Prof Danilo P. Mandic, PhD, MSc, MEng (Hons), FIEEE

Publications

Books - authored:

[1] L. Stankovic, D. P. Mandic, M. Dakovic, M. Brakovic, B. Scalzo Dees, S. Li, and A. G. Constantinides, "Data Analytics on Graphs", *Now Publishers*, ISBN: 978-1-68083-982-1, 2021.

[2] A. Cichocki, A.-H. Phan, Q. Zhao, N. Lee, I. Oseledets, M. Sugiyama, and D. P. Mandic, "Tensor networks for dimensionality reduction and large-scale optimization. Part 2: Applications and future perspectives", *Now Publishers*, ISBN: 978-1-68083-276-1, 2017.

[3] A. Cichocki, N. Lee, I. Oseledets, A.-H. Phan, Q. Zhao, and D. P. Mandic, "Tensor networks for dimensionality reduction and large-scale optimization. Part 1: Low-rank tensor decompositions", *Now Publishers*, ISBN: 978-1-68083-222-8, 2016.

[4] D. P. Mandic and S. L. Goh, *Complex Valued Nonlinear Adaptive Filters: Noncircularity, Widely Linear and Neural Models*, research monograph, John Wiley & Sons, ISBN: 978-0-470-06635-5, 2009.

[5] D. P. Mandic and J. A. Chambers, *Recurrent Neural Networks for Prediction: Learning Algorithms, Architectures, and Stability*, research monograph, John Wiley & Sons, ISBN: 978-0-471-49517-8, 2001.

Books - edited:

[1] N. Kasabov *et al.*, (editors), *Springer Handbook of Bio- and Neuro-Informatics*, part-edited by D. Mandic, Springer 2014.

[2] D. P. Mandic, M. Golz, A. Kuh, D. Obradovic, and T. Tanaka, (editors), *Signal Processing Techniques for Knowledge Extraction and Information Fusion*, Springer 2008.

Edited conference proceedings:

[1] C. Jayne, D. P. Mandic, and R. Duro, "International Neural Network Society Workshop on Deep Learning Innovations and Applications", *Elsevier Procedia Computer Science*, 2023.

[2] D. P. Mandic (co-editor), "New Trends in Image Analysis and Processing", *Proceedings of ICIAP 2013 Workshops*, Lecture Notes in Computer Science, vol. 8158, Springer 2013.

[3] J. Marques de Sa, L. Alexandre, W. Duch, and D. P. Mandic, (editors), *Proceedings of the 17th International Conference on Artificial Neural Networks, ICANN'07. Part I and Part II*, Lecture Notes in Computer Science, LNCS 4668 and LNCS 4669, Springer 2007.

Journal articles:

[1] N. Ahsan, A. Sau, J. Barker, B. Neerahoo, N Qureshi, M. Koa-Wing, D. Keene, L. Malcolme-Lawes, D. Lefroy, N Linton, B. Lim, A. Varnava, Z. Whinnett, P. Kanagaratnam, D. P. Mandic, N. S. Peters, F. S. Ng, "Impact of pulmonary vein isolation on atrial fibrillation organisation: Correlation of intracardiac and surface Electrocardiogram measures", *Journal of Cardiovascular Electrophysiology*, accepted, July 2025.

[2] A. Jenkins, A. El-Medany, F. S. Ng, and D. P. Mandic, "Online graph topology learning via time-vertex adaptive filters: From theory to cardiac fibrillation", *IEEE Transactions on Signal and Information Processing over Networks*, vol. 11, pp. 965–979, 2025.

[3] M. Thornton, D. Mandic and T. Reichenbach, "Comparison of linear and nonlinear methods for decoding selective attention to speech from ear-EEG recordings,", *IEEE Access*, accepted, July 2025.

[4] H. Xiao, Y. L. Xu, A. Cukic, A. G. Constantinides, and D. P. Mandic, "Financial stress evaluation: A complexity science approach", *Financial Innovation*, accepted, April 2025.

[5] E. Menguc and D. P. Mandic, "Online censoring-based learning algorithms for fully complex-valued neural networks", *Neurocomputing*, vol. 623, pp. 1–12, 2025.

[6] S. Sun, D. Xu, Q. Diao, and D. P. Mandic, "Cramer-Rao lower bounds for unconstrained and constrained quaternion parameters", *IEE Transactions on Signal Processing*, accepted, January 2025.

[7] Q. Diao, D. Xu, S. Sun, and D. P. Mandic, "Optimizing beamforming in quaternion signal processing using projected gradient descent algorithm", Signal Processing, vol. 225. pp. 1–9, 2025.

[8] Y. Qiu, G. Zhou, C. Li, D. P. Mandic, and Q. Zhao, "Tensor ring rank determination using odd-dimensional unfolding method,", Neural Networks, vol. 183, pp. 1–14, 2025.

[9] M. Zhang, M. Xiang, Z. Zheng, S.P. Talebi, and D. P. Mandic, "A class of widely linear quaternion blind equalisation algorithms", Signal Processing, vol. 230, pp. 1–12, 2025.

[10] A. Sau, D. P. Mandic, F. S. Ng, *et al.*, "Prognostic significance and associations of neural network–derived electrocardiographic features", *Circulation: Cardiovascular Quality and Outcomes*, vol. 17, pp. 1–13, 2024.

[11] Y. Liang, D. Xu, N. Zhang, and D. P. Mandic, "Almost sure convergence of stochastic composite mirror descent for non-convex non-smooth optimisation", *Optimisation Letters*, vol. 18, pp. 2113–2131, 2024.

[12] A. Sau, E. Sieliwonczyk, K. Patlatzoglou, A. H. Ribeiro, K. A. McGurk, B. Zeidaabadi, H. Zhang, K. Macierzanka, D. P. Mandic, E. Sabino, L. Giatti, S. M. Barreto, L. do Valle Camelo, I. Tzoulaki, D. P. O'Regan, N. S. Peters, J. S. Ware, A. L. P. Ribeiro, D. B. Kramer, J. W. Waks, and F. S. Ng, "Artificial intelligence-enabled electrocardiogram for mortality and cardiovascular risk estimation: An actionable, explainable and biologically plausible platform" *Lancet Digital Health*, vol. 6, pp. 1–12, 2024.

[13] L. Pastika, A. Sau, K. Patlatzoglou, E. Sieliwonczyk, A. H. Ribeiro, K. A. McGurk, S. Khan, D. Mandic, W. R. Scott, J. S. Ware, N. S. Peters, Antonio L. P. Ribeiro, D. Kramer, J. W. Waks, and F. S. Ng,"Deep Neural Network-derived electrocardiographic body mass index as a predictor of cardiometabolic disease", *NPJ Digital Medicine*, vol. 7, article 147, pp. 1–16, 2024.

[14] C. Liu, X. Ma, Y. Zhang, L. Ding, D. Tao, B. Du, W. Hu and D. P. Mandic, "Comprehensive graph gradual pruning for sparse training in graph neural networks", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 35, no. 10, pp. 14903–14917, 2024.

[15] Y. Jiang, J. Liu, D. Xu, and D. P. Mandic, "UAdam: Unified Adam-type algorithmic framework for non-convex optimisation", *Neural Computation*, vol. 36, no. 9, pp. 1912–1938, 2024.

[16] D. Comminiello, E. Grassucci, D. P. Mandic, and A. Uncini, "Demystifying the hypercomplex: Inductive biases in hypercomplex deep learning", *IEEE Signal Processing Magazine*, vol. 41, no. 3, pp. 59–71 2024.

[17] C. Cheong Took, S. P. Talebi, R. M Fernandez Alcala, and D. P. Mandic, "Augmented statistics for quaternion random variables: A lynchpin of quaternion learning machines", *IEEE Signal Processing Magazine*, vol. 41, no. 3, pp. 72–87, 2024.

[18] S. Fu, X. Ma, Y. Zhan, F. You, Q. Peng, T. Liu, J. Bailey, and D. P. Mandic, "Finding core labels for maximizing generalization of graph neural networks", *Neural Networks*, vol. 180, article 106635, pp. 1–12, 2024.

[19] I. Stankovic, M. Brajovic, C. Ioana, M. Dakovic, D. P. Mandic, and L. Stankovic, "Matched filtering on directed graphs", *IEEE Transactions on Systems, Man and Cybernetics: Systems*, vol. 54, no. 9, pp. 5857–5861, 2024.

[20] H. J. Davies, G. Hammour, M. Zylinski, A. Nassibi, L. Stankovic, and D. P. Mandic, "The Deep-Match framework: R-peak detection in ear-ECG", *IEEE Transactions on Biomedical Engineering*, vol. 71, no. 7, pp. 2014-2021, 2024.

[21] Q. Diao, D. Xu, S. Sun, and D. P. Mandic, "Price's theorem for quaternion variables", *IEEE Signal Processing Letters*, vol. 31, pp. 1424–1428, 2024.

[22] G. Hammour, H. Davies, G. Atzori, C. della Monica, K. K. G. Ravindran, V. Revell, D.-J. Dijk, and D. P. Mandic, "From scalp to in-ear EEG: A generalisable transfer learning model for automatic sleep scoring in older people", *IEEE Journal of Translational Engineering in Health & Medicine*, vol. 12, pp. 448-456, 2024.

[23] M. Zylinski, A. Nassibi, E. Occhipinti, A. Malik, M. Bermond, H. J. Davies, and D. P. Mandic, "Hearables: In-ear multimodal data fusion for robust heart rate estimation", *BioMedInformatics*, vol. 4, pp. 911-920, 2024.

[24] M. Thornton, D. P. Mandic and T. Reichenbach, "Decoding envelope and frequency-following EEG responses to continuous speech using deep neural networks", *IEEE Open Journal of Signal Processing*, vol. 5, pp. 700-716, 2024.

[25] S. Sun, Q. Diao, D. Xu, P. Bourigault, and D. P. Mandic, "Convex quaternion optimization for signal processing: Theory and applications", *IEEE Transactions on Signal Processing*, vol. 71, pp. 4106-4115, 2023.

[26] M. Zylinski, A. Nassibi, I. Rakhmatulin, A. Malik, C. Papavassiliou, and D. P. Mandic, "Deployment of artificial intelligence models on edge devices: A tutorial brief", *IEEE Transactions on Circuits and Systems II: Express Briefs*, vol. 71, no. 3, pp. 1738–1743, 2024.

[27] D. P. Mandic, M. Bermond, E. Occhipinti, H. J. Davies, G. Hammour, and A. Nassibi, "In–your–ear: A multimodal hearables device for the assessment of the state of body and mind", *IEEE Pulse*, vol. 14, no. 6, pp. 17–23, 2024.

[28] H. J. Davies, G. Hammour, H. Xiao, P. Bachtinger, A. Larionov, P. L. Molyneaux, N. S. Peters, and D. P. Mandic, "Physically meaningful surrogate data for COPD", *IEEE Open Journal of Engineering in Medicine and Biology*, vol. 5, pp. 148–156, 2023.

[29] I. Rakhmatulin, M.-S. Dao, A. Nassibi, and D. P. Mandic, "Exploring convolutional neural network architectures for EEG feature extraction", *Sensors*, vol. 24, no. 877, pp. 1–39, 2024.

[30] M. Yarici, W. von Rosenberg, G. Hammour, H. Davies, P. Amadori, N. Ling, Y. Demiris, and D. P. Mandic, "Hearables: Feasibility of recording cardiac rhythms from single in-ear locations", *Royal Society Open Science*, vol. 11, article 221620, pp. 1–17, 2024.

[31] M. Zylinski, A. Nassibi, and D. P. Mandic, "Design and implementation of an atrial fibrilation detection algorithm on the ARM Cortex M4 microcontroller", *Sensors*, vol. 23, no, 7521, pp. 1–12, 2023.

[32] S. Poushpas, P. Normahani, I. Kisil, B. Szubert, D. P. Mandic, and U. Jaffer, "Tensor decomposition and machine learning for the detection of arteriovenous fistula stenosis: An initial evaluation", *PLOS ONE*, vol. 18, no. 7, pp. 1–15, 2023.

[33] S. Li and D. P. Mandic, "Von Mises-Fisher elliptical distribution", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 34, no 12, pp. 11006–11012, 2023.

[34] H. J. Davies and D. P. Mandic, "Rapid extraction of respiratory waveforms from photoplethysmography: A deep corr-encoder approach", *Biomedical Signal Processing and Control*, vol. 85, pp. 1-8, 2023.

[35] P. H. Charlton, *et al.*, "The 2023 wearable photoplethysmography roadmap", *Physiological Measurement*, vol. 44, no. 11, pp. 1–90, 2023.

[36] Y. L. Xu, K. Konstantinidis and D. P. Mandic, "Graph-regularized tensor regression: A domain-aware framework for interpretable modelling of multi-way data on graphs", *Neural Computation*, vol. 35, pp. 1404–1429, 2023.

[37] G. Hammour and D. P. Mandic, "An in-ear PPG-based blood glucose monitor: A proof-of-concept study", *Sensors*, vol. 23, article 3319, pp. 1-14, 2023. (**Editors's choice article for July 2024**)

[38] E. C. Menguc, N. Nacir, and D. P. Mandic, "A class of online censoring based quaternion-valued Least Mean Square algorithms", *IEEE Signal Processing Letters*, vol. 30, pp. 244-248, 2023.

[39] A. Sau, S. Ibrahim, D. B. Kramer, J. W. Waks, N. Qureshi, M. Koa-Wing, D. Keene, MRCP, L. Malcolme-Lawes, D. C. Lefroy, N. W.F. Linton, P. Boon Lim, A. Varnava, Z. I. Whinnett, P. Kanagaratnam, MRCP, D. Mandic, N. S. Peters, MD, F. Siong Ng, "Artificial intelligence-enabled electrocardiogram to distinguish atrioventricular re-entrant tachycardia from atrioventricular nodal re-entrant tachycardia", *Cardiovascular Digital Health Journal*, vol. 4, no. 2, pp. 60–67, 2023.

[40] L. Stankovic and D. P. Mandic, "Convolutional neural networks demystified: A matched filtering based approach", *IEEE Transactions on Systems, Man and Cybernetics*, vol. 53, no. 6, pp. 3614–3528, 2023.

[41] J. Liu, D. Xu, Y. Lu, J. Kong, and D. P. Mandic, "Last-iterate convergence analysis of stochastic momentum methods for neural networks", *Neurocomputing*, vol. 527, no. 28, pp. 27-35, 2023.

[42] L. Stankovic and D. P. Mandic, "Understanding the basis of graph convolutional neural networks via an intuitive matched filtering approach", *IEEE Signal Processing Magazine*, vol. 40, no. 2, pp. 155-165, 2023.

[43] Z. Qing, J. Ni, Z. Li, E. C. Menguc, and D. P. Mandic, "Performance analysis of the Augmented Complex-Valued Least Mean Kurtosis algorithm", *Signal Processing*, vol. 203, article 108792, pp. 1–13, 2023.

[44] H Davies, I. Williams, G. Hammour, M. Yarici, M. Stacey, B. Seemungal, and D. P. Mandic, "In-ear SpO_2 for classification of cognitive workload", *IEEE Transactions on Cognitive and Developmental Systems*, vol. 15, no. 2, pp. 950-958, 2023.

[45] M. Yarici, M. Thornton, and D. P. Mandic, "Ear-EEG sensitivity modeling for neural sources and ocular artifacts", *Frontiers in Neuroscience*, vol. 16, article 997377, pp. 1–15, 2023.

[46] K. Powezka, A. Pettipher, A. Hemakom, T. Adjei, P. Normahani, D.P. Mandic, and U. Jaffer "A pilot study of heart rate variability synchrony as a marker of intra-operative surgical teamwork and its correlation to the length of procedure", *Sensors*, vol. 22, pp. 1-11, 2022.

[47] S. Li, Z. Yu, M. Xiang, and D. P. Mandic, "Reciprocal GAN through characteristic functions (RCF-GAN)", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 45, no. 2, pp. 2246–2263, 2023.

[48] H. Xiao, T. Chanwimalueang, and D. P. Mandic, "Multivariate multiscale cosine similarity entropy and its application to examine circularity properties in division algebras", *Entropy*, vol. 24, article 1287, pp. 1–19, 2022.

[49] A. Haliassos, K. Konstantinidis and D. P. Mandic, "Supervised learning for non-sequential data: A Canonical Polyadic Decomposition approach", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 33, no. 10, pp. 5162–5176, 2022.

[50] E. Menguc, M. Xiang, and D. P. Mandic, "Online censoring based complex–valued adaptive filters", *Signal Processing*, vol 200, article 108638, pp. 1–12, 2022.

[51] S. P. Talebi, S. Godsill, and D. P. Mandic, "Filtering structures for α-stable systems", *IEEE Control Systems Letters*, vol. 7 pp. 553–558, 2022.

[52] J. Liu, D. Xu, H. Zhang, and D. P. Mandic, "On hyper–parameter selection for guaranteed convergence of RMSProp", *Cognitive Neurodynamics*, vol. 10, pp. 1-11, 2022.

