, O., Wymeersch, H. & Nurmi, J., Jun 2018, In : IEEE Signal Processing Letters. 25, 6, p. 763-767

Research output: Contribution to journal › Article › Scientific › peer-review

Digital Predistortion for Hybrid MIMO Transmitters

Abdelaziz, M., Anttila, L., Brihuega, A., Tufvesson, F. & Valkama, M., Jun 2018, In : IEEE Journal on Selected Topics in Signal Processing. 12, 3, p. 445-454

Research output: Contribution to journal › Article › Scientific › peer-review

Analysis of common rail pressure signal of dual-fuel large industrial engine for identification of injection duration of pilot diesel injectors

Krogerus, T., Hyvönen, M. & Huhtala, K., Mar 2018, In : Fuel. 216, p. 1-9

Research output: Contribution to journal › Article › Scientific › peer-review

Detection and Classification of Acoustic Scenes and Events: Outcome of the DCASE 2016 Challenge

Mesaros, A., Heittola, T., Benetos, E., Foster, P., Lagrange, M., Virtanen, T. & Plumbley, M. D., Feb 2018, In : IEEE/ACM Transactions on Audio Speech and Language Processing. 26, 2, p. 379-393

Research output: Contribution to journal › Article › Scientific › peer-review

Probabilistic saliency estimation

Aytekin, C., Iosifidis, A. & Gabbouj, M., 2018, In : Pattern Recognition. 74, p. 359-372 14 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Separation of Moving Sound Sources Using Multichannel NMF and Acoustic Tracking

Nikunen, J., Diment, A. & Virtanen, T., 2018, In : IEEE/ACM Transactions on Audio Speech and Language Processing. 26, 2, p. 281-295

Research output: Contribution to journal › Article › Scientific › peer-review

Damped Posterior Linearization Filter

Raitoharju, M., Svensson, L., Garcia-Fernandez, A. F. & Piche, R., 2018, In : IEEE Signal Processing Letters. 25, 4

Research output: Contribution to journal › Article › Scientific › peer-review

Estimation and Mitigation of Channel Non-Reciprocity in Massive MIMO

Raeesi, O., Gokceoglu, A. & Valkama, M., 2018, In : IEEE Transactions on Signal Processing. 66, 10

Research output: Contribution to journal › Article › Scientific › peer-review

Multi-view predictive latent space learning

Yuan, J., Gao, K., Zhu, P. & Egiazarian, K., 2018, In : Pattern Recognition Letters.

Research output: Contribution to journal › Article › Scientific › peer-review

Model-Based Dynamic Scheduling for Multicore Signal Processing

Wu, J., Blattner, T., Keyrouz, W. & Bhattacharyya, S. S., 2018, In : Journal of Signal Processing Systems. p. 1-14 14 p.
Research output: Contribution to journal › Article › Scientific › peer-review

Sparse approximations in complex domain based on BM3D modeling

Katkovnik, V., Ponomarenko, M. & Egiazarian, K., 1 Dec 2017, In : Signal Processing. 141, p. 96-108 13 p.
Research output: Contribution to journal › Article › Scientific › peer-review

Multilinear class-specific discriminant analysis

Thanh Tran, D., Gabbouj, M. & Iosifidis, A., 1 Dec 2017, In : Pattern Recognition Letters. 100, p. 131-136 6 p.
Research output: Contribution to journal › Article › Scientific › peer-review

Big Media Data Analysis

Iosifidis, A., Tefas, A., Pitas, I. & Gabbouj, M., 1 Nov 2017, In : Signal Processing: Image Communication. 59, p. 105-108 4 p.
Research output: Contribution to journal › Editorial › Scientific › peer-review

Sparse Overcomplete Denoising: Aggregation Versus Global Optimization

Carrera, D., Boracchi, G., Foi, A. & Wohlberg, B., 1 Oct 2017, In : IEEE Signal Processing Letters. 24, 10, p. 1468-1472 5 p.
Research output: Contribution to journal › Article › Scientific › peer-review

Binary Non-Negative Matrix Deconvolution for Audio Dictionary Learning

Drgas, S., Virtanen, T., Lücke, J. & Hurmalainen, A., 1 Aug 2017, In : IEEE/ACM Transactions on Audio Speech and Language Processing. 25, 8, p. 1644-1656 13 p.
Research output: Contribution to journal › Article › Scientific › peer-review

Power Mitigation by Performance Equalization in a Heterogeneous Reconfigurable Multicore Architecture

Hussain, W., Hoffmann, H., Ahonen, T. & Nurmi, J., Jun 2017, In : Journal of Signal Processing Systems. 87, 3, p. 287-297 11 p.
Research output: Contribution to journal › Article › Scientific › peer-review

Sparse phase imaging based on complex domain nonlocal BM3D techniques

Katkovnik, V. & Egiazarian, K., 1 Apr 2017, In : Digital Signal Processing. 63, p. 72-85 14 p.
Research output: Contribution to journal › Article › Scientific › peer-review

Neighborhood Matching for Image Retrieval

González-Díaz, I., Birinci, M., Díaz-De-María, F. & Delp, E. J., 1 Mar 2017, In : IEEE Transactions on Multimedia. 19, 3, p. 544-558 15 p.
Research output: Contribution to journal › Article › Scientific › peer-review

State Estimation for a Class of Piecewise Affine State-Space Models

Rui, R., Ardeshiri, T., Nurminen, H., Bazanella, A. & Gustafsson, F., Jan 2017, In : IEEE Signal Processing Letters. 24, 1, p. 61-65 5 p.
Research output: Contribution to journal › Article › Scientific › peer-review

Data Flow Algorithms for Processors with Vector Extensions: Handling Actors With Internal State

Barford, L., Bhattacharyya, S. S. & Liu, Y., 2017, In : Journal of Signal Processing Systems. 87, 1, p. 21-31
Research output: Contribution to journal › Article › Scientific › peer-review

On the existence of the solution for one-dimensional discrete phase retrieval problem

Rusu, C. & Astola, J., 2017, In : Signal, Image and Video Processing. 11, 2, p. 195-202 8 p.
Research output: Contribution to journal › Article › Scientific › peer-review

Parallel Digital Predistortion Design on Mobile GPU and Embedded Multicore CPU for Mobile Transmitters

Li, K., Ghazi, A., Tarver, C., Boutellier, J., Abdelaziz, M., Anttila, L., Juntti, M., Valkama, M. & Cavallaro, J. R., 2017, In : Journal of Signal Processing Systems. 89, 3, p. 417–430 14 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Implementation of a Multirate Resampler for Multi-carrier Systems on GPUs

Kim, S. C. & Bhattacharyya, S. S., 2017, In : Journal of Signal Processing Systems. 89, 3, p. 445–455 11 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Design Flow for GPU and Multicore Execution of Dynamic Dataflow Programs

Boutellier, J. & Nyländén, T., 2017, In : Journal of Signal Processing Systems. 89, 3, p. 469–478 10 p.

Research output: Contribution to journal › Article › Scientific › peer-review

A Hybrid Task Graph Scheduler for High Performance Image Processing Workflows

Blattner, T., Keyrouz, W., Bhattacharyya, S. S., Halem, M. & Brady, M., 2017, In : Journal of Signal Processing Systems. 89, 3, p. 457–467 11 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Minimum description length sparse modeling and region merging for lossless plenoptic image compression

Helin, P., Astola, P., Rao, B. & Tabus, I., 2017, In : IEEE Journal on Selected Topics in Signal Processing. 11, 7

Research output: Contribution to journal › Article › Scientific › peer-review

Data Rate Assessment on L2–L3 CPU Bus and Bus between CPU and RAM in Modern CPUs

Komar, M. S., 2017, In : Automatic Control and Computer Sciences. 51, 7, p. 701-708 8 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Adaptive tracking of people and vehicles using mobile platforms

Ben Salem, H., Damarla, T., Sudusinghe, K., Stechele, W. & Bhattacharyya, S. S., 1 Dec 2016, In : Eurasip Journal on Advances in Signal Processing. 2016, 1, 65.

Research output: Contribution to journal › Article › Scientific › peer-review

Generalized Hampel Filters

Pearson, R. K., Neuvo, Y., Astola, J. & Gabbouj, M., 1 Dec 2016, In : Eurasip Journal on Advances in Signal Processing. 2016, 1, 87.

Research output: Contribution to journal › Article › Scientific › peer-review

Blind Separation of Audio Mixtures Through Nonnegative Tensor Factorization of Modulation Spectrograms

Barker, T. & Virtanen, T., 1 Dec 2016, In : IEEE-Acm transactions on audio speech and language processing. 24, 12, p. 2377-2389 13 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Ensembles of dense and dense sampling descriptors for the HEP-2 cells classification problem

Nanni, L., Lumini, A., dos Santos, F. L. C., Paci, M. & Hyttinen, J., 15 Oct 2016, In : Pattern Recognition Letters. 82, p. 28-35

Research output: Contribution to journal › Article › Scientific › peer-review

Image interpolation based on non-local geometric similarities and directional gradients

Zhu, S., Zeng, B., Zeng, L. & Gabbouj, M., 1 Sep 2016, In : IEEE Transactions on Multimedia. 18, 9, p. 1707-1719 13 p.

Research output: Contribution to journal › Article › Scientific › peer-review

A software tool for studying the size and shape of human cardiomyocytes

Rasku, J., Ojala, M., Pölonen, R. P., Joutsijoki, H., Gizatdinova, Y., Laurikkala, J., Kartasalo, K., Aalto-Setälä, K. & Juhola, M., 1 Sep 2016, In : Biomedical Signal Processing and Control. 30, p. 134-139 6 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Nyström-based approximate kernel subspace learning

Iosifidis, A. & Gabbouj, M., Sep 2016, In : Pattern Recognition. p. 190-197 8 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Compressive Detection of Random Subspace Signals

Razavi, A., Valkama, M. & Cabric, D., 15 Aug 2016, In : IEEE Transactions on Signal Processing. 64, 16, p. 4166-4179 14 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Variance Stabilization for Noisy+Estimate Combination in Iterative Poisson Denoising

Azzari, L. & Foi, A., 1 Aug 2016, In : IEEE Signal Processing Letters. 23, 8, p. 1086-1090 5 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Optimization of Flexible Filter Banks Based on Fast Convolution

Yli-Kaakinen, J. & Renfors, M., Aug 2016, In : Journal of Signal Processing Systems. 85, 1, p. 101-111

Research output: Contribution to journal › Article › Scientific › peer-review

Visual Voice Activity Detection in the Wild

Patrona, F., Iosifidis, A., Tefas, A., Nikolaidis, N. & Pitas, I., 1 Jun 2016, In : IEEE Transactions on Multimedia. 18, 6, p. 967-977 11 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Rotation Invariant Texture Description Using Symmetric Dense Microblock Difference

Mehta, R. & Egiazarian, K., 1 Jun 2016, In : IEEE Signal Processing Letters. 23, 6, p. 833-837 5 p.

