

- Raitoharju M, García-Fernández F, Hostettler R, Piché R, Särkkä S. **Gaussian mixture models for signal mapping and positioning**. Signal Processing. 2020 Mar 1;168. 107330. <https://doi.org/10.1016/j.sigpro.2019.107330>
- Pirhonen M, Vehkaoja A. **Fusion enhancement for tracking of respiratory rate through intrinsic mode functions in photoplethysmography**. Biomedical Signal Processing and Control. 2020;59. 101887. <https://doi.org/10.1016/j.bspc.2020.101887>
- Magron P, Virtanen T. **Online Spectrogram Inversion for Low-Latency Audio Source Separation**. IEEE Signal Processing Letters. 2020;27:306-310. <https://doi.org/10.1109/LSP.2020.2970310>
- Ilves M, Rantanen V, Venesvirta H, Lylykangas J, Vehkaoja A, Mäkelä E et al. **Functional electrical stimulation for facial pacing: Effects of waveforms on movement intensity and ratings of discomfort**. Biomedical Signal Processing and Control. 2020;60. 101992. <https://doi.org/10.1016/j.bspc.2020.101992>
- Belyaev E, Codreanu M, Juntti M, Egiazarian K. **Compressive sensed video recovery via iterative thresholding with random transforms**. IET Image Processing. 2020;14(6):1187-1200. <https://doi.org/10.1049/iet-ipr.2019.0661>
- Ni X, Huttunen H. **Vehicle Attribute Recognition by Appearance: Computer Vision Methods for Vehicle Type, Make and Model Classification**. Journal of Signal Processing Systems. 2020. <https://doi.org/10.1007/s11265-020-01567-6>
- Brihuega A, Anttila L, Abdelaziz M, Eriksson T, Tufvesson F, Valkama M. **Digital Predistortion for Multiuser Hybrid MIMO at mmWaves**. IEEE Transactions on Signal Processing. 2020;68:3603-3618. <https://doi.org/10.1109/TSP.2020.2995972>
- Sohrab F, Raitoharju J, Iosifidis A, Gabbouj M. **Multimodal subspace support vector data description**. Pattern Recognition. 2020;110. 107648. <https://doi.org/10.1016/j.patcog.2020.107648>
- Gao Y, Bregovic R, Gotchev A. **Self-Supervised Light Field Reconstruction Using Shearlet Transform and Cycle Consistency**. IEEE Signal Processing Letters. 2020;27:1425-1429. <https://doi.org/10.1109/LSP.2020.3008082>
- Hassan SS, Huttunen H, Niemi J, Tohka J. **Bayesian receiver operating characteristic metric for linear classifiers**. Pattern Recognition Letters. 2019 Dec 1;128:52-59. <https://doi.org/10.1016/j.patrec.2019.07.016>
- Garcia-Molla VM, San Juan P, Virtanen T, Vidal AM, Alonso P. **Generalization of the K-SVD algorithm for minimization of  $\beta$ -divergence**. Digital Signal Processing: A Review Journal. 2019 Sep 1;92:47-53. <https://doi.org/10.1016/j.dsp.2019.05.001>
- Rajput S, Averbukh M, Yahalom A, Minav T. **An approval of MPPT based on pv cell's simplified equivalent circuit during fast-shading conditions**. Electronics (Switzerland). 2019 Sep 1;8(9). 1060. <https://doi.org/10.3390/electronics8091060>
- Fu J, Pertuz S, Matas J, Kämäräinen J-K. **Performance analysis of single-query 6-DoF camera pose estimation in self-driving setups**. Computer Vision and Image Understanding. 2019 Sep;186:58-73. <https://doi.org/10.1016/j.cviu.2019.04.009>
- Al-Sa'd MF, Boashash B. **Design and implementation of a multi-sensor newborn EEG seizure and background model with inter-channel field characterization**. Digital Signal Processing: A Review Journal. 2019 Jul 1;90:71-99. <https://doi.org/10.1016/j.dsp.2019.02.003>
- Moltchanov D, Kovalchukov R, Gerasimenko M, Andreev S, Koucheryavy Y, Gerla M. **Socially inspired relaying and proactive mode selection in mmWave vehicular communications**. IEEE Internet of Things Journal. 2019 Jun 1;6(3):5172-5183. <https://doi.org/10.1109/JIOT.2019.2898420>
- Purwins H, Li B, Virtanen T, Schlüter J, Chang SY, Sainath T. **Deep Learning for Audio Signal Processing**. IEEE Journal on Selected Topics in Signal Processing. 2019 May 1;13(2):206-219. <https://doi.org/10.1109/JSTSP.2019.2908700>

Cai D, Chen K, Qian Y, Kämäräinen J-K. **Convolutional low-resolution fine-grained classification**. Pattern Recognition Letters. 2019 Mar;119:166-171. <https://doi.org/10.1016/j.patrec.2017.10.020>

Al-Ars Z, van der Vlugt S, Jääskeläinen P, van der Linden F. **ALMARVI System Solution for Image and Video Processing in Healthcare, Surveillance and Mobile Applications**. Journal of Signal Processing Systems. 2019 Jan;91(1):1-7. <https://doi.org/10.1007/s11265-018-1423-2>

Schwarz S, Shekipour N, Fakour Sevom V, Hannuksela MM. **Video coding of dynamic 3D point cloud data**. APSIPA Transactions on Signal and Information Processing. 2019. e31. <https://doi.org/10.1017/ATSIP.2019.24>

Pascual Campo P, Lampu V, Meirhaeghe A, Boutellier J, Anttila L, Valkama M. **Digital Predistortion for 5G Small Cell: GPU Implementation and RF Measurements**. Journal of Signal Processing Systems. 2019. <https://doi.org/10.1007/s11265-019-01502-4>

Mahkonen K, Virtanen T, Kämäräinen J. **Cascade of Boolean detector combinations**. Eurasip Journal on Image and Video Processing. 2018 Dec;2018. 61. <https://doi.org/10.1186/s13640-018-0303-9>

Hautala I, Boutellier J, Nyländen T, Silvén O. **Toward Efficient Execution of RVC-CAL Dataflow Programs on Multicore Platforms**. Journal of Signal Processing Systems. 2018 Nov;90(11):1507-1517. <https://doi.org/10.1007/s11265-018-1339-x>

Nurminen H, Ardeshiri T, Piche R, Gustafsson F. **Skew-t Filter and Smoother with Improved Covariance Matrix Approximation**. IEEE Transactions on Signal Processing. 2018 Nov;66(21):5618-5633. <https://doi.org/10.1109/TSP.2018.2865434>

Niemi J, Tanttu J. **Deep Learning Case Study for Automatic Bird Identification**. Applied Sciences (Switzerland). 2018 Oct 29;8(11). 2089. <https://doi.org/10.3390/app8112089>

Raitoharju J, Riabchenko E, Ahmad I, Iosifidis A, Gabbouj M, Kiranyaz S et al. **Benchmark database for fine-grained image classification of benthic macroinvertebrates**. Image and Vision Computing. 2018 Oct 1;78:73-83. <https://doi.org/10.1016/j.imavis.2018.06.005>

Cruz C, Foi A, Katkovnik V, Egiazarian K. **Nonlocality-Reinforced Convolutional Neural Networks for Image Denoising**. IEEE Signal Processing Letters. 2018 Aug 1;25(8):1216-1220. <https://doi.org/10.1109/LSP.2018.2850222>

Tejero-de-Pablos A, Nakashima Y, Sato T, Yokoya N, Linna M, Rahtu E. **Summarization of User-Generated Sports Video by Using Deep Action Recognition Features**. IEEE Transactions on Multimedia. 2018 Aug;20(8):2000-2011. <https://doi.org/10.1109/TMM.2018.2794265>

Phan D, Rodrigues SS. **Stabilization to trajectories for parabolic equations**. Mathematics of Control, Signals, and Systems . 2018 Jun 1;30(2). 11. <https://doi.org/10.1007/s00498-018-0218-0>

Daniel O, Wymeersch H, Nurmi J. **Delay-Accuracy Trade-off in Opportunistic Time-of-Arrival Localization**. IEEE Signal Processing Letters. 2018 Jun;25(6):763-767. <https://doi.org/10.1109/LSP.2018.2826470>

Abdelaziz M, Anttila L, Brihuega A, Tufvesson F, Valkama M. **Digital Predistortion for Hybrid MIMO Transmitters**. IEEE Journal on Selected Topics in Signal Processing. 2018 Jun;12(3):445-454. <https://doi.org/10.1109/JSTSP.2018.2824981>

Krogerus T, Hyvönen M, Huhtala K. **Analysis of common rail pressure signal of dual-fuel large industrial engine for identification of injection duration of pilot diesel injectors**. Fuel. 2018 Mar;216:1-9. <https://doi.org/10.1016/j.fuel.2017.11.152>

Mesaros A, Heittola T, Benetos E, Foster P, Lagrange M, Virtanen T et al. **Detection and Classification of Acoustic Scenes and Events: Outcome of the DCASE 2016 Challenge**. IEEE/ACM Transactions on Audio Speech and Language Processing. 2018 Feb;26(2):379-393. <https://doi.org/10.1109/TASLP.2017.2778423>

Aytekin C, Iosifidis A, Gabbouj M. **Probabilistic saliency estimation**. Pattern Recognition. 2018;74:359-372. <https://doi.org/10.1016/j.patcog.2017.09.023>

Nikunen J, Diment A, Virtanen T. **Separation of Moving Sound Sources Using Multichannel NMF and Acoustic Tracking**. IEEE/ACM Transactions on Audio Speech and Language Processing. 2018;26(2):281-295. <https://doi.org/10.1109/TASLP.2017.2774925>

Raitoharju M, Svensson L, Garcia-Fernandez AF, Piche R. **Damped Posterior Linearization Filter**. IEEE Signal Processing Letters. 2018;25(4). <https://doi.org/10.1109/LSP.2018.2806304>

Raeesi O, Gokceoglu A, Valkama M. **Estimation and Mitigation of Channel Non-Reciprocity in Massive MIMO**. IEEE Transactions on Signal Processing. 2018;66(10). <https://doi.org/10.1109/TSP.2018.2814992>

Yuan J, Gao K, Zhu P, Egiuzarian K. **Multi-view predictive latent space learning**. Pattern Recognition Letters. 2018. <https://doi.org/10.1016/j.patrec.2018.06.022>

Wu J, Blattner T, Keyrouz W, Bhattacharyya SS. **Model-Based Dynamic Scheduling for Multicore Signal Processing**. Journal of Signal Processing Systems. 2018;1-14. <https://doi.org/10.1007/s11265-018-1412-5>

Katkovnik V, Ponomarenko M, Egiuzarian K. **Sparse approximations in complex domain based on BM3D modeling**. Signal Processing. 2017 Dec 1;141:96-108. <https://doi.org/10.1016/j.sigpro.2017.05.032>

Thanh Tran D, Gabbouj M, Iosifidis A. **Multilinear class-specific discriminant analysis**. Pattern Recognition Letters. 2017 Dec 1;100:131-136. <https://doi.org/10.1016/j.patrec.2017.10.027>

Iosifidis A, Tefas A, Pitas I, Gabbouj M. **Big Media Data Analysis**. Signal Processing: Image Communication. 2017 Nov 1;59:105-108. <https://doi.org/10.1016/j.image.2017.10.004>

Carrera D, Boracchi G, Foi A, Wohlberg B. **Sparse Overcomplete Denoising: Aggregation Versus Global Optimization**. IEEE Signal Processing Letters. 2017 Oct 1;24(10):1468-1472. <https://doi.org/10.1109/LSP.2017.2734119>

Drgas S, Virtanen T, Lücke J, Hurmalainen A. **Binary Non-Negative Matrix Deconvolution for Audio Dictionary Learning**. IEEE/ACM Transactions on Audio Speech and Language Processing. 2017 Aug 1;25(8):1644-1656. <https://doi.org/10.1109/TASLP.2017.2709909>

Hussain W, Hoffmann H, Ahonen T, Nurmi J. **Power Mitigation by Performance Equalization in a Heterogeneous Reconfigurable Multicore Architecture**. Journal of Signal Processing Systems. 2017 Jun;87(3):287-297. <https://doi.org/10.1007/s11265-016-1142-5>