[53] S. Ibrahim, A. Ahmed, B. Handa, D. B. Kramer, H. W. Waks, A. D. Arnold, J. P. Howard, N. Qureshi, M. Koa-Wing, D. Keene, L. Malcolme-Lawes, D. C. Lefroy, N. W. F. Linton, P. Boon Lim, A. Varnava, Z. I. Whinnett, P. Kanagaratnam, D. P. Mandic, N. S. Peters, and F. S. Ng, "Artificial intelligence-enabled electrocardiogram to distinguish cavotricuspid isthmus dependence from other atrial tachycardia mechanisms", *European Heart Journal*, vol. 3, pp. 405-414, 2022.

[54] M. Thornton, D. P. Mandic, and T. Reichenbach,"Robust decoding of the speech envelope from EEG recordings through deep neural networks", *Journal of Neural Engineering*, vol. 19, article 046007, pp. 1–19, 2022.

[55] P. Normahani, V. Sounderajah, D. P. Mandic, and U. Jaffer, "Machine learning based classification of arterial spectral waveforms for the diagnosis of peripheral arterial disease in the context of diabetes: A proof of concept study", *Vascular Medicine*, vol. 27, no. 5, pp. 450–456, 2022.

[56] C. Cheong Took and D. P. Mandic, "Weight sharing for LMS algorithms: Convolutional neural networks inspired multichannel adaptive filtering", *Digital Signal Processing*, vol. 127, article 103580, pp. 1–11, 2022.

[57] I. Kisil, G. Calvi, K. Konstantinidis, Y. L. Xu, and D. P. Mandic, "Accelerating tensor contraction products via tensor-train decomposition", *IEEE Signal Processing Magazine*, vol. 39, no. 5, pp. 63–70, 2022.

[58] A. Prochazka, J. Charvat, O. Vysata, and D. P. Mandic, "Incremental deep learning for reflectivity data recognition in stomatology", *Neural Computing and Applications*, accepted, vol. 34, no. 1, pp. 1-9, 2022.

[59] H. Xiao and D. P. Mandic, "Variational embedding multiscale sample entropy: A tool for complexity analysis of multichannel systems", *Entropy*, 2021.vol. 24, no. 26, pp. 1–19, 2022.

[60] M. Lo Giudice, E. Ferlazzo, N. Mammone, S. Gasparini, V. Cianci, A. Pascarella, A. Mamm, D. P. Mandic, F. C. Morabito, and U. Aguglia, "Convolutional neural network classification of rest EEG signals among people with epilepsy, psychogenic non-epileptic seizures and control subjects", *International Journal of Environmental Research and Public Health*, vol. 19, no. 23, pp. 1–9, 2022.

[61] H. Davies, P. Bachtinger, I. Williams, M. Peters, and D. P. Mandic, "Wearable in-ear PPG: Detailed respiratory variations enable classification of COPD", *IEEE Transactions on Biomedical Engineering*, vol. 69, no. 7, pp. 2390–2400, 2022.

[62] I. Kisil, G. G. Calvi, B. Scalzo, and D. P. Mandic, "HOTTBOX: Higher Order Tensor ToolBOX for the analysis of multi-way data", *Journal of Machine Learning Research*, accepted, September 2021.

[63] Z. Li, W. Deng, Z. Zhi and S. P. Mandic, "A layer-wise distribution analysis of the WLMMSE-SIC MIMO receiver for rectilinear or quasi-rectilinear signals", *Signal Processing*, vol. 189, article 108230, pp. 1–7, 2021.

[64] Z. Li, R. Pu, Y. Xia, W. Pei, and D. P. Mandic, "A full second-order analysis of the widely linear MVDR beamformer for noncircular signals", *IEEE Transactions on Signal Processing*, vol. 69, pp. 4257–4268, 2021.

[65] E. Menguc, S. Cinar, M. Xiang, and D. P. Mandic, "Online censoring based weighted-frequency Fourier linear combiner for estimation of pathological hand tremors", *IEEE Signal Processing Letters*, vol. 28, pp. 1460–1464, 2021.

[66] L. Stankovic, J. Lerga, D. P. Mandic, M. Brajovic, C. Richard, and M. Dakovic, "From time-frequency to vertex-frequency and back", *Mathematics*, vol. 9, no. 12, article 407, pp. 1-40, 2021.

[67] L. Stankovic, M. Brajovic, D. P. Mandic, I. Stankovic, and M. Dakovic, "Improved coherence index-based bound in compressive sensing", *IEE Signal Processing Letters*, vol. 28, pp. 1110–1114, 2021.

[68] S. Li, Z. Yu, and D. P. Mandic, "A universal framework for learning the elliptical mixture model", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 32, no. 7, pp. 3181–3195, 2021.

[69] M. Bugallo, A. G. Constantinides, D. P. Mandic, A. Oppenheim, and R. Togneri, "Innovation Starts with Education", *IEEE Signal Processing Magazine*, vol. 28, no. 3, pp. 11-13, 2021.

[70] A. Ruiz-Garcia, J. Schmidhuber, V. Palade, C. Cheong Took, and D. P. Mandic, "Deep neural network representation and Generative Adversarial Learning", *Neural Networks*, vol. 139, no. July, pp. 199-200, 2021.

[71] D. Xu, S. Zhang, H. Zhang, and D. P Mandic, "Convergence of the RMSProp deep learning method with penalty for nonconvex optimization", *Neural Networks*, vol. 139, pp. 17–23, 2021.

[72] B. Scalzo Dees, T. Konstantinidis, and D. P. Mandic, "Analysis of global fixed income returns using multi-linear tensor algebra", *The Journal of Fixed Income*, pp. 1–21, Spring 2021.

[73] G. G. Calvi, B. S. Dees and D. P. Mandic, "A lower bound on tensor rank based on its maximally square matrix unfolding", *Signal Processing*, vol. 180, article 107862, pp. 1–4, 2021.

[74] Y. Khalifa, D. P. Mandic, and E. Sejdic, "A review of hidden Markov models and recurrent neural networks for event detection and localisation in biomedical signals", *Information Fusion*, vol. 69, pp. 52–72, 2021.

[75] L. Stankovic, D. P. Mandic, M. Dakovic, M. Brajovic, B. Scalzo Dees, S. Li, and A. G. Constantinides, "Data analytics on graphs. Part III: Machine learning on graphs, from graph topology to applications", *Foundations and Trends in Machine Learning*, vol. 13, no. 4, pp. 332–530, 2020.

[76] L. Stankovic, D. P. Mandic, M. Dakovic, M. Brajovic, B. Scalzo Dees, S. Li, and A. G. Constantinides, "Data analytics on graphs. Part II: Signals on graphs", *Foundations and Trends in Machine Learning*, vol. 13, no. 2–3, pp. 158–331, 2020.

[77] L. Stankovic, D. P. Mandic, M. Dakovic, M. Brajovic, B. Scalzo Dees, S. Li, and A. G. Constantinides, "Data analytics on graphs. Part I: Graphs and spectra on graphs", *Foundations and Trends in Machine Learning*, vol. 13, no. 1, pp. 1–157, 2020.

[78] V. Gogineni, S. P. Talebi, D. P. Mandic and S. Werner, "Fractional-order correntropy filters for tracking dynamic systems in alpha-stable environments", *IEEE Transactions on Circuits and Systems II: Express Briefs*, vol. 67, no. 12, pp. 3557–3561, 2020.

[79] E. C. Menguc, N. Acir, and D. P. Mandic, "Widely linear quaternion-valued Least-Mean Kurtosis algorithm", *IEEE Transactions on Signal Processing*, vol. 68, pp. 5914-5922, 2020.

[80] V. Gogineni, S. P. Talebo, S. Werner, and D. P. Mandic, "Fractional-order correntropy adaptive filters for distributed processing of α-stable signals", *IEEE Signal Processing Letters*, vol. 27, pp. 1884–1888, 2020.

[81] A. H. Phan, M. Yamagishi, D. P. Mandic, and A. Cichocki, "Quadratic programming over ellipsoids with applications to constrained linear regression and tensor decomposition", *Neural Computing and Applications*, vol. 32, no. 11, pp. 7097-7120, 2020.

[82] A.–H. Phan, A. Cichocki, A. Uschmajew, P. Tichavsky, G. Luta, and D. P. Mandic, "Tensor networks for latent variable analysis: Novel algorithms for tensor train approximation", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 31, no. 11., pp. 4622–4636, 2020.

[83] H. Davies, I. Williams, N. Peters and D. P. Mandic, "In-Ear SpO2: A tool for wearable, unobtrusive monitoring of core blood oxygen saturation", *Sensors*, vol. 20, article 4879, pp. 1–12, 2020. (**Editors's choice article for October 2020**)

[84] L. Stankovic, D. Mandic, M. Dakovic, B. Scalzo-Dees, M. Brajovic, E. Sejdic, and A. G. Constantinides, "Vertex-frequency graph signal processing: A comprehensive review", *Digital Signal Processing*, vol. 107, article 102802, pp. 1–28, 2020. (**Editors's choice article for October 2020**)

[85] L. Stankovic, M. Brajovic, M. Dakovic, and D. P. Mandic, "On the decomposition of multivariate nonstationary multicomponent signals", *Signal Processing*, vol. 167, article 107261, pp. 1–13, 2020.

[86] S. P. Talebi, S. Werner, and D. P. Mandic, "Quaternion–valued distributed filtering and control", *IEEE Transactions on Automatic Control*, vol. 65, no. 10, pp. 4246–4257, 2020.

[87] X. Zhang, Y. Xia, Yili, C. Li, L. Yang, and D. P. Mandic, "Complex properness inspired blind adaptive frequency-dependent I/Q imbalance compensation for wideband direct-conversion receivers", *IEEE Transactions on Wireless Communications*, vol. 19, no. 9, pp. 5982–5992, 2020.

[88] X. Zhang, B. Scalzo Dees, C. Li, Y. Xia, L. Yang, and D. P. Mandic, "Analysis of least stochastic entropy adaptive filters for noncircular Gaussian signals", *IEEE Transactions on Circuits and Systems II: Express Briefs*, vol. 67, no. 7, pp. 1364-1368, 2020.

[89] M. Xiang, Y. Xia, and D. P. Mandic, "Performance analysis of deficient length least mean square adaptive filter", *IEEE Transactions on Signal Processing*, vol. 68, pp. 65–80, 2020.

[90] T. Nakamura, Y. D. Alqurashi, M. J. Morrell and D. P. Mandic, "Hearables: Automatic overnight sleep monitoring with standardised in-ear sensor", *IEEE Transactions on Biomedical Engineering*, vol. 67, no.1, pp. 1558–2531, 2020.

[91] L. Stankovic, D. P. Mandic, M. Dakovic and I. Kisil, "Demystifying the coherence index in compressive sensing", *IEEE Signal Processing Magazine*, vol. 37, no. 1, pp. 152–162, 2020.

[92] A. H. Phan, A. Cichocki, I. Oseledets, G. Calvi, S. Ahmadi–Asl, and D. P. Mandic, "Tensor networks for latent variable analysis: Higher Order Canonical Polyadic Decomposition", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 31, no. 6, pp. 2174-2188, 2020.

[93] Y. Xia, B. Zhang, W. Pei, and D. P. Mandic, "Bidimensional Multivariate Empirical Mode Decomposition with applications in multi-scale image fusion", *IEEE Access*, vol. 7, pp. 114261–114270, 2019.

[94] W. von Rosenberg, M.-O. Hoting, and D. P. Mandic, "A physiology based model of heart rate variability", *Biomedical Engineering Letters*, vol. 9, no. 4, pp. 425–434, 2019.

[95] L. Stankovic, D. P. Mandic, I. Kisil, E. Sejdic, and A. G. Constantinides, "Understanding the basis of graph signal processing via an intuitive example-driven approach", *IEEE Signal Processing Magazine* [Lecture Notes], vol. 36, no. 6, pp. 135–145, 2019.

[96] V. Oliveira, W. von Rosenberg, P. Montaldo, T. Adjei, J. Mendoza, V. Shivamurtappa, D. P. Mandic and S. Thayyil, "Early postnatal heart rate variability in healthy newborn infants" *Frontiers in Physiology: Clinical and Translational Physiology*, vol. 10, pp. 1–12, August 2019.

[97] M. Xiang, Y. Xia, and D. P. Mandic, "Complementary cost functions for complex and quaternion widely linear estimation", *IEEE Signal Processing Letters*, vol. 26, no. 9, pp. 1344–1348, 2019.

[98] P. Talebi, S. Werner, and D. P. Mandic, "Complex–valued nonlinear adaptive filters with applications in α–stable environments", *IEEE Signal Processing Letters*, vol. 26, no. 9, pp. 1315–1319, 2019.

[99] Y. Xia, S. Tao, Z. Li, M. Xiang, W. Pei, and D. P. Mandic, "Full mean square performance bounds on quaternion estimators for improper data", *IEEE Transactions on Signal Processing*, vol. 67, no. 15, pp. 4093–4106, 2019.

[100] V. Solo, M. S. Greco, D. Mandic, P. Djuric, A. Spanias, and M. Bugallo, "Innovation Starts with Education: ICASSP 2019 Education Panel", *IEEE Signal Processing Magazine* [SP Forum], vol. 36, no. 5, pp. 135–138, 2019.

[101] D. Mandic, P. Djuric, A. Cichocki, C. Cheong Took, S. Sanei, and L. Hanzo, "Quo Vadis ICASSP – Echoes of the 2019 International Conference on Acoustics, Speech and Signal Processing, Brighton, UK, 12-17 May 2019", *IEEE Signal Processing Magazine* [Conference Highlights], vol. 36, no. 5, pp. 127–134, 2019.

[102] X. Zhang, Y. Xia, C. Li, L. Yang, and D. P. Mandic, "Analysis of the unconstrained frequency domain block LMS for second-order noncircular inputs", *IEEE Transactions on Signal Processing*, vol. 67, no. 15, pp. 3970–3984, 2019.

[103] T. Nitta, M. Kobayashi, and D. P. Mandic, "Hypercomplex widely linear estimation through the lens of underpinning geometry", *IEEE Transactions on Signal Processing*, vol. 67, no. 15, pp. 3985–3994, 2019.

[104] T. Adjei, W. von Rosenberg, and D. P. Mandic, "The ClassA framework: HRV based assessment of SNS and PNS dynamics without LF-HF controversies", *Frontiers in Physiology*, vol. 10, article ID 505, pp. 1–15, 2019.

[105] S. T. Hansen, A. Hemakom, M. G. Safeldt, L. K. Krohne, K. H. Madsen, H. R. Siebner, D. P. Mandic, and L. K. Hansen, "Unmixing oscillatory brain activity by EEG source localization and empirical mode decomposition", *Computational Intelligence and Neuroscience*, vol. 2019, article ID 5618303, pp. 1–15, 2019.

[106] S. Kanna, A. Moniri, Y. Xia, A. G. Constantinides, and D. P. Mandic, "A Data Analytics perspective of power grid analysis. Part 2: Teaching old power systems new tricks", *IEEE Signal Processing Magazine* [Lecture Notes], vol. 36, no. 3, pp. 110–117, 2019.

[107] A. Stott, B. Scalzo–Dees, I. Kisil, and D. P. Mandic, "A class of multidimensional NIPALS Algorithms for quaternion and tensor partial least squares regression", *Signal Processing*, vol. 160, pp. 316–327, 2019.

[108] D. P. Mandic and C. Cheong Took, "Rebuttal to *Comments on The Quaternion LMS Algorithm for Adaptive Filtering of Hypercomplex Processes*", *IEEE Transactions on Signal Processing*, vol. 67, no. 7, pp. 1959–1959, 2019.

[109] D. P. Mandic, S. Kanna, Y. Xia, A. Moniri, A. Junyent–Ferre, and A. G. Constantinides, "A Data Analytics perspective of power grid analysis. Part 1: The Clarke and related transforms", *IEEE Signal Processing Magazine* [Lecture Notes], vol. 36, no. 2, pp. 110–116, 2019.

[110] H. Cheng, Y Xia, Y. Huang. L. Yang, and D. P. Mandic, "Joint channel estimation and Tx/Rx I/Q imbalance compensation for GFDM systems", *IEEE Transactions on Wireless Communications*, vol. 18, no. 2, pp. 1304-1317, 2019.

[111] Z. Li, Y. Xia, W. Pei, and D. P. Mandic, "A cost-effective nonlinear self-interference canceller in full-duplex direct-conversion transceivers", *Signal Processing*, vol. 158, no. 5, pp. 4–14, 2019.

[112] K. Powezka, T. Adjei, W. von Rosenberg, P. Normahani, V. Goverdovsky, N. Standfield, D. P. Mandic, and U. Jaffer, "A pilot study of preoperative heart rate variability predicting pain during local anesthetic varicose vein surgery", *Journal of Vascular Surgery: Venous and Lymphatic Disorders*, vol. 7, no, 3, pp. 382–386, 2019.

[113] M. Xiang, B. Scalzo-Dees, and D. P. Mandic, "Multiple model adaptive estimation for 3D and 4D signals: A widely linear quaternion approach", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 30, no. 1, pp. 72–84, 2019.

[114] V. Oliveira, R. Martins, N. Liow, J. Teiserskas, W. von Rosenberg, T. Adjei, V. Shivamurthappa, P. J. Lally, D. P. Mandic, and S. Thayyil, "Prognostic accuracy of heart rate variability analysis in neonatal encephalopathy: A systematic review", *Neonatology*, vol. 115, pp. 59–67, 2019.