Research output: Contribution to journal › Article › Scientific › peer-review

A Wideband Front-End Receiver Implementation on GPUs

Kim, S. C. & Bhattacharyya, S. S., 15 May 2016, In : IEEE Transactions on Signal Processing. 64, 10, p. 2602-2612 11 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Statistical analysis of interference for nanoscale electromechanical wireless communication at VHF-band

Lehtomäki, J. J., Bicen, A. O. & Akyildiz, I. F., 15 Apr 2016, In : IEEE Transactions on Signal Processing. 64, 8, p. 2040-2050 11 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Which wavelength is the best for arterial pulse waveform extraction using laser speckle imaging?

Vaz, P., Pereira, T., Figueiras, E., Correia, C., Humeau-Heurtier, A. & Cardoso, J., Mar 2016, In : Biomedical Signal Processing and Control. 25, p. 188-195 8 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Importance of maintenance data quality in extended warranty simulation

Mahlamäki, K., Niemi, A., Jokinen, J. & Borgman, J., 1 Jan 2016, In : International Journal of COMADEM. 19, 1, p. 3-10 8 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Online tests of Kalman filter consistency

Piché, R., 2016, In : International Journal of Adaptive Control and Signal Processing. 30, 1, p. 115-124

Research output: Contribution to journal › Article › Scientific › peer-review

Still image/video frame lossy compression providing a desired visual quality

Zemliachenko, A., Lukin, V., Ponomarenko, N., Egiazarian, K. & Astola, J., 2016, In : Multidimensional Systems and Signal Processing. 27, 3, p. 697-718

Research output: Contribution to journal › Article › Scientific › peer-review

IEEE 802.11ac MIMO Transceiver Baseband Processing on a VLIW Processor

Aghababaeetafreshi, M., Lehtonen, L. K., Levanen, T., Valkama, M. & Takala, J., 2016, In : Journal of Signal Processing Systems.

Research output: Contribution to journal › Article › Scientific › peer-review

Instrumentation-Driven Validation of Dataflow Applications

Chukhman, I., Jiao, Y., Salem, H. B. & Bhattacharyya, S. S., 2016, In : Journal of Signal Processing Systems. 84, 3, p. 383–397

Research output: Contribution to journal › Article › Scientific › peer-review

Dominant Rotated Local Binary Patterns (DRLBP) for texture classification

Mehta, R. & Egiazarian, K., 2016, In : Pattern Recognition Letters. 71, p. 16-22 7 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Efficiency of texture image filtering and its prediction

Rubel, O., Lukin, V., Abramov, S., Vozel, B., Egiazarian, K. & Pogrebnyak, O., 2016, In : Signal, Image and Video Processing. 10, 8, p. 1543–1550 8 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Unbiased Injection of Signal-Dependent Noise in Variance-Stabilized Range

Borges, L., Vieira, M. & Foi, A., 2016, In : IEEE Signal Processing Letters. 23, 10, p. 1494-1498

Research output: Contribution to journal › Article › Scientific › peer-review

Using multi-step proposal distribution for improved MCMC convergence in Bayesian network structure learning

Larjo, A. & Lähdesmäki, H., 27 Dec 2015, In : Eurasip Journal on Bioinformatics and Systems Biology. 2015, 1, 6.

Research output: Contribution to journal › Article › Scientific › peer-review

Energy cooperation for throughput optimization based on save-then-transmit protocol in wireless communication system

Dai, C-Q., Li, F-J. & Renfors, M., 26 Dec 2015, In : Eurasip Journal on Wireless Communications and Networking. 2015, 1, 119.

Research output: Contribution to journal › Article › Scientific › peer-review

Generative part-based Gabor object detector

Riabchenko, E. & Kämäräinen, J-K., 15 Dec 2015, In : Pattern Recognition Letters. 68, P1, p. 1-8 8 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Binomial Gaussian mixture filter

Raitoharju, M., Ali-Löytty, S. & Piché, R., 2 Dec 2015, In : Eurasip Journal on Advances in Signal Processing. 2015, 1, 36.

Research output: Contribution to journal › Article › Scientific › peer-review

A fast universal self-tuned sampler within Gibbs sampling

Martino, L., Yang, H., Luengo, D., Kanninen, J. & Corander, J., 1 Dec 2015, In : Digital Signal Processing. 47, p. 68-83

Research output: Contribution to journal › Article › Scientific › peer-review

Kalman filter with a linear state model for PDR+WLAN positioning and its application to assisting a particle filter

Raitoharju, M., Nurminen, H. & Piché, R., 1 Dec 2015, In : Eurasip Journal on Advances in Signal Processing. 2015, 1, 33.

Research output: Contribution to journal › Article › Scientific › peer-review

A New Approach to Sign-Bit-Based Parameter Estimation in OFDM Receivers

Diaz, I., Wilhelmsson, L. R., Sofotasios, P. C., Miao, Y., Tan, S., Edfors, O. & Öwall, V., 23 Nov 2015, In : Circuits, Systems and Signal Processing. 34, 11, p. 3631-3660 30 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Robust Inference for State-Space Models with Skewed Measurement Noise

Nurminen, H., Ardeshiri, T., Piché, R. & Gustafsson, F., 1 Nov 2015, In : IEEE Signal Processing Letters. 22, 11, p. 1898-1902 5 p.

Research output: Contribution to journal > Article > Scientific > peer-review

Entropy and Channel Capacity under Optimum Power and Rate Adaptation over Generalized Fading Conditions

Sofotasios, P. C., Muhaidat, S., Valkama, M., Ghogho, M. & Karagiannidis, G. K., 1 Nov 2015, In : IEEE Signal Processing Letters. 22, 11, p. 2162-2166 5 p.

Research output: Contribution to journal > Article > Scientific > peer-review

Sparse extreme learning machine classifier exploiting intrinsic graphs

Iosifidis, A., Tefas, A. & Pitas, I., 1 Nov 2015, In : Pattern Recognition Letters. 65, p. 192-196 5 p.

Research output: Contribution to journal > Article > Scientific > peer-review

Coupled dictionaries for exemplar-based speech enhancement and automatic speech recognition

Baby, D., Virtanen, T., Gemmeke, J. F. & Van hamme, H., 1 Nov 2015, In : IEEE-Acm transactions on audio speech and language processing. 23, 11, p. 1788-1799 12 p.

Research output: Contribution to journal > Article > Scientific > peer-review

Model selection for linear classifiers using Bayesian error estimation

Huttunen, H. & Tohka, J., Nov 2015, In : Pattern Recognition. 48, 11, p. 3739-3748 10 p.

Research output: Contribution to journal > Article > Scientific > peer-review

Solutions to integrals involving the marcum Q-function and applications

Sofotasios, P. C., Muhaidat, S., Karagiannidis, G. K. & Sharif, B. S., 1 Oct 2015, In : IEEE Signal Processing Letters. 22, 10, p. 1752-1756 5 p.

Research output: Contribution to journal > Article > Scientific > peer-review

Adaptive Randomized Coordinate Descent for Sparse Systems: Lasso and Greedy Algorithms

Onose, A. & Dumitrescu, B., 1 Aug 2015, In : IEEE Transactions on Signal Processing. 63, 15, p. 4091-4101 11 p.

Research output: Contribution to journal > Article > Scientific > peer-review

Adaptive sampling for compressed sensing based image compression

Zhu, S., Zeng, B. & Gabbouj, M., 1 Jul 2015, In : Journal of Visual Communication and Image Representation. 30, p. 94-105 12 p.

Research output: Contribution to journal > Article > Scientific > peer-review

Actor Merging for Dataflow Process Networks

Boutellier, J., Ersfolk, J., Lilius, J., Mattavelli, M., Roquier, G. & Silvén, O., 15 May 2015, In : IEEE Transactions on Signal Processing. 63, 10, p. 2496-2508 13 p., 7055878.

Research output: Contribution to journal > Article > Scientific > peer-review

Spectrum Sensing under RF Non-Linearities: Performance Analysis and DSP-Enhanced Receivers

Rebeiz, E., Hagh Ghadam, A. S., Valkama, M. & Cabric, D., 15 Apr 2015, In : IEEE Transactions on Signal Processing. 63, 8, p. 1950-1964 15 p.

Research output: Contribution to journal > Article > Scientific > peer-review

Multiresolution analysis for compactly supported interpolating tensor product wavelets

Höynälänmaa, T., 6 Mar 2015, In : International Journal of Wavelets Multiresolution and Information Processing. 13, 2, p. 1550010.

Research output: Contribution to journal > Article > Scientific > peer-review

On the kernel Extreme Learning Machine classifier

Iosifidis, A., Tefas, A. & Pitas, I., 1 Mar 2015, In : Pattern Recognition Letters. 54, p. 11-17 7 p.

Research output: Contribution to journal > Article > Scientific > peer-review

Image database TID2013: Peculiarities, results and perspectives

Ponomarenko, N., Jin, L., Ieremeiev, O., Lukin, V., Egiazarian, K., Astola, J., Vozel, B., Chehdi, K., Carli, M., Battisti, F. & Jay Kuo, C. C., 1 Jan 2015, In : Signal Processing: Image Communication. 30, p. 57-77 21 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Analytical model in discrete time for cross-layer video communication over LTE

Efimushkina, T., Gabbouj, M. & Samuylov, K., 2015, In : Automatic Control and Computer Sciences. 48, 6, p. 345-357 13 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Digital correction of frequency response mismatches in 2-channel time-interleaved ADCs using adaptive I/Q signal processing

Singh, S., Valkama, M., Epp, M., Anttila, L., Schlecker, W. & Ingber, E., 2015, In : Analog Integrated Circuits and Signal Processing. 82, 3, p. 543-555 13 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Subjective evaluation of Super Multi-View compressed contents on high-end light-field 3D displays

Dricot, A., Jung, J., Cagnazzo, M., Pesquet, B., Dufaux, F., Kovács, P. & Adhikarla, V. K., 2015, In : Signal Processing: Image Communication. 39, Part B, p. 369-385

Research output: Contribution to journal › Article › Scientific › peer-review

Non-negative tensor factorization models for Bayesian audio processing

Şimşekli, U., Virtanen, T. & Cemgil, A. T., 2015, In : Digital Signal Processing. 47, p. 178-191

Research output: Contribution to journal › Article › Scientific › peer-review

Smart home gateway system over Bluetooth low energy with wireless energy transfer capability

Galinina, O., Mikhaylov, K., Andreev, S., Turlikov, A. & Koucheryavy, Y., 2015, In : Eurasip Journal on Wireless Communications and Networking. 2015, 1, 178.