Katkovnik V, Egiuzarian K. **Sparse phase imaging based on complex domain nonlocal BM3D techniques**. Digital Signal Processing. 2017 Apr 1;63:72-85. <https://doi.org/10.1016/j.dsp.2017.01.002>

González-Díaz I, Birinci M, Díaz-De-María F, Delp EJ. **Neighborhood Matching for Image Retrieval**. IEEE Transactions on Multimedia. 2017 Mar 1;19(3):544-558. <https://doi.org/10.1109/TMM.2016.2616298>

Rui R, Ardeshiri T, Nurminen H, Bazanella A, Gustafsson F. **State Estimation for a Class of Piecewise Affine State-Space Models**. IEEE Signal Processing Letters. 2017 Jan;24(1):61-65. <https://doi.org/10.1109/LSP.2016.2633624>

Barford L, Bhattacharyya SS, Liu Y. **Data Flow Algorithms for Processors with Vector Extensions: Handling Actors With Internal State**. Journal of Signal Processing Systems. 2017;87(1):21-31. <https://doi.org/10.1007/s11265-015-1045-x>

Rusu C, Astola J. **On the existence of the solution for one-dimensional discrete phase retrieval problem**. Signal, Image and Video Processing. 2017;11(2):195–202. <https://doi.org/10.1007/s11760-016-0919-0>

Li K, Ghazi A, Tarver C, Boutellier J, Abdelaziz M, Anttila L et al. **Parallel Digital Predistortion Design on Mobile GPU and Embedded Multicore CPU for Mobile Transmitters**. Journal of Signal Processing Systems. 2017;89(3):417–430. <https://doi.org/10.1007/s11265-017-1233-y>

Kim SC, Bhattacharyya SS. **Implementation of a Multirate Resampler for Multi-carrier Systems on GPUs**. Journal of Signal Processing Systems. 2017;89(3):445–455. <https://doi.org/10.1007/s11265-017-1239-5>

Boutellier J, Nyländen T. **Design Flow for GPU and Multicore Execution of Dynamic Dataflow Programs**. Journal of Signal Processing Systems. 2017;89(3):469–478. <https://doi.org/10.1007/s11265-017-1260-8>

Blattner T, Keyrouz W, Bhattacharyya SS, Halem M, Brady M. **A Hybrid Task Graph Scheduler for High Performance Image Processing Workflows**. Journal of Signal Processing Systems. 2017;89(3):457–467. <https://doi.org/10.1007/s11265-017-1262-6>

Helin P, Astola P, Rao B, Tabus I. **Minimum description length sparse modeling and region merging for lossless plenoptic image compression**. IEEE Journal on Selected Topics in Signal Processing. 2017;11(7). <https://doi.org/10.1109/JSTSP.2017.2737967>

Komar MS. **Data Rate Assessment on L2–L3 CPU Bus and Bus between CPU and RAM in Modern CPUs**. Automatic Control and Computer Sciences. 2017;51(7):701-708. <https://doi.org/10.3103/S014641161707029X>

Ben Salem H, Damarla T, Sudusinghe K, Stechele W, Bhattacharyya SS. **Adaptive tracking of people and vehicles using mobile platforms**. Eurasip Journal on Advances in Signal Processing. 2016 Dec 1;2016(1). 65. <https://doi.org/10.1186/s13634-016-0356-9>

Pearson RK, Neuvo Y, Astola J, Gabbouj M. **Generalized Hampel Filters**. Eurasip Journal on Advances in Signal Processing. 2016 Dec 1;2016(1). 87. <https://doi.org/10.1186/s13634-016-0383-6>

Barker T, Virtanen T. **Blind Separation of Audio Mixtures Through Nonnegative Tensor Factorization of Modulation Spectrograms**. Ieee-Acm transactions on audio speech and language processing. 2016 Dec 1;24(12):2377-2389. <https://doi.org/10.1109/TASLP.2016.2602546>

Nanni L, Lumini A, dos Santos FLC, Paci M, Hyttinen J. **Ensembles of dense and dense sampling descriptors for the HEp-2 cells classification problem**. Pattern Recognition Letters. 2016 Oct 15;82:28-35. <https://doi.org/10.1016/j.patrec.2016.01.026>

Zhu S, Zeng B, Zeng L, Gabbouj M. **Image interpolation based on non-local geometric similarities and directional gradients**. IEEE Transactions on Multimedia. 2016 Sep 1;18(9):1707-1719. <https://doi.org/10.1109/TMM.2016.2593039>

Rasku J, Ojala M, Pölonen RP, Joutsijoki H, Gizatdinova Y, Laurikkala J et al. **A software tool for studying the size and shape of human cardiomyocytes**. Biomedical Signal Processing and Control. 2016 Sep 1;30:134-139. <https://doi.org/10.1016/j.bspc.2016.06.011>

Iosifidis A, Gabbouj M. **Nyström-based approximate kernel subspace learning**. Pattern Recognition. 2016 Sep;190-197. <https://doi.org/10.1016/j.patcog.2016.03.018>

- Razavi A, Valkama M, Cabric D. **Compressive Detection of Random Subspace Signals**. IEEE Transactions on Signal Processing. 2016 Aug 15;64(16):4166-4179. <https://doi.org/10.1109/TSP.2016.2560132>
- Azzari L, Foi A. **Variance Stabilization for Noisy+Estimate Combination in Iterative Poisson Denoising**. IEEE Signal Processing Letters. 2016 Aug 1;23(8):1086-1090. <https://doi.org/10.1109/LSP.2016.2580600>
- Yli-Kaakinen J, Renfors M. **Optimization of Flexible Filter Banks Based on Fast Convolution**. Journal of Signal Processing Systems. 2016 Aug;85(1):101-111. <https://doi.org/10.1007/s11265-015-1004-6>
- Patrona F, Iosifidis A, Tefas A, Nikolaidis N, Pitas I. **Visual Voice Activity Detection in the Wild**. IEEE Transactions on Multimedia. 2016 Jun 1;18(6):967-977. <https://doi.org/10.1109/TMM.2016.2535357>
- Mehta R, Egiazarian K. **Rotation Invariant Texture Description Using Symmetric Dense Microblock Difference**. IEEE Signal Processing Letters. 2016 Jun 1;23(6):833-837. <https://doi.org/10.1109/LSP.2016.2561311>
- Kim SC, Bhattacharyya SS. **A Wideband Front-End Receiver Implementation on GPUs**. IEEE Transactions on Signal Processing. 2016 May 15;64(10):2602-2612. <https://doi.org/10.1109/TSP.2016.2535349>
- Lehtomäki JJ, Bicen AO, Akyildiz IF. **Statistical analysis of interference for nanoscale electromechanical wireless communication at VHF-band**. IEEE Transactions on Signal Processing. 2016 Apr 15;64(8):2040-2050. <https://doi.org/10.1109/TSP.2015.2512526>
- Vaz P, Pereira T, Figueiras E, Correia C, Humeau-Heurtier A, Cardoso J. **Which wavelength is the best for arterial pulse waveform extraction using laser speckle imaging?** Biomedical Signal Processing and Control. 2016 Mar;25:188-195. <https://doi.org/10.1016/j.bspc.2015.11.013>
- Mahlamäki K, Niemi A, Jokinen J, Borgman J. **Importance of maintenance data quality in extended warranty simulation**. International Journal of COMADEM. 2016 Jan 1;19(1):3-10.
- Piché R. **Online tests of Kalman filter consistency**. International Journal of Adaptive Control and Signal Processing. 2016;30(1):115-124. <https://doi.org/10.1002/acs.2571>
- Zemliachenko A, Lukin V, Ponomarenko N, Egiazarian K, Astola J. **Still image/video frame lossy compression providing a desired visual quality**. Multidimensional Systems and Signal Processing. 2016;27(3):697-718. <https://doi.org/10.1007/s11045-015-0333-8>
- Aghababaeetafreshi M, Lehtonen LK, Levanen T, Valkama M, Takala J. **IEEE 802.11ac MIMO Transceiver Baseband Processing on a VLIW Processor**. Journal of Signal Processing Systems. 2016. <https://doi.org/10.1007/s11265-015-1032-2>
- Chukhman I, Jiao Y, Salem HB, Bhattacharyya SS. **Instrumentation-Driven Validation of Dataflow Applications**. Journal of Signal Processing Systems. 2016;84(3):383-397. <https://doi.org/10.1007/s11265-015-1073-6>
- Mehta R, Egiazarian K. **Dominant Rotated Local Binary Patterns (DRLBP) for texture classification**. Pattern Recognition Letters. 2016;71:16-22. <https://doi.org/10.1016/j.patrec.2015.11.019>
- Rubel O, Lukin V, Abramov S, Vozel B, Egiazarian K, Pogrebnnyak O. **Efficiency of texture image filtering and its prediction**. Signal, Image and Video Processing. 2016;10(8):1543-1550. <https://doi.org/10.1007/s11760-016-0969-3>
- Borges L, Vieira M, Foi A. **Unbiased Injection of Signal-Dependent Noise in Variance-Stabilized Range**. IEEE Signal Processing Letters. 2016;23(10):1494-1498. <https://doi.org/10.1109/LSP.2016.2601689>

- Larjo A, Lähdesmäki H. **Using multi-step proposal distribution for improved MCMC convergence in Bayesian network structure learning.** *Eurasip Journal on Bioinformatics and Systems Biology*. 2015 Dec 27;2015(1). 6. <https://doi.org/10.1186/s13637-015-0024-7>
- Dai C-Q, Li F-J, Renfors M. **Energy cooperation for throughput optimization based on save-then-transmit protocol in wireless communication system.** *Eurasip Journal on Wireless Communications and Networking*. 2015 Dec 26;2015(1). 119. <https://doi.org/10.1186/s13638-015-0364-8>
- Riabchenko E, Kämäräinen J-K. **Generative part-based Gabor object detector.** *Pattern Recognition Letters*. 2015 Dec 15;68(P1):1-8. <https://doi.org/10.1016/j.patrec.2015.08.004>
- Raitoharju M, Ali-Löytty S, Piché R. **Binomial Gaussian mixture filter.** *Eurasip Journal on Advances in Signal Processing*. 2015 Dec 2;2015(1). 36. <https://doi.org/10.1186/s13634-015-0221-2>
- Martino L, Yang H, Luengo D, Kannianen J, Corander J. **A fast universal self-tuned sampler within Gibbs sampling.** *Digital Signal Processing*. 2015 Dec 1;47:68-83. <https://doi.org/10.1016/j.dsp.2015.04.005>
- Raitoharju M, Nurminen H, Piché R. **Kalman filter with a linear state model for PDR+WLAN positioning and its application to assisting a particle filter.** *Eurasip Journal on Advances in Signal Processing*. 2015 Dec 1;2015(1). 33. <https://doi.org/10.1186/s13634-015-0216-z>
- Diaz I, Wilhelmsson LR, Sofotasios PC, Miao Y, Tan S, Edfors O et al. **A New Approach to Sign-Bit-Based Parameter Estimation in OFDM Receivers.** *Circuits, Systems and Signal Processing*. 2015 Nov 23;34(11):3631-3660. <https://doi.org/10.1007/s00034-015-0025-5>
- Nurminen H, Ardeshiri T, Piché R, Gustafsson F. **Robust Inference for State-Space Models with Skewed Measurement Noise.** *IEEE Signal Processing Letters*. 2015 Nov 1;22(11):1898-1902. <https://doi.org/10.1109/LSP.2015.2437456>
- Sofotasios PC, Muhaidat S, Valkama M, Ghogho M, Karagiannidis GK. **Entropy and Channel Capacity under Optimum Power and Rate Adaptation over Generalized Fading Conditions.** *IEEE Signal Processing Letters*. 2015 Nov 1;22(11):2162-2166. <https://doi.org/10.1109/LSP.2015.2464221>
- Iosifidis A, Tefas A, Pitas I. **Sparse extreme learning machine classifier exploiting intrinsic graphs.** *Pattern Recognition Letters*. 2015 Nov 1;65:192-196. <https://doi.org/10.1016/j.patrec.2015.07.036>
- Baby D, Virtanen T, Gemmeke JF, Van hamme H. **Coupled dictionaries for exemplar-based speech enhancement and automatic speech recognition.** *Ieee-Acm transactions on audio speech and language processing*. 2015 Nov 1;23(11):1788-1799. <https://doi.org/10.1109/TASLP.2015.2450491>
- Huttunen H, Tohka J. **Model selection for linear classifiers using Bayesian error estimation.** *Pattern Recognition*. 2015 Nov;48(11):3739-3748. <https://doi.org/10.1016/j.patcog.2015.05.005>
- Sofotasios PC, Muhaidat S, Karagiannidis GK, Sharif BS. **Solutions to integrals involving the marcum Q-function and applications.** *IEEE Signal Processing Letters*. 2015 Oct 1;22(10):1752-1756. <https://doi.org/10.1109/LSP.2015.2432064>
- Onose A, Dumitrescu B. **Adaptive Randomized Coordinate Descent for Sparse Systems: Lasso and Greedy Algorithms.** *IEEE Transactions on Signal Processing*. 2015 Aug 1;63(15):4091-4101. <https://doi.org/10.1109/TSP.2015.2436369>
- Zhu S, Zeng B, Gabbouj M. **Adaptive sampling for compressed sensing based image compression.** *Journal of Visual Communication and Image Representation*. 2015 Jul 1;30:94-105. <https://doi.org/10.1016/j.jvcir.2015.03.006>
- Boutellier J, Ersfolk J, Lilius J, Mattavelli M, Roquier G, Silvén O. **Actor Merging for Dataflow Process Networks.** *IEEE Transactions on Signal Processing*. 2015 May 15;63(10):2496-2508. 7055878. <https://doi.org/10.1109/TSP.2015.2411229>