[115] T. Adjei, J. Xue and D. P. Mandic, "The female heart: Sex differences in the dynamics of ECG in response to stress", *Frontiers in Physiology*, vol. 9, article 1616, pp. 1–8, 2018.

[116] Y. D. Alqurashi, T. Nakamura, V. Goverdovsky, J. Moss, M. I. Polkey, D. P. Mandic, and M. J. Morrell, "A novel in-ear sensor to determine sleep latency during the Multiple Sleep Latency Test (MSLT) in healthy adults with and without sleep restriction", *Nature and Science of Sleep*, vol. 10, pp. 385–396, 2018.

[117] H. Cheng, Y. Xia, Y. Huang, L. Yang, and D. P. Mandic, "A normalized complex LMS based blind I/Q imbalance compensator for GFDM receivers and its full second order performance analysis", *IEEE Transactions on Signal Processing*, vol. 66, no. 17, pp. 4701–4712, 2018.

[118] S. P. Talebi, S. Werner, and D. P. Mandic, "Distributed adaptive filtering of α–stable signals", *IEEE Signal Processing Letters*, vol. 25, no. 10, pp. 1450–1454, 2018.

[119] A. Stott, S. Kanna, and D. P. Mandic, "Widely linear complex partial least squares for latent subspace regression", *Signal Processing*, vol. 152, pp. 350–362, 2018.

[120] Z. Li, Y. Xia, W. Pei, K. Wang, and D. P. Mandic, "An augmented nonlinear LMS for digital self-interference cancellation in full-duplex direct-conversion transceivers", *IEEE Transactions on Signal Processing*, vol. 66, no. 15, pp. 4065–4078, 2018.

[121] P. Normahani, N. Makwana, W. von Rosenberg, S. Syed, D. P. Mandic, V. Goverdovsky, N. Standfield, and U. Jaffer, "Self-assessment of surgical ward crisis management using video replay augmented with stress biofeedback", *Patient Safety in Surgery*, vol. 12, no. 6, pp. 1–10, 2018.

[122] S. Kanna, W. von Rosenberg, V. Goverdovsky, A. G. Constantinides, and D. P. Mandic, "Bringing wearable sensors into the classroom: A participatory approach", *IEEE Signal Processing Magazine* [Lecture Notes], vol. 35, no. 3, pp. 110–130, 2018.

[123] M. A. M. Constantinescu, S.-L. Lee, S. Ernst, A. Hemakom, D. P. Mandic, and G.-Z. Yang, "Probabilistic guidance for catheter tip motion in cardiac ablation procedures", *Medical Image Analysis*, vol. 47, pp. 1–14, 2018.

[124] Y. Xia, S. C. Douglas, and D. P. Mandic, "A perspective on CLMS as a deficient length augmented CLMS: Dealing with second order noncircularity", *Signal Processing*, vol. 149, pp. 236–245, 2018.

[125] M. Xiang, S. Enshaeifar, A. E. Stott, C. Cheong Took, Y. Xia, S. Kanna, and D. P. Mandic, "Simultaneous diagonalisation of the covariance and complementary covariance matrices in quaternion widely linear signal processing", *Signal Processing*, vol. 148, pp. 193–204, 2018.

[126] M. Xiang, S. Kanna, and D. P. Mandic, "Performance analysis of quaternion adaptive filters in nonstationary environments", *IEEE Transactions on Signal Processing*, vol. 66, no. 6, pp. 1566–1579, 2018.

[127] Y. Xia, S. Kanna, and D. P. Mandic, "Maximum likelihood frequency estimation of unbalanced three-phase power signals", *IEEE Transactions on Instrumentation and Measurement*, vol. 67, no. 3, pp. 569–581, 2018.

[128] D. Looney, T. Adjei, and D. P. Mandic, "A novel multivariate sample entropy algorithm for modelling time series synchronization", *Entropy*, vol. 20, no. 82, pp. 1–18, 2018.

[129] Y. Xia and D. P. Mandic, "Augmented performance bounds on strictly linear and widely linear estimators with complex data", *IEEE Transactions on Signal Processing*, vol. 66, no. 2, pp. 507-514, 2018.

[130] L. Stankovic, M. Brajovic, and D. P. Mandic, "Time-frequency decomposition of multivariate multicomponent signals", *Signal Processing*, vol. 142, pp. 468–479, 2018.

[131] Y. Xia, S. C. Douglas, and D. P. Mandic, "Performance analysis of the deficient length augmented CLMS algorithm for second order noncircular complex signals" *Signal Processing*, vol. 144, pp. 214–225, 2018.

[132] T. Nakamura, V. Goverdovsky, and D. P. Mandic, "In-ear EEG biometrics for feasible and readily collectable real-world person authentication", *IEEE Transactions on Information Forensics & Security*, vol. 13, no. 3, pp. 648–661, 2018.

[133] W. von Rosenberg, T. Chanwimalueang, V. Goverdovsky, N. S. Peters, C. Papavassiliou, and D. P. Mandic, "Hearables: Feasibility of recording cardiac rhythms from head and in-ear locations", *Royal Society Open Science*, vol. 4, no. 11, article 171214, pp. 1–13, 2017.

[134] T. Chanwimalueang and D. P. Mandic, "Cosine similarity entropy: Self-correlation-based complexity analysis of dynamical systems", *Entropy*, vol. 19, article 652, pp. 1–23, 2017.

[135] A. Hemakom, K. Powezka, V. Goverdovsky, U. Jaffer, and D. P. Mandic, "Quantifying team cooperation through intrinsic multi-scale measures: Respiratory and cardiac synchronisation in choir singers and surgical teams," *Royal Society Open Science*, vol. 4, article 170853, pp. 1–23, 2017.

[136] Y. Tonoyan, T. Chanwimalueang, M. M. van Hulle, and D. P. Mandic, "Discrimination of emotional states from scalp- and intracranial EEG using multiscale Renyi entropy", *PLOS ONE*, vol. 12, no. 11, pp. 1–22, 2017.

[137] T. Adjei, W. von Rosenberg, V. Goverdovsky, K. Powezka, U. Jaffer, and D. P. Mandic, "Pain prediction from ECG in vascular surgery", *IEEE Journal of Translational Engineering in Health and Medicine*, vol. 5, article 2800310, pp. 1–10 , 2017.

[138] S. P. Talebi and D. P. Mandic, "Distributed particle filtering of alpha-stable signals", *IEEE Signal Processing Letters*, vol. 24, no. 12, pp. 1862–1866, 2017.

[139] S. Kappel, D. Looney, D. P. Mandic, and P. Kidmose, "Physiological artifacts in scalp EEG and ear-EEG", *BioMedical Engineering OnLine*, vol. 16, article 103, pp. 1–16, 2018.

[140] V. Goverdovsky, W. von Rosenberg, T. Nakamura, D. Looney, D. J. Sharp, C. Papavassiliou, M. J. Morrell, and D. P. Mandic, "Hearables: Multimodal physiological in-ear sensing", *Nature Scientific Reports*, vol. 7, article 6948, pp. 1-10, 2017.

[141] Y. Xia and D. P. Mandic. "A full mean square analysis of CLMS for second order noncircular inputs", *IEEE Transactions on Signal Processing*, vol. 65, no. 21, pp. 5578–5590, 2017.

[142] Y. Xia and D. P. Mandic, "Complementary mean square analysis of Augmented CLMS for second order noncircular Gaussian signals", *IEEE Signal Processing Letters*, vol. 24, no. 98, p. 1413–1417, 2017.

[143] T. Nakamura, V. Goverdovsky, M. Morrell, and D. P. Mandic, "Automatic sleep monitoring using ear-EEG", *IEEE Journal of Translational Engineering in Health and Medicine*, vol. 5, article id 2800108, pp. 1–8, 2017. **(most dowloaded paper in this journal, September 2017)**.

[144] S. Enshaeifar, C. Park, C. Cheong Took, and D. P. Mandic, "Quaternion common spatial patterns", *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, vol. 25, no. 8, pp. 1278–1286, 2017.

[145] Y. Alqurashi, J. Moss, T. Nakamura, V. Goverdovsky, M. Polkey, D. P. Mandic, and M. J. Morrell, "The efficacy of in-ear electroencephalography (EEG) to monitor sleep latency and the impact of sleep deprivation", *American Journal of Respiratory and Critical Care Medicine*, (abstract of our conference paper published in a journal), vol. 195, A7596, 2017.

[146] W. von Rosenberg, T. Chanwimalueang, T. Adjei, U. Jaffer, V. Goverdovsky, and D. P. Mandic, "Resolving ambiguities in the LF/HF ratio: LF-HF scatter plots for the categorization of mental and physical stress from HRV", *Frontiers in Physiology*, vol. 8, Article 360, pp. 1–12, 2017.

[147] S. Kanna and D. P. Mandic, "Self-stabilising adaptive three-phase transforms via widely linear modelling", *Electronics Letters*, vol. 53, no. 13, pp. 875–877, 2017.

[148] T. Chanwimalueang, L. Aufegger, T. Adjei, D. Wasley, C. Cruder, D. P. Mandic, and A. Williamon, "Stage call: Cardiovascular reactivity to audition stress in musicians", *PLOS ONE*, vol. 12, no. 4, pp. 1–14, 2017.

[149] A. Cichocki, A.-H. Phan, Q. Zhao, N. Lee, I. Oseledets, M. Sugiyama, and D. P. Mandic, "Tensor networks for dimensionality reduction and large-scale optimization. Part 2: Applications and future perspectives", *Foundations and Trends in Machine Learning*, vol. 9, no. 6, pp. 431–673, 2017.

[150] Y. Xia, Y. He, K. Wang, W. Pei, Z. Blazic, and D. P. Mandic, "A complex least squares enhanced smart DFT technique for power system frequency estimation", *IEEE Transactions on Power Delivery*, vol. 32, no. 3, pp. 1270–1278, 2017.

[151] M. Xiang, S. Kanna, C. Cheong Took, and D. P. Mandic,"Cost-effective quaternion minimum mean square error estimation: From widely linear to four-channel processing", *Signal Processing*, vol. 136, pp. 81–91, 2017.

[152] Z. Li, Y. Xia, K. Wang, W. Pei, and D. P. Mandic, "Noncircular measurement and mitigation of I/Q imbalance in OFDM-based WLAN transmitters", *IEEE Transactions on Instrumentation and Measurement*, vol. 66, no. 3, pp. 383–393, 2017.

[153] M. U. Ahmed, T. Chanwimalueang, S. Thayyil, and D. P. Mandic, "A multivariate multiscale fuzzy entropy algorithm with application to uterine EMG complexity analysis", *Entropy*, vol. 19, no. 2, pp. 1–18, 2017.

[154] N. Rehman, S. Abbas, A. Asif, A. Javed, K. Naveed, and D. P. Mandic, "Translation invariant multi-scale signal denoising based on goodness-of-fit tests", Signal Processing, vol. 131, pp. 220-234, 2017.

[155] W. von Rosenberg, T. Chanwimalueang, V. Goverdovsky, D. Looney, D. Sharp, and D. P. Mandic, "Smart helmet: Wearable multichannel ECG & EEG", *IEEE Journal of Translational Engineering in Health and Medicine*, **most downloaded paper over six months since its online publication**, vol. 4, article id 700111, pp. 1–11, 2016. **received The Prize, in the 2023 IEEE Engineering in Medicine and Biology Society Prize Paper Award**

[156] A. Cichocki, N. Lee, I. Oseledets, A.-H. Phan, Q. Zhao, and D. P. Mandic, "Tensor networks for dimensionality reduction and large-scale optimisation. Part 1: Low-rank tensor decompositions", *Foundations and Trends in Machine Learning*, vol. 9, no. 4-5, pp. 249–429, 2016.

[157] H. Zhang and D. P. Mandic, "Is a complex-valued stepsize advantageous in complex-valued gradient learning algorithms?", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 27, no. 12, pp. 2730–2735, 2016.

[158] S. P. Talebi, S. Kanna, and D. P. Mandic, "A distributed quaternion Kalman filter with applications to smart grid and target tracking", *IEEE Transactions on Signal and Information Processing over Networks*, vol. 2, no. 4, pp. 477–488, 2016.

[159] G. Zhou, A. Cichocki, Z. Yu, and D. P. Mandic, "Group component analysis for multi-block data: Common and individual feature extraction", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 27, no. 11, pp. 2426–2439, 2016.

[160] Y. Kim, J. Ryu, K. Kim, C. C. Took, D. P. Mandic, and C. Park, "Motor imagery classification using mu and beta rhythms of EEG with strong uncorrelating transform based complex common spatial patterns", *Computational Intelligence and Neuroscience*, vol. 2016, article ID 1489692, 13 pages, doi:10.1155/2016/1489692, 2016.

[161] D. Looney, V. Goverdovsky, I. Rosenzweig, M. J. Morrell, and D. P. Mandic, "A wearable in-ear encephalography sensor for monitoring sleep: Preliminary observations from nap studies", *Annals of the American Thoracic Society*, vol. 13, no. 12, pp. 2229–2233, 2016.

[162] D. Xu, H. Gao, and D. P. Mandic,"A new proof of the generalized Hamiltonian-Real calculus", *Royal Society Open Science*, vol. 3, no. 9, pp. 160211(1–6), 2016.

[163] A. Hemakom, T. Chanwimalueang, A. Carrion-Garcia, L. Aufegger, A. G. Constantinides, and D. P. Mandic, "Financial stress through complexity science", *IEEE Journal on Selected Topics in Signal Processing*, vol. 10, no. 6, pp. 1112–1126, 2016.

[164] S. Kanna and D. P. Mandic, "Steady-state behaviour of general complex-valued diffusion LMS strategies", *IEEE Signal Processing Letters*, vol. 23, no. 5, pp. 722-726, 2016.

[165] Y. Tonoyan, D. Looney, D. P. Mandic, and M. M. van Hulle, "Discriminating multiple emotional states from EEG using a data-adaptive, multiscale information-theoretic approach", *International Journal of Neural Systems*, vol. 26, no. 2, pp. 1–16, 2016.

[166] A. Hemakom, V. Goverdovsky, D. Looney, and D. P. Mandic, "Adaptive-projection intrinsically-transformed multivariate empirical mode decomposition in cooperative brain-computer interface applications", *Philosophical Transactions of the Royal Society A*, vol. 374, vol. 2064, pp. 1–15, 2016.

[167] D. Xu, Y. Xia, and D. P. Mandic, "Optimization in quaternion dynamic systems: Gradient, Hessian and learning algorithms", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 27, no. 2, pp. 249-261, 2016.

[168] V. Goverdovsky, D. Looney, P. Kidmose, and D. P. Mandic, "In-ear EEG from viscoelastic generic earpieces: Robust and unobtrusive 24/7 monitoring", *IEEE Sensors Journal*, vol. 16, no. 1, pp. 271–277, 2016.

[169] V. Jaksic, D. P. Mandic, K. Ryan, B. Basu, and V. Pakrashi, "A comprehensive study of the delay vector variance method for quantification of nonlinearity in dynamical systems", *Royal Society Open Science*, vol. 3, no. 1, pp. 150493(1–24), 2016.

[170] V. Jaksic, B. Basu, R. Karoumi, D. P. Mandic, and V. Pakrashi, "Estimation of nonlinearities from pseudo-dynamic and dynamic responses of bridge structures using the delay vector variance method", *Physica A: Statistical Mechanics and its Applications*, vol. 441, pp. 100–120, 2016.

[171] K. B. Mikkelsen, S. L. Kappel, D. P. Mandic, and P. Kidmose, "EEG recorded from the ear: Characterizing the Ear-EEG method", *Frontiers in Neuroscience*, vol. 9, article 438, 8 pages, 2015.

[172] R. Miralles, A. Carrion, D. Looney, G. Lara, and D. P. Mandic, "Characterization of the complexity in short oscillating time series: An application to seismic airgun detonations", *Journal of the Acoustical Society of America*, vol. 138, no. 3, pp. 1595–1603, 2015.

[173] D. P. Mandic, S. Kanna, and A. Constantinides, "On the intrinsic relationship between the least mean square (LMS) and Kalman filters", *IEEE Signal Processing Magazine* [Lecture Notes], vol. 32, no. 6, pp. 117–122, 2015.

[174] D. Xu, C. Jahanchahi, C. Cheong Took, and D. P. Mandic, "Enabling quaternion derivatives: The GHR calculus", *Royal Society Open Science*, vol. 2, no. 8, pp. 150255(1–24), 2015.

[175] F. Tobar, P. Djuric, and D. P. Mandic, "Unsupervised state-space modelling using reproducing kernels", *IEEE Transactions on Signal Processing*, vol. 63, no. 19, pp. 5210-5221, 2015.

[176] Y. Xia, C. Jahanchahi, T. Nitta, and D. P. Mandic, "Performance bounds of quaternion estimators", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 26, no. 12, pp. 3287–3292, 2015.

[177] B. Jelfs and D. P. Mandic, "A unifying framework for the analysis of proportionate NLMS algorithms", *International Journal of Adaptive Control and Signal Processing*, vol. 29, no. 9, pp. 1073–1085, 2015.

[178] A. Ahrabian and D. P. Mandic, "Selective time-frequency reassignment based on synchrosqueezing", *IEEE Signal Processing Letters*, vol. 22, no. 11, pp. 2039–2043, 2015.