Research output: Contribution to journal › Article › Scientific › peer-review

Class-Specific Reference Discriminant Analysis With Application in Human Behavior Analysis

Iosifidis, A., Tefas, A. & Pitas, I., 25 Dec 2014, In : IEEE Transactions on Human-Machine Systems. 45, 3, p. 315-326

Research output: Contribution to journal › Article › Scientific › peer-review

Kernel reference discriminant analysis

Iosifidis, A., Tefas, A. & Pitas, I., 1 Nov 2014, In : Pattern Recognition Letters. 49, p. 85-91 7 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Discriminant Bag of Words based representation for human action recognition

Iosifidis, A., Tefas, A. & Pitas, I., 1 Nov 2014, In : Pattern Recognition Letters. 49, p. 185-192 8 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Implementation of a high-throughput low-latency polyphase channelizer on GPUs Design and Architectures for Signal and Image Processing 2008

Kim, S. C. & Bhattacharyya, S. S., 2014, In : Eurasip Journal on Advances in Signal Processing. 2014, 1

Research output: Contribution to journal › Article › Scientific › peer-review

Automated design of networks of transport-triggered architecture processors using dynamic dataflow programs

Yviquel, H., Boutellier, J., Raulet, M. & Casseau, E., Nov 2013, In : Signal Processing: Image Communication. 28, 10, p. 1295-1302 8 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Towards generic embedded multiprocessing for RVC-CAL dataflow programs

Boutellier, J. & Silvén, O., Nov 2013, In : Journal of Signal Processing Systems. 73, 2, p. 137-142 6 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Passive wireless antenna sensor for strain and crack sensing - Electromagnetic modeling, simulation, and testing

Yi, X., Cho, C., Cooper, J., Wang, Y., Tentzeris, M. M. & Leon, R. T., Aug 2013, In : Smart Materials and Structures. 22, 8, 085009.

Research output: Contribution to journal › Article › Scientific › peer-review

Multi-view action recognition based on action volumes, fuzzy distances and cluster discriminant analysis

Iosifidis, A., Tefas, A. & Pitas, I., Jun 2013, In : Signal Processing. 93, 6, p. 1445-1457 13 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Integration of dataflow-based heterogeneous multiprocessor scheduling techniques in GNU radio

Zaki, G. F., Plishker, W., Bhattacharyya, S. S., Clancy, C. & Kuykendall, J., Feb 2013, In : Journal of Signal Processing Systems. 70, 2, p. 177-191 15 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Dynamic action recognition based on dynemes and Extreme Learning Machine

Iosifidis, A., Tefas, A. & Pitas, I., 2013, In : Pattern Recognition Letters. 34, 15, p. 1890-1898 9 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Automatic hierarchical discovery of quasi-static schedules of RVC-CAL dataflow programs

Boutellier, J., Raulet, M. & Silvén, O., 2013, In : Journal of Signal Processing Systems. 71, 1, p. 35-40 6 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Parameterized scheduling of topological patterns in signal processing dataflow graphs

Wang, L. H., Shen, C. C., Wu, S. & Bhattacharyya, S. S., 2013, In : Journal of Signal Processing Systems. 71, 3, p. 275-286 12 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Design and synthesis for multimedia systems using the targeted dataflow interchange format

Shen, C. C., Wu, S., Sane, N., Wu, H. H., Plishker, W. & Bhattacharyya, S. S., 2012, In : IEEE Transactions on Multimedia. 14, 3 PART1, p. 630-640 11 p., 6172244.

Research output: Contribution to journal › Article › Scientific › peer-review

Mapping parameterized cyclo-static dataflow graphs onto configurable hardware

Kee, H., Shen, C. C., Bhattacharyya, S. S., Wong, I., Rao, Y. & Kornerup, J., 2012, In : Journal of Signal Processing Systems. 66, 3, p. 285-301 17 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Overview of the MPEG reconfigurable video coding framework

Bhattacharyya, S. S., Eker, J., Janneck, J. W., Lucarz, C., Mattavelli, M. & Raulet, M., May 2011, In : Journal of Signal Processing Systems. 63, 2, p. 251-263 13 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Quasi-static scheduling of CAL actor networks for reconfigurable video coding

Boutellier, J., Lucarz, C., Lafond, S., Gomez, V. M. & Mattavelli, M., May 2011, In : Journal of Signal Processing Systems. 63, 2, p. 191-202 12 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Forward simulation and inverse dipole localization with the lowest order Raviart - Thomas elements for electroencephalography

Pursiainen, S., Sorrentino, A., Campi, C. & Piana, M., Apr 2011, In : Inverse Problems. 27, 4, 045003.

Research output: Contribution to journal › Article › Scientific › peer-review

Exploiting statically schedulable regions in dataflow programs

Gu, R., Janneck, J. W., Raulet, M. & Bhattacharyya, S. S., Apr 2011, In : Journal of Signal Processing Systems. 63, 1, p. 129-142 14 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Dimensionality reduction for data visualization

Kaski, S. & Peltonen, J., Mar 2011, In : IEEE Signal Processing Magazine. 28, 2, p. 100-104 5 p., 5714379.

Research output: Contribution to journal › Article › Scientific › peer-review

Topological patterns for scalable representation and analysis of dataflow graphs

Sane, N., Kee, H., Seetharaman, G. & Bhattacharyya, S. S., 2011, In : Journal of Signal Processing Systems. 65, 2, p. 229-244 16 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Modeling and estimation of signal-dependent and correlated noise

Azzari, L., Borges, L. R. & Foi, A., 2018, *Denosing of Photographic Images and Video: Fundamentals, Open Challenges and New Trends*. SPRINGER-VERLAG LONDON LTD, p. 1-36 36 p. (Advances in Computer Vision and Pattern Recognition).

Research output: Chapter in Book/Report/Conference proceeding › Chapter › Scientific › peer-review

Data-driven stream mining systems for computer vision

Bhattacharyya, S. S., Van Der Schaar, M., Atan, O., Tekin, C. & Sudusinghe, K., 2014, *Advances in Computer Vision and Pattern Recognition*. SPRINGER-VERLAG LONDON LTD, Vol. 68. p. 249-264 16 p. (Advances in Computer Vision and Pattern Recognition; vol. 68).

Research output: Chapter in Book/Report/Conference proceeding › Chapter › Scientific › peer-review

Radio-based Sensing and Indoor Mapping with Millimeter-Wave 5G NR Signals

Barneto, C. B., Riihonen, T., Turunen, M., Koivisto, M., Talvitie, J. & Valkama, M., Jun 2020, *2020 International Conference on Localization and GNSS, ICL-GNSS 2020 - Proceedings*. Nurmi, J., Lohan, E-S., Torres-Sospedra, J., Kuusniemi, H. & Ometov, A. (eds.). IEEE, 5 p. (2020 International Conference on Localization and GNSS, ICL-GNSS 2020 - Proceedings).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Positioning Based on Noise-Limited Censored Path Loss Data

Karttunen, A., Valkama, M. & Talvitie, J., Jun 2020, *2020 International Conference on Localization and GNSS, ICL-GNSS 2020 - Proceedings*. Nurmi, J., Lohan, E-S., Torres-Sospedra, J., Kuusniemi, H. & Ometov, A. (eds.). IEEE, 6 p. (2020 International Conference on Localization and GNSS, ICL-GNSS 2020 - Proceedings).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Modeling and Mitigating 5G Wireless Downlink Interferences for Low-altitude Aerial vehicles

Wang, W., Fath, T., Valkama, M. & Lohan, E. S., Jun 2020, *2020 International Conference on Localization and GNSS, ICL-GNSS 2020 - Proceedings*. Nurmi, J., Lohan, E-S., Torres-Sospedra, J., Kuusniemi, H. & Ometov, A. (eds.). IEEE, 6 p. (2020 International Conference on Localization and GNSS, ICL-GNSS 2020 - Proceedings).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Analog Mitigation of Frequency-Modulated Interference for Improved GNSS Reception

Parlin, K. & Riihonen, T., Jun 2020, *2020 International Conference on Localization and GNSS, ICL-GNSS 2020 - Proceedings*. Nurmi, J., Lohan, E-S., Torres-Sospedra, J., Kuusniemi, H. & Ometov, A. (eds.). IEEE, 6 p. (2020 International Conference on Localization and GNSS, ICL-GNSS 2020 - Proceedings).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Adaptive Normalization for Forecasting Limit Order Book Data Using Convolutional Neural Networks

Passalis, N., Tefas, A., Kannianen, J., Gabbouj, M. & Iosifidis, A., 1 May 2020, *2020 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2020 - Proceedings*. IEEE, p. 1713-1717 5 p. (ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings; vol. 2020-May).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Peer to Peer Offloading with Delayed Feedback: An Adversary Bandit Approach

Yang, M., Zhu, H., Wang, H., Koucheryavy, Y., Samouylov, K. & Qian, H., 1 May 2020, *2020 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2020 - Proceedings*. IEEE, p. 5035-5039 5 p. (ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings; vol. 2020-May).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

5G new radio evolution towards sub-THz communications

Tervo, O., Levanen, T., Pajukoski, K., Hulkkonen, J., Wainio, P. & Valkama, M., 1 Mar 2020, *2nd 6G Wireless Summit 2020: Gain Edge for the 6G Era, 6G SUMMIT 2020*. IEEE, 6 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Protective Coating Methods for Glove-Integrated RFID Tags - A Preliminary Study

Khan, Z., He, H., Chen, X., Ukkonen, L. & Virkki, J., 1 Mar 2020, *14th European Conference on Antennas and Propagation, EuCAP 2020*. IEEE, 9135632. (14th European Conference on Antennas and Propagation, EuCAP 2020).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Headband Antenna for Wireless Power Transfer to Millimeter-Sized Neural Implants with Minimal Misalignment Effects

Ahmed, S., Sydänheimo, L., Ukkonen, L. & Björninen, T., 1 Mar 2020, *14th European Conference on Antennas and Propagation, EuCAP 2020*. IEEE, 4 p. (14th European Conference on Antennas and Propagation, EuCAP 2020).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Circularly Polarized Corner-Truncated and Slotted Microstrip Patch Antenna on Textile Substrate for Wearable Passive UHF RFID Tags

Le, D., Ukkonen, L. & Björninen, T., 1 Mar 2020, *14th European Conference on Antennas and Propagation, EuCAP 2020*. IEEE, 5 p. (14th European Conference on Antennas and Propagation, EuCAP 2020).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Measurements of Reflection and Penetration Losses in Low Terahertz Band Vehicular Communications

Petrov, V., Eckhardt, J. M., Moltchanov, D., Koucheryavy, Y. & Kurner, T., 1 Mar 2020, *14th European Conference on Antennas and Propagation, EuCAP 2020*. Institute of Electrical and Electronics Engineers Inc., 5 p. (14th European Conference on Antennas and Propagation, EuCAP 2020).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Towards Asteroid Tomography: Modellings and Measurements Using an Analogue Model