Rebeiz E, Hagh Ghadam AS, Valkama M, Cabric D. **Spectrum Sensing under RF Non-Linearities: Performance Analysis and DSP-Enhanced Receivers**. IEEE Transactions on Signal Processing. 2015 Apr 15;63(8):1950-1964. <https://doi.org/10.1109/TSP.2015.2401532>

Höynälänmaa T. **Multiresolution analysis for compactly supported interpolating tensor product wavelets**. International Journal of Wavelets Multiresolution and Information Processing. 2015 Mar 6;13(2). 1550010. <https://doi.org/10.1142/S0219691315500101>

Iosifidis A, Tefas A, Pitas I. **On the kernel Extreme Learning Machine classifier**. Pattern Recognition Letters. 2015 Mar 1;54:11-17. <https://doi.org/10.1016/j.patrec.2014.12.003>

Ponomarenko N, Jin L, Ieremeiev O, Lukin V, Egiazarian K, Astola J et al. **Image database TID2013: Peculiarities, results and perspectives**. Signal Processing: Image Communication. 2015 Jan 1;30:57-77. <https://doi.org/10.1016/j.image.2014.10.009>

Efimushkina T, Gabbouj M, Samuylov K. **Analytical model in discrete time for cross-layer video communication over LTE**. Automatic Control and Computer Sciences. 2015;48(6):345-357. <https://doi.org/10.3103/S0146411614060029>

Singh S, Valkama M, Epp M, Anttila L, Schlecker W, Ingber E. **Digital correction of frequency response mismatches in 2-channel time-interleaved ADCs using adaptive I/Q signal processing**. Analog Integrated Circuits and Signal Processing. 2015;82(3):543-555. <https://doi.org/10.1007/s10470-014-0476-9>

Dricot A, Jung J, Cagnazzo M, Pesquet B, Dufaux F, Kovács P et al. **Subjective evaluation of Super Multi-View compressed contents on high-end light-field 3D displays**. Signal Processing: Image Communication. 2015;39(Part B):369-385. <https://doi.org/10.1016/j.image.2015.04.012>

Şimşekli U, Virtanen T, Cemgil AT. **Non-negative tensor factorization models for Bayesian audio processing**. Digital Signal Processing. 2015;47:178-191. <https://doi.org/10.1016/j.dsp.2015.03.011>

Galinina O, Mikhaylov K, Andreev S, Turlikov A, Koucheryavy Y. **Smart home gateway system over Bluetooth low energy with wireless energy transfer capability**. Eurasip Journal on Wireless Communications and Networking. 2015;2015(1). 178. <https://doi.org/10.1186/s13638-015-0393-3>

Iosifidis A, Tefas A, Pitas I. **Class-Specific Reference Discriminant Analysis With Application in Human Behavior Analysis**. IEEE Transactions on Human-Machine Systems. 2014 Dec 25;45(3):315-326. <https://doi.org/10.1109/THMS.2014.2379274>

Iosifidis A, Tefas A, Pitas I. **Kernel reference discriminant analysis**. Pattern Recognition Letters. 2014 Nov 1;49:85-91. <https://doi.org/10.1016/j.patrec.2014.06.013>

Iosifidis A, Tefas A, Pitas I. **Discriminant Bag of Words based representation for human action recognition**. Pattern Recognition Letters. 2014 Nov 1;49:185-192. <https://doi.org/10.1016/j.patrec.2014.07.011>

Kim SC, Bhattacharyya SS. **Implementation of a high-throughput low-latency polyphase channelizer on GPUs Design and Architectures for Signal and Image Processing 2008**. Eurasip Journal on Advances in Signal Processing. 2014;2014(1). <https://doi.org/10.1186/1687-6180-2014-141>

Yviquel H, Boutellier J, Raulet M, Casseau E. **Automated design of networks of transport-triggered architecture processors using dynamic dataflow programs**. Signal Processing: Image Communication. 2013 Nov;28(10):1295-1302. <https://doi.org/10.1016/j.image.2013.08.013>

- Boutellier J, Silvén O. **Towards generic embedded multiprocessing for RVC-CAL dataflow programs.** Journal of Signal Processing Systems. 2013 Nov;73(2):137-142. <https://doi.org/10.1007/s11265-013-0737-3>
- Yi X, Cho C, Cooper J, Wang Y, Tentzeris MM, Leon RT. **Passive wireless antenna sensor for strain and crack sensing - Electromagnetic modeling, simulation, and testing.** Smart Materials and Structures. 2013 Aug;22(8). 085009. <https://doi.org/10.1088/0964-1726/22/8/085009>
- Iosifidis A, Tefas A, Pitas I. **Multi-view action recognition based on action volumes, fuzzy distances and cluster discriminant analysis.** Signal Processing. 2013 Jun;93(6):1445-1457. <https://doi.org/10.1016/j.sigpro.2012.08.015>
- Zaki GF, Plishker W, Bhattacharyya SS, Clancy C, Kuykendall J. **Integration of dataflow-based heterogeneous multiprocessor scheduling techniques in GNU radio.** Journal of Signal Processing Systems. 2013 Feb;70(2):177-191. <https://doi.org/10.1007/s11265-012-0696-0>
- Iosifidis A, Tefas A, Pitas I. **Dynamic action recognition based on dynemes and Extreme Learning Machine.** Pattern Recognition Letters. 2013;34(15):1890-1898. <https://doi.org/10.1016/j.patrec.2012.10.019>
- Boutellier J, Raulet M, Silvén O. **Automatic hierarchical discovery of quasi-static schedules of RVC-CAL dataflow programs.** Journal of Signal Processing Systems. 2013;71(1):35-40. <https://doi.org/10.1007/s11265-012-0676-4>
- Wang LH, Shen CC, Wu S, Bhattacharyya SS. **Parameterized scheduling of topological patterns in signal processing dataflow graphs.** Journal of Signal Processing Systems. 2013;71(3):275-286. <https://doi.org/10.1007/s11265-012-0719-x>
- Shen CC, Wu S, Sane N, Wu HH, Plishker W, Bhattacharyya SS. **Design and synthesis for multimedia systems using the targeted dataflow interchange format.** IEEE Transactions on Multimedia. 2012;14(3 PART1):630-640. 6172244. <https://doi.org/10.1109/TMM.2012.2191397>
- Kee H, Shen CC, Bhattacharyya SS, Wong I, Rao Y, Kornerup J. **Mapping parameterized cyclo-static dataflow graphs onto configurable hardware.** Journal of Signal Processing Systems. 2012;66(3):285-301. <https://doi.org/10.1007/s11265-011-0599-5>
- Bhattacharyya SS, Eker J, Janneck JW, Lucarz C, Mattavelli M, Raulet M. **Overview of the MPEG reconfigurable video coding framework.** Journal of Signal Processing Systems. 2011 May;63(2):251-263. <https://doi.org/10.1007/s11265-009-0399-3>
- Boutellier J, Lucarz C, Lafond S, Gomez VM, Mattavelli M. **Quasi-static scheduling of CAL actor networks for reconfigurable video coding.** Journal of Signal Processing Systems. 2011 May;63(2):191-202. <https://doi.org/10.1007/s11265-009-0389-5>
- Pursiainen S, Sorrentino A, Campi C, Piana M. **Forward simulation and inverse dipole localization with the lowest order Raviart - Thomas elements for electroencephalography.** Inverse Problems. 2011 Apr;27(4). 045003. <https://doi.org/10.1088/0266-5611/27/4/045003>
- Gu R, Janneck JW, Raulet M, Bhattacharyya SS. **Exploiting statically schedulable regions in dataflow programs.** Journal of Signal Processing Systems. 2011 Apr;63(1):129-142. <https://doi.org/10.1007/s11265-009-0445-1>
- Kaski S, Peltonen J. **Dimensionality reduction for data visualization.** IEEE Signal Processing Magazine. 2011 Mar;28(2):100-104. 5714379. <https://doi.org/10.1109/MSP.2010.940003>
- Sane N, Kee H, Seetharaman G, Bhattacharyya SS. **Topological patterns for scalable representation and analysis of dataflow graphs.** Journal of Signal Processing Systems. 2011;65(2):229-244. <https://doi.org/10.1007/s11265-011-0610-1>

Azzari L, Borges LR, Foi A. **Modeling and estimation of signal-dependent and correlated noise**. In Denoising of Photographic Images and Video: Fundamentals, Open Challenges and New Trends. SPRINGER-VERLAG LONDON LTD. 2018. p. 1-36. (Advances in Computer Vision and Pattern Recognition). [https://doi.org/10.1007/978-3-319-96029-6\\_1](https://doi.org/10.1007/978-3-319-96029-6_1)

Bhattacharyya SS, Van Der Schaar M, Atan O, Tekin C, Sudusinghe K. **Data-driven stream mining systems for computer vision**. In Advances in Computer Vision and Pattern Recognition. Vol. 68. SPRINGER-VERLAG LONDON LTD. 2014. p. 249-264. (Advances in Computer Vision and Pattern Recognition). [https://doi.org/10.1007/978-3-319-09387-1\\_12](https://doi.org/10.1007/978-3-319-09387-1_12)

Barneto CB, Riihonen T, Turunen M, Koivisto M, Talvitie J, Valkama M. **Radio-based Sensing and Indoor Mapping with Millimeter-Wave 5G NR Signals**. In Nurmi J, Lohan E-S, Torres-Sospedra J, Kuusniemi H, Ometov A, editors, 2020 International Conference on Localization and GNSS, ICL-GNSS 2020 - Proceedings. IEEE. 2020. (2020 International Conference on Localization and GNSS, ICL-GNSS 2020 - Proceedings). <https://doi.org/10.1109/ICL-GNSS49876.2020.9115568>

Karttunen A, Valkama M, Talvitie J. **Positioning Based on Noise-Limited Censored Path Loss Data**. In Nurmi J, Lohan E-S, Torres-Sospedra J, Kuusniemi H, Ometov A, editors, 2020 International Conference on Localization and GNSS, ICL-GNSS 2020 - Proceedings. IEEE. 2020. (2020 International Conference on Localization and GNSS, ICL-GNSS 2020 - Proceedings). <https://doi.org/10.1109/ICL-GNSS49876.2020.9115572>