[179] S. Kanna, D. Dini, Y. Xia, R. Hui, and D. P. Mandic, "Distributed widely linear Kalman filtering for frequency estimation in power networks", *IEEE Transactions on Signal and Information Processing over Networks*, vol. 1, no. 1, pp. 45–57, 2015.

[180] D. Xu, H. Zhang, and D. P. Mandic, "Convergence analysis of an augmented algorithm for fully complex-valued neural networks", *Neural Networks*, vol. 69, pp. 44-50, 2015.

[181] J. Duun-Henriksen, T. W. Kjaer, D. Looney, M. D. Atkins, J. A. Sorensen, M. Rose, D. P. Mandic, R. E. Madsen and C. Juhl, "EEG signal quality of a subcutaneous recording system compared to standard surface electrodes," *Journal of Sensors*, Article ID 167145, pp. 1–11, 2015.

[182] N. Rehman, S. Ehsam. S. M. U. Abdullah, M. J. Akhtar, D. P. Mandic, and K. D. McDonald-Maier, "Multi-scale pixel based image fusion using multivariate empirical mode decomposition", *Sensors*, vol. 15, no. 5, pp. 10923-10947, 2015.

[183] A. Cichocki, D. P. Mandic, C. Caiafa, A.-H. Phan, G. Zhou, Q. Zhao and L. De Lathauwer, "Tensor decompositions for signal processing applications: From two-way to multiway component analysis", *IEEE Signal Processing Magazine*, vol. 32, no. 2, pp. 145–163, 2015. **(best paper award in IEEE Signal Processing Magazine for 2018)**

[184] A. Ahrabian and D. P. Mandic, "A class of multivariate denoising algorithms based on synchrosqueezing", *IEEE Transactions on Signal Processing*, vol. 63, no. 9, pp. 2196–2208, 2015.

[185] Y. Xia, C. Jahanchahi, and D. P. Mandic, "Quaternion-valued echo state networks", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 26, no. 4, pp. 663–673, 2015.

[186] Y. Xia, Z. Blazic, and D. P. Mandic, "Complex-valued least squares frequency estimation for unbalanced power systems", *IEEE Transactions on Instrumentation and Measurement*, vol. 64, no. 3, pp. 638–648, 2015.

[187] V. Jaksic, C. Wright, J. Murphy, A. Chanayil, S. F. Ali, D. P. Mandic, and V. Pakrashi, "Dynamic response mitigation of floating wind turbine platforms using tuned liquid column dampers", *Philosophical Transactions of the Royal Society A*, vol. 373, no. 2035, pp. 1–9, 2015.

[188] V. Jaksic, R. O'Shea, P. Cahill, J. Murphy, D. P. Mandic, and V. Pakrashi, "Dynamic response signatures of a scaled model platform for floating wind turbines in an ocean wave basin", *Philosophical Transactions of the Royal Society A*, vol. 373, no. 2035, pp. 1–18, 2015.

[189] V Jaksic, C. Wright , D. P Mandic, J. Murphy, and V. Pakrashi, "A delay vector variance based marker for an output-only assessment of structural changes in tension leg platforms,", *Journal of Physics, Conference Series – DAMAS'15*, vol. 628, article 012059, pp. 1–9, 2015.

[190] D. Xu and D. P. Mandic, "The theory of quaternion matrix derivatives", *IEEE Transactions on Signal Processing*, vol. 63, no. 6, pp. 1543–1556, 2015.

[191] S. M. Abdullah, N. Rehman, M. N. Khan, and D. P. Mandic, "A multivariate empirical mode decomposition based approach to pan-sharpening", *IEEE Transactions on Geoscience and Remote Sensing*, vol. 53, no. 7, pp. 3974–3984, 2015.

[192] D. Looney, A. Hemakom, and D. P. Mandic, "Intrinsic multiscale analysis: A multivariate empirical mode decomposition framework", *Proceedings of the Royal Society A*, vol. 471, no. 2173, pp. 1–28, 2015.

[193] V. Goverdovsky, D. Looney, P. Kidmose, C. Papavassiliou, and D. P. Mandic, "Co-located multimodal sensing: A next generation solution for wearable health", *IEEE Sensors Journal*, vol. 15, no. 1, pp. 138–145, 2015.

[194] C. Cheong Took, S. C. Douglas, and D. P. Mandic, "Maintaining the integrity of sources in complex learning systems: Intraference and the correlation preserving transform", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 26, no. 3, pp. 500–509, 2015.

[195] A. Ahrabian, D. Looney, L. Stankovic, and D. P. Mandic, "Synchrosqueezing-based time-frequency analysis of multivariate data", *Signal Processing*, vol. 106, pp. 331–341, 2015.

[196] F. Tobar and D. P. Mandic, "Quaternion reproducing kernel Hilbert spaces: Existence and uniqueness conditions", *IEEE Transactions on Information Theory*, vol. 60, no. 9, pp. 5736–5748, 2014.

[197] N. Rehman, M. W. Safdar, U. Rehman, and D. P. Mandic, "Dynamically-sampled bivariate empirical mode decomposition", *IEEE Signal Processing Letters*, vol. 21, no. 7, pp. 857–861, 2014.

[198] C. Jahanchahi, S. Kanna, and D. P. Mandic, "Complex dual channel estimation: Cost effective widely linear adaptive filtering", *Signal Processing*, vol. 104, pp. 33–42, 2014.

[199] C. Park, C. Cheong Took, and D. P. Mandic, "Augmented complex common spatial patterns for classification of noncircular EEG from motor imagery tasks", *IEEE Transactions on Neural Systems and Rehabilitation Engineering,* vol. 22, no. 1, pp. 1–10, 2014.

[200] C. Jahanchahi and D. P. Mandic, "A class of quaternion Kalman filters", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 25, no. 3, pp. 533–544, 2014.

[201] C. Ujang Bukhari, C. Jahanchahi, C. Cheong-Took, and D. P. Mandic, "An adaptive convex combination approach for the identification of improper quaternion processes", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 25, no. 1, pp. 172–182, 2014.

[202] M. S. Koh, D. P. Mandic and A. G. Constantinides, "Theory of digital filterbanks realized via multivariate empirical mode decomposition", *Advances in Adaptive Data Analysis*, vol. 6, no. 1, pp. 1–31, 2014.

[203] Y. Xia and D. P. Mandic, "A widely linear least mean phase algorithm for adaptive frequency estimation of unbalanced power system", *International Journal of Electrical Power and Energy Systems*, vol. 54, pp. 367–375, 2014.

[204] F. Tobar, S.-Y. Kung and D. P. Mandic, "The multikernel least mean square algorithm", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 25, no. 2, pp. 265–277, 2014.

[205] B. Peng, W. Liu, and D. P. Mandic, "Design of oversampled GDFT filter banks for application to subband based blind source separation", *IET Signal Processing*, vol. 7, no. 9, pp. 843–853, 2013.

[206] A. Williamon, L. Aufegger, D. Wasley, D. Looney, and D. P. Mandic, "Complexity of physiological responses decreases in high stress musical performance", *Royal Society Interface*, vol. 10, no. 89, pp. 1–6, 2013.

[207] D. P. Mandic, N. Rehman, Z. Wu, and N. E. Huang, "Empirical mode decomposition based time-frequency analysis of multivariate signals", *IEEE Signal Processing Magazine*, vol. 30, no. 6, pp. 74–86, 2013.

[208] D. Dini, P. Djuric, and D. P. Mandic, "The augmented complex particle filter", *IEEE Transactions on Signal Processing*, vol. 61, no. 17, pp. 4341–4346, 2013.

[209] N. Rehman, C. Park, N. E. Huang, and D. P. Mandic, "EMD via MEMD: Multivariate noise-aided computation of standard EMD", *Advances in Adaptive Data Analysis*, vol. 5, no. 2, pp. 1–25, 2013.

[210] P. Aguilera, S. Cruces, I. Duran-Diaz, A. Sarmiento, and D. P. Mandic, "Blind separation of dependent sources with a bounded component analysis deflationary algorithm", *IEEE Signal Processing Letters*, vol. 20, no. 7, pp. 709-712, 2013.

[211] P. Kidmose, D. Looney, M. L. Rank, M. Ungstrup, and D. P. Mandic, "A study of evoked potentials from Ear-EEG", *IEEE Transactions on Biomedical Engineering*, vol. 60, no. 10, pp. 2824–2830, 2013.

[212] J. Navarro-Moreno, J. Fernandez Alcala, C. Cheong Took, and D. P. Mandic, "Prediction of wide-sense stationary quaternion random signals", *Signal Processing*, vol. 93, no. 9, pp. 2573–2580, 2013.

[213] A. Ahrabian, N. Rehman, and D. P. Mandic, "Bivariate empirical mode decomposition for unbalanced real-world signals", *IEEE Signal Processing Letters*, vol. 20, no. 3, pp. 245–248, 2013.

[214] Y. Xia and D. P. Mandic, "Augmented MVDR spectrum based frequency estimation for unbalanced power systems", *IEEE Transactions on Instrumentation and Measurement*, vol. 62, no. 7, pp, 1917–1926, 2013.

[215] Q. Zhao, C. F. Caiafa, D. P. Mandic, Z. C. Chao, Y. Nagasaka, N. Fujii,L. Zhang, and A. Cichocki, "Higher-order partial least squares (HOPLS): A generalized multi-linear regression method", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 35, no. 7, pp. 1660–1673, 2013.

[216] C. Jahanchahi, C. Cheong Took, and D. P. Mandic, "A class of quaternion valued affine projection algorithms", *Signal Processing*, vol. 93, no. 9, pp. 1712–1723, 2013.

[217] I. Mostafanezhad, E. Yavari, O. Boric-Lubecke, V. Lubecke, and D. P. Mandic, "Cancellation of unwanted Doppler radar sensor motion using empirical mode decomposition", *IEEE Sensors Journal*, vol. 13, no. 5, pp. 1897–1904, 2013.

[218] D. Dini and D. P. Mandic, "Widely linear modeling for frequency estimation in unbalanced three-phase power systems", *IEEE Transactions on Instrumentation and Measurement*, vol. 62, no. 2, pp. 353–363, 2013.

[219] C. Park, D. Looney, N. Rehman, A. Ahrabian and D. P. Mandic, "Classification of motor imagery BCI using multivariate empirical mode decomposition", *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, vol. 21, no. 1, pp. 10–22, 2013.

[220] A. Ahrabian, C. Cheong Took and D. P. Mandic, "Algorithmic trading using phase synchronization", *IEEE Journal on Selected Topics in Signal Processing*, vol. 6, no. 4, pp. 399–404, 2012.

[221] D. Dini, C. Jahanchahi, and D. P. Mandic, "Widely linear complex and quaternion valued bearings only tracking", *IET Signal Processing* (invited), vol. 6, no. 5, pp. 435–445, 2012.

[222] D. Looney, P. Kidmose, C. Park, M. Ungstrup, M. L. Rank, K. Rosenkranz and D. P. Mandic, "The In-the-Ear recording concept", *IEEE Pulse Magazine*, vol. 3, no. 6, pp. 32–42, 2012.

[223] M. U. Ahmed, N. Rehman, D. Looney, T. M. Rutkowski, and D. P. Mandic, "Data-adaptive multivariate complexity analysis", *Bulletin of the Polish Academy of Sciences*, vol. 50, no. 3, pp. 433-466, 2012.

[224] D. Looney, M. Ahmed and D. P. Mandic, "Human-centred multivariate complexity analysis", *Natural Intelligence Magazine*, vol. 1, no. 3, pp. 40–43, 2012.

[225] D. H. Dini and D. P. Mandic, "A class of widely linear complex Kalman filters", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 23, no. 5, pp. 775–786, 2012.

[226] B. Peng, W. Liu, and D. P. Mandic, "Reducing permutation error in subband-based convolutive blind separation", *IET Signal Processing*, vol. 6, no. 1, pp. 34-44, 2012.

[227] Y. Xia, S. C. Douglas, and D. P. Mandic, "Adaptive frequency estimation in smart grid applications: Exploring noncircularity and widely linear estimators", *IEEE Signal Processing Magazine*, vol. 29, no. 5, pp. 44-54, 2012.

[228] C. Cheong Took, S. C. Douglas, and D. P. Mandic, "On approximate diagonalisation of correlation matrices in widely linear signal processing", *IEEE Transactions on Signal Processing*, vol. 60, no. 3, pp. 1469–1473, 2012.

[229] M. Uddin Ahmed and D. P. Mandic, "Multivariate multiscale entropy", *IEEE Signal Processing Letters*, vol. 19, no. 2, pp. 91–94, 2012.

[230] L. Li, Y. Xia, B. Jelfs, J. Cao, and D. P. Mandic, "Modelling of brain consciousness based on collaborative adaptive filters", *Neurocomputing* (invited paper), vol. 76, no. 1, p. 36–43, 2012.

[231] Y. Xia and D. P. Mandic, "Widely linear adaptive frequency estimation of unbalanced three-phase power systems", *IEEE Transactions on Instrumentation and Measurement*, vol. 61, no. 1, pp. 74-83, 2012.

[232] M. Leo, D. Looney, T. D'Orazio, and D. P. Mandic, "Identification of defective areas in composite materials by bivariate EMD analysis of ultrasound", *IEEE Transactions on Instrumentation and Measurement*, vol. 61, no. 1, pp. 221-232, 2012.

[233] B. Jelfs, D. P. Mandic, and S. C. Douglas, "An adaptive approach for the identification of improper complex signals", *Signal Processing*, vol. 92, pp. 335-344, 2012.

[234] M. Uddin Ahmed and D. P. Mandic, "Multivariate multiscale entropy: A tool for complexity analysis of multichannel data", *Physical Review E*, vol. 84, no. 6, pp. 061918-1 – 061918-10, 2011.

[235] C. U. Bukhari, C. Cheong-Took and D. P. Mandic, "Quaternion valued nonlinear adaptive filtering", *IEEE Transactions on Neural Networks*, vol. 22, no. 8, pp. 1193-1206, 2011.

[236] S. Javidi, C. Cheong Took, and D. P. Mandic, "A fast independent component analysis algorithm for quaternion signals", *IEEE Transactions on Neural Networks*, vol. 22. no. 12, pp. 1967-1978, 2011.

[237] Y. Xia, D. P. Mandic, and A. H. Sayed, "An adaptive diffusion augmented CLMS algorithm for distributed filtering of noncircular complex signals", *IEEE Signal Processing Letters*, vol. 18, no. 11, pp. 659-662, 2011.

[238] C. Cheong-Took, D. P. Mandic, and F. Zhang, "On the unitary diagonalisation of a special class of quaternion matrices", *Applied Mathematics Letters*, vol. 24, no. 11, pp. 1806-1809, 2011.

[239] S. Javidi, D. P. Mandic, C. Cheong Took, and A. Cichocki, "Kurtosis based blind source extraction of complex noncircular signals with application in EEG artifact removal in real time", *Frontiers in Neuroscience*, vol. 5, no. 105, pp. 1–18, 2011.

[240] D. Dini, D. P. Mandic, and S. Julier, "A widely linear complex unscented Kalman filter", *IEEE Signal Processing Letters*, vol. 18, no. 11, pp. 623-626, 2011.

[241] T. Rutkowski, T. Tanaka, A. Cichocki, D. Erickson, J. Cao, and D. P. Mandic, "Interactive components extraction from fEEG and fNIRS for affective brain machine interfaces", *Computers in Human Behavior* (invited paper), vol. 27, pp. 1512-1518, 2011.

[242] Y. Xia, B. Jelfs, M. M. Van Hulle, J. C. Principe and D. P. Mandic, "An augmented echo state network for nonlinear adaptive filtering of complex noncircular signals", *IEEE Transactions on Neural Networks*, vol. 22, no. 1, pp. 74-83, 2011.

[243] C. Park, D. Looney, P. Kidmose, M. Ungstrup, and D. P. Mandic, "Time-frequency analysis of EEG asymmetry using bivariate empirical mode decomposition", *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, vol. 19, no. 4, pp. 366–373, 2011.

[244] C. Cheong-Took, G. Strbac, K. Aihara, and D. P. Mandic, "Quaternion-valued short term joint forecasting of three-dimensional wind and atmospheric parameters", *Renewable Energy*, vol. 74, no. 6, pp. 867–875, 2011.

[245] N. Rehman and D. P. Mandic, "Filterbank property of multivariate empirical mode decomposition", *IEEE Transactions on Signal Processing*, vol. 59, no. 5, pp. 2421–2426 , 2011.

[246] C. Park, D. Looney, M. M. Van Hulle, and D. P. Mandic, "The complex local mean decomposition", *Neurocomputing*, vol. 74, no. 6, pp. 867–875, 2011.

[247] T. Rutkowski, A. Cichocki, D. P. Mandic, and T. Nishida, "Emotional empathy transition patterns from human brain responses in interactive communication situations", *AI & Society* (invited paper), vol. 26, no. 3, pp. 301–315, 2011.

[248] C. Cheong-Took and D. P. Mandic, "Augmented second order statistics of quaternion random signals", *Signal Processing*, vol. 91, pp. 214-224, 2011.

[249] D. P. Mandic, C. Jahanchahi, and C. Cheong-Took, "A quaternion gradient operator and its applications", *IEEE Signal Processing Letters*, vol. 18, no. 1, pp. 1–5, 2011.