Eyraud, C., Sorsa, L. I., Herique, A., Geffrin, J. M., Pursiainen, S. & Kofman, W., 1 Mar 2020, *14th European Conference on Antennas and Propagation, EuCAP 2020*. IEEE, 4 p. (14th European Conference on Antennas and Propagation, EuCAP 2020).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Passive RFID-based Textile Touchpad

He, H., Chen, X., Raivio, L., Huttunen, H. & Virkki, J., 2020, *14th European Conference on Antennas and Propagation, EuCAP 2020*. IEEE, 4 p. 9135201

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Constrained PSK: Energy-efficient modulation for Sub-THz systems

Nasarre, I. P., Levanen, T. & Valkama, M., 2020, *2020 IEEE International Conference on Communications Workshops, ICC Workshops 2020 - Proceedings*. IEEE, 7 p. (IEEE/CIC international conference on communications in China - workshops).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Reinforcement learning for improved UAV-based integrated access and backhaul operation

Tafintsev, N., Moltchanov, D., Simsek, M., Yeh, S. P., Andreev, S., Koucheryavy, Y. & Valkama, M., 2020, *2020 IEEE International Conference on Communications Workshops, ICC Workshops 2020 - Proceedings*. IEEE, 7 p. (IEEE/CIC international conference on communications in China - workshops).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Comparing capacity gains of static and UAV-based millimeter-wave relays in clustered deployments

Gapeyenko, M., Petrov, V., Moltchanov, D., Yeh, S. P., Himayat, N. & Andreev, S., 2020, *2020 IEEE International Conference on Communications Workshops, ICC Workshops 2020 - Proceedings*. IEEE, 7 p. (IEEE/CIC international conference on communications in China - workshops).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Parametric exploration of cellular swelling in a computational model of cortical spreading depression

Genocchi, B., Cunha, A., Jain, S., Hyttinen, J., Lenk, K. & Ellingsrud, A. J., 2020, *42nd Annual International Conferences of the IEEE Engineering in Medicine and Biology Society: Enabling Innovative Technologies for Global Healthcare, EMBC 2020*. IEEE, p. 2491-2495 5 p. (Annual International Conference of the IEEE Engineering in Medicine and Biology Society; vol. 2020-July).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Prototyping directional UAV-based wireless access and backhaul systems

Gerasimenko, M., Pokorny, J., Schneider, T., Sirjov, J., Andreev, S. & Hosek, J., 1 Dec 2019, *2019 IEEE Global Communications Conference, GLOBECOM 2019 - Proceedings*. IEEE, 9014228

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Optimized wake-up scheme with bounded delay for energy-efficient MTC

Rostami, S., Lagen, S., Costa, M., Dini, P. & Valkama, M., 1 Dec 2019, *2019 IEEE Global Communications Conference, GLOBECOM 2019 - Proceedings*. IEEE, 9013534

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Gamified coding: Toy robots and playful learning in early education

Heljakka, K., Ihamaki, P., Tuomi, P. & Saarikoski, P., 1 Dec 2019, *Proceedings - 6th Annual Conference on Computational Science and Computational Intelligence, CSCI 2019*. IEEE, p. 800-805 6 p. 9071010

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

V2X Connectivity: From LTE to Joint Millimeter Wave Vehicular Communications and Radar Sensing

Petrov, V., Fodor, G., Andreev, S., Do, H. & Sahlin, H., Nov 2019, *Conference Record - 53rd Asilomar Conference on Circuits, Systems and Computers, ACSSC 2019*. Matthews, M. B. (ed.). IEEE Computer Society, p. 1120-1124 5 p. 9048846. (Conference Record - Asilomar Conference on Signals, Systems and Computers; vol. 2019-November).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Closed-Loop DPD for Digital MIMO Transmitters under Antenna Crosstalk

Brihuega, A., Abdelaziz, M., Anttila, L., Barneto, C. B. & Valkama, M., Nov 2019, *Conference Record - 53rd Asilomar Conference on Circuits, Systems and Computers, ACSSC 2019*. Matthews, M. B. (ed.). IEEE Computer Society, p. 1682-1689 8 p. 9049001. (Conference Record - Asilomar Conference on Signals, Systems and Computers; vol. 2019-November).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Fast fourier color constancy and grayness index for ISPA illumination estimation challenge

Qian, Y., Chen, K. & Yu, H., 17 Oct 2019, *ISPA 2019 - 11th International Symposium on Image and Signal Processing and Analysis*. Loncaric, S., Bregovic, R., Carli, M. & Subasic, M. (eds.). IEEE, p. 352-354 3 p. (International Symposium on Image and Signal Processing and Analysis, ISPA; vol. 2019-September).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Towards Algebraic Modeling of GPU Memory Access for Bank Conflict Mitigation

Ferranti, L. & Boutellier, J., 1 Oct 2019, *2019 IEEE International Workshop on Signal Processing Systems, SiPS 2019*. IEEE, p. 103-108 6 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

A perspective on wireless M-bus for smart electricity grids

Masek, P., Stusek, M., Zeman, K., Mozny, R., Ometov, A. & Hosek, J., 1 Jul 2019, *2019 42nd International Conference on Telecommunications and Signal Processing, TSP 2019*. Herencsar, N. (ed.). IEEE, p. 730-735 6 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

On the performance of narrow-band internet of things (NB-IoT) for delay-tolerant services

Mozny, R., Masek, P., Stusek, M., Zeman, K., Ometov, A. & Hosek, J., 1 Jul 2019, *2019 42nd International Conference on Telecommunications and Signal Processing, TSP 2019*. Herencsar, N. (ed.). IEEE, p. 637-642 6 p. (2019 42nd International Conference on Telecommunications and Signal Processing, TSP 2019).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Input magnitude data setting in error-reduction algorithm for one-dimensional discrete phase retrieval problem

Rusu, C. & Astola, J., 1 Jul 2019, *ISSCS 2019 - International Symposium on Signals, Circuits and Systems*. IEEE, 8801743

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

User Experience Study of 360° Music Videos on Computer Monitor and Virtual Reality Goggles

Holm, J., Väänänen, K. & Remans, M. M. R., 1 Jul 2019, *Information Visualization - Biomedical Visualization and Geometric Modelling and Imaging, IV 2019*. Banissi, E., Ursyn, A., McK. Bannatyne, M. W., Datia, N., Pires, J. M., Francese, R., Sarfraz, M., Wyeld, T. G., Bouali, F., Venturin, G., Azzag, H., Lebbah, M., Trutschl, M., Cvek, U., Muller, H., Nakayama, M., Kernbach, S., Caruccio, L., Risi, M., Erra, U., Vitiello, A. & Rossano, V. (eds.). IEEE, p. 81-87 7 p. (Proceedings of the International Conference on Information Visualisation).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Low-latency Deep Clustering for Speech Separation

Wang, S., Naithani, G. & Virtanen, T., 1 May 2019, *2019 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2019 - Proceedings*. IEEE, p. 76-80 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Time Difference of Arrival Estimation of Speech Signals Using Deep Neural Networks with Integrated Time-frequency Masking

Pertilä, P. & Parviainen, M., 1 May 2019, *2019 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2019 - Proceedings*. IEEE, p. 436-440 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Convex Energy Optimization of Streaming Applications for MPSoCs

Nogues, E., Mercat, A., Arrestier, F., Pelcat, M. & Menard, D., 1 May 2019, *2019 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2019 - Proceedings*. IEEE, p. 1557-1561 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Deep Reinforcement Learning for Financial Trading Using Price Trailing

Zarkias, K. S., Passalis, N., Tsantekidis, A. & Tefas, A., 1 May 2019, *2019 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2019 - Proceedings*. IEEE, p. 3067-3071 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

1-D Convolutional Neural Networks for Signal Processing Applications

Kiranyaz, S., Ince, T., Abdeljaber, O., Avci, O. & Gabbouj, M., 1 May 2019, *2019 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2019 - Proceedings*. IEEE, p. 8360-8364 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Deep Temporal Logistic Bag-of-features for Forecasting High Frequency Limit Order Book Time Series

Passalis, N., Tefas, A., Kannianen, J., Gabbouj, M. & Iosifidis, A., 1 May 2019, *2019 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2019 - Proceedings*. IEEE, p. 7545-7549 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Random Forest Oriented Fast QTBT Frame Partitioning

Amestoy, T., Mercat, A., Hamidouche, W., Bergeron, C. & Menard, D., 1 May 2019, *2019 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2019 - Proceedings*. IEEE, p. 1837-1841 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Open framework for mammography-based breast cancer risk assessment

Pertuz, S., Torres, G. F., Tamimi, R. & Kämäräinen, J., 1 May 2019, *2019 IEEE EMBS International Conference on Biomedical and Health Informatics, BHI 2019 - Proceedings*. IEEE

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Variance Preserving Initialization for Training Deep Neuromorphic Photonic Networks with Sinusoidal Activations

Passalis, N., Mourgias-Alexandris, G., Tsakyridis, A., Pleros, N. & Tefas, A., 1 May 2019, *2019 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2019 - Proceedings*. IEEE, p. 1483-1487 5 p.
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Automatic detection of water inside concrete slabs using ground penetrating radar

Khan, M. A., Vehmas, R. & Visa, A., 1 Apr 2019, *2019 IEEE Radar Conference, RadarConf 2019*. IEEE
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Exploiting Multipath Terahertz Communications for Physical Layer Security in beyond 5G Networks

Petrov, V., Moltchanov, D., Jornet, J. M. & Koucheryavy, Y., 1 Apr 2019, *INFOCOM 2019 - IEEE Conference on Computer Communications Workshops, INFOCOM WKSHPS 2019*. IEEE, p. 865-872 8 p.
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Improved Session Continuity in 5G NR with Joint Use of Multi-Connectivity and Guard Bandwidth

Kovalchukov, R., Moltchanov, D., Begishev, V., Samuylov, A., Andreev, S., Koucheryavy, Y. & Samouylov, K., 20 Feb 2019, *2018 IEEE Global Communications Conference, GLOBECOM 2018*. IEEE
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Energy Detection-Based Spectrum Sensing over Fisher-Snedecor F Fading Channels

Yoo, S. K., Cotton, S. L., Sofotasios, P. C., Muhaidat, S., Badarneh, O. S. & Karagiannidis, G. K., 20 Feb 2019, *2018 IEEE Global Communications Conference*. IEEE, 8647778
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

The Direction Cosine Matrix Algorithm in Fixed-point: Implementation and Analysis

Meirhaeghe, A., Boutellier, J. & Collin, J., 2019, *ICASSP 2019 - 2019 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*. IEEE
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Efficient Solving of Markov Decision Processes on GPUs Using Parallelized Sparse Matrices

Sapio, A., Bhattacharyya, S. S. & Wolf, M., Dec 2018, *2018 Conference on Design and Architectures for Signal and Image Processing, DASIP 2018*. IEEE COMPUTER SOCIETY PRESS, p. 13-18 6 p. (Conference on Design and Architectures for Signal and Image Processing, DASIP).
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

An active learning method using clustering and committee-based sample selection for sound event classification

Shuyang, Z., Heittola, T. & Virtanen, T., 2 Nov 2018, *16th International Workshop on Acoustic Signal Enhancement, IWAENC 2018*. IEEE, p. 116-120 5 p.
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Using sequential information in polyphonic sound event detection

Huang, G., Heittola, T. & Virtanen, T., 2 Nov 2018, *16th International Workshop on Acoustic Signal Enhancement, IWAENC 2018*. IEEE, p. 291-295 5 p.
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Acoustic scene classification: An overview of dcase 2017 challenge entries

Mesaros, A., Heittola, T. & Virtanen, T., 2 Nov 2018, *16th International Workshop on Acoustic Signal Enhancement, IWAENC 2018*. IEEE, p. 411-415 5 p.
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Time-frequency masking strategies for single-channel low-latency speech enhancement using neural networks

Parviainen, M., Pertila, P., Virtanen, T. & Grosche, P., 2 Nov 2018, *16th International Workshop on Acoustic Signal Enhancement, IWAENC 2018*. IEEE, p. 51-55 5 p.
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Deep neural network based speech separation optimizing an objective estimator of intelligibility for low latency applications
Naithani, G., Nikunen, J., Bramsloh, L. & Virtanen, T., 2 Nov 2018, *16th International Workshop on Acoustic Signal Enhancement, IWAENC 2018*. IEEE, p. 386-390 5 p.