Wang W, Fath T, Valkama M, Lohan ES. **Modeling and Mitigating 5G Wireless Downlink Interferences for Low-altitude Aerial vehicles**. In Nurmi J, Lohan E-S, Torres-Sospedra J, Kuusniemi H, Ometov A, editors, 2020 International Conference on Localization and GNSS, ICL-GNSS 2020 - Proceedings. IEEE. 2020. (2020 International Conference on Localization and GNSS, ICL-GNSS 2020 - Proceedings). <https://doi.org/10.1109/ICL-GNSS49876.2020.9115534>

Parlin K, Riihonen T. **Analog Mitigation of Frequency-Modulated Interference for Improved GNSS Reception**. In Nurmi J, Lohan E-S, Torres-Sospedra J, Kuusniemi H, Ometov A, editors, 2020 International Conference on Localization and GNSS, ICL-GNSS 2020 - Proceedings. IEEE. 2020. (2020 International Conference on Localization and GNSS, ICL-GNSS 2020 - Proceedings). <https://doi.org/10.1109/ICL-GNSS49876.2020.9115518>

Passalis N, Tefas A, Kannianen J, Gabbouj M, Iosifidis A. **Adaptive Normalization for Forecasting Limit Order Book Data Using Convolutional Neural Networks**. In 2020 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2020 - Proceedings. IEEE. 2020. p. 1713-1717. (ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings). <https://doi.org/10.1109/ICASSP40776.2020.9054321>

Yang M, Zhu H, Wang H, Koucheryavy Y, Samouylov K, Qian H. **Peer to Peer Offloading with Delayed Feedback: An Adversary Bandit Approach**. In 2020 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2020 - Proceedings. IEEE. 2020. p. 5035-5039. (ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings). <https://doi.org/10.1109/ICASSP40776.2020.9053680>

Tervo O, Levanen T, Pajukoski K, Hulkkonen J, Wainio P, Valkama M. **5G new radio evolution towards sub-THz communications**. In 2nd 6G Wireless Summit 2020: Gain Edge for the 6G Era, 6G SUMMIT 2020. IEEE. 2020 <https://doi.org/10.1109/6GSUMMIT49458.2020.9083807>

Khan Z, He H, Chen X, Ukkonen L, Virkki J. **Protective Coating Methods for Glove-Integrated RFID Tags - A Preliminary Study**. In 14th European Conference on Antennas and Propagation, EuCAP 2020. IEEE. 2020. 9135632. (14th European Conference on Antennas and Propagation, EuCAP 2020). <https://doi.org/10.23919/EuCAP48036.2020.9135632>

Ahmed S, Sydänheimo L, Ukkonen L, Björninen T. **Headband Antenna for Wireless Power Transfer to Millimeter-Sized Neural Implants with Minimal Misalignment Effects**. In 14th European Conference on Antennas and Propagation, EuCAP 2020. IEEE. 2020. (14th European Conference on Antennas and Propagation, EuCAP 2020). <https://doi.org/10.23919/EuCAP48036.2020.9135977>

Le D, Ukkonen L, Björninen T. **Circularly Polarized Corner-Truncated and Slotted Microstrip Patch Antenna on Textile Substrate for Wearable Passive UHF RFID Tags**. In 14th European Conference on Antennas and Propagation, EuCAP 2020. IEEE. 2020. (14th European Conference on Antennas and Propagation, EuCAP 2020). <https://doi.org/10.23919/EuCAP48036.2020.9135984>

Petrov V, Eckhardt JM, Moltchanov D, Koucheryavy Y, Kurner T. **Measurements of Reflection and Penetration Losses in Low Terahertz Band Vehicular Communications**. In 14th European Conference on Antennas and Propagation, EuCAP 2020. Institute of Electrical and Electronics Engineers Inc. 2020. (14th European Conference on Antennas and Propagation, EuCAP 2020). <https://doi.org/10.23919/EuCAP48036.2020.9135389>

Eyraud C, Sorsa LI, Herique A, Geffrin JM, Pursiainen S, Kofman W. **Towards Asteroid Tomography: Modellings and Measurements Using an Analogue Model**. In 14th European Conference on Antennas and Propagation, EuCAP 2020. IEEE. 2020. (14th European Conference on Antennas and Propagation, EuCAP 2020). <https://doi.org/10.23919/EuCAP48036.2020.9136060>

He H, Chen X, Raivio L, Huttunen H, Virkki J. **Passive RFID-based Textile Touchpad**. In 14th European Conference on Antennas and Propagation, EuCAP 2020. IEEE. 2020. 9135201 <https://doi.org/10.23919/EuCAP48036.2020.9135201>

Nasarre IP, Levanen T, Valkama M. **Constrained PSK: Energy-efficient modulation for Sub-THz systems**. In 2020 IEEE International Conference on Communications Workshops, ICC Workshops 2020 - Proceedings. IEEE. 2020. (IEEE/CIC international conference on communications in China - workshops). <https://doi.org/10.1109/ICCWorkshops49005.2020.9145132>

Tafintsev N, Moltchanov D, Simsek M, Yeh SP, Andreev S, Koucheryavy Y et al. **Reinforcement learning for improved UAV-based integrated access and backhaul operation**. In 2020 IEEE International Conference on Communications Workshops, ICC Workshops 2020 - Proceedings. IEEE. 2020. (IEEE/CIC international conference on communications in China - workshops). <https://doi.org/10.1109/ICCWorkshops49005.2020.9145423>

Gapeyenko M, Petrov V, Moltchanov D, Yeh SP, Himayat N, Andreev S. **Comparing capacity gains of static and UAV-based millimeter-wave relays in clustered deployments**. In 2020 IEEE International Conference on Communications Workshops, ICC Workshops 2020 - Proceedings. IEEE. 2020. (IEEE/CIC international conference on communications in China - workshops). <https://doi.org/10.1109/ICCWorkshops49005.2020.9145216>

Genocchi B, Cunha A, Jain S, Hyttinen J, Lenk K, Ellingsrud AJ. **Parametric exploration of cellular swelling in a computational model of cortical spreading depression**. In 42nd Annual International Conferences of the IEEE Engineering in Medicine and Biology Society: Enabling Innovative Technologies for Global Healthcare, EMBC 2020. IEEE. 2020. p. 2491-2495. (Annual International Conference of the IEEE Engineering in Medicine and Biology Society). <https://doi.org/10.1109/EMBC44109.2020.9175306>

Gerasimenko M, Pokorny J, Schneider T, Sirjov J, Andreev S, Hosek J. **Prototyping directional UAV-based wireless access and backhaul systems**. In 2019 IEEE Global Communications Conference, GLOBECOM 2019 - Proceedings. IEEE. 2019. 9014228 <https://doi.org/10.1109/GLOBECOM38437.2019.9014228>

Rostami S, Lagen S, Costa M, Dini P, Valkama M. **Optimized wake-up scheme with bounded delay for energy-efficient MTC**. In 2019 IEEE Global Communications Conference, GLOBECOM 2019 - Proceedings. IEEE. 2019. 9013534 <https://doi.org/10.1109/GLOBECOM38437.2019.9013534>

Heljakka K, Ihamaki P, Tuomi P, Saarikoski P. **Gamified coding: Toy robots and playful learning in early education**. In Proceedings - 6th Annual Conference on Computational Science and Computational Intelligence, CSCI 2019. IEEE. 2019. p. 800-805. 9071010 <https://doi.org/10.1109/CSCI49370.2019.00152>

Petrov V, Fodor G, Andreev S, Do H, Sahlin H. **V2X Connectivity: From LTE to Joint Millimeter Wave Vehicular Communications and Radar Sensing**. In Matthews MB, editor, Conference Record - 53rd Asilomar Conference on Circuits, Systems and Computers, ACSSC 2019. IEEE Computer Society. 2019. p. 1120-1124. 9048846. (Conference Record - Asilomar Conference on Signals, Systems and Computers). <https://doi.org/10.1109/IEEECONF44664.2019.9048846>

Brihuega A, Abdelaziz M, Anttila L, Barneto CB, Valkama M. **Closed-Loop DPD for Digital MIMO Transmitters under Antenna Crosstalk**. In Matthews MB, editor, Conference Record - 53rd Asilomar Conference on Circuits, Systems and Computers, ACSSC 2019. IEEE Computer Society. 2019. p. 1682-1689. 9049001. (Conference Record - Asilomar Conference on Signals, Systems and Computers). <https://doi.org/10.1109/IEEECONF44664.2019.9049001>

Qian Y, Chen K, Yu H. **Fast fourier color constancy and grayness index for ISPA illumination estimation challenge**. In Loncaric S, Bregovic R, Carli M, Subasic M, editors, ISPA 2019 - 11th International Symposium on Image and Signal Processing and Analysis. IEEE. 2019. p. 352-354. (International Symposium on Image and Signal Processing and Analysis, ISPA). <https://doi.org/10.1109/ISPA.2019.8868451>

Ferranti L, Boutellier J. **Towards Algebraic Modeling of GPU Memory Access for Bank Conflict Mitigation**. In 2019 IEEE International Workshop on Signal Processing Systems, SiPS 2019. IEEE. 2019. p. 103-108 <https://doi.org/10.1109/SiPS47522.2019.9020385>

Masek P, Stusek M, Zeman K, Mozny R, Ometov A, Hosek J. **A perspective on wireless M-bus for smart electricity grids**. In Herencsar N, editor, 2019 42nd International Conference on Telecommunications and Signal Processing, TSP 2019. IEEE. 2019. p. 730-735 <https://doi.org/10.1109/TSP.2019.8768840>

Mozny R, Masek P, Stusek M, Zeman K, Ometov A, Hosek J. **On the performance of narrow-band internet of things (NB-IoT) for delay-tolerant services**. In Herencsar N, editor, 2019 42nd International Conference on Telecommunications and Signal Processing, TSP 2019. IEEE. 2019. p. 637-642. (2019 42nd International Conference on Telecommunications and Signal Processing, TSP 2019). <https://doi.org/10.1109/TSP.2019.8768871>

Rusu C, Astola J. **Input magnitude data setting in error-reduction algorithm for one-dimensional discrete phase retrieval problem**. In ISSCS 2019 - International Symposium on Signals, Circuits and Systems. IEEE. 2019. 8801743 <https://doi.org/10.1109/ISSCS.2019.8801743>

Holm J, Väänänen K, Remans MMR. **User Experience Study of 360° Music Videos on Computer Monitor and Virtual Reality Goggles**. In Banissi E, Ursyn A, McK. Bannatyne MW, Datia N, Pires JM, Francese R, Sarfraz M, Wyeld TG, 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, editors, Information Visualization - Biomedical Visualization and Geometric Modelling and Imaging, IV 2019. IEEE. 2019. p. 81-87. (Proceedings of the International Conference on Information Visualisation). <https://doi.org/10.1109/IV.2019.00023>

Wang S, Naithani G, Virtanen T. **Low-latency Deep Clustering for Speech Separation**. In 2019 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2019 - Proceedings. IEEE. 2019. p. 76-80 <https://doi.org/10.1109/ICASSP.2019.8683437>

Pertilä P, Parviainen M. **Time Difference of Arrival Estimation of Speech Signals Using Deep Neural Networks with Integrated Time-frequency Masking**. In 2019 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2019 - Proceedings. IEEE. 2019. p. 436-440 <https://doi.org/10.1109/ICASSP.2019.8682574>

Nogues E, Mercat A, Arrestier F, Pelcat M, Menard D. **Convex Energy Optimization of Streaming Applications for MPSoCs**. In 2019 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2019 - Proceedings. IEEE. 2019. p. 1557-1561 <https://doi.org/10.1109/ICASSP.2019.8682317>

Zarkias KS, Passalis N, Tsantekidis A, Tefas A. **Deep Reinforcement Learning for Financial Trading Using Price Trailing**. In 2019 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2019 - Proceedings. IEEE. 2019. p. 3067-3071 <https://doi.org/10.1109/ICASSP.2019.8683161>

Kiranyaz S, Ince T, Abdeljaber O, Avci O, Gabbouj M. **1-D Convolutional Neural Networks for Signal Processing Applications**. In 2019 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2019 - Proceedings. IEEE. 2019. p. 8360-8364 <https://doi.org/10.1109/ICASSP.2019.8682194>