[250] C. Cheong–Took and D. P. Mandic, "A quaternion widely linear adaptive filter", *IEEE Transactions on Signal Processing*, vol. 58, no. 8, pp. 4427-4431, 2010.

[251] C. Cheong–Took and D. P. Mandic, "Quaternion-valued stochastic gradient based adaptive IIR filtering", *IEEE Transactions on Signal Processing*, vol. 58, no. 7, pp. 3895–3901, 2010.

[252] S. Javidi, D. P. Mandic, and A. Cichocki, "Complex blind source extraction from noisy mixtures using second order statistics", *IEEE Transactions on Circuits and Systems I*, vol. 57, no. 7, pp. 1404–1416, 2010.

[253] Y. Xia, C. Cheong–Took, and D. P. Mandic, "An augmented affine projection algorithm for the filtering of noncircular complex signals", *Signal Processing*, vol. 90, no. 6, pp. 1788–1799, 2010.

[254] N. Rehman and D. P. Mandic, "Multivariate empirical mode decomposition", *Proceedings of the Royal Society A*, vol. 466, no. 2117, pp. 1291–1302, 2010.

[255] C. Ujang–Bukhari, C. Cheong–Took, and D. P. Mandic, "Split–quaternion nonlinear adaptive filtering", *Neural Networks*, vol. 23, no. 3, pp. 426–434, 2010.

[256] C. Boukis, D. P. Mandic, and A. Constantinides, "A modified Armijo rule for online learning rate adaptation", *Digital Signal Processing*, vol. 20, no. 3, pp. 630–639, 2010.

[257] N. Rehman and D. P. Mandic, "Empirical mode decomposition for trivariate signals", *IEEE Transactions on Signal Processing*, vol. 58, no. 3, pp. 1059–1068, 2010.

[258] T. Rutkowski, D. P. Mandic, A. Cichocki, and A. Przybyszewski, "EMD approach to multichannel EEG data analysis - the amplitude and phase components clustering" *Journal of Circuits, Systems, and Computers* (invited paper), vol. 19, no. 1, pp. 215–229, 2010.

[259] W. Y. Leong and D. P. Mandic, "Noisy component extraction (NoiCE)", *IEEE Transactions on Circuits and Systems I*, vol. 57, no. 3, pp. 664–671, 2010.

[260] B. Jelfs, S. Javidi, P. Vayanos, and D. P. Mandic, "Characterisation of signal modality: Exploiting signal nonlinearity in machine learning and signal processing", *Journal of Signal Processing Systems* (invited paper), vol. 61, no. 1. pp. 105–115, 2010.

[261] C. Cheong–Took and D. P. Mandic, "Adaptive IIR filtering of noncircular signals", *IEEE Transactions on Signal Processing*, vol. 57, no. 10, pp. 4111–4118, 2009.

[262] C. Cheong–Took and D. P. Mandic, "The quaternion LMS algorithm for adaptive filtering of hypercomplex processes", *IEEE Transactions on Signal Processing*, vol. 57, no. 4, pp. 1316–1327, 2009.

[263] Y. Yuan, Y. Li, and D. P. Mandic, "Regular nonlinear response of the driven Duffing oscillator to chaotic time series", *Chinese Physics B*, vol. 18, no. 3, pp. 958–968, 2009.

[264] D. Looney and D. P. Mandic, "Multi-scale image fusion using complex extensions of EMD", *IEEE Transactions on Signal Processing*, vol. 57, no. 4, pp. 1626–1630, 2009.

[265] D. P. Mandic, S. Javidi, S. L. Goh, A. Kuh and K. Aihara, "Complex valued prediction of wind profile using augmented complex statistics", *Renewable Energy*, vol. 34, no. 1, pp. 196–201, 2009.

[266] C. Boukis, D. P. Mandic, and A. G. Constantinides, "A class of stochastic gradient descent algorithms with exponential cost functions", *Digital Signal Processing*, vol. 19, no. 2, pp. 201–212, 2009.

[267] Y. Yuan, Y. Li, and D. P. Mandic, "Comparative analysis of embedding dimensions in normal and epileptic EEG", *Journal of Physiological Sciences*, vol. 58, no. 4, pp. 239–247, 2008.

[268] W. Y. Leong and D. P. Mandic, "Post–nonlinear blind extraction in the presence of ill–conditioned mixing", *IEEE Transactions on Circuits and Systems I*, vol. 55, no. 9, pp. 2631–2638, 2008.

[269] D. P. Mandic, P. Vayanos, M. Chen, and S. L. Goh, "Online detection of the modality of complex valued real world signals", *International Journal of Neural Systems* (invited paper), vol. 18, no. 2, pp. 67–74, 2008.

[270] D. P. Mandic, M. Chen, T. Gautama, M. M. Van Hulle, and A. Constantinides, "On the characterisation of the deterministic/stochastic and linear/nonlinear nature of time series", *Proceedings of the Royal Society A*, vol. 464, no. 2093, pp. 1141–1160, 2008.

[271] W. Leong, W. Liu, and D. P. Mandic, "Blind source extraction: Standard approaches and extensions to noisy and post-nonlinear mixing", *Neurocomputing, Special Issue on Advances in Blind Source Separation*, (invited paper), vol. 17, no. 10–12, pp. 2344–2355, 2008.

[272] M. Pedzisz and D. P. Mandic, "A homomorphic neural network for modelling and prediction", *Neural Computation*, vol. 20, no. 4, pp. 1042–1064, 2008.

[273] M. Chen, T. Gautama, and D. P. Mandic, "An assessment of qualitative performance of machine learning architectures: Modular feedback networks", *IEEE Transactions on Neural Networks*, vol. 19, no. 1, pp. 183–189, 2008.

[274] Y. Hirata, D. P. Mandic, H. Suzuki, and K. Aihara, "Wind direction modelling using multiple observation points", *Philosophical Transactions of the Royal Society A* (invited paper), vol. 366, pp. 591-607, 2008.

[275] S. L. Goh and D. P. Mandic, "An augmented CRTRL for complex-valued recurrent neural networks", *Neural Networks*, vol. 20, no. 10, pp. 1061–1066, 2007.

[276] W. Liu, D. P. Mandic, and A. Cichocki, "Analysis and online realization of the CCA approach for blind source separation", *IEEE Transactions on Neural Networks*, vol. 18, no. 5, pp. 1505–1510, 2007.

[277] S. L. Goh and D. P. Mandic, "Stochastic gradient adaptive complex–valued nonlinear neural adaptive filters with a gradient adaptive step size", *IEEE Transactions on Neural Networks*, (invited paper), vol. 18, no. 5, pp. 1511–1516, 2007.

[278] D. P. Mandic, S. L. Goh, and K. Aihara, "Sequential data fusion via vector spaces: Fusion of heterogeneous data in the complex domain", *International Journal of VLSI Signal Processing Systems* (invited paper), vol. 48, no. 1–2, pp. 98–108, 2007.

[279] C. Boukis, D. P. Mandic, and A. Constantinides, "Towards bias minimisation in acoustic feedback cancellation systems", *Journal of the Acoustic Society of America*, vol. 121, no. 3, pp. 1529–1537, 2007.

[280] T. Tanaka and D. P. Mandic, "Complex empirical mode decomposition", *IEEE Signal Processing Letters*, vol. 14, no. 2, pp. 101–104, 2007.

[281] W. Liu, D. P. Mandic, and A. Cichocki, "Blind source extraction based on a linear predictor", *IET Signal Processing*, vol.1, no. 1, pp. 29–34, 2007.

[282] S. L. Goh and D. P. Mandic, "An augmented extended Kalman filter algorithm for complex-valued recurrent neural networks", *Neural Computation*, vol. 19, no. 4, pp. 1039-1055, 2007.

[283] R. Palaniappan and D. P. Mandic, "Biometric from the brain electrical activity: A machine learning approach", *IEEE Transactions in Pattern Analysis and Machine Intelligence* (Special Issue on Biometrics), vol. 29, no. 4, pp. 738–742, 2007.

[284] T. M. Rutkowski and D. P. Mandic, "Communicative interactivity - a multimodal communicative situation classification approach", *International Journal of VLSI Signal Processing Systems, Special Issue on Data Fusion* (invited paper), vol. 49, no. 2, pp. 317–328, 2007.

[285] R. Palaniappan and D. P. Mandic, "Energy of brain potentials evoked during visual stimulus: A new biometric?", *International Journal of VLSI Signal Processing Systems, Special Issue on Data Fusion*, vol. 49, no. 2, pp. 243–250, 2007.

[286] D. Sommer, M. Chen, M. Golz, U. Trutschell and D. P. Mandic, "Fusion of state space and frequency domain features for improved microsleep detection", *International Journal of VLSI Signal Processing Systems, Special Issue on Data Fusion* (invited paper), vol. 49, no. 2, pp. 329–342, 2007.

[287] W. Liu, D. P. Mandic, and A. Cichocki, "Blind second-order source extraction of instantaneous noisy mixtures", *IEEE Transactions on Circuits and Systems II*, vol. 53, no. 9, pp. 931–935, 2006.

[288] S. L. Goh, M. Chen, D. H. Popovic, K. Aihara, D. Obradovic and D. P. Mandic, "Complex–valued forecasting of wind profile", *Renewable Energy*, vol. 31, pp. 1733–1750, 2006.

[289] C. Boukis, D. P. Mandic, A. G. Constantinides, and L. C. Polymenakos, "A novel algorithm for the adaptation of the poles of Laguerre filters", *IEEE Signal Processing Letters*, vol. 13, no. 7, pp. 429–432, 2006.

[290] W. Liu and D. P. Mandic, "A Normalised kurtosis based algorithm for blind source extraction from noisy measurements", *Signal Processing*, vol. 86, pp. 1580–1585, 2006.

[291] C. Boukis, D. P. Mandic, and A. Constantinides, "Bias reduction in acoustic feedback cancellation systems with varying all-pass filters", *IEE Electronics Letters*, vol. 42, no. 9, pp. 556–558, 2006.

[292] W. Leong, D. P. Mandic, and J. Homer, "Implementing nonlinear multiuser detection in Rayleigh fading channels", *EURASIP Journal on Wireless Communications and Networking*, vol. 2006, pp. 1–9, 2006.

[293] S. L. Goh and D. P. Mandic, "Nonlinear adaptive prediction of complex valued signals by complex–valued PRNN", *IEEE Transactions on Signal Processing*, vol. 53, no. 5, pp. 1827–1836, 2005.

[294] S. L. Goh and D. P. Mandic, "A general complex RTRL algorithm for nonlinear adaptive filters", *Neural Computation*, vol. 16, no. 12, pp. 2699–2713, 2004.

[295] T. Gautama, D. P. Mandic and M. M. Van Hulle, "A non-parametric test for detecting the complex-valued nature of time series", *International Journal of Knowledge-Based Intelligent Engineering Systems* (invited paper), vol. 8, no. 2, pp. 99–106, 2004.

[296] T. Gautama, D. P. Mandic, and M. M. van Hulle, "A novel method for determining the nature of time series", *IEEE Transactions on Biomedical Engineering*, vol. 51, no. 5, pp. 728–736, 2004.

[297] G. C. Cawley, N. L. Talbot, R. J. Foxall, S. R. Dorling, and D. P. Mandic, "Heteroscedastic kernel ridge regression", *Neurocomputing* (invited paper), vol. 57, pp. 477-484, 2004.

[298] T. Gautama, D. P. Mandic, and M. M. Van Hulle, "The delay vector variance method for detecting determinism and nonlinearity in time series", *Physica D*, vol. 190, pp. 167–176, 2004.

[299] D. P. Mandic, "A generalised normalised gradient descent algorithm", *IEEE Signal Processing Letters*, vol. 11, no. 2, pp. 115–118, 2004.

[300] M. G. Jafari, J. A. Chambers, and D. P. Mandic, "A novel adaptive learning rate sequential blind source separation algorithm", *Signal Processing*, vol. 84, pp. 801-804, 2004.

[301] A. I. Hanna and D. P. Mandic, "On an improved approach to nonlinear system identification using neural networks", *Journal of the Franklin Institute*, vol. 340, pp. 363–370, 2003.

[302] S. L. Goh and D. P. Mandic, "Recurrent neural networks with trainable amplitude of activation functions", *Neural Networks*, vol. 16, pp. 1095–1100, 2003.

[303] A. Palmer, M. Razaz, and D. P. Mandic, "A spatially–adaptive neural network approach to regularized image restoration", *Journal of Intelligent & Fuzzy Systems* (invited paper), vol. 13, pp. 177–185, 2003.

[304] A. I. Hanna and D. P. Mandic, "A general fully adaptive normalised gradient descent learning algorithm for complex-valued nonlinear adaptive filters", *IEEE Transactions on Signal Processing*, vol. 51, no. 10, pp. 2540–2549, 2003.

[305] S. R. Dorling, R. J. Foxall, D. P. Mandic, and G. C. Cawley, "Penalised maximum likelihood cost functions for neural network models of air quality data", *Atmospheric Environment*, vol. 37, no. 24, pp. 3435–3443, 2003.

[306] T. Gautama, D. P. Mandic, and M. M. Van Hulle, "On the analysis of nonlinearity in fMRI signals: Comparing BOLD to MION", *IEEE Transactions on Medical Imaging*, vol. 22, no. 5, pp. 636–644, 2003.

[307] T. Gautama, D. P. Mandic, and M. M. Van Hulle, "On the indications of nonlinear structures in brain electrical activity", *Virtual Journal of Biological Physics Research* (Selected Papers from Physical Review E), Volume 5, Issue 8, 2003.

[308] T. Gautama, D. P. Mandic, and M. M. Van Hulle, "On the indications of nonlinear structures in brain electrical activity", *Physical Review E*, vol. 67, no. 4, pp. 046204–1 – 046204–5, 2003.

[309] S. L. Goh, D. P. Mandic and M. M. Bozic, "A nonlinear neural adaptive filter with a trainable amplitude of nonlinearity", *Journal of Automatic Control, Special Issue on Neural Networks* (invited paper), vol. 13, no. 1, pp. 1–5, 2003.

[310] A. I. Hanna and D. P. Mandic, "Complex–valued nonlinear neural adaptive filters with trainable amplitude of activation functions", *Neural Networks*, vol. 16, no. 2, pp. 155–159, 2003.

[311] A. I. Hanna and D. P. Mandic, "A data–reusing nonlinear gradient descent algorithm for a class of complex–valued nonlinear adaptive filters", *Neural Processing Letters*, vol. 17, pp. 85–91, 2003.

[312] A. I. Hanna and D. P. Mandic, "A nonlinear adaptive filter with a gradient adaptive amplitude of the nonlinearity", *IEEE Signal Processing Letters*, vol. 9, no. 8, pp. 253–255, 2002.

[313] M. G. Jafari, J. A. Chambers, and D. P. Mandic, "A natural gradient algorithm for cyclostationary sources", *IEE Electronics Letters*, vol. 38, no. 14, pp. 758–759, 2002.

[314] D. P. Mandic, "Data–reusing recurrent neural adaptive filters", *Neural Computation*, vol. 14, no. 11, 2693–2708, 2002.

[315] Z. V. Babic and D. P. Mandic, "A fast algorithm for linear convolution of discrete time signals", *Facta Universitatis: Series Electronics and Energetics* (invited paper), vol. 14, no. 3, pp. 399–409, 2001.

[316] D. P. Mandic, A. I. Hanna, and M. Razaz, "A normalised nonlinear gradient descent algorithm with a gradient adaptive step size", *IEEE Signal Processing Letters*, vol. 8, no. 11, pp. 295–297, 2001.

[317] D. P. Mandic and I. R. Krcmar, "Stability of the NNGD algorithm for nonlinear system identification", *Electronics Letters*, vol. 37, no. 3, pp. 200–202, 2001.

[318] D. P. Mandic and J. A. Chambers, "A normalised real time recurrent learning algorithm", *Signal Processing*, vol. 80, no. 9, pp. 1909–1916, 2000.

[319] D. P. Mandic and J. A. Chambers, "Advanced RNN based NARMA predictors", *Journal of VLSI Signal Processing Systems* (invited paper), vol. 26, no. 1/2, pp. 105–117, 2000.

[320] D. P. Mandic and J. A. Chambers, "Relationships between the a priori and a posteriori errors in nonlinear adaptive filters", *Neural Computation*, vol. 12, no. 6, pp. 1285–1292, 2000.

[321] D. P. Mandic, "The NNGD algorithm for neural adaptive filters", *Electronics Letters*, vol. 36, no. 9, pp. 845–846, 2000.

[322] D. P. Mandic and J. A. Chambers, "On the choice of parameters of the cost function in nested modular RNNs", *IEEE Transactions on Neural Networks*, vol. 11, no. 2, pp. 315–322, 2000.

[323] D. P. Mandic and J. A. Chambers, "On robust stability of time-variant discrete-time nonlinear systems with bounded parameter perturbations", *IEEE Transactions on Circuits and Systems I: Fundamental Theory and Applications*, vol. 47, no. 2, pp. 185–188, 2000.

[324] D. P. Mandic and J. A. Chambers, "Towards an optimal learning rate for backpropagation", *Neural Processing Letters*, vol. 11, no. 1, pp. 1-5, 2000.