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Multichannel NMF for source separation with ambisonic signals

Nikunen, J. & Politis, A., 2 Nov 2018, *16th International Workshop on Acoustic Signal Enhancement, IWAENC 2018*. IEEE, p. 251-255 5 p.

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Identification of Parkinson's Disease Utilizing a Single Self-recorded 20-step Walking Test Acquired by Smartphone's Inertial Measurement Unit

Mehrang, S., Jauhiainen, M., Pietilä, J., Puustinen, J., Ruokolainen, J. & Nieminen, H., 26 Oct 2018, *40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC 2018*. Institute of Electrical and Electronics Engineers Inc., Vol. 2018-July. p. 2913-2916 4 p. 8512921

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Eigen Posture Based Fall Risk Assessment System Using Kinect

Tripathy, S. R., Chakravarty, K. & Sinha, A., 26 Oct 2018, *40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC 2018*. IEEE, Vol. 2018-July. p. 1-4 4 p. 8513263

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

The Accuracy of Atrial Fibrillation Detection from Wrist Photoplethysmography. A Study on Post-Operative Patients

Tarniceriu, A., Harju, J., Yousefi, Z. R., Vehkaoja, A., Parak, J., Yli-Hankala, A. & Korhonen, I., 26 Oct 2018, *40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC 2018*. IEEE, Vol. 2018-July. p. 4844-4847 4 p. 8513197

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

LoTTA: Energy-Efficient Processor for Always-on Applications

Multanen, J., Kultala, H., Jääskeläinen, P., Viitanen, T., Tervo, A. & Takala, J., Oct 2018, *2018 IEEE International Workshop on Signal Processing Systems (SiPS)*. IEEE

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Estimation of time-varying room impulse responses of multiple sound sources from observed mixture and isolated source signals

Nikunen, J. & Virtanen, T., 10 Sep 2018, *2018 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2018 - Proceedings*. Institute of Electrical and Electronics Engineers Inc., Vol. 2018-April. p. 421-425 5 p. 8462535. (Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing).

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Low-energy graph fourier basis functions span salient objects

Malik, J., Aytekin, C. & Gabbouj, M., 10 Sep 2018, *2018 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2018 - Proceedings*. Institute of Electrical and Electronics Engineers Inc., Vol. 2018-April. p. 1548-1552 5 p. 8462672

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Statistical Evaluation of Visual Quality Metrics for Image Denoising

Egiazarian, K., Ponomarenko, M., Lukin, V. & Ieremeiev, O., 10 Sep 2018, *2018 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2018 - Proceedings*. Institute of Electrical and Electronics Engineers Inc., Vol. 2018-April. p. 6752-6756 5 p. 8462294

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

A joint target localization and classification framework for sensor networks

Lee, K., Riggan, B. S. & Bhattacharyya, S. S., 10 Sep 2018, *2018 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2018 - Proceedings*. Institute of Electrical and Electronics Engineers Inc., Vol. 2018-April. p. 3076-3080 5 p. 8462641

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

2D Video Coding of Volumetric Video Data

Schwarz, S., Hannuksela, M. M., Fakour-Sevom, V. & Sheikhi-Pour, N., 5 Sep 2018, *2018 Picture Coding Symposium, PCS 2018 - Proceedings*. IEEE, p. 61-65 5 p. 8456265

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

User Positioning in mmW 5G Networks Using Beam-RSRP Measurements and Kalman Filtering

Rastorgueva-Foi, E., Costa, M., Koivisto, M., Leppänen, K. & Valkama, M., 5 Sep 2018, *2018 21st International Conference on Information Fusion, FUSION 2018*. IEEE, p. 1150-1156 7 p. 8455289

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Inertial Odometry on Handheld Smartphones

Solin, A., Cortes, S., Rahtu, E. & Kannala, J., 5 Sep 2018, *2018 21st International Conference on Information Fusion, FUSION 2018*. IEEE, p. 1361-1368 8 p. 8455482

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Multi-source localization using a DOA Kernel based spatial covariance model and complex nonnegative matrix factorization

Carabias-Orti, J. J., Cabanas-Molero, P., Vera-Candeas, P. & Nikunen, J., 27 Aug 2018, *2018 IEEE 10th Sensor Array and Multichannel Signal Processing Workshop, SAM 2018*. IEEE, p. 440-444 5 p. 8448664. (Proceedings of the IEEE Sensor Array and Multichannel Signal Processing Workshop).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Anisotropic Spatiotemporal Regularization in Compressive Video Recovery by Adaptively Modeling the Residual Errors as Correlated Noise

Eslahi, N. & Foi, A., 27 Aug 2018, *2018 IEEE 13th Image, Video, and Multidimensional Signal Processing Workshop, IVMS 2018 - Proceedings*. IEEE, 8448455

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Performance Evaluation of UAV-Assisted mmWave Operation in Mobility-Enabled Urban Deployments

Khosravi, Z., Gerasimenko, M., Andreev, S. & Koucheryavy, Y., 20 Aug 2018, *2018 41st International Conference on Telecommunications and Signal Processing, TSP 2018*. IEEE, p. 150-153 4 p. 8441321

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Data Clustering Based on Community Structure in Mutual k-Nearest Neighbor Graph

Zhang, H., Kiranyaz, S. & Gabbouj, M., 20 Aug 2018, *2018 41st International Conference on Telecommunications and Signal Processing, TSP 2018*. IEEE, p. 262-268 7 p. 8441226

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Improvement of GPS and BeiDou extended orbit predictions with CNNs

Pihlajasalo, J., Leppäkoski, H., Ali-Löytty, S. & Piché, R., 10 Aug 2018, *26th European Navigation Conference, ENC 2018: Gothenburg, Sweden, 14-17 May, 2018*. IEEE, p. 54-59 6 p. 8433244

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Role of the user in information systems development

Jaakkola, H., Thalheim, B., Henno, J., Mäkelä, J. & Keto, H., 28 Jun 2018, *2018 41st International Convention on Information and Communication Technology, Electronics and Microelectronics, MIPRO 2018*. IEEE, p. 625-632 8 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Adjusting university education with workspace training and self-education

Henno, J., Jaakkola, H. & Makela, J., 28 Jun 2018, *2018 41st International Convention on Information and Communication Technology, Electronics and Microelectronics, MIPRO 2018*. IEEE, p. 701-708 8 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Full-duplex radio technology for simultaneously detecting and preventing improvised explosive device activation

Riihonen, T., Korpi, D., Turunen, M. & Valkama, M., 27 Jun 2018, *2018 International Conference on Military Communications and Information Systems, ICMCIS 2018*. IEEE, p. 1-4 4 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Sample-based regularization for support vector machine classification

Tran, D. T., Waris, M. A., Gabbouj, M. & Iosifidis, A., 8 Mar 2018, *Proceedings of the 7th International Conference on Image Processing Theory, Tools and Applications, IPTA 2017*. IEEE, p. 1-6 6 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Subaperture image segmentation for lossless compression

Schiopu, I., Gabbouj, M., Iosifidis, A., Zeng, B. & Liu, S., 8 Mar 2018, *Proceedings of the 7th International Conference on Image Processing Theory, Tools and Applications, IPTA 2017*. IEEE, p. 1-6 6 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Deep multiresolution color constancy

Aytekin, C., Nikkanen, J. & Gabbouj, M., 20 Feb 2018, *2017 IEEE International Conference on Image Processing, ICIP 2017 - Proceedings*. IEEE COMPUTER SOCIETY PRESS, p. 3735-3739 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

360-Degree video streaming and its subjective quality

Curcio, I. D. D., Toukoma, H. & Naik, D., 5 Feb 2018, *SMPTE 2017 Annual Technical Conference and Exhibition, SMPTE 2017*. SMPTE, p. 1-23 23 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Model-based dynamic scheduling for multicore implementation of image processing systems

Wu, J., Blattner, T., Keyrouz, W. & Bhattacharyya, S. S., 14 Nov 2017, *2017 IEEE International Workshop on Signal Processing Systems, SiPS 2017*. IEEE, 8110003

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

An optimized embedded target detection system using acoustic and seismic sensors

Lee, K., Riggan, B. S. & Bhattacharyya, S. S., 23 Oct 2017, *25th European Signal Processing Conference, EUSIPCO 2017*. IEEE, p. 986-990 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Full search equivalent fast block matching using orthonormal tree-structured haar transform

Ito, I. & Egiazarian, K., 18 Oct 2017, *ISPA 2017 - 10th International Symposium on Image and Signal Processing and Analysis*. IEEE COMPUTER SOCIETY PRESS, p. 177-182 6 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Lossless compression of high resolution disparity map images

Astola, P. & Tabus, I., 12 Sep 2017, *ISSCS 2017 - International Symposium on Signals, Circuits and Systems*. IEEE

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Convergence analysis of error-reduction algorithm for solving of the extended one-dimensional discrete phase retrieval problem

Rusu, C. & Astola, J., 12 Sep 2017, *ISSCS 2017 - International Symposium on Signals, Circuits and Systems*. IEEE

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Angular wall loss model and Extended Building Penetration model for outdoor to indoor propagation

Sheikh, M. U., Hiltunen, K. & Lempiäinen, J., 19 Jul 2017, *2017 13th International Wireless Communications and Mobile Computing Conference, IWCMC 2017*. IEEE, p. 1291-1296 6 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Analysis of multipath propagation for 5G system at higher frequencies in microcellular environment