Passalis N, Tefas A, Kannianen J, Gabbouj M, Iosifidis A. **Deep Temporal Logistic Bag-of-features for Forecasting High Frequency Limit Order Book Time Series**. In 2019 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2019 - Proceedings. IEEE. 2019. p. 7545-7549 <https://doi.org/10.1109/ICASSP.2019.8682297>

Amestoy T, Mercat A, Hamidouche W, Bergeron C, Menard D. **Random Forest Oriented Fast QTBT Frame Partitioning**. In 2019 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2019 - Proceedings. IEEE. 2019. p. 1837-1841 <https://doi.org/10.1109/ICASSP.2019.8683413>

Pertuz S, Torres GF, Tamimi R, Kämäräinen J. **Open framework for mammography-based breast cancer risk assessment**. In 2019 IEEE EMBS International Conference on Biomedical and Health Informatics, BHI 2019 - Proceedings. IEEE. 2019 <https://doi.org/10.1109/BHI.2019.8834599>

Passalis N, Mourgiyas-Alexandris G, Tsakyridis A, Pleros N, Tefas A. **Variance Preserving Initialization for Training Deep Neuromorphic Photonic Networks with Sinusoidal Activations**. In 2019 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2019 - Proceedings. IEEE. 2019. p. 1483-1487 <https://doi.org/10.1109/ICASSP.2019.8682218>

Khan MA, Vehmas R, Visa A. **Automatic detection of water inside concrete slabs using ground penetrating radar**. In 2019 IEEE Radar Conference, RadarConf 2019. IEEE. 2019 <https://doi.org/10.1109/RADAR.2019.8835797>

Petrov V, Moltchanov D, Jornet JM, Koucheryavy Y. **Exploiting Multipath Terahertz Communications for Physical Layer Security in beyond 5G Networks**. In INFOCOM 2019 - IEEE Conference on Computer Communications Workshops, INFOCOM WKSHPs 2019. IEEE. 2019. p. 865-872 <https://doi.org/10.1109/INFOCOMW.2019.8845312>

Kovalchukov R, Moltchanov D, Begishev V, Samuylov A, Andreev S, Koucheryavy Y et al. **Improved Session Continuity in 5G NR with Joint Use of Multi-Connectivity and Guard Bandwidth**. In 2018 IEEE Global Communications Conference, GLOBECOM 2018. IEEE. 2019 <https://doi.org/10.1109/GLOCOM.2018.8647608>

Yoo SK, Cotton SL, Sofotasios PC, Muhaidat S, Badarneh OS, Karagiannidis GK. **Energy Detection-Based Spectrum Sensing over Fisher-Snedecor F Fading Channels**. In 2018 IEEE Global Communications Conference. IEEE. 2019. 8647778 <https://doi.org/10.1109/GLOCOM.2018.8647778>

Meirhaeghe A, Boutellier J, Collin J. **The Direction Cosine Matrix Algorithm in Fixed-point: Implementation and Analysis**. In ICASSP 2019 - 2019 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). IEEE. 2019 <https://doi.org/10.1109/ICASSP.2019.8683644>

Sapio A, Bhattacharyya SS, Wolf M. **Efficient Solving of Markov Decision Processes on GPUs Using Parallelized Sparse Matrices**. In 2018 Conference on Design and Architectures for Signal and Image Processing, DASIP 2018. IEEE COMPUTER SOCIETY PRESS. 2018. p. 13-18. (Conference on Design and Architectures for Signal and Image Processing, DASIP). <https://doi.org/10.1109/DASIP.2018.8596969>

Shuyang Z, Heittola T, Virtanen T. **An active learning method using clustering and committee-based sample selection for sound event classification**. In 16th International Workshop on Acoustic Signal Enhancement, IWAENC 2018. IEEE. 2018. p. 116-120 <https://doi.org/10.1109/IWAENC.2018.8521336>

Huang G, Heittola T, Virtanen T. **Using sequential information in polyphonic sound event detection**. In 16th International Workshop on Acoustic Signal Enhancement, IWAENC 2018. IEEE. 2018. p. 291-295 <https://doi.org/10.1109/IWAENC.2018.8521367>

Mesaros A, Heittola T, Virtanen T. **Acoustic scene classification: An overview of dcase 2017 challenge entries**. In 16th International Workshop on Acoustic Signal Enhancement, IWAENC 2018. IEEE. 2018. p. 411-415 <https://doi.org/10.1109/IWAENC.2018.8521242>

Parviainen M, Pertila P, Virtanen T, Grosche P. **Time-frequency masking strategies for single-channel low-latency speech enhancement using neural networks**. In 16th International Workshop on Acoustic Signal Enhancement, IWAENC 2018. IEEE. 2018. p. 51-55 <https://doi.org/10.1109/IWAENC.2018.8521400>

Naithani G, Nikunen J, Bramslow L, Virtanen T. **Deep neural network based speech separation optimizing an objective estimator of intelligibility for low latency applications**. In 16th International Workshop on Acoustic Signal Enhancement, IWAENC 2018. IEEE. 2018. p. 386-390 <https://doi.org/10.1109/IWAENC.2018.8521379>

Nikunen J, Politis A. **Multichannel NMF for source separation with ambisonic signals**. In 16th International Workshop on Acoustic Signal Enhancement, IWAENC 2018 . IEEE. 2018. p. 251-255 <https://doi.org/10.1109/IWAENC.2018.8521344>

Mehrang S, Jauhiainen M, Pietilä J, Puustinen J, Ruokolainen J, Nieminen H. **Identification of Parkinson's Disease Utilizing a Single Self-recorded 20-step Walking Test Acquired by Smartphone's Inertial Measurement Unit**. In 40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC 2018. Vol. 2018-July. Institute of Electrical and Electronics Engineers Inc. 2018. p. 2913-2916. 8512921 <https://doi.org/10.1109/EMBC.2018.8512921>

Tripathy SR, Chakravarty K, Sinha A. **Eigen Posture Based Fall Risk Assessment System Using Kinect**. In 40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC 2018. Vol. 2018-July. IEEE. 2018. p. 1-4. 8513263 <https://doi.org/10.1109/EMBC.2018.8513263>

Tarniceriu A, Harju J, Yousefi ZR, Vehkaoja A, Parak J, Yli-Hankala A et al. **The Accuracy of Atrial Fibrillation Detection from Wrist Photoplethysmography. A Study on Post-Operative Patients**. In 40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC 2018. Vol. 2018-July. IEEE. 2018. p. 4844-4847. 8513197 <https://doi.org/10.1109/EMBC.2018.8513197>

Multanen J, Kultala H, Jääskeläinen P, Viitanen T, Tervo A, Takala J. **LoTTA: Energy-Efficient Processor for Always-on Applications**. In 2018 IEEE International Workshop on Signal Processing Systems (SiPS). IEEE. 2018 <https://doi.org/10.1109/SiPS.2018.8598408>

Nikunen J, Virtanen T. **Estimation of time-varying room impulse responses of multiple sound sources from observed mixture and isolated source signals**. In 2018 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2018 - Proceedings. Vol. 2018-April. Institute of Electrical and Electronics Engineers Inc. 2018. p. 421-425. 8462535. ( Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing). <https://doi.org/10.1109/ICASSP.2018.8462535>

Malik J, Aytekin C, Gabbouj M. **Low-energy graph fourier basis functions span salient objects**. In 2018 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2018 - Proceedings. Vol. 2018-April. Institute of Electrical and Electronics Engineers Inc. 2018. p. 1548-1552. 8462672 <https://doi.org/10.1109/ICASSP.2018.8462672>

Egiazarian K, Ponomarenko M, Lukin V, Ieremeiev O. **Statistical Evaluation of Visual Quality Metrics for Image Denoising**. In 2018 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2018 - Proceedings. Vol. 2018-April. Institute of Electrical and Electronics Engineers Inc. 2018. p. 6752-6756. 8462294 <https://doi.org/10.1109/ICASSP.2018.8462294>

Lee K, Riggan BS, Bhattacharyya SS. **A joint target localization and classification framework for sensor networks**. In 2018 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2018 - Proceedings. Vol. 2018-April. Institute of Electrical and Electronics Engineers Inc. 2018. p. 3076-3080. 8462641 <https://doi.org/10.1109/ICASSP.2018.8462641>

Schwarz S, Hannuksela MM, Fakour-Sevom V, Sheikhi-Pour N. **2D Video Coding of Volumetric Video Data**. In 2018 Picture Coding Symposium, PCS 2018 - Proceedings. IEEE. 2018. p. 61-65. 8456265 <https://doi.org/10.1109/PCS.2018.8456265>

Rastorgueva-Foi E, Costa M, Koivisto M, Leppänen K, Valkama M. **User Positioning in mmW 5G Networks Using Beam-RSRP Measurements and Kalman Filtering**. In 2018 21st International Conference on Information Fusion, FUSION 2018. IEEE. 2018. p. 1150-1156. 8455289 <https://doi.org/10.23919/ICIF.2018.8455289>

Solin A, Cortes S, Rahtu E, Kannala J. **Inertial Odometry on Handheld Smartphones**. In 2018 21st International Conference on Information Fusion, FUSION 2018. IEEE. 2018. p. 1361-1368. 8455482 <https://doi.org/10.23919/ICIF.2018.8455482>

Carabias-Orti JJ, Cabanas-Molero P, Vera-Candeas P, Nikunen J. **Multi-source localization using a DOA Kernel based spatial covariance model and complex nonnegative matrix factorization**. In 2018 IEEE 10th Sensor Array and Multichannel Signal Processing Workshop, SAM 2018. IEEE. 2018. p. 440-444. 8448664. (Proceedings of the IEEE Sensor Array and Multichannel Signal Processing Workshop). <https://doi.org/10.1109/SAM.2018.8448664>

Eslahi N, Foi A. **Anisotropic Spatiotemporal Regularization in Compressive Video Recovery by Adaptively Modeling the Residual Errors as Correlated Noise**. In 2018 IEEE 13th Image, Video, and Multidimensional Signal Processing Workshop, IVMSP 2018 - Proceedings. IEEE. 2018. 8448455 <https://doi.org/10.1109/IVMSPW.2018.8448455>

Khosravi Z, Gerasimenko M, Andreev S, Koucheryavy Y. **Performance Evaluation of UAV-Assisted mmWave Operation in Mobility-Enabled Urban Deployments**. In 2018 41st International Conference on Telecommunications and Signal Processing, TSP 2018. IEEE. 2018. p. 150-153. 8441321 <https://doi.org/10.1109/TSP.2018.8441321>

Zhang H, Kiranyaz S, Gabbouj M. **Data Clustering Based on Community Structure in Mutual k-Nearest Neighbor Graph**. In 2018 41st International Conference on Telecommunications and Signal Processing, TSP 2018. IEEE. 2018. p. 262-268. 8441226 <https://doi.org/10.1109/TSP.2018.8441226>

Pihlajasalo J, Leppäkoski H, Ali-Löytty S, Piché R. **Improvement of GPS and BeiDou extended orbit predictions with CNNs**. In 26th European Navigation Conference, ENC 2018: Gothenburg, Sweden, 14-17 May, 2018. IEEE. 2018. p. 54-59. 8433244 <https://doi.org/10.1109/EURONAV.2018.8433244>

Jaakkola H, Thalheim B, Henno J, Mäkelä J, Keto H. **Role of the user in information systems development**. In 2018 41st International Convention on Information and Communication Technology, Electronics and Microelectronics, MIPRO 2018. IEEE. 2018. p. 625-632 <https://doi.org/10.23919/MIPRO.2018.8400118>

Henno J, Jaakkola H, Makela J. **Adjusting university education with workspace training and self-education**. In 2018 41st International Convention on Information and Communication Technology, Electronics and Microelectronics, MIPRO 2018. IEEE. 2018. p. 701-708 <https://doi.org/10.23919/MIPRO.2018.8400131>

Riihonen T, Korpi D, Turunen M, Valkama M. **Full-duplex radio technology for simultaneously detecting and preventing improvised explosive device activation**. In 2018 International Conference on Military Communications and Information Systems, ICMCIS 2018. IEEE. 2018. p. 1-4 <https://doi.org/10.1109/ICMCIS.2018.8398707>