[325] D. P. Mandic and J. A. Chambers, "On stability of relaxive systems described by polynomials with time-variant coefficients", *IEEE Transactions on Circuits and Systems I: Fundamental Theory and Applications*, vol. 47, no. 10, pp. 1534–1537, 2000.

[326] D. P. Mandic, "Nonlinear Activation Function and PDF for Nonlinear Prediction via Recurrent Neural Networks", *Electronics*, vol. 3, no. 1, pp. 66–68, 1999.

[327] D. P. Mandic and J. A. Chambers, "Relationship between the slope of the activation function and the learning rate for the RNN", *Neural Computation*, vol. 11, no. 5, pp. 1069-1077, 1999.

[328] D. P. Mandic and J. A. Chambers, "Toward an optimal PRNN based NARMA predictor", *IEEE Transactions on Neural Networks*, vol. 10, no. 6, pp. 1435–1442, 1999.

[329] D. P. Mandic and J. A. Chambers, "Exploiting inherent relationships in RNN architectures", *Neural Networks*, vol. 12, no. 10, pp. 1341–1345, 1999.

[330] D. P. Mandic and J. A. Chambers, "A posteriori error learning in nonlinear adaptive filters", *IEE Proceedings-Vision, Image and Signal Processing*, vol. 146, no. 6, pp. 293–296, 1999.

[331] D. P. Mandic and J. A. Chambers, "A posteriori real time recurrent learning schemes for a recurrent neural network based nonlinear predictor", *IEE Proceedings - Vision, Image and Signal Processing*, vol. 145, no. 6, pp. 365-370, 1998.

Refereed conferences and workshops:

[1] S. P. Talebi, C. Cheong Took and D. P. Mandic, "A Quantum of Learning: Using Quaternion Algebra to Model Learning on Quantum Devices", *Proceedings of the 25th International Conference on Digital Signal Processing (DSP)*, pp. 1–5, 2025

[2] A. Cini, A. Jenkins, D. P. Mandic, C. Allipi, and F. M Bianchi, "Relational conformal prediction for correlated time series", *Proceedings of the Forty-Second International Conference on Machine Learning*, accepted, 2025.

[3] S. P. Talebi, C. Cheong Took, and D. P. Mandic, "A quantum of learning: Using quaternion algebra to model learning on quantum devices", *Proceedings of the 25 International Conference on Digital Signal Processing, DSP'25*, pp. 1–5, 2025.

[4] G. Iacovides, M. Xu, T. Konstantinidis, and D. P. Mandic, "FinLlama: LLM-based financial sentiment analysis for algorithmic trading", *Proceedings of the 5th ACM International Conference on AI in Finance, ICAIF'24*, pp. 134–141, 2024.

[5] A. Cini, D. P. Mandic, and C. Alippi, "Graph-based time series clustering for end-to-end hierarchical forecasting", *International Conference on Machine Learning (ICML)*, pp 1–8, 2024.

[6] S. P. Talebi and D. P. Mandic, "On the dynamics of multiagent nonlinear filtering and learning", *in Proceedings of the IEEE International Workshop on Machine Learning for Signal Processing, MLSP'24*, pp. 1–6, 2024.

[7] C. Cheong Took, S. Ibunu, K. Moore, and D. P. Mandic, "Weight sharing for single-channel LMS", *Proceedings of the IEEE Statistical Signal Processing Workshop*, pp. 1–5, 2023.

[8] M. Thornton, J. Auernheimer, C. Jehn, D. P. Mandic, and T. Reichenbach, "Detecting gamma-band responses to the speech envelope for the ICASSP 2024 Auditory EEG Decoding Signal Processing Grand Challenge", *Proceedings of the International Conference on Acoustics, Speech and Signal Processing, ICASSP'24*, pp. 1–2, 2024.

[9] H. J. Davies, Y. Miao, A. Nassibi, M. Khaleghimeybodi, and D. P. Mandic, "Segmented error minimisation (SEMI) for robust training of deep learning models with non–linear shifts in reference data", *Proceedings of the International Conference on Acoustics, Speech and Signal Processing, ICASSP'24*, pp. 1–5, 2024.

[10] H. Liu, Z. Chen, Y. Yuan, X. Mei, X. Liu, D. P. Mandic, W. Wang, and Mark D. Plumbley, "AudioLDM: Text-to-Audio Generation with Latent Diffusion Models", *Proceedings of International Conference on Machine Learning (ICML'23)*, pp. 1–25, 2023.

[11] H. Davies, M. Zylinski, M. Bermond, Z. Liu, and D. P. Mandic, "Feasibility of transfer learning from finger PPG to in-ear PPG", *in Proceedings of the IEEE EMBS Conference*, pp. 1–4, 2023.

[12] H. Tian, O. Occhipinti, A. Nassibi, and D. P. Mandic, "Heart rate variability from ear-Electrocardiogram and ear-Photoplethysmogram (Ear-ECG and Ear-PPG)", *in Proceedings of the IEEE EMBS Conference*, pp. 1–5, 2023.

[13] G. Hammour, G. Atzori, C. Dellamonica, K. Guruswamyravindran, D. J. Dijk, and D. P. Mandic, "Automatic sleep scoring from single-channel Ear-EEG in older adults", *in Proceedings of the IEEE EMBS Conference*, pp. 1–4, 2023.

[14] M. Zylinski, E. Occhipinti, and D. P. Mandic, "Generalization error of a regression model for non-invasive blood pressure monitoring using a single Photoplethysmography (PPG) signal", *in Proceedings of the IEEE EMBS Conference*, pp. 1–4, 2023.

[15] M. Bermond, H. Davies, E. Occhipinti, A. Nassibi and D. P. Mandic, "Reducing racial bias in SpO2 estimation: Effects of pigmentation", *in Proceedings of the IEEE EMBS Conference*, pp. 1–5, 2023.

[16] M Thornton, D. P. Mandic and T. Reichenbach, "Relating EEG recordings to speech using envelope tracking and the speech-FFR", *Proceedings of ICASSP'23*, pp. 1–5, 2023.

[17] H. Xiao, L. Li, and D. P. Mandic, "ClassA Entropy for the Analysis of Structural Complexity of Physiological Signals", *Proceedings of ICASSP'23*, pp. 1–5, 2023.

[18] A. Arya, Y. L. Xu, L. Stankovic, and D. P. Mandic, "Hierarchical Graph Learning for stock market prediction via a domain–aware graph pooling operator", *Proceedings of ICASSP'23*, pp. 1–5, 2023.

[19] A. Rebello, K. Konstantinidis, Y. L. Xu, and D. P. Mandic, "Tensor completion for efficient and accurate hyperparameter optimisation in large-scale statistical learning", *Proceedings of ICASSP'23*, pp. 1–5, 2023.

[20] J. Roa-Vicens, Y. L. Xu, R. Silva, and D. P. Mandic, "Graph and tensor-train neural networks for high-dimensional models of limit order books", *in Proceedings of the 3rd ACM International Conference on AI in Finance (ICAIF)*, pp. 207-213, 2022.

[21] M. Lo Guidice, N. Mammone, C. Iearacitano, U. Aguglia, D. P. Mandic, and F. C. Morabito, "Explainable deep learning classification of respiratory sound for telemedicine applications", *Springer Applied Intelligence and Informatics Conference, AII'02*, pp. 391–403, 2023.

[22] M. Thornton, D. P. Mandic, and T. Reichenbach, "Decoding EEG responses to the speech envelope using deep neural networks", *International Conference on Auditory Cortex*, accepted, July 2022.

[23] L. , K. Konstantinidis, P. Farinelli, G. Konstantinidis, and D. P. Mandic, "RF MEMS switch design methodology by electromagnetic simulations and machine learning", *Proc. of European Microwave Week Conference*, pp. 1–4, 2022.

[24] S. P. Talebi, C. Cheong Took, Y. Xia, S. Werner, and D. P. Mandic,"A joint particle filter for quaternion-valued α-stable signals via the characteristic function", *Proc. of the 12th IEEE Sensor Array and Multichannel Signal Processing Workshop (SAM)*, pp. 1–6, 2022.

[25] S. P. Talebi, S. Werner, and D. P. Mandic, " Fractional-order learning systems", *in Proceedings of the International Joint Conference on Neural Networks (IJCNN'22)*, pp. 1-6, 2022.

[26] E. Occhipinti, H. Davies, G. Hammour, and D. P. Mandic, "Hearables: Artefact removal in Ear-EEG for continuous 24/7 monitoring", *Proceedings of the IEEE EMBC Conference*, pp. 1–6, 2022.

[27] H. Davies and D. P. Mandic, "Tracking cognitive workload in gaming with In-Ear SpO2", *Proceedings of the IEEE EMBC Conference*, pp. tba, 2022.

[28] M. D. Thornton, T. J. Reichenbach, and D. P. Mandic, "Decoding EEG responses to the speech envelope using deep neural networks", *in Proceedings of the 13th Speech in Noise Workshop (SPIN)*, pp. 1–5, 2022.

[29] Y. Leng, *et al.*, "BinauralGrad: A Two-Stage Conditional Diffusion Probabilistic Model for Binaural Audio Synthesis", *Proceedings of NeurIPS*, pp. 1–12, 2022.

[30] Z. Chen, X. Tan, K. Wang, S. Pan. D. Mandic, L. He, and S. Zhao, "Infergrad: Improving diffusion models for vocoder by considering inference in training", *Proceedings of ICASSP'22*, pp. 8432–8436, 2022.

[31] A. Arroyo, B. Scalzo, L. Stankovic, and D. P. Mandic, "Dynamic portfolio cuts: A spectral approach to graph-theoretic diversification", *Proceedings of ICASSP'22*, pp. 5468–5472, 2022.

[32] K. Konstantinidis, Y. L. Xu, Q. Zhao, and D. P. Mandic, "Variational Bayesian tensor networks with structured posteriors", *Proceedings of ICASSP'22*, pp. 3638–3642, 2022.

[33] Y. L. Xu, K. Konstantinidis, S. Li, L. Stankovic, and D. P. Mandic, "Low-complexity attention modelling via graph tensor networks", *Proceedings of ICASSP'22*, pp. 3928–3332, 2022.

[34] H. Xiao, T. Chanwimalueang, and D. P. Mandic, "Multivariate multiscale cosine similarity entropy", *Proceedings of ICASSP'22*, pp. 5997–6001, 2022.

[35] M. Mahfouz, T. Balch, M. Veloso and D. P. Mandic, "Learning to classify and imitate trading agents in continuous double auction markets", *Proceedings of the 2nd ACM International Conference AI in Finance, ICAIF'21*, pp. 1–9, 2021.

[36] F. Tobar and D. P. Mandic, "Bayesian autoregressive spectral estimation", *Proceedings of the 7th IEEE Latin American Conference on Computational Intelligence*, pp. tba, 2021.

[37] K. Konstantinidis, S. Li, and D. P. Mandic, "Kernel learning with tensor networks", *Proceedings of ICASSP'21*, pp. 2920–2924, 2021.

[38] B. Scalzo Dees, A. Arroyo, L. Stankovic, A. G. Constantinides, and D. P. Mandic, "Nonstationary portfolios: Diversification in the spectral domain", *Proceedings of ICASSP'21*, pp. 5155–5159, 2021.

[39] J. Chereau, B. Scalzo Dees, and D. P. Mandic, "Robust PCA through maximum correntropy power iterations", *Proceedings of ICASSP'21*, pp. 4985–4989, 2021.

[40] G. M. Hammour and D. P. Mandic, "Hearables: Making sense from motion artefacts in ear-EEG for real-life human activity classification", *in Proceedings of the IEEE IMBS Conference*, 2021.

[41] S. Li, Z. Yu, M. Xiang, and D. P. Mandic, "Reciprocal adversarial learning via characteristic functions", *Proceedings of NeurIPS*, 2020.

[42] Y. L Xu, K. Konstantinidis, and D. P. Mandic, "Multi-graph tensor networks", *Proceedings of NeurIPS*, 2020.

[43] H. Cheng, Y. Xia, Z. Lu, Y. Huang, W. Pei, L. Yang, and D. P. Mandic, "Design of improper constellations for optimal data rates in downlink NOMA systems", *International Conference on Wireless Communications and Signal Processing (WCSP'20)*, pp. 436–441, 2020.

[44] D. Bacciu and D. P. Mandic, "Tensor decompositions in deep learning", *Proceedings of ESANN'2020*, pp. 441-450, 2020.

[45] S. Li, Z. Yu, and D. P. Mandic, "Solving general Elliptical Mixture Models through an approximate Wasserstein manifold", Proceedings of the Thirty-Fourth AAAI Conference on Artificial Intelligence (AAAI-20), pp. tba, 2020.

[46] Z. Chen, B. Scalzo Dees, and D. P. Mandic, "A probabilistic beat-to-beat filtering model for continuous and accurate blood pressure estimation", *Proceedings of the International Joint Conference on Neural Networks (IJCNN'20)*, pp. 1–6, 2020.

[47] B. Scalzo Dees, L. Stankovic, A. G. Constantinides, and D. P. Mandic, "Portfolio cuts: A graph theoretic framework to diversification", *Proceedings of ICASSP 2020*, pp. 8454–8458, 2020.

[48] L. Stankovic, M. Dakovic, D. Mandic, M. Brajovic, B. Scalazo Dees, and A. G. Constantinides, and D. P. Mandic, "A low-dimensionality method for data-driven graph learning", *Proceedings of ICASSP 2020*, pp. 5340–5344, 2020.

[49] M. Mahfouz, A. Filos, C. Chtourou, J. Lockhart, S. Assefa, M. Veloso, D. P. Mandic, and T. Balch, "On the importance of opponent modeling in auction markets", *Proceedings of the NeurIPS Workshop on Robust AI in Financial Services: Data, Fairness, Explainability, Trustworthiness, and Privacy*, pp. tba, 2019.

[50] L. Stankovic, M. Dakovic, M. Brajovic, and D. P. Mandic, "A p-Laplacian inspired method for graph cut", Proc. of the 27th Telecommunications Forum (TELFOR), pp. 1-4, 2019.

[51] A. Moniri, A. G. Constantinides, and D. P. Mandic, "Smart DSP for a smarter power grid: Teaching power system analysis through signal processing", *Proceedings of ICASSP 2019*, pp. 7883–7887, 2019.

[52] T. Variddhisai, N. Xiang, S. C. Douglas, and D. P. Mandic, "Quaternion–valued adaptive filtering via Nesterov's extrapolation ", *Proceedings of ICASSP 2019*, pp. 4868–4872, 2019.

[53] X. Zhang, B. S. Dees, C. Li, Y. Xia, L. Yang, and D. P. Mandic, "Simultaneous DFT and IDFT through Widely Linear CLMS", *Proceedings of ICASSP 2019*, pp. 4868–4872, 2019.

[54] G. G. Calvi, V. Lucic, and D. P. Mandic, "Support tensor machine for financial forecasting", *Proceedings of ICASSP 2019*, pp. 8152–8156, 2019.

[55] S. P. Talebi, S. Werner, and D. P. Mandic, "Tracking dynamic systems in alpha-stable environments", *Proceedings of ICASSP 2019*, pp. 4852–4857, 2019.

[56] L. Yuan, C. Li, D. P. Mandic, J. Cao, and Q. Zhao, "Tensor ring decomposition with rank minimization on latent space: An efficient approach for tensor completion", Proceedings of the Thirty-Third AAAI Conference on Artificial Intelligence (AAAI-19), accepted (16 % acceptance rate), 2019.

[57] H. J. Davies, T. Nakamura, and D. P. Mandic, "A transition probability based classification model for enhanced N1 sleep stage identification during automatic sleep stage scoring", *in Proceedings of the IEEE EMBS Conference*, 2019.

[58] T. Nakamura, H. J. Davies, and D. P. Mandic, " Scalable automatic sleep staging in the era of big data", *in Proceedings of the IEEE EMBS Conference*, 2019.

[59] G. Hammour, M. Yarici, W von Rosenberg, and D. P. Mandic, "Hearables: Feasibility and validation of in-ear electrocardiogram", *in Proceedings of the IEEE EMBS Conference*, 2019.

[60] I. Kisil, A. Moniri and D. P. Mandic, "Tensor ensemble learning for multidimensional data", *in Proceedings of GlobalSip*, pp. 1358–1362, 2018.

[61] Z. Li, W. Deng, W. Pei, Y. Xia and D. P. Mandic, "Refreshing Digital Communications curriculum with RFID technology: A participatory approach", *in Proceedings of the 23rd International Conference on Digital Signal Processing (DSP'18)*, in press, 2018.

[62] A. Moniri, I. Kisil, A. G. Constantinides and D. P. Mandic, "Refreshing DSP courses through biopresence in the curriculum: A successful paradigm", *in Proceedings of the 23rd International Conference on Digital Signal Processing (DSP'18)*, pp. 1–4, 2018.

[63] G. Calvi, I. Kisil, and D. P. Mandic, "Feature fusion via tensor network summation," *in Proceedings the 26th European Signal Processing Conference (EUSIPCO)*, 2018.

[64] T. Nakamura, Y. Alqurashi, M. Morrell and D. P. Mandic, "Automatic detection of drowsiness using in-ear EEG", *in Proceedings of the International Joint Conference on Neural Networks, IJCNN'08*, pp. 5569–5574, 2018.