Sheikh, M. U. & Lempiäinen, J., 19 Jul 2017, *2017 13th International Wireless Communications and Mobile Computing Conference, IWCMC 2017*. IEEE, p. 1660-1664 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Reduced-complexity digital predistortion for massive MIMO

Abdelaziz, M., Anttila, L. & Valkama, M., 16 Jun 2017, *2017 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2017 - Proceedings*. IEEE, p. 6478-6482 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

A k-nearest neighbor multilabel ranking algorithm with application to content-based image retrieval

Zhang, H., Kiranyaz, S. & Gabbouj, M., 16 Jun 2017, *2017 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2017 - Proceedings*. IEEE, p. 2587-2591 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Inband full-duplex radio access system with self-backhauling: Transmit power minimization under QOS requirements

Korpi, D., Riihonen, T. & Valkama, M., 16 Jun 2017, *2017 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2017 - Proceedings*. IEEE, p. 6558-6562 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

An accumulative fusion architecture for discriminating people and vehicles using acoustic and seismic signals

Lee, K., Riggan, B. S. & Bhattacharyya, S. S., 16 Jun 2017, *2017 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2017 - Proceedings*. IEEE, p. 2976-2980 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

The variation of air and surface temperatures in London within a 1km grid using vehicle-transect and ASTER data

Dos Santos, R. S., Taylor, J., Davies, M., Mavrogianni, A. & Milner, J., 10 May 2017, *2017 Joint Urban Remote Sensing Event, JURSE 2017*. Institute of Electrical and Electronics Engineers Inc., 7924613. (2017 Joint Urban Remote Sensing Event, JURSE 2017).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

The Effect of Light Field Reconstruction and Angular Resolution Reduction on the Quality of Experience

Kara, P. A., Kovacs, P. T., Vagharshakyan, S., Martini, M. G., Barsi, A., Balogh, T., Chuchvara, A. & Chehaibi, A., 21 Apr 2017, *2016 12th International Conference on Signal-Image Technology & Internet-Based Systems (SITIS)*. IEEE, p. 781-786 6 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

HEVC-compliant viewport-adaptive streaming of stereoscopic panoramic video

Zare, A., Sreedhar, K. K., Vadakital, V. K. M., Aminlou, A., Hannuksela, M. M. & Gabbouj, M., 19 Apr 2017, *2016 Picture Coding Symposium, PCS 2016*. IEEE

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Compact modeling and management of reconfiguration in digital channelizer implementation

Sapio, A. E., Wolf, M. & Bhattacharyya, S. S., 19 Apr 2017, *2016 IEEE Global Conference on Signal and Information Processing, GlobalSIP 2016 - Proceedings*. IEEE, p. 595-599 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Advanced architectures for self-interference cancellation in full-duplex radios: Algorithms and measurements

Korpi, D., Aghababaeetafreshi, M., Piilila, M., Anttila, L. & Valkama, M., 1 Mar 2017, *2016 50th Asilomar Conference on Signals, Systems and Computers*. IEEE, p. 1553-1557 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Low power design methodology for signal processing systems using lightweight dataflow techniques

Li, L., Fanni, T., Viitanen, T., Xie, R., Palumbo, F., Raffo, L., Huttunen, H., Takala, J. & Bhattacharyya, S. S., 13 Feb 2017, *DASIP 2016 - Proceedings of the 2016 Conference on Design and Architectures for Signal and Image Processing*. IEEE COMPUTER SOCIETY PRESS, p. 82-89 8 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Color-distribution similarity by information theoretic divergence for color images

Murayama, M., Oguro, D., Kikuchi, H., Huttunen, H., Ho, Y. S. & Shin, J., 17 Jan 2017, *2016 Asia-Pacific Signal and Information Processing Association Annual Summit and Conference, APSIPA 2016*. IEEE

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Models of architecture: Reproducible efficiency evaluation for signal processing systems

Pelcat, M., Desnos, K., Maggiani, L., Liu, Y., Heulot, J., Nezan, J. F. & Bhattacharyya, S. S., 9 Dec 2016, *IEEE International Workshop on Signal Processing Systems, SiPS 2016*. IEEE, p. 121-126 6 p. 7780083. (IEEE International Workshop on Signal Processing Systems).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Improved image quality in fast inpainting with omnidirectional filling

Hirvola, O., Viitanen, T., Sintunata, V. & Aoki, T., 22 Sep 2016, *International Conference on Image, Vision and Computing (ICIVC)*. IEEE, p. 31-35 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Automatic objective thresholding to detect neuronal action potentials

Tanskanen, J. M. A., Kapucu, F. E., Välikki, I. & Hyttinen, J. A. K., 29 Aug 2016, *Proceedings of 2016 24th European Signal Processing Conference (EUSIPCO)*. p. 662-666 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Supervised subspace learning based on deep randomized networks

Iosifidis, A. & Gabbouj, M., 18 May 2016, *2016 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*. The Institute of Electrical and Electronics Engineers, Inc., p. 2584-2588 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

On Renyi's entropy estimation with one-dimensional Gaussian kernels

Sarbu, S., 18 May 2016, *2016 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*. IEEE, p. 4408-4412 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Blind sub-Nyquist GNSS signal detection

Daniel, O., Raasakka, J., Peltola, P., Fröhle, M., Rivero-Rodriguez, A., Wymeersch, H. & Nurmi, J., 18 May 2016, *2016 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*. IEEE, p. 6575-6579 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Coordinating proactive social devices in a mobile cloud: Lessons learned and a way forward

Mäkitalo, N., Aaltonen, T. & Mikkonen, T., 14 May 2016, *MOBILESoft '16 Proceedings of the International Conference on Mobile Software Engineering and Systems*. ACM, p. 179-188 10 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

On prediction of DCT-based denoising efficiency under spatially correlated noise conditions

Rubel, O., Lukin, V. & Egiazarian, K., 12 Apr 2016, *2016 13th International Conference on Modern Problems of Radio Engineering, Telecommunications and Computer Science (TCSET)*. IEEE, p. 750-754 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

BL-LDA: Bringing bigram to supervised topic model

Park, Y., Alam, M. H., Ryu, W. J. & Lee, S., 2 Mar 2016, *Proceedings - 2015 International Conference on Computational Science and Computational Intelligence, CSCI 2015*. Institute of Electrical and Electronics Engineers Inc., p. 83-88 6 p. 7424068

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Random Value Impulse Noise Removal Based on Most Similar Neighbors

Habib, M., Rasheed, S., Hussain, A. & Ali, M., 26 Feb 2016, *2015 13th International Conference on Frontiers of Information Technology (FIT)*. IEEE, p. 329-333 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Digital full-band linearization of wideband direct-conversion receiver for radar and communications applications

Allen, M., Marttila, J., Valkama, M., Singh, S., Epp, M. & Schlecker, W., 26 Feb 2016, *2015 49th Asilomar Conference on Signals, Systems and Computers*. IEEE COMPUTER SOCIETY PRESS, p. 1361-1368 8 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Innovative e-Tourism Services on Top of Geo2Tag LBS Platform

Balandina, E., Balandin, S., Koucheryavy, Y. & Mouromtsev, D., 5 Feb 2016, *Proceedings - 11th International Conference on Signal-Image Technology and Internet-Based Systems, SITIS 2015*. IEEE, p. 752-759 8 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Accurate depth estimation from a sequence of monocular images supported by proprioceptive sensors

Davidson, P., Raunio, J. P. & Piché, R., 2016, *23rd Saint Petersburg International Conference on Integrated Navigation Systems, ICINS 2016 - Proceedings*. State Research Center of the Russian Federation, p. 249-257 9 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Computer vision aided navigation systems

Davidson, P. & Merkulova, I., 2016, *23rd Saint Petersburg International Conference on Integrated Navigation Systems, ICINS 2016 - Proceedings*. State Research Center of the Russian Federation, p. 560-562 3 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

OpenCL Programmable Exposed Datapath High Performance Low-Power Image Signal Processor

Multanen, J., Kultala, H., Koskela, M., Viitanen, T., Jääskeläinen, P., Takala, J., Danielyan, A. & Cruz, C., 2016, *2016 IEEE Nordic Circuits and Systems Conference (NORCAS)*. IEEE, 6 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

BM3D image denoising using heterogeneous computing platforms

Sarjanoja, S., Boutellier, J. & Hannuksela, J., 28 Dec 2015, *DASIP 2015 - Proceedings of the 2015 Conference on Design and Architectures for Signal and Image Processing*. IEEE COMPUTER SOCIETY PRESS, Vol. 2015-December. 7367257

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Whole-cell morphological properties of neurons constrain the nonrandom features of network connectivity

Acimovic, J., Mäki-Marttunen, T. M. & Linne, M.-L., 4 Dec 2015, *24th Annual Computational Neuroscience Meeting: CNS*2015*. Cymbalyuk, G. & Burkitt, A. (eds.). Prague: BioMed Central, Vol. 16 (Suppl 1). p. P:O7 1 p. O7

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Programming graphics processing units in the RVC-CAL dataflow language

Boutellier, J. & Nyländén, T., 2 Dec 2015, *Electronic Proceedings of the 2015 IEEE International Workshop on Signal Processing Systems, SiPS 2015*. Institute of Electrical and Electronics Engineers Inc., Vol. 2015-December. 7344994

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Cosparse dictionary learning for the orthogonal case

Irofti, P. & Dumitrescu, B., 5 Nov 2015, *2015 19th International Conference on System Theory, Control and Computing, ICSTCC 2015 - Joint Conference SINTES 19, SACCS 15, SIMSIS 19*. IEEE, p. 343-347 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

The effect of region of interest size on textural parameters

Sikiö, M., Holli-Helenius, K. K., Ryymin, P., Dastidar, P., Eskola, H. & Harrison, L., 23 Oct 2015, *2015 9th International Symposium on Image and Signal Processing and Analysis (ISPA)*. IEEE, p. 149-153 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

MOBILE3DTV: Content delivery optimization over DVB-H system

Akar, G. B. & Gotchev, A., 15 Sep 2015, *SMPTE International Conference on Stereoscopic 3D for Media and Entertainment*. SMPTE

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

The extended one-dimensional discrete phase retrieval problem

Rusu, C. & Astola, J., 14 Aug 2015, *2015 International Symposium on Signals, Circuits and Systems (ISSCS)*. IEEE

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Enhancing class discrimination in Kernel Discriminant Analysis

Iosifidis, A., Tefas, A. & Pitas, I., 4 Aug 2015, *ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings*. The Institute of Electrical and Electronics Engineers, Inc., p. 1926-1930 5 p. 7178306
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Exploiting subclass information in one-class support vector machine for video summarization