Tran DT, Waris MA, Gabbouj M, Iosifidis A. **Sample-based regularization for support vector machine classification**. In Proceedings of the 7th International Conference on Image Processing Theory, Tools and Applications, IPTA 2017. IEEE. 2018. p. 1-6 <https://doi.org/10.1109/IPTA.2017.8310103>

Schiopu I, Gabbouj M, Iosifidis A, Zeng B, Liu S. **Subaperture image segmentation for lossless compression**. In Proceedings of the 7th International Conference on Image Processing Theory, Tools and Applications, IPTA 2017. IEEE. 2018. p. 1-6 <https://doi.org/10.1109/IPTA.2017.8310083>

Aytekin C, Nikkanen J, Gabbouj M. **Deep multiresolution color constancy**. In 2017 IEEE International Conference on Image Processing, ICIP 2017 - Proceedings. IEEE COMPUTER SOCIETY PRESS. 2018. p. 3735-3739 <https://doi.org/10.1109/ICIP.2017.8296980>

Curcio IDD, Toukoma H, Naik D. **360-Degree video streaming and its subjective quality**. In SMPTE 2017 Annual Technical Conference and Exhibition, SMPTE 2017. SMPTE. 2018. p. 1-23 <https://doi.org/10.5594/M001758>

Wu J, Blattner T, Keyrouz W, Bhattacharyya SS. **Model-based dynamic scheduling for multicore implementation of image processing systems**. In 2017 IEEE International Workshop on Signal Processing Systems, SiPS 2017. IEEE. 2017. 8110003 <https://doi.org/10.1109/SiPS.2017.8110003>

Lee K, Riggan BS, Bhattacharyya SS. **An optimized embedded target detection system using acoustic and seismic sensors**. In 25th European Signal Processing Conference, EUSIPCO 2017. IEEE. 2017. p. 986-990 <https://doi.org/10.23919/EUSIPCO.2017.8081355>

Ito I, Egiazarian K. **Full search equivalent fast block matching using orthonormal tree-structured haar transform**. In ISPA 2017 - 10th International Symposium on Image and Signal Processing and Analysis. IEEE COMPUTER SOCIETY PRESS. 2017. p. 177-182 <https://doi.org/10.1109/ISPA.2017.8073591>

Astola P, Tabus I. **Lossless compression of high resolution disparity map images**. In ISSCS 2017 - International Symposium on Signals, Circuits and Systems. IEEE. 2017 <https://doi.org/10.1109/ISSCS.2017.8034934>

Rusu C, Astola J. **Convergence analysis of error-reduction algorithm for solving of the extended one-dimensional discrete phase retrieval problem**. In ISSCS 2017 - International Symposium on Signals, Circuits and Systems. IEEE. 2017 <https://doi.org/10.1109/ISSCS.2017.8034945>

Sheikh MU, Hiltunen K, Lempiäinen J. **Angular wall loss model and Extended Building Penetration model for outdoor to indoor propagation**. In 2017 13th International Wireless Communications and Mobile Computing Conference, IWCMC 2017. IEEE. 2017. p. 1291-1296 <https://doi.org/10.1109/IWCMC.2017.7986471>

Sheikh MU, Lempiäinen J. **Analysis of multipath propagation for 5G system at higher frequencies in microcellular environment**. In 2017 13th International Wireless Communications and Mobile Computing Conference, IWCMC 2017. IEEE. 2017. p. 1660-1664 <https://doi.org/10.1109/IWCMC.2017.7986533>

Abdelaziz M, Anttila L, Valkama M. **Reduced-complexity digital predistortion for massive MIMO**. In 2017 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2017 - Proceedings. IEEE. 2017. p. 6478-6482 <https://doi.org/10.1109/ICASSP.2017.7953404>

Zhang H, Kiranyaz S, Gabbouj M. **A k-nearest neighbor multilabel ranking algorithm with application to content-based image retrieval**. In 2017 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2017 - Proceedings. IEEE. 2017. p. 2587-2591 <https://doi.org/10.1109/ICASSP.2017.7952624>

Korpi D, Riihonen T, Valkama M. **Inband full-duplex radio access system with self-backhauling: Transmit power minimization under QOS requirements**. In 2017 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2017 - Proceedings. IEEE. 2017. p. 6558-6562 <https://doi.org/10.1109/ICASSP.2017.7953420>

Lee K, Riggan BS, Bhattacharyya SS. **An accumulative fusion architecture for discriminating people and vehicles using acoustic and seismic signals**. In 2017 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2017 - Proceedings. IEEE. 2017. p. 2976-2980 <https://doi.org/10.1109/ICASSP.2017.7952702>

Dos Santos RS, Taylor J, Davies M, Mavrogianni A, Milner J. **The variation of air and surface temperatures in London within a 1km grid using vehicle-transect and ASTER data**. In 2017 Joint Urban Remote Sensing Event, JURSE 2017. Institute of Electrical and Electronics Engineers Inc. 2017. 7924613. (2017 Joint Urban Remote Sensing Event, JURSE 2017). <https://doi.org/10.1109/JURSE.2017.7924613>

Kara PA, Kovacs PT, Vagharshakyan S, Martini MG, Barsi A, Balogh T et al. **The Effect of Light Field Reconstruction and Angular Resolution Reduction on the Quality of Experience**. In 2016 12th International Conference on Signal-Image Technology & Internet-Based Systems (SITIS). IEEE. 2017. p. 781-786 <https://doi.org/10.1109/SITIS.2016.128>

Zare A, Sreedhar KK, Vadakital VKM, Aminlou A, Hannuksela MM, Gabbouj M. **HEVC-compliant viewport-adaptive streaming of stereoscopic panoramic video**. In 2016 Picture Coding Symposium, PCS 2016. IEEE. 2017 <https://doi.org/10.1109/PCS.2016.7906401>

Sapio AE, Wolf M, Bhattacharyya SS. **Compact modeling and management of reconfiguration in digital channelizer implementation**. In 2016 IEEE Global Conference on Signal and Information Processing, GlobalSIP 2016 - Proceedings. IEEE. 2017. p. 595-599 <https://doi.org/10.1109/GlobalSIP.2016.7905911>

Korpi D, Aghababaeetafreshi M, Piilila M, Anttila L, Valkama M. **Advanced architectures for self-interference cancellation in full-duplex radios: Algorithms and measurements.** In 2016 50th Asilomar Conference on Signals, Systems and Computers. IEEE. 2017. p. 1553-1557 <https://doi.org/10.1109/ACSSC.2016.7869639>

Li L, Fanni T, Viitanen T, Xie R, Palumbo F, Raffo L et al. **Low power design methodology for signal processing systems using lightweight dataflow techniques.** In DASIP 2016 - Proceedings of the 2016 Conference on Design and Architectures for Signal and Image Processing. IEEE COMPUTER SOCIETY PRESS. 2017. p. 82-89 <https://doi.org/10.1109/DASIP.2016.7853801>

Murayama M, Oguro D, Kikuchi H, Huttunen H, Ho YS, Shin J. **Color-distribution similarity by information theoretic divergence for color images.** In 2016 Asia-Pacific Signal and Information Processing Association Annual Summit and Conference, APSIPA 2016. IEEE. 2017 <https://doi.org/10.1109/APSIPA.2016.7820681>

Pelcat M, Desnos K, Maggiani L, Liu Y, Heulot J, Nezan JF et al. **Models of architecture: Reproducible efficiency evaluation for signal processing systems.** In IEEE International Workshop on Signal Processing Systems, SiPS 2016. IEEE. 2016. p. 121-126. 7780083. (IEEE International Workshop on Signal Processing Systems). <https://doi.org/10.1109/SiPS.2016.29>

Hirvola O, Viitanen T, Sintunata V, Aoki T. **Improved image quality in fast inpainting with omnidirectional filling.** In International Conference on Image, Vision and Computing (ICIVC). IEEE. 2016. p. 31-35 <https://doi.org/10.1109/ICIVC.2016.7571269>

Tanskanen JMA, Kapucu FE, Välikki I, Hyttinen JAK. **Automatic objective thresholding to detect neuronal action potentials.** In Proceedings of 2016 24th European Signal Processing Conference (EUSIPCO). 2016. p. 662-666 <https://doi.org/10.1109/EUSIPCO.2016.7760331>

Iosifidis A, Gabbouj M. **Supervised subspace learning based on deep randomized networks.** In 2016 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP) . The Institute of Electrical and Electronics Engineers, Inc. 2016. p. 2584-2588 <https://doi.org/10.1109/ICASSP.2016.7472144>

Sarbu S. **On Renyi's entropy estimation with one-dimensional Gaussian kernels.** In 2016 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP) . IEEE. 2016. p. 4408-4412 <https://doi.org/10.1109/ICASSP.2016.7472510>

Daniel O, Raasakka J, Peltola P, Fröhle M, Rivero-Rodriguez A, Wymeersch H et al. **Blind sub-Nyquist GNSS signal detection.** In 2016 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP) . IEEE. 2016. p. 6575-6579 <https://doi.org/10.1109/ICASSP.2016.7472944>

Mäkitalo N, Aaltonen T, Mikkonen T. **Coordinating proactive social devices in a mobile cloud: Lessons learned and a way forward.** In MOBILESoft '16 Proceedings of the International Conference on Mobile Software Engineering and Systems . ACM. 2016. p. 179-188 <https://doi.org/10.1145/2897073.2897079>

Rubel O, Lukin V, Egiazarian K. **On prediction of DCT-based denoising efficiency under spatially correlated noise conditions.** In 2016 13th International Conference on Modern Problems of Radio Engineering, Telecommunications and Computer Science (TCSET) . IEEE. 2016. p. 750-754 <https://doi.org/10.1109/TCSET.2016.7452171>

Park Y, Alam MH, Ryu WJ, Lee S. **BL-LDA: Bringing bigram to supervised topic model.** In Proceedings - 2015 International Conference on Computational Science and Computational Intelligence, CSCI 2015. Institute of Electrical and Electronics Engineers Inc. 2016. p. 83-88. 7424068 <https://doi.org/10.1109/CSCI.2015.146>

Habib M, Rasheed S, Hussain A, Ali M. **Random Value Impulse Noise Removal Based on Most Similar Neighbors.** In 2015 13th International Conference on Frontiers of Information Technology (FIT) . IEEE. 2016. p. 329-333 <https://doi.org/10.1109/FIT.2015.64>

Allen M, Marttila J, Valkama M, Singh S, Epp M, Schlecker W. **Digital full-band linearization of wideband direct-conversion receiver for radar and communications applications**. In 2015 49th Asilomar Conference on Signals, Systems and Computers. IEEE COMPUTER SOCIETY PRESS. 2016. p. 1361-1368 <https://doi.org/10.1109/ACSSC.2015.7421365>

Balandina E, Balandin S, Koucheryavy Y, Mouromtsev D. **Innovative e-Tourism Services on Top of Geo2Tag LBS Platform**. In Proceedings - 11th International Conference on Signal-Image Technology and Internet-Based Systems, SITIS 2015. IEEE. 2016. p. 752-759 <https://doi.org/10.1109/SITIS.2015.11>

Davidson P, Raunio JP, Piché R. **Accurate depth estimation from a sequence of monocular images supported by proprioceptive sensors**. In 23rd Saint Petersburg International Conference on Integrated Navigation Systems, ICINS 2016 - Proceedings. State Research Center of the Russian Federation. 2016. p. 249-257

Davidson P, Merkulova I. **Computer vision aided navigation systems**. In 23rd Saint Petersburg International Conference on Integrated Navigation Systems, ICINS 2016 - Proceedings. State Research Center of the Russian Federation. 2016. p. 560-562

Multanen J, Kultala H, Koskela M, Viitanen T, Jääskeläinen P, Takala J et al. **OpenCL Programmable Exposed Datapath High Performance Low-Power Image Signal Processor**. In 2016 IEEE Nordic Circuits and Systems Conference (NORCAS). IEEE. 2016 <https://doi.org/10.1109/NORCHIP.2016.7792906>