[65] M. Brajovic, L. Stankovic, M. Dakovic, and D. P. Mandic, "Additive noise influence on the bivariate two-component signal decomposition", *in Proceedings of MECO 2018*, pp. 1–4, 2018.

[66] V. Jaksic and D. P. Mandic, "Monitoring of carbon dioxide fluxes in a temperate grassland using nonlinear signatures", *in Proceedings of ENVIRON, Irish Environmental Research Colloquium, Cork, Ireland*, 2018.

[67] A. Hemakom, V. Goverdovsky, and D. P. Mandic, "Ear-EEG for detecting inter-brain synchronisation in continuous cooperative multi-person scenarios", *in Proceedings of ICASSP'18*, pp. 911–915, 2018.

[68] S. C. Douglas and D. P. Mandic, "Affine-projection least-mean-magnitude-phase algorithms using a posteriori updates", *in Proceedings of ICASSP'18*, pp. 4154–4158, 2018.

[69] Z. Li, W. Pei, Y. Xia, K. Wang, and D. P. Mandic, "Widely Linear CLMS based cancelation of nonlinear self-interference in full-duplex direct-conversion transceivers", *in Proceedings of ICASSP'18*, pp. 4329–4333, 2018.

[70] B. Scalzo Dees, S. C. Douglas, and D. P. Mandic, "Complementary complex-valued spectrum for real-valued data: Real time estimation of the panorama through circularity-preserving DFT", *in Proceedings of ICASSP'18*, pp. 3999-4003, 2018.

[71] B. Scalzo Dees, Y. Xia, S. C. Douglas, and D. P. Mandic, "Correntropy-based adaptive filtering of noncircular complex data", *in Proceedings of ICASSP'18*, pp. 4339–4343, 2018.

[72] I. Kisil, G. G. Calvi, A. Cichocki, and D. P. Mandic, "Common and individual feature extraction using tensor decompositions: A remedy for the curse of dimensionality?", *in Proceedings of ICASSP'18*, 6299–6303, 2018.

[73] S. Saito, H. Suzuki, and D. P. Mandic, "Hypergraph p-Laplacian: A differential geometry view", *Proceedings of the the Thirty Second AAAI Conference on Artificial Intelligence (AAAI-18)*, pp. 3984–3991, 2018.

[74] Y. Xia, L. Qiao, Q. Yang, W. Pei, and D. P. Mandic, "Widely linear adaptive frequency estimation for unbalanced three-phase power systems with multiple noisy measurements", *Proceedings of the 22nd International Conference on Digital Signal Processing (DSP'17)*, 2017.

[75] Z. Li, Y. Xia, W. Pei, K. Wang, and D. P. Mandic, "A DFT enhanced complex LMS for digital adaptive spur cancellation", *Proceedings of the 22nd International Conference on Digital Signal Processing (DSP'17)*, pp. 1–5, 2017.

[76] M. Xiang, S. C. Douglas, and D. P. Mandic, "The quaternion least mean magnitude phase adaptive filtering algorithm", *Proceedings of the 22nd International Conference on Digital Signal Processing (DSP'17)*, 2017.

[77] S. Kanna and D. P. Mandic, "Stability of distributed extended Kalman filters", *Proceedings of the 22nd International Conference on Digital Signal Processing (DSP'17)*, pp. 1–5, 2017.

[78] L. Stankovic, M. Brajovic, M. Dakovic, and D. P. Mandic, "Two-component bivariate signal decomposition based on time-frequency analysis", *Proceedings of the 22nd International Conference on Digital Signal Processing (DSP'17)*, pp. 1–5, 2017.

[79] T. Variddhisai and D. P. Mandic, "On an RLS-like LMS adaptive filter ", *Proceedings of the 22nd International Conference on Digital Signal Processing (DSP'17)*, pp. 1–5, 2017.

[80] Y. Alqurashi, J. Moss, T. Nakamura, V. Goverdovsky, M. Polkey , D. P. Mandic, and M. J. Morrell, "The efficacy of in-ear electroencephalography (EEG) to monitor sleep latency and the impact of sleep deprivation", *Proceedings of the International Conference of the American-Thoracic-Society (ATS)*, 2017.

[81] T. Nakamura, T. Adjei, Y. Alqurashi, D. Looney, M. J. Morrell and D. P. Mandic, "Complexity science for sleep stage classification from EEG", *Proceedings of the IEEE International Joint Conference on Neural Networks (IJCNN'17)*, pp. 4387–4394, 2017.

[82] E. Yavari E, A. Rahman, J. Xu, D. P. Mandic, and O. Boric-Lubecke, "Synchrosqueezing: An effective method for analyzing Doppler radar physiological signals", *Proceedings of the IEEE EMBC Conference*, pp. 263–266, 2016.

[83] Z. Zhang, H. Li, and D. P. Mandic, "Blind source separation and artefact cancellation for single channel bioelectrical signals", *Proceedings of the 13th IEEE International Conference on Wearable and Implantable Body Sensor Networks (BSN)*, pp 177–182, 2016.

[84] S. C. Douglas and D. P. Mandic, "Stability analysis of the least-mean-magnitude-phase algorithm", *Proceedings of ICASSP'16*, pp. 4935–4939, 2016.

[85] M. Xiang, S. Kanna, S. C. Douglas, and D. P. Mandic, "Performance advantage of quaternion widely linear estimation: An approximate uncorrelating transform approach", *Proceedings of ICASSP'16*, pp. 4348–4352, 2016.

[86] A. Hemakom, V. Goverdovsky, L. Aufegger, and D. P. Mandic, "Quantifying cooperation in choir singing: Respiratory and cardiac synchronisation", *Proceedings of ICASSP'15*, pp. 719–723, 2016.

[87] S. Enshaeifar, C. Cheong Took, S. Sanei, and D. P. Mandic, "Novel quaternion matrix factorisations", *Proceedings of ICASSP'16*, pp. 3946–3950, 2016.

[88] T. Chanwimalueang, L. Aufegger, W. von Rosenberg, and D. P. Mandic, "Modelling stress in public speaking: Evolution of stress levels during conference presentations", *Proceedings of ICASSP'16*, pp. 814–818, 2016.

[89] W. von Rosenberg, T. Chanwimalueang, V. Goverdovsky, and D. P. Mandic, "Smart helmet: Monitoring brain, cardiac and respiratory activity", *Proc. 37th IEEE Annual Conference of the Engineering in Medicine and Biology Society (EMBC)*, pp. 1829-1832, 2015.

[90] Y.-T. Wang, N. Masaki, S. Kappel, P. Kidmose, D. P. Mandic, Y. Wang, and C.-K. Cheng, "Developing an online steady-state visual evoked potential-based brain-computer interface system using EarEEG", *Proc. 37th IEEE Annual Conference of the Engineering in Medicine and Biology Society (EMBC)*, pp. 2271-2274, 2015.

[91] S. P. Talebi, S. Kanna, and D. P. Mandic, "Real–time estimation of quaternion impropriety", *in Proceedings of the IEEE International Conference on Digital Signal Processing (DSP'15)*, pp. 557-561, 2015.

[92] D. P. Mandic, S. Kanna, and S. C. Douglas, "Mean square analysis of the CLMS and ACLMS for non-circular signals: The approximate uncorrelating transform approach", *Proceedings of ICASSP'15*, pp. 3531–3535, 2015.

[93] T. Thanthawaritthisai, F. Tobar, A. G. Constantinides, and D. P. Mandic, "The widely linear quaternion recursive total least squares", *Proceedings of ICASSP'15*, pp. 3357–3361, 2015.

[94] W. von Rosenberg, T. Chanwimalueang, D. Looney and D. P. Mandic, "Vital signs from inside a helmet: A multichannel face-lead study", *Proceedings of ICASSP'15*, pp. 982–986, 2015.

[95] G. Zhou, A. Cichocki, and D. P. Mandic, "Common components analysis via linked blind source separation", *Proceedings of ICASSP'15*, pp. 2150–2154, 2015.

[96] A. Hemakom, A. Ahrabian, D. Looney, N. Rehman, and D. P. Mandic, "Nonuniformly sampled trivariate empirical mode decomposition", *Proceedings of ICASSP'15*, pp. 3691–3695, 2015.

[97] P. Talebi and D. P. Mandic, "A quaternion frequency estimator for three-phase power systems", *Proceedings of ICASSP'15*, pp. 3956–3960, 2015.

[98] F. Farooq, D. Looney, D. P. Mandic, and P. Kidmose, "EarEEG based visual P300 brain-computer interface", *in Proceedings of the 7th IEEE EMBS Conference on Neural Engineering*, pp. 1–4, 2015.

[99] Y. Xia, K. Wang, W. Pei, and D. P. Mandic, "A balancing voltage transformation for robust frequency estimation in unbalanced power systems", *in Proceedings of the IEEE APSIPA'14*, pp. 1–6, 2014.

[100] S. Kanna, S. C. Douglas, and D. P. Mandic, "A real time tracker of complex circularity", *in Proceedings of the 8th IEEE Workshop on Sensor Array and Multichannel Signal Processing (SAM'14)*, pp. 129–132, 2014.

[101] C. Cheong Took, S. C. Douglas, and D. P. Mandic, "The correlation preserving transform resolves phase ambiguity in complex decorrelating transforms", *in Proceedings of the 8th IEEE Workshop on Sensor Array and Multichannel Signal Processing (SAM'14)*, pp. 73–76, 2014.

[102] Y. Xia, C. Jahanchahi, D. Xu, and D. P. Mandic, "The HC calculus, quaternion derivatives and Cayley-Dickson form of quaternion adaptive filters and learning systems", *in Proceedings of the IEEE International Joint Conference on Neural Networks, IJCNN'14*, pp. 3395–3401, 2014.

[103] Y. Tonoyan, D. Looney, D. P. Mandic, and D. P. Mandic, "Predicting subject performance level from EEG signal complexity when engaged in BCI paradigm", *In Proceedings of the IEEE Workshop on Machine Learning for Signal Processing, MLSP'14*, pp. 1-5, 2014.

[104] C. Jahanchahi, S. Kanna, and D. P. Mandic, "A theoretical bound on the performance advantage of in quaternion widely linear estimation", *in Proceedings of the 19th International DSP Conference, DSP'14*, pp. 254–258, 2014.

[105] S. Kanna, P. Talebi, and D. P. Mandic, "Diffusion widely linear adaptive estimation of system frequency in distributed power grids", *in Proceedings of ENERGYCON'14*, pp. 772–778, 2014.

[106] V. Goverdovsky, D. Looney, P. Kidmose, and D. P. Mandic, "Multimodal physiological sensor for motion artefact rejection", *in Proceedings of the IEEE Annual EMBC Conference, EMBC'14*, pp. 2753–2756, 2014.

[107] S. Kappel, D. Looney, D. P. Mandic, and P. Kidmose, "A method for quantitative assessment of artifacts in EEG, and an empirical study of artifacts", *in Proceedings of the IEEE Annual EMBC Conference, EMBC'14*, pp. 1686–1690, 2014.

[108] L. Li, A. Witon, S. Marcora, H. Bowman, and D. P. Mandic, "EEG-based connectivity analysis of states of unawareness", *in Proceedings of the IEEE Annual EMBC Conference, EMBC'14*, pp. 1002–1005, 2014.

[109] S. C. Douglas and D. P. Mandic, "Autoconvolution and panorama: Augmenting second-order signal analysis", *in Proceedings of ICASSP 2014*, pp. 384–388, 2014.

[110] A. Ahrabian and D. P. Mandic, "Estimation of phase synchrony using the synchrosqueezing transform", *in Proceedings of ICASSP 2014*, pp. 759–763, 2014.

[111] F. Tobar and D. P. Mandic, "A particle filtering based kernel HMM predictor", *in Proceedings of ICASSP 2014*, pp. 7696–7973, 2014.

[112] D. Looney, V. Goverdovsky, and D. P. Mandic, "Subspace denoising of EEG artefacts via multivariate EMD", *in Proceedings of ICASSP 2014*, pp. 4688–4692, 2014.

[113] P. Talebi, D. Xu, A. Kuh, and D. P. Mandic, "A quaternion least mean phase adaptive estimator", *in Proceedings of ICASSP 2014*, pp. 6419–6423, 2014.

[114] F. Tobar, M. Orchad, D. P. Mandic, and A. G. Constantinides, "Estimation of financial indices volatility using a model with time-varying parameters", *in Proceedings of the IEEE Conference on Computational Intelligence for Financial Engineering & Economics*, pp. 318–324, 2014.

[115] C. Jahanchahi and D. P. Mandic, "An adaptive diffusion quaternion LMS algorithm for distributed networks of 3D and 4D vector sensors", *in Proceedings of EUSIPCO'13*, pp. 1–5, 2013.

[116] D. Dini and D. P. Mandic, "Exploring sparsity in widely linear estimation", *in Proceedings of the IEEE International Symposium on Wireless Communication Systems*, pp. 1–5, 2013.

[117] W. Er and D. P. Mandic, "Dynamical complexity analysis of multivariate financial data", *in Proceedings of ICASSP'13*, pp. 8732–8736 , 2013.

[118] F. Tobar and D. P. Mandic, "Quaternion kernel least squares", *in Proceedings of ICASSP'13*, pp. 6128–6132, 2013.

[119] C. Cheong Took, S. C. Douglas, and D. P. Mandic, "On intraference and its implications in complex-valued signal processing", *in Proceedings of ICASSP'13*, pp. 3934–3937, 2013.

[120] D. Dini and D. P. Mandic, "Widely linear collaborative estimation", *in Proceedings of the Asilomar Conference on Signals and Systems*, pp. 1518–1522, 2012.

[121] D. Dini and D. P. Mandic, "An enhanced bearing estimation technique for DIFAR sonobuoy underwater target tracking", *in Proceedings of the SSPD conference*, pp. 1-4, 2012.

[122] D. Dini, S. C. Douglas, and D. P. Mandic, "Widely linear state space models for frequency estimation in unbalanced three-phase systems", *in Proceedings of the 7th IEEE Sensor Array and Multichannel Signal Processing Workshop*, pp. 9-12, 2012.

[123] F. Tobar, A. Kuh, and D. P. Mandic, "A novel augmented complex valued kernel LMS", *in Proceedings of the 7th IEEE Sensor Array and Multichannel Signal Processing Workshop*, pp. 481–484, 2012.

[124] C. Jahanchahi, C. Cheong Took, and D. P. Mandic, "On gradient calculation in quaternion adaptive filtering", *in Proceedings of ICASSP'12*, 3773–3776, 2012.

[125] S. C. Douglas and D. P. Mandic, "A family of least-squares magnitude phase algorithms", *in Proceedings of ICASSP'12*, 3769–3772, 2012.

[126] C. U. Bukhari, C. Cheong Took, and D. P. Mandic, "On quaternion analyticity: Enabling quaternion valued nonlinear adaptive filtering", *in Proceedings of ICASSP'12*, pp. 2117–2120, 2012.

[127] M. U. Ahmed, N. Rehman, D. Looney, T. Rutkowski, P. Kidmose, and D. P. Mandic, "Multivariate entropy analysis with data driven scales", *in Proceedings of ICASSP'12*, 3901–3904, 2012.

[128] A. H. Phan, A. Cichocki, P. Tichavsky, D. P. Mandic, and K. Matsuoka, "On revealing replicating structures in multiway data: A novel tensor decomposition approach", *in Proceedings of the IEEE Latent Variable Analysis Workshop*, pp. 297–305, 2012.

[129] Q. Zhao, C. Caiafa, D. P. Mandic, L. Zhang, T. Ball, A. Schulze-Bonhage, and A. Cichocki, "A multilinear subspace regression method using orthogonal tensors decompositions", *in Proceedings of the Neural Information Processing Systems Conference (NIPS'11)*, pp. 1269–1277, 2011.

[130] C. Cheong Took, C. Jahanchahi, and D. P. Mandic, "A unifying framework for the analysis of quaternion-valued adaptive filters", *in Proceedings of the Asilomar Conference on Signals, Systems, and Computers*, pp. 1771–1774, 2011.

[131] D. Dini and D. P. Mandic, "Analysis of the widely linear extended Kalman filter", *in Proceedings of the Sensor Signal Processing for Defence (SSPD'11) Conference*, pp. 1–4, 2011.

[132] C. Park, D. Looney, and D. P. Mandic, "Estimating human response to taste using EEG", *in Proceedings of IEEE EBMC'11*, pp. 6331–6334, 2011.

[133] D. Looney, C. Park, P. Kidmose, M. L. Rank, M. Ungstrup, and D. P. Mandic, "An in-the-ear platform for recording electroencephalogram", *in Proceedings of IEEE EBMC'11*, pp. 6882–6885, 2011.

[134] L. Li, D. Looney, C. Park, N. Rehman, and D. P. Mandic, "Power independent EMG based gesture recognition for robotics", *in Proceedings of IEEE EBMC'11*, pp. 793–796, 2011.

[135] M. U. Ahmed, L. Li, J. Cao, and D. P. Mandic, "Multivariate multiscale entropy for brain consciousness analysis", *in Proceedings of IEEE EBMC'11*, pp. 810–813, 2011.

[136] Y. Xia, S. C. Douglas, and D. P. Mandic, "Widely linear adaptive frequency estimation in three-phase power systems under unbalanced voltage sag conditions", *in Proceedings of IJCNN'11*, pp. 1700 - 1705, 2011.