Mygdalis, V., Iosifidis, A., Tefas, A. & Pitas, I., 4 Aug 2015, *ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings*. The Institute of Electrical and Electronics Engineers, Inc., Vol. 2015-August. p. 2259-2263 5 p.
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Low-complexity robust DOA estimation

Dumitrescu, B., Rusu, C., Tabus, I. & Astola, J., 4 Aug 2015, *ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings*. The Institute of Electrical and Electronics Engineers, Inc., p. 2794-2798 5 p.
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Similarity induced group sparsity for non-negative matrix factorisation

Hurmala, A., Saeidi, R. & Virtanen, T., 4 Aug 2015, *ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings*. The Institute of Electrical and Electronics Engineers, Inc., p. 4425-4429 5 p.
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Collaborative filtering based on group coordinates for smoothing and directional sharpening

Azzari, L. & Foi, A., 4 Aug 2015, *ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings*. IEEE, p. 1573-1577 5 p.
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Exemplar-based speech enhancement for deep neural network based automatic speech recognition

Baby, D., Gemmeke, J. F., Virtanen, T. & Van Hamme, H., 4 Aug 2015, *ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings*. The Institute of Electrical and Electronics Engineers, Inc., p. 4485-4489 5 p.
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Low-Latency Sound-Source-Separation using Non-Negative Matrix Factorisation with Coupled Analysis and Synthesis Dictionaries

Barker, T., Virtanen, T. & Pontoppidan, N. H., 4 Aug 2015, *2015 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*. IEEE, p. 241-245 5 p.
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Ambient energy harvesting from a two-way talk radio for flexible wearable devices utilizing inkjet printing masking

Bito, J., Hester, J. G. & Tentzeris, M. M., 24 Jul 2015, *2015 IEEE MTT-S International Microwave Symposium, IMS 2015*. Institute of Electrical and Electronics Engineers Inc., 7167079
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

A flexible hybrid printed RF energy harvester utilizing catalyst-based copper printing technologies for far-field RF energy harvesting applications

Kim, S., Bito, J., Jeong, S., Georgiadis, A. & Tentzeris, M. M., 24 Jul 2015, *2015 IEEE MTT-S International Microwave Symposium, IMS 2015*. Institute of Electrical and Electronics Engineers Inc., 7166723
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

3D/inkjet-printed origami antennas for multi-direction RF harvesting

Kimionis, J., Georgiadis, A., Isakov, M., Qi, H. J. & Tentzeris, M. M., 24 Jul 2015, *2015 IEEE MTT-S International Microwave Symposium, IMS 2015*. Institute of Electrical and Electronics Engineers Inc., 7166878
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Additively manufactured multilayer high performance RF passive components on cellulose substrates for internet-of-things electronic circuits

Mariotti, C., Cook, B. S., Alimenti, F., Roselli, L. & Tentzeris, M. M., 24 Jul 2015, *2015 IEEE MTT-S International Microwave Symposium, IMS 2015*. Institute of Electrical and Electronics Engineers Inc., 7166924

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Lossy-to-lossless progressive coding of depth-maps

Schiopu, I. & Tabus, I., Jul 2015, *International Symposium on Signals, Circuits and Systems (ISSCS)*. Iasi, Romania, p. 1 - 4 4 p.

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Partial expansion of dataflow graphs for resource-aware scheduling of multicore signal processing systems

Zaki, G., Plishker, W., Bhattacharyya, S. S. & Fruth, F., 24 Apr 2015, *Conference Record of the 48th Asilomar Conference on Signals, Systems and Computers*. IEEE COMPUTER SOCIETY PRESS, Vol. 2015-April. p. 385-392 8 p. 7094469

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Lossless compression of regions-of-interest from retinal images

Hukkanen, J., Astola, P. & Tabus, I., 22 Jan 2015, *EUVIP 2014 - 5th European Workshop on Visual Information Processing*. The Institute of Electrical and Electronics Engineers, Inc.

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Classification of iPSC colony images using hierarchical strategies with support vector machines

Joutsijoki, H., Rasku, J., Haponen, M., Baldin, I., Gizatdinova, Y., Paci, M., Saarikoski, J., Varpa, K., Siirtola, H., Ávalos-Salguero, J., Iltanen, K., Laurikkala, J., Penttinen, K., Hyttinen, J., Aalto-Setälä, K. & Juhola, M., 13 Jan 2015, *IEEE SSCI 2014 - 2014 IEEE Symposium Series on Computational Intelligence - CIDM 2014: 2014 IEEE Symposium on Computational Intelligence and Data Mining, Proceedings*. The Institute of Electrical and Electronics Engineers, Inc., p. 86-92 7 p. 7008152

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Human action recognition in stereoscopic videos based on bag of features and disparity pyramids

Iosifidis, A., Tefas, A., Nikolaidis, N. & Pitas, I., 10 Nov 2014, *European Signal Processing Conference*. European Signal Processing Conference, EUSIPCO, p. 1317-1321 5 p.

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

GPU parallel implementation of the approximate K-SVD algorithm using OpenCL

Irofti, P. & Dumitrescu, B., 10 Nov 2014, *2014 Proceedings of the 22nd European Signal Processing Conference (EUSIPCO)*. European Signal Processing Conference, EUSIPCO, p. 271-275 5 p.

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Radar micro-Doppler feature extraction using the Singular Value Decomposition

De Wit, J. J. M., Harmanny, R. I. A. & Molchanov, P., 12 Mar 2014, *2014 International Radar Conference, Radar 2014*. The Institute of Electrical and Electronics Engineers, Inc.

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Compressed video quality assessment with modified MSE

Hu, S., Jin, L. & Kuo, C-C. J., 12 Feb 2014, *2014 Asia-Pacific Signal and Information Processing Association Annual Summit and Conference, APSIPA 2014*. The Institute of Electrical and Electronics Engineers, Inc.

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Just-in-time scheduling techniques for multicore signal processing systems

Heulot, J., Pelcat, M., Nezan, J. F., Oliva, Y., Aridhi, S. & Bhattacharyya, S. S., 5 Feb 2014, *2014 IEEE Global Conference on Signal and Information Processing, GlobalSIP 2014*. Institute of Electrical and Electronics Engineers Inc., p. 25-29 5 p. 7032071

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Data flow algorithms for processors with vector extensions: Handling actors with internal state

Barford, L., Bhattacharyya, S. S. & Liu, Y., 5 Feb 2014, *2014 IEEE Global Conference on Signal and Information Processing, GlobalSIP 2014*. Institute of Electrical and Electronics Engineers Inc., p. 20-24 5 p. 7032070

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Dynamic, data-driven spectrum management in cognitive small cell networks

Lee, C. S., Chen, W. C., Bhattacharyya, S. S. & Lee, T. S., 23 Jan 2014, 2014, *8th International Conference on Signal Processing and Communication Systems, ICSPCS 2014 - Proceedings*. Institute of Electrical and Electronics Engineers Inc., 7021121

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

The lord of the sense: A privacy preserving reputation system for participatory sensing applications

Michalas, A. & Komninos, N., 1 Jan 2014, *2014 IEEE Symposium on Computers and Communications, ISCC 2014 - Proceedings*. Institute of Electrical and Electronics Engineers Inc., 6912480

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

On application of rational Discrete Short Time Fourier Transform in epileptic seizure classification

Kovács, P., Samiee, K. & Gabbouj, M., 2014, *2014 IEEE International Conference on Acoustics, Speech and Signal processing (ICASSP), May 4-9 2014, Florence, Italy*. Piscataway: IEEE, p. 5839-5843 5 p. 6854723. (IEEE International Conference on Acoustics, Speech and Signal Processing).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

An Unsupervised Audio Segmentation Method Using Bayesian Information Criterion

Ozan, E. C., Tankiz, S., Acar, B. O. & Ciloglu, T., 2014, *6th International Symposium on Communications, Control & Signal Processing, ISCCSP, 21-23.5.2014, Athens, Greece*. NEW YORK: IEEE, p. 640-643 4 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Minimum Variance Extreme Learning Machine for human action recognition

Iosifidis, A., Tefas, A. & Pitas, I., 2014, *ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings*. The Institute of Electrical and Electronics Engineers, Inc., p. 5427-5431 5 p. 6854640

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Impact of received signal on self-interference channel estimation and achievable rates in in-band full-duplex transceivers

Korpi, D., Anttila, L. & Valkama, M., 2014, *2014 48th Asilomar Conference on Signals, Systems and Computers*. IEEE COMPUTER SOCIETY PRESS, p. 975-982 8 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Programmable lowpower implementation of the HEVC Adaptive Loop Filter

Hautala, I., Boutellier, J. & Hannuksela, J., 18 Oct 2013, *2013 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013 - Proceedings*. p. 2664-2668 5 p. 6638139

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Configurable, resource-optimized FFT architecture for OFDM communication

Cho, I., Shen, C. C., Tachwali, Y., Hsu, C. J. & Bhattacharyya, S. S., 18 Oct 2013, *2013 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013 - Proceedings*. p. 2746-2750 5 p. 6638156

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

On the effect of network structure and synaptic mechanisms on sustained bursting activity

Mäki-Marttunen, T. M., Acimovic, J., Ruohonen, K. P. & Linne, M-L., 8 Jul 2013, *Twenty Second Annual Computational Neuroscience Meeting: CNS*2013*. Cymbalyuk, G. & Prinz, A. (eds.). Paris, France: BioMed Central, Vol. Volume 14 Suppl 1. p. P247 1 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Rate-distortion based reversible watermarking for JPEG images with quality factors selection

Efimushkina, T., Egiazarian, K. & Gabbouj, M., 2013, *2013 4th European Workshop on Visual Information Processing, EUVIP 2013, Paris, France, 10.-12.2013*. University of Paris 13, p. 94-99 6 p. 6623958. (European Workshop on Visual Information Processing).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Multi-view human action recognition: A survey

Iosifidis, A., Tefas, A. & Pitas, I., 2013, *Proceedings - 2013 9th International Conference on Intelligent Information Hiding and Multimedia Signal Processing, IIH-MSP 2013*. IEEE COMPUTER SOCIETY PRESS, p. 522-525 4 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Representative class vector clustering-based discriminant analysis

Iosifidis, A., Tefas, A. & Pitas, I., 2013, *Proceedings - 2013 9th International Conference on Intelligent Information Hiding and Multimedia Signal Processing, IIH-MSP 2013*. IEEE COMPUTER SOCIETY PRESS, p. 526-529 4 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Dynamic action classification based on iterative data selection and Feedforward Neural networks

Iosifidis, A., Tefas, A. & Pitas, I., 2013, *European Signal Processing Conference*. European Signal Processing Conference, EUSIPCO, 6811572

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Multiplicative update for fast optimization of information retrieval based neighbor embedding

Peltonen, J. & Lin, Z., 2013, *2013 IEEE International Workshop on Machine Learning for Signal Processing - Proceedings of MLSP 2013*. 6661899