Sarjanoja S, Boutellier J, Hannuksela J. **BM3D image denoising using heterogeneous computing platforms**. In DASIP 2015 - Proceedings of the 2015 Conference on Design and Architectures for Signal and Image Processing. Vol. 2015-December. IEEE COMPUTER SOCIETY PRESS. 2015. 7367257 <https://doi.org/10.1109/DASIP.2015.7367257>

Acimovic J, Mäki-Marttunen TM, Linne M-L. **Whole-cell morphological properties of neurons constrain the nonrandom features of network connectivity**. In Cymbalyuk G, Burkitt A, editors, 24th Annual Computational Neuroscience Meeting: CNS\*2015. Vol. 16 (Suppl 1). Prague: BioMed Central. 2015. p. P:O7. O7

Boutellier J, Nyländén T. **Programming graphics processing units in the RVC-CAL dataflow language**. In Electronic Proceedings of the 2015 IEEE International Workshop on Signal Processing Systems, SiPS 2015. Vol. 2015-December. Institute of Electrical and Electronics Engineers Inc. 2015. 7344994 <https://doi.org/10.1109/SiPS.2015.7344994>

Irofti P, Dumitrescu B. **Cosparse dictionary learning for the orthogonal case**. In 2015 19th International Conference on System Theory, Control and Computing, ICSTCC 2015 - Joint Conference SINTES 19, SACCS 15, SIMSIS 19. IEEE. 2015. p. 343-347 <https://doi.org/10.1109/ICSTCC.2015.7321317>

Sikiö M, Holli-Helenius KK, Ryymin P, Dastidar P, Eskola H, Harrison L. **The effect of region of interest size on textural parameters**. In 2015 9th International Symposium on Image and Signal Processing and Analysis (ISPA). IEEE. 2015. p. 149-153 <https://doi.org/10.1109/ISPA.2015.7306049>

Akar GB, Gotchev A. **MOBILE3DTV: Content delivery optimization over DVB-H system**. In SMPTE International Conference on Stereoscopic 3D for Media and Entertainment. SMPTE. 2015 <https://doi.org/10.5594/M001417>

Rusu C, Astola J. **The extended one-dimensional discrete phase retrieval problem**. In 2015 International Symposium on Signals, Circuits and Systems (ISSCS). IEEE. 2015 <https://doi.org/10.1109/ISSCS.2015.7204029>

Iosifidis A, Tefas A, Pitas I. **Enhancing class discrimination in Kernel Discriminant Analysis**. In ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings. The Institute of Electrical and Electronics Engineers, Inc. 2015. p. 1926-1930. 7178306 <https://doi.org/10.1109/ICASSP.2015.7178306>

Mygdalis V, Iosifidis A, Tefas A, Pitas I. **Exploiting subclass information in one-class support vector machine for video summarization**. In ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings. Vol. 2015-August. The Institute of Electrical and Electronics Engineers, Inc. 2015. p. 2259-2263 <https://doi.org/10.1109/ICASSP.2015.7178373>

Dumitrescu B, Rusu C, Tabus I, Astola J. **Low-complexity robust DOA estimation**. In ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings. The Institute of Electrical and Electronics Engineers, Inc. 2015. p. 2794-2798 <https://doi.org/10.1109/ICASSP.2015.7178480>

Hurmalainen A, Saeidi R, Virtanen T. **Similarity induced group sparsity for non-negative matrix factorisation**. In ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings. The Institute of Electrical and Electronics Engineers, Inc. 2015. p. 4425-4429 <https://doi.org/10.1109/ICASSP.2015.7178807>

Azzari L, Foi A. **Collaborative filtering based on group coordinates for smoothing and directional sharpening**. In ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings. IEEE. 2015. p. 1573-1577 <https://doi.org/10.1109/ICASSP.2015.7178235>

Baby D, Gemmeke JF, Virtanen T, Van Hamme H. **Exemplar-based speech enhancement for deep neural network based automatic speech recognition**. In ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings. The Institute of Electrical and Electronics Engineers, Inc. 2015. p. 4485-4489 <https://doi.org/10.1109/ICASSP.2015.7178819>

Barker T, Virtanen T, Pontoppidan NH. **Low-Latency Sound-Source-Separation using Non-Negative Matrix Factorisation with Coupled Analysis and Synthesis Dictionaries**. In 2015 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). IEEE. 2015. p. 241-245 <https://doi.org/10.1109/ICASSP.2015.7177968>

Bito J, Hester JG, Tentzeris MM. **Ambient energy harvesting from a two-way talk radio for flexible wearable devices utilizing inkjet printing masking**. In 2015 IEEE MTT-S International Microwave Symposium, IMS 2015. Institute of Electrical and Electronics Engineers Inc. 2015. 7167079 <https://doi.org/10.1109/MWSYM.2015.7167079>

Kim S, Bito J, Jeong S, Georgiadis A, Tentzeris MM. **A flexible hybrid printed RF energy harvester utilizing catalyst-based copper printing technologies for far-field RF energy harvesting applications**. In 2015 IEEE MTT-S International Microwave Symposium, IMS 2015. Institute of Electrical and Electronics Engineers Inc. 2015. 7166723 <https://doi.org/10.1109/MWSYM.2015.7166723>

Kimionis J, Georgiadis A, Isakov M, Qi HJ, Tentzeris MM. **3D/inkjet-printed origami antennas for multi-direction RF harvesting**. In 2015 IEEE MTT-S International Microwave Symposium, IMS 2015. Institute of Electrical and Electronics Engineers Inc. 2015. 7166878 <https://doi.org/10.1109/MWSYM.2015.7166878>

Mariotti C, Cook BS, Alimenti F, Roselli L, Tentzeris MM. **Additively manufactured multilayer high performance RF passive components on cellulose substrates for internet-of-things electronic circuits**. In 2015 IEEE MTT-S International Microwave Symposium, IMS 2015. Institute of Electrical and Electronics Engineers Inc. 2015. 7166924 <https://doi.org/10.1109/MWSYM.2015.7166924>

Schiopu I, Tabus I. **Lossy-to-lossless progressive coding of depth-maps**. In International Symposium on Signals, Circuits and Systems (ISSCS). Iasi, Romania. 2015. p. 1 - 4 <https://doi.org/10.1109/ISSCS.2015.7203966>

Zaki G, Plishker W, Bhattacharyya SS, Fruth F. **Partial expansion of dataflow graphs for resource-aware scheduling of multicore signal processing systems**. In Conference Record of the 48th Asilomar Conference on Signals, Systems and Computers. Vol. 2015-April. IEEE COMPUTER SOCIETY PRESS. 2015. p. 385-392. 7094469 <https://doi.org/10.1109/ACSSC.2014.7094469>

Hukkanen J, Astola P, Tabus I. **Lossless compression of regions-of-interest from retinal images**. In EUVIP 2014 - 5th European Workshop on Visual Information Processing. The Institute of Electrical and Electronics Engineers, Inc. 2015 <https://doi.org/10.1109/EUVIP.2014.7018394>

Joutsijoki H, Rasku J, Haponen M, Baldin I, Gizatdinova Y, Paci M et al. **Classification of iPSC colony images using hierarchical strategies with support vector machines**. In 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. 2015. p. 86-92. 7008152

<https://doi.org/10.1109/CIDM.2014.7008152>

Iosifidis A, Tefas A, Nikolaidis N, Pitas I. **Human action recognition in stereoscopic videos based on bag of features and disparity pyramids**. In European Signal Processing Conference. European Signal Processing Conference, EUSIPCO. 2014. p. 1317-1321

Irofti P, Dumitrescu B. **GPU parallel implementation of the approximate K-SVD algorithm using OpenCL**. In 2014 Proceedings of the 22nd European Signal Processing Conference (EUSIPCO). European Signal Processing Conference, EUSIPCO. 2014. p. 271-275

De Wit JJM, Harmanny RIA, Molchanov P. **Radar micro-Doppler feature extraction using the Singular Value Decomposition**. In 2014 International Radar Conference, Radar 2014. The Institute of Electrical and Electronics Engineers, Inc. 2014 <https://doi.org/10.1109/RADAR.2014.7060268>

Hu S, Jin L, Kuo C-CJ. **Compressed video quality assessment with modified MSE**. In 2014 Asia-Pacific Signal and Information Processing Association Annual Summit and Conference, APSIPA 2014. The Institute of Electrical and Electronics Engineers, Inc. 2014 <https://doi.org/10.1109/APSIPA.2014.7041643>

Heulot J, Pelcat M, Nezan JF, Oliva Y, Aridhi S, Bhattacharyya SS. **Just-in-time scheduling techniques for multicore signal processing systems**. In 2014 IEEE Global Conference on Signal and Information Processing, GlobalSIP 2014. Institute of Electrical and Electronics Engineers Inc. 2014. p. 25-29. 7032071 <https://doi.org/10.1109/GlobalSIP.2014.7032071>

Barford L, Bhattacharyya SS, Liu Y. **Data flow algorithms for processors with vector extensions: Handling actors with internal state**. In 2014 IEEE Global Conference on Signal and Information Processing, GlobalSIP 2014. Institute of Electrical and Electronics Engineers Inc. 2014. p. 20-24. 7032070 <https://doi.org/10.1109/GlobalSIP.2014.7032070>

Lee CS, Chen WC, Bhattacharyya SS, Lee TS. **Dynamic, data-driven spectrum management in cognitive small cell networks**. In 2014, 8th International Conference on Signal Processing and Communication Systems, ICSPCS 2014 - Proceedings. Institute of Electrical and Electronics Engineers Inc. 2014. 7021121 <https://doi.org/10.1109/ICSPCS.2014.7021121>

Michalás A, Komninos N. **The lord of the sense: A privacy preserving reputation system for participatory sensing applications**. In 2014 IEEE Symposium on Computers and Communications, ISCC 2014 - Proceedings. Institute of Electrical and Electronics Engineers Inc. 2014. 6912480 <https://doi.org/10.1109/ISCC.2014.6912480>

Kovács P, Samiee K, Gabbouj M. **On application of rational Discrete Short Time Fourier Transform in epileptic seizure classification**. In 2014 IEEE International Conference on Acoustics, Speech and Signal processing (ICASSP), May 4-9 2014, Florence, Italy. Piscataway: IEEE. 2014. p. 5839-5843. 6854723. (IEEE International Conference on Acoustics, Speech and Signal Processing). <https://doi.org/10.1109/ICASSP.2014.6854723>

Ozan EC, Tankiz S, Acar BO, Ciloglu T. **An Unsupervised Audio Segmentation Method Using Bayesian Information Criterion**. In 6th International Symposium on Communications, Control & Signal Processing, ISCCSP, 21-23.5.2014, Athens, Greece. NEW YORK: IEEE. 2014. p. 640-643 <https://doi.org/10.1109/ISCCSP.2014.6877956>

Iosifidis A, Tefas A, Pitas I. **Minimum Variance Extreme Learning Machine for human action recognition**. In ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings. The Institute of Electrical and Electronics Engineers, Inc. 2014. p. 5427-5431. 6854640 <https://doi.org/10.1109/ICASSP.2014.6854640>

Korpi D, Anttila L, Valkama M. **Impact of received signal on self-interference channel estimation and achievable rates in in-band full-duplex transceivers**. In 2014 48th Asilomar Conference on Signals, Systems and Computers. IEEE COMPUTER SOCIETY PRESS. 2014. p. 975-982 <https://doi.org/10.1109/ACSSC.2014.7094599>

Hautala I, Boutellier J, Hannuksela J. **Programmable lowpower implementation of the HEVC Adaptive Loop Filter**. In 2013 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013 - Proceedings. 2013. p. 2664-2668. 6638139 <https://doi.org/10.1109/ICASSP.2013.6638139>

Cho I, Shen CC, Tachwali Y, Hsu CJ, Bhattacharyya SS. **Configurable, resource-optimized FFT architecture for OFDM communication.** In 2013 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013 - Proceedings. 2013. p. 2746-2750. 6638156 <https://doi.org/10.1109/ICASSP.2013.6638156>

Mäki-Marttunen TM, Acimovic J, Ruohonen KP, Linne M-L. **On the effect of network structure and synaptic mechanisms on sustained bursting activity.** In Cymbalyuk G, Prinz A, editors, Twenty Second Annual Computational Neuroscience Meeting: CNS\*2013. Vol. Volume 14 Suppl 1. Paris, France: BioMed Central. 2013. p. P247

Efimushkina T, Egiazarian K, Gabbouj M. **Rate-distortion based reversible watermarking for JPEG images with quality factors selection.** In 2013 4th European Workshop on Visual Information Processing, EUVIP 2013, Paris, France, 10.-12.2013. University of Paris 13. 2013. p. 94-99. 6623958. (European Workshop on Visual Information Processing).

Iosifidis A, Tefas A, Pitas I. **Multi-view human action recognition: A survey.** In Proceedings - 2013 9th International Conference on Intelligent Information Hiding and Multimedia Signal Processing, IIH-MSP 2013. IEEE COMPUTER SOCIETY PRESS. 2013. p. 522-525 <https://doi.org/10.1109/IIH-MSP.2013.135>

Iosifidis A, Tefas A, Pitas I. **Representative class vector clustering-based discriminant analysis.** In Proceedings - 2013 9th International Conference on Intelligent Information Hiding and Multimedia Signal Processing, IIH-MSP 2013. IEEE COMPUTER SOCIETY PRESS. 2013. p. 526-529 <https://doi.org/10.1109/IIH-MSP.2013.136>

Iosifidis A, Tefas A, Pitas I. **Dynamic action classification based on iterative data selection and Feedforward Neural networks.** In European Signal Processing Conference. European Signal Processing Conference, EUSIPCO. 2013. 6811572

Peltonen J, Lin Z. **Multiplicative update for fast optimization of information retrieval based neighbor embedding.** In 2013 IEEE International Workshop on Machine Learning for Signal Processing - Proceedings of MLSP 2013. 2013. 6661899 <https://doi.org/10.1109/MLSP.2013.6661899>

Betrouni N, Colin P, Puech P, Villers A, Mordon S. **An image guided treatment platform for prostate cancer photodynamic therapy.** In 2013 35th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC 2013. 2013. p. 370-373. 6609514 <https://doi.org/10.1109/EMBC.2013.6609514>

Kong L, Aho KL, Granberg K, Roos C, Autio R. **DBComposer: An R package for integrative analysis and management of gene expression microarray data.** In 2013 IEEE International Workshop on Genomic Signal Processing and Statistics, GENSIPS 2013 - Proceedings. 2013. p. 92-93. 6735944 <https://doi.org/10.1109/GENSIPS.2013.6735944>

Kim SC, Plishker WL, Bhattacharyya SS. **An efficient GPU implementation of an arbitrary resampling polyphase channelizer.** In DASIP 2013 - Proceedings of the 2013 Conference on Design and Architectures for Signal and Image Processing. 2013. p. 231-238. 6661548

Casale-Brunet S, Bezati E, Alberti C, Roquier G, Mattavelli M, Janneck JW et al. **Design space exploration and implementation of RVC-CAL applications using the TURNUS framework.** In DASIP 2013 - Proceedings of the 2013 Conference on Design and Architectures for Signal and Image Processing. 2013. p. 341-342. 6661566

Boutellier J, Ghazi A, Silvén O, Ersfolk J. **High-performance programs by source-level merging of RVC-CAL dataflow actors.** In 2013 IEEE Workshop on Signal Processing Systems, SiPS 2013. Institute of Electrical and Electronics Engineers Inc. 2013. p. 360-365. 6674533

Wang LH, Shen CC, Bhattacharyya SS. **Parameterized core functional dataflow graphs and their application to design and implementation of wireless communication systems.** In 2013 IEEE Workshop on Signal Processing Systems, SiPS 2013. Institute of Electrical and Electronics Engineers Inc. 2013. p. 1-6. 6674471

Cho I, Sudusinghe K, Shen CC, McGee J, Bhattacharyya S. **A system-level design approach for dynamic resource coordination and energy optimization in sensor network platforms.** In Conference Record of the 47th Asilomar Conference on Signals, Systems and Computers. IEEE COMPUTER SOCIETY PRESS. 2013. p. 1436-1441. 6810533  
<https://doi.org/10.1109/ACSSC.2013.6810533>

Ghazi A, Boutellier J, Hannuksela J, Shahabuddin S, Silvén O. **Programmable implementation of zero-crossing demodulator on an application specific processor.** In 2013 IEEE Workshop on Signal Processing Systems, SiPS 2013. Institute of Electrical and Electronics Engineers Inc. 2013. p. 231-236. 6674510

Peltonen J, Georgatzis K. **Efficient optimization for data visualization as an information retrieval task.** In 2012 IEEE International Workshop on Machine Learning for Signal Processing - Proceedings of MLSP 2012. 2012. 6349797  
<https://doi.org/10.1109/MLSP.2012.6349797>

Wang LH, Shen CC, Seetharaman G, Palaniappan K, Bhattacharyya SS. **Multidimensional dataflow graph modeling and mapping for efficient GPU implementation.** In Proceedings - 2012 IEEE Workshop on Signal Processing Systems, SiPS 2012. 2012. p. 300-305. 6363272 <https://doi.org/10.1109/SiPS.2012.10>

Boutellier J, Lundbom I, Janhunen J, Ylimainen J, Hannuksela J. **Application-specific instruction processor for extracting local binary patterns.** In DASIP 2012 - Proceedings of the 2012 Conference on Design and Architectures for Signal and Image Processing. 2012. p. 82-89. 6385363

Zhou Z, Shen CC, Plishker W, Wu HH, Bhattacharyya SS. **Systematic integration of flowgraph- and module-level parallelism in implementation of DSP applications on multiprocessor systems-on-chip.** In ICSP 2012 - 2012 11th International Conference on Signal Processing, Proceedings. Vol. 1. 2012. p. 402-408. 6491686  
<https://doi.org/10.1109/ICoSP.2012.6491686>

Kim SC, Plishker WL, Bhattacharyya SS, Cavallaro JR. **GPU-based acceleration of symbol timing recovery.** In DASIP 2012 - Proceedings of the 2012 Conference on Design and Architectures for Signal and Image Processing. 2012. p. 273-280. 6385393

Won S, Shen CC, Bhattacharyya SS. **NT-SIM: A co-simulator for networked signal processing applications.** In Proceedings of the 20th European Signal Processing Conference, EUSIPCO 2012. 2012. p. 1094-1098. 6334198

Wu S, Shen CC, Sane N, Davis K, Bhattacharyya SS. **Parameterized scheduling for signal processing systems using topological patterns.** In 2012 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2012 - Proceedings. 2012. p. 1561-1564. 6288190 <https://doi.org/10.1109/ICASSP.2012.6288190>

Acimovic J. **Emergence of global and local structural features during development of neuronal networks.** In Proceedings of the Eighth International Workshop on Computational Systems Biology, WCSB 2011, June 6-8, 2011, Zürich, Switzerland . Tampere: TICSP. 2011. (TICSP Series) .

Mäki-Marttunen T, Acimovic J, Ruohonen K, Linne M-L. **Effects of structure on spontaneous activity in simulated neuronal networks.** In Proceedings of Mathematical Neuroscience (ICMS 2011), April 11-13, 2011, Edinburgh, Scotland. 2011

Boutellier J, Silvén O, Raulet M. **Automatic synthesis of TTA processor networks from RVC-CAL dataflow programs.** In 2011 IEEE Workshop on Signal Processing Systems, SiPS 2011, Proceedings. 2011. p. 25-30. 6088944  
<https://doi.org/10.1109/SiPS.2011.6088944>

Zaki GF, Plishker W, Bhattacharyya SS, Clancy C, Kuykendall J. **Vectorization and mapping of software defined radio applications on heterogeneous multi-processor platforms.** In 2011 IEEE Workshop on Signal Processing Systems, SiPS 2011, Proceedings. 2011. p. 31-36. 6088945 <https://doi.org/10.1109/SiPS.2011.6088945>

Zabrodina V, Abramov S, Lukin V, Astola J, Vozel B, Chehdi K. **Blind estimation of mixed noise parameters in images using robust regression curve fitting.** In European Signal Processing Conference. 2011. p. 1135-1139

Kedilaya S, Plishker W, Purkovic A, Johnson B, Bhattacharyya SS. **Model-based precision analysis and optimization for digital signal processors**. In European Signal Processing Conference. 2011. p. 506-510

Bhattacharyya SS, Plishker W, Sane N, Shen CC, Wu HH. **Modeling and optimization of dynamic signal processing in resource-aware sensor networks**. In 2011 8th IEEE International Conference on Advanced Video and Signal Based Surveillance, AVSS 2011. 2011. p. 449-454. 6027374 <https://doi.org/10.1109/AVSS.2011.6027374>

Boutellier J, Silven O, Raulet M. **Scheduling of CAL actor networks based on dynamic code analysis**. In 2011 IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2011 - Proceedings. 2011. p. 1609-1612. 5946805 <https://doi.org/10.1109/ICASSP.2011.5946805>

Ivanov S, Botvich D, Balasubramaniam S. **On delay distribution in IEEE 802.11 wireless networks**. In 16th IEEE Symposium on Computers and Communications, ISCC'11. 2011. p. 254-256. 5983849 <https://doi.org/10.1109/ISCC.2011.5983849>

Acimovic J, Mäki-Marttunen T, Linne M-L. **Computational modeling of growth in cortical cultures using the NETMORPH simulation tool**. In Neuroscience 2010, 40th Annual Meeting, San Diego, USA, 13-17 November 2010. 2010. p. 2 p

Acimovic J, Teppola H, Selinummi JJ, Linne M-L. **Computational tools for assessing the properties of 2D neural cell cultures**. In Johnson D, editor, Eighteenth Annual Computational Neuroscience Meeting: CNS\*2009. Vol. 10 (Suppl 1). Berlin: BioMed Central. 2009. p. P170. P170

Ma H, Yu S, Gabbouj M, Mueller P. **Guest Editorial Special Issue on Multimedia Big Data in Internet of Things**. IEEE Internet of Things Journal. 2018 Oct;5(5):3405-3407. 8534720. <https://doi.org/10.1109/JIOT.2018.2875580>

Ellervee P, Nurmi J. **Guest Editorial: Implementation Issues in System-on-Chip**. Journal of Signal Processing Systems. 2017 Jun 1;87(3):269-270. <https://doi.org/10.1007/s11265-017-1242-x>

Richard G, Virtanen T, Bello JP, Ono N, Glotin H. **Introduction to the Special Section on Sound Scene and Event Analysis**. IEEE/ACM Transactions on Audio Speech and Language Processing. 2017 Jun 1;25(6):1169-1171. <https://doi.org/10.1109/TASLP.2017.2699334>

Balasubramaniam S, Jornet JM, Pierobon M, Koucheryavy Y. **Guest editorial special issue on the internet of nano things**. IEEE Internet of Things Journal. 2016 Feb 1;3(1):1-3. <https://doi.org/10.1109/JIOT.2016.2516838>

Mäki-Marttunen TM, Acimovic J, Ruohonen KP, Linne M-L. **Effects of local structure of neuronal networks on spiking activity in silico**. In Fellous J-M, Prinz A, editors, Twentieth Annual Computational Neuroscience Meeting: CNS\*2011. Vol. 12 (Suppl 1). Stockholm: BioMed Central. 2011. p. P202

Koivuluoma M, Barna L, Koivistoinen T, Kööbi T, Värri A. **Influences of digital band-pass filtering on the BCG waveform**. In BIOSIGNALS 2008 - Proceedings of the 1st International Conference on Bio-inspired Systems and Signal Processing. 2008. p. 84-89

Acimovic J, Teppola H, Mäki-Marttunen TM, Linne M-L. **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?** BMC Neuroscience. 2018 Oct 29;19(Suppl 2):68-69.

Acimovic J, Teppola H, Mäki-Marttunen TM, Linne M-L. **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?** 2018. Paper presented at Brain and Mind Symposium 2018, Helsinki, Finland.

Acimovic J. **Neural networks, cell cultures and some older work on data analysis.** 2009. Paper presented at Okinawa Computational Neuroscience Course 2009, Japan.