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

An image guided treatment platform for prostate cancer photodynamic therapy

Betrouni, N., Colin, P., Puech, P., Villers, A. & Mordon, S., 2013, *2013 35th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC 2013*. p. 370-373 4 p. 6609514

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

DBComposer: An R package for integrative analysis and management of gene expression microarray data

Kong, L., Aho, K. L., Granberg, K., Roos, C. & Autio, R., 2013, *2013 IEEE International Workshop on Genomic Signal Processing and Statistics, GENSIPS 2013 - Proceedings*. p. 92-93 2 p. 6735944

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

An efficient GPU implementation of an arbitrary resampling polyphase channelizer

Kim, S. C., Plishker, W. L. & Bhattacharyya, S. S., 2013, *DASIP 2013 - Proceedings of the 2013 Conference on Design and Architectures for Signal and Image Processing*. p. 231-238 8 p. 6661548

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Design space exploration and implementation of RVC-CAL applications using the TURNUS framework

Casale-Brunet, S., Bezati, E., Alberti, C., Roquier, G., Mattavelli, M., Janneck, J. W. & Boutellier, J., 2013, *DASIP 2013 - Proceedings of the 2013 Conference on Design and Architectures for Signal and Image Processing*. p. 341-342 2 p. 6661566

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

High-performance programs by source-level merging of RVC-CAL dataflow actors

Boutellier, J., Ghazi, A., Silvén, O. & Ersfolk, J., 2013, *2013 IEEE Workshop on Signal Processing Systems, SiPS 2013*. Institute of Electrical and Electronics Engineers Inc., p. 360-365 6 p. 6674533

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Parameterized core functional dataflow graphs and their application to design and implementation of wireless communication systems

Wang, L. H., Shen, C. C. & Bhattacharyya, S. S., 2013, *2013 IEEE Workshop on Signal Processing Systems, SiPS 2013*. Institute of Electrical and Electronics Engineers Inc., p. 1-6 6 p. 6674471

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

A system-level design approach for dynamic resource coordination and energy optimization in sensor network platforms

Cho, I., Sudusinghe, K., Shen, C. C., McGee, J. & Bhattacharyya, S., 2013, *Conference Record of the 47th Asilomar Conference on Signals, Systems and Computers*. IEEE COMPUTER SOCIETY PRESS, p. 1436-1441 6 p. 6810533

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Programmable implementation of zero-crossing demodulator on an application specific processor

Ghazi, A., Boutellier, J., Hannuksela, J., Shahabuddin, S. & Silvén, O., 2013, *2013 IEEE Workshop on Signal Processing Systems, SiPS 2013*. Institute of Electrical and Electronics Engineers Inc., p. 231-236 6 p. 6674510

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Efficient optimization for data visualization as an information retrieval task

Peltonen, J. & Georgatzis, K., 2012, *2012 IEEE International Workshop on Machine Learning for Signal Processing - Proceedings of MLSP 2012*. 6349797

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Multidimensional dataflow graph modeling and mapping for efficient GPU implementation

Wang, L. H., Shen, C. C., Seetharaman, G., Palaniappan, K. & Bhattacharyya, S. S., 2012, *Proceedings - 2012 IEEE Workshop on Signal Processing Systems, SiPS 2012*. p. 300-305 6 p. 6363272

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Application-specific instruction processor for extracting local binary patterns

Boutellier, J., Lundbom, I., Janhunen, J., Ylimainen, J. & Hannuksela, J., 2012, *DASIP 2012 - Proceedings of the 2012 Conference on Design and Architectures for Signal and Image Processing*. p. 82-89 8 p. 6385363

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Systematic integration of flowgraph- and module-level parallelism in implementation of DSP applications on multiprocessor systems-on-chip

Zhou, Z., Shen, C. C., Plishker, W., Wu, H. H. & Bhattacharyya, S. S., 2012, *ICSP 2012 - 2012 11th International Conference on Signal Processing, Proceedings*. Vol. 1. p. 402-408 7 p. 6491686

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

GPU-based acceleration of symbol timing recovery

Kim, S. C., Plishker, W. L., Bhattacharyya, S. S. & Cavallaro, J. R., 2012, *DASIP 2012 - Proceedings of the 2012 Conference on Design and Architectures for Signal and Image Processing*. p. 273-280 8 p. 6385393

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

NT-SIM: A co-simulator for networked signal processing applications

Won, S., Shen, C. C. & Bhattacharyya, S. S., 2012, *Proceedings of the 20th European Signal Processing Conference, EUSIPCO 2012*. p. 1094-1098 5 p. 6334198

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Parameterized scheduling for signal processing systems using topological patterns

Wu, S., Shen, C. C., Sane, N., Davis, K. & Bhattacharyya, S. S., 2012, *2012 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2012 - Proceedings*. p. 1561-1564 4 p. 6288190

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Emergence of global and local structural features during development of neuronal networks

Acimovic, J., 6 Jun 2011, *Proceedings of the Eighth International Workshop on Computational Systems Biology, WCSB 2011, June 6-8, 2011, Zürich, Switzerland*. Tampere: TICSP, (TICSP Series ; vol. 57).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Effects of structure on spontaneous activity in simulated neuronal networks

Mäki-Marttunen, T., Acimovic, J., Ruohonen, K. & Linne, M-L., 11 Apr 2011, *Proceedings of Mathematical Neuroscience (ICMS 2011), April 11-13, 2011, Edinburgh, Scotland*.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Automatic synthesis of TTA processor networks from RVC-CAL dataflow programs

Boutellier, J., Silvén, O. & Raulet, M., 2011, *2011 IEEE Workshop on Signal Processing Systems, SiPS 2011, Proceedings*. p. 25-30 6 p. 6088944

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Vectorization and mapping of software defined radio applications on heterogeneous multi-processor platforms

Zaki, G. F., Plishker, W., Bhattacharyya, S. S., Clancy, C. & Kuykendall, J., 2011, *2011 IEEE Workshop on Signal Processing Systems, SIPS 2011, Proceedings*. p. 31-36 6 p. 6088945

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Blind estimation of mixed noise parameters in images using robust regression curve fitting

Zabrodina, V., Abramov, S., Lukin, V., Astola, J., Vozel, B. & Chehdi, K., 2011, *European Signal Processing Conference*. p. 1135-1139 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Model-based precision analysis and optimization for digital signal processors

Kedilaya, S., Plishker, W., Purkovic, A., Johnson, B. & Bhattacharyya, S. S., 2011, *European Signal Processing Conference*. p. 506-510 5 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Modeling and optimization of dynamic signal processing in resource-aware sensor networks

Bhattacharyya, S. S., Plishker, W., Sane, N., Shen, C. C. & Wu, H. H., 2011, *2011 8th IEEE International Conference on Advanced Video and Signal Based Surveillance, AVSS 2011*. p. 449-454 6 p. 6027374

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Scheduling of CAL actor networks based on dynamic code analysis

Boutellier, J., Silven, O. & Raullet, M., 2011, *2011 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2011 - Proceedings*. p. 1609-1612 4 p. 5946805

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

On delay distribution in IEEE 802.11 wireless networks

Ivanov, S., Botvich, D. & Balasubramaniam, S., 2011, *16th IEEE Symposium on Computers and Communications, ISCC'11*. p. 254-256 3 p. 5983849

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Computational modeling of growth in cortical cultures using the NETMORPH simulation tool

Acimovic, J., Mäki-Marttunen, T. & Linne, M-L., 2010, *Neuroscience 2010, 40th Annual Meeting, San Diego, USA, 13-17 November 2010*. p. 2 p

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Computational tools for assessing the properties of 2D neural cell cultures

Acimovic, J., Teppola, H., Selinummi, J. J. & Linne, M-L., 13 Jul 2009, *Eighteenth Annual Computational Neuroscience Meeting: CNS*2009*. Johnson, D. (ed.). Berlin: BioMed Central, Vol. 10 (Suppl 1). p. P170 1 p. P170

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Guest Editorial Special Issue on Multimedia Big Data in Internet of Things

Ma, H., Yu, S., Gabbouj, M. & Mueller, P., Oct 2018, In : *IEEE Internet of Things Journal*. 5, 5, p. 3405-3407 3 p., 8534720.

Research output: Contribution to journal › Editorial › Scientific

Guest Editorial: Implementation Issues in System-on-Chip

Ellervee, P. & Nurmi, J., 1 Jun 2017, In : *Journal of Signal Processing Systems*. 87, 3, p. 269-270 2 p.

Research output: Contribution to journal › Editorial › Scientific

Introduction to the Special Section on Sound Scene and Event Analysis

Richard, G., Virtanen, T., Bello, J. P., Ono, N. & Glotin, H., 1 Jun 2017, In : *IEEE/ACM Transactions on Audio Speech and Language Processing*. 25, 6, p. 1169-1171 3 p.

Research output: Contribution to journal › Article › Scientific

Guest editorial special issue on the internet of nano things

Balasubramaniam, S., Jornet, J. M., Pierobon, M. & Koucheryavy, Y., 1 Feb 2016, In : IEEE Internet of Things Journal. 3, 1, p. 1-3 3 p.

Research output: Contribution to journal › Article › Scientific

Effects of local structure of neuronal networks on spiking activity in silico

Mäki-Marttunen, T. M., Acimovic, J., Ruohonen, K. P. & Linne, M-L., 18 Jul 2011, *Twentieth Annual Computational Neuroscience Meeting: CNS*2011*. Fellous, J-M. & Prinz, A. (eds.). Stockholm: BioMed Central, Vol. 12 (Suppl 1). p. P202 1 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Influences of digital band-pass filtering on the BCG waveform

Koivuluoma, M., Barna, L., Koivistoinen, T., Kööbi, T. & Värri, A., 13 Nov 2008, *BIOSIGNALS 2008 - Proceedings of the 1st International Conference on Bio-inspired Systems and Signal Processing*. p. 84-89 6 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Data-driven study of synchronous population activity in generic spiking neuronal networks: How much do we capture using the minimal model for the considered phenomena?

Acimovic, J., Teppola, H., Mäki-Marttunen, T. M. & Linne, M-L., 29 Oct 2018, In : BMC Neuroscience. 19, Suppl 2, p. 68-69 1 p.

Research output: Contribution to journal › Meeting Abstract › Scientific › peer-review

Data-driven study of synchronous population activity in generic spiking neuronal networks: How much do we capture using the minimal model for the considered phenomena?

Acimovic, J., Teppola, H., Mäki-Marttunen, T. M. & Linne, M-L., 20 Sep 2018.

Research output: Other conference contribution › Paper, poster or abstract › Scientific

Neural networks, cell cultures and some older work on data analysis.

Acimovic, J., 15 Jun 2009.

Research output: Other conference contribution › Paper, poster or abstract › Scientific