[137] T.M. Rutkowski, Q. Zhao, A. Cichocki, T. Tanaka, and D.P. Mandic, "Towards affective BCI/BMI paradigms – analysis of fEEG and fNIRS brain responses to emotional speech and facial videos," in *Advances in Cognitive Neurodynamics*, pp. 671–675, Springer Netherlands, 2011.

[138] M. Wang, C. Cheong Took and D. P. Mandic, "A class of fast quaternion valued variable stepsize stochastic gradient learning algorithms for vector sensor processes", *in Proceedings of IJCNN'11*, pp. 1700 - 1705, 2011.

[139] S. Javidi, C. Cheong Took, C. Jahanchahi, N. Le Bihan, and D. P. Mandic, "Blind source extraction of improper quaternion sources", *in Proceedings of ICASSP'11*, pp. 3708-3711, 2011.

[140] Y. Xia, L. Li, J. Cao, M. Golz, D. P. Mandic, "A collaborative adaptive filtering approach for quasi brain death EEG analysis", *in Proceedings of ICASSP'11*, pp. 645-648, 2011.

[141] S. C. Douglas and D. P. Mandic, "The least mean magnitude phase algorithm with applications to communications systems", *in Proceedings of ICASSP'11*, pp. 4152-4155, 2011.

[142] D. Looney and D. P. Mandic, "Augmented complex matrix factorization", *in Proceedings of ICASSP'11*, pp. 4072-4075, 2011.

[143] D. P. Mandic, Y. Xia, and S. C. Douglas, "Steady state analysis of the CLMS and augmented CLMS algorithms for noncircular complex signals", *in Proceedings of the Asilomar Conference on Signals, Systems, and Computers*, pp. 1635-1639, 2010.

[144] Y. Xia, S. Javidi, and D. P. Mandic, "A regularised normalised augmented complex least mean square algorithm", *in Proceedings of the IEEE Wireless Communications Systems Symposium*, pp. 355–358, 2010.

[145] S. Javidi and D. P. Mandic, "A fast algorithm for blind extraction of smooth complex sources with applications in EEG conditioning", *in Proceedings of the IEEE MLSP Workshop*, pp. 397–402, 2010.

[146] D. Dini and D. P. Mandic, "Analysis of the widely linear Kalman filter", *in Proceedings of the Sensor Signal Processing for Defence (SSPD'10) Conference*, pp. 1–4, 2010.

[147] P. Kidmose, M. K. Rank, M. Ungstrup, D. Looney, C. Park, and D. P. Mandic, "A Yarbus-style experiment to determine auditory attention", *in Proceedings of the 32nd Annual International IEEE EMBS Conference*, pp. 4650–4653, 2010.

[148] N. Rehman, Y. Xia, and D. P. Mandic, "Application of multivariate empirical mode decomposition for seizure detection in EEG signals", *in Proc. of the 32nd Annual International IEEE EMBS Conference*, pp. 1650–1653, 2010.

[149] S. Javidi, D. P. Mandic and A. Kuh, "Optimisation of real functions of complex matrices for the adaptive estimation of complex sources", *in Proceedings of the International Conference on Green Circuits and Systems (ICGCS)*, pp. 30-35, 2010.

[150] N. Rehman and D. P. Mandic, "Quadrivariate empirical mode decomposition", *in Proceedings of the IEEE International Joint Conference on Neural Networks (IJCNN)*, pp. 2265-2270, 2010.

[151] B. Che Ujang, C. Cheong-Took, and D. P. Mandic, "Identification of improper processes by variable tap-length complex-valued adaptive filters", *in Proceedings of the IEEE IJCNN*, pp. 3398-3404, 2010.

[152] C. Cheong-Took, D. P. Mandic, and K. Aihara, "Quaternion valued short term forecasting of wind profile", *in Proceedings of the IEEE IJCNN*, pp. 3412-3417, 2010.

[153] C. Jahanchahi, C. Cheong-Took, and D. P. Mandic, "On HR calculus, quaternion valued stochastic gradient, and adaptive three dimensional wind forecasting", *in Proceedings of IEEE IJCNN*, pp. 3154-3158, 2010.

[154] D. Looney, C. Park, Y. Xia, P. Kidmose, M. Ungstrup and D. P. Mandic, "Towards estimating selective auditory attention from EEG using a novel time-frequency synchronisation framework", *in Proceedings of IEEE IJCNN*, pp. 4083-4087, 2010.

[155] S. C. Douglas and D. P. Mandic, "Performance analysis of the conventional complex LMS and Augmented complex LMS algorithms", *in Proceedings of IEEE ICASSP'10*, pp. 3794–3797, 2010.

[156] Y. Xia, C. Cheong–Took, S. Javidi, and D. P. Mandic, "A widely linear affine projection algorithm", *in Proceedings of the 15th IEEE Workshop on Statistical Signal Processing (SSP'09)*, pp. 373–376, 2009.

[157] T. Rutkowski, T. Tanaka, A. Cichocki, D. Erickson, and D. P. Mandic, "Interactive Components Extraction from fEEG and fNIRS for Affective Brain Machine Interfacing Paradigms", *in Proceedings of the Fifth International Conference on Intelligent Computing (ICIC'09)*, 2009.

[158] I. Mostafanezhad, O. Boric–Lubecke, V. Lubecke, and D. P., Mandic, "Application of Empirical Mode Decomposition in removing fidgeting interference in Doppler radar life signs monitoring devices", *in Proceedings of the 31st Annual International Conference of the IEEE EMBS*, pp. 340–343, 2009.

[159] S. Javidi, B. Jelfs, and D. P. Mandic, "Blind extraction of noncircular complex signals using a widely linear predictor", *in Proceedings of the 15th IEEE Workshop on Statistical Signal Processing (SSP'09)*, pp. 501–504, 2009.

[160] N. U. Rehman, D. Looney, T. Rutkowski, and D. P. Mandic, "Bivariate EMD-based image fusion", *in Proceedings of the 15th IEEE Workshop on Statistical Signal Processing (SSP'09)*, pp. 57–60, 2009.

[161] D. Looney, C. Park, M. Ungstrup, P. Kidmose, and D. P. Mandic, "Measuring phase synchrony using complex extensions of EMD", *in Proceedings of the 15th IEEE Workshop on Statistical Signal Processing (SSP'09)*, pp. 49–52, 2009.

[162] D. Looney, N. U. Rehman, T. Rutkowski, A. Heidenreich, D. Beyer, and D. P. Mandic, "Conditioning multimodal information for smart environments", *in Proceedings of the 3rd ACM/IEEE Conference on Distributed Smart Cameras*, pp. 1–8, 2009.

[163] A. Kavcic, D. P. Mandic, X. Huang, and X. Ma, "Upper bounds on the capacities of non-controllable finite-state channels using dynamic programming methods", *in Proceedings of the IEEE International Symposium on Information Theory (ISIT2009)*, pp. 2346–2350, 2009.

[164] C. Cheong-Took, D. P. Mandic, and J. Benesty, "Study of the quaternion LMS and four-channel LMS algorithms", *in Proceedings of ICASSP'09*, pp. 3109–3112, 2009.

[165] N. U. Rehman and D. P. Mandic, "Qualitative analysis of rotational modes within three-dimensional empirical mode decomposition", *in Proceedings of ICASSP'09*, pp. 3449–3452, 2009.

[166] T. Rutkowski, A. Cichocki, T. Tanaka, D. P. Mandic, J. Cao, and Anca Ralescu, "Multichannel spectral pattern separation - an EEG processing application", *in Proceedings of ICASSP'09*, pp. 373–376, 2009.

[167] C. A. Ujang, C. Cheong-Took, A. Kavcic, and D. P. Mandic, "A split-quaternion nonlinear adaptive filter", *in Proceedings of ICASSP'09*, pp. 1745–1748, 2009.

[168] D. P. Mandic, S. Still, and S. C. Douglas, "Duality between widely linear and dual channel adaptive filtering", *in Proceedings of ICASSP'09*, pp. 1729–1732, 2009.

[169] A. Kuh and D. P. Mandic, "Applications of complex augmented kernels to wind profile prediction", *in Proceedings of ICASSP'09*, pp. 3581–3584, 2009.

[170] S. C. Douglas and D. P. Mandic, "Mean and mean-square analysis of the complex LMS algorithm for non-circular Gaussian signals", *in Proceedings of the 13th Digital Signal Processing Workshop and the 5th IEEE Signal Processing Education Workshop, DSP/SPE 2009*, pp. 101-106, 2008.

[171] T. M. Rutkowski, A. Cichocki, T. Tanaka, D. P. Mandic, and J. Cao, "Multichannel spectral pattern separation - a nonlinear approach to EEG signals from interferences separation in frequency domain", *in Proceedings of the International Workshop on Nonlinear Circuits and Signal Processing NCSP'09*, pp. 439-442, 2009.

[172] T. M. Rutkowski, A. Cichocki, T. Tanaka, A. L. Ralescu, and D. P. Mandic, "Spectral patterns clustering of EMD components extracted from EEG channels in application to neurophysiological signals separation", *in the Proceedings of the 15th Neural Information Processing Conference, ICONIP 2008*, pp. 453–460, 2008.

[173] T. M. Rutkowski, T. Tanaka, A. Cichocki, and D. P. Mandic, "Clustering EMD components for muscular interference separation from EEG - a time/frequency approach with different distance measures", *in Proceedings of the 23rd SIP Symposium*, pp. 5257, 2008.

[174] D. Looney and D. P. Mandic, "Fusion of visual and thermal images using complex extensions of EMD", *in Proceedings of the International Conference on Distributed Smart Camera Networks, ICDSCN'08*, pp. 1–8, 2008.

[175] W. Liu, D. P. Mandic, and A. Cichocki, "A Dual linear predictor approach to blind source extraction for noisy mixtures", *in Proceedings of the 5th IEEE Sensor Array and Multichannel Signal Processing Workshop*, pp. 515–519, 2008.

[176] D. Sommer, M. Golz, J. Krajewski, and D. P. Mandic, "Improved microsleep recognition: Combining different types of biosignals and of features", *in Proceedings of the German Workshop Biosignal Processing*, proceedings on CD, 2008.

[177] T. Schnupp, M. Holzbrecher-Morys, D. P. Mandic, and M. Golz, "Sensitivity of posturography to elimination of visual feedback", *in Proceedings of the 4th European Conference on Biomedical Engineering, EMBEC'08*, 2008.

[178] C. Cheong–Took and D. P. Mandic, "Fusion of heterogeneous data sources: A quaternionic approach", *in Proceedings of the IEEE Workshop on Machine Learning for Signal Processing, MLSP'08*, pp. 456-461, 2008.

[179] Y. Xia, D. P. Mandic, M. M. Van Hulle, and J. C. Principe, "A complex echo state networks for nonlinear adaptive filtering", *in Proceedings of the IEEE Workshop on Machine Learning for Signal Processing, MLSP'08*, pp. 404–408, 2008.

[180] B. Jelfs, Y. Xia, D. P. Mandic and S. C. Douglas, "Collaborative adaptive filtering in the complex domain", *in Proceedings of the IEEE Workshop on Machine Learning for Signal Processing, MLSP'08*, pp. 421–425, 2008.

[181] T. M. Rutkowski, D. P. Mandic, A. Cichocki, and A. W. Przybyszewski "EMD Approach to multichannel EEG Data - the amplitude and phase synchrony analysis technique", *in Proceedings of ICIC 2008*, pp. 122–129, 2008.

[182] T. M. Rutkowski, A. Cichocki, A. L. Ralescu, and D. P. Mandic, "Emotional states estimation from multichannel EEG maps", *in Proceedings of the International Conference on Advances in Cognitive Neurodynamics*, pp. 695–698, 2008.

[183] Y. Yuan, Y. Li, D. Yu, and D. P. Mandic, "Delay time based epileptic EEG detection using artificial neural network" in *Proceedings of the International Conference on Bioinformatics and Biomedical Engineering*, pp. 502–505, 2008.

[184] Y. Yuan, Y. Li, D. Yu, and D. P. Mandic, "Automated detection of epileptic seizure using artificial neural network" in *Proceedings of the International Conference on Bioinformatics and Biomedical Engineering*, pp. 1959–1962, 2008.

[185] S. Javidi, M. Pedzisz, and D. P. Mandic, "The augmented complex least mean square algorithm with application to adaptive prediction problems", *in Proceedings of the Cognitive Information Processing Systems Conference (CIP'08)*, pp. 54–57, 2008.

[186] B. Jelfs and D. P. Mandic, "Signal modality characterisation using collaborative adaptive filters", *Proceedings of the the Cognitive Information Processing Systems Conference*, pp. 58–62, 2008.

[187] W. Leong and D. P. Mandic, "Cascaded approach to microsleep data extraction", *in Proceedings of ICASSP'08*, pp. 2045–2048, 2008.

[188] M. Chen, D. P. Mandic, P. Kidmose, and M. Ungstrup, "Qualitative assessment of intrinsic mode functions of empirical mode decomposition", *in Proceedings of ICASSP'08*, pp. 1905–1908, 2008.

[189] D. P. Mandic, P. Vayanos, S. Javidi, B. Jelfs, and K. Aihara, "Online tracking of the degree of nonlinearity within complex signals", *in Proceedings of ICASSP'08*, pp. 2061–2065, 2008.

[190] D. Looney and D. P. Mandic, "A Machine learning enhanced empirical mode decomposition", *in Proceedings of ICASSP'08*, pp. 1897–1900, 2008.

[191] T. M. Rutkowski, A. Cichocki, and D. P. Mandic, "EMD Analysis of multichannel EEG data", *Proceedings of the 22nd SIP Symposium*, pp. 149-154, 2007.

[192] T. M. Rutkowski, J. Dauwels, F. Vialatte, A. Cichocki, and D. P. Mandic, "Time-frequency and synchrony analysis of responses to steady-state auditory and musical stimuli from multichannel EEG", *Proceedings of the Twenty-First Annual Conference on Neural Information Processing Systems, NIPS*, pp. 1-8, 2007.

[193] D. Looney, L. Li, T. Rutkowski, D. P. Mandic, and A. Cichocki, "Ocular artifacts removal from EEG using EMD", *Proceedings of the First International Conference on Cognitive Neurodynamics*, pp. 831–835, 2007.

[194] Y. Saito, T. Tanaka, J. Cao, and D. P. Mandic, "Quasi-brain-death EEG data analysis by empirical mode decomposition", *Proceedings of the First International Conference on Cognitive Neurodynamics*, pp. 836–839, 2007.

[195] M. Chen, D. P. Mandic, T. Rutkowski, and A. Cichocki, "Signal modality characterisation of EEG with response to steady-state auditory and visual BCI paradigms", *in Proceedings of the IEEE Workshop on Machine Learning for Signal Processing (MLSP'07)*, pp. 223–228, 2007.

[196] D. P. Mandic, S. Javidi, G. Souretis, and V. S. L. Goh, "Why a complex valued solution for a real domain problem", *in Proceedings of the IEEE Workshop on Machine Learning for Signal Processing (MLSP'07)* 384–389, 2007.

[197] D. Looney, D. P. Mandic, and T. Rutkowski, "Regularised adaptive FIR filters for image denoising", *in Proceedings of the 15th DSP Conference*, pp. 55-58, 2007.

[198] W. Leong, D. P. Mandic, D. Sommer, and M. Golz, "Blind extraction of microsleep events", *in Proceedings of the 15th DSP Conference*, pp. 207-210, 2007.

[199] B. Jelfs, D. P. Mandic, and A. Cichocki, "A unifying approach to the derivation of the class of PNLMS algorithms", *in Proceedings of the 15th DSP Conference*, pp. 35-38, 2007.

[200] G. Souretis, D. P. Mandic, M. Griselli, T. Tanaka, and M. M. Van Hulle, "Blood volume signal analysis with empirical mode decomposition" *in Proceedings of the 15th DSP Conference*, pp. 147-150, 2007.

[201] B. Jelfs, D. P. Mandic, and J. Benesty, "A class of adaptively regularised PNLMS algorithms", *in Proceedings of the 15th DSP Conference*, pp. 19-22, 2007.

[202] C. Boukis, D. P. Mandic and A. G. Constantinides, "A generalised mixed norm stochastic gradient algorithm", *in Proceedings of the 15th DSP Conference*, pp. 27-30, 2007.

[203] D. P. Mandic, P. Vayanos, C. Boukis, B. Jelfs, S. L. Goh, T. Gautama, and T. Rutkowski, "Collaborative adaptive learning using hybrid filters", *in Proceedings of ICASSP'07*, vol. III, pp. 921–924, 2007.

[204] W. Y. Leong, D. P. Mandic, and W. Liu, "Blind extraction of noisy events using nonlinear predictor", *in Proceedings of ICASSP'07*, vol. II, pp. 657–660, 2007.

[205] M. U. B. Altaf, T. Gautama, T. Tanaka, and D. P. Mandic, "Rotation invariant empirical mode decomposition", *in Proceedings of ICASSP'07*, vol. III, pp. 1009–1012, 2007.

[206] M. Chen, T. M. Rutkowski, B. Jelfs, G. Souretis, J. Cao, and D. P. Mandic, "Assessment of nonlinearity in brain electrical activity: A DVV approach", *in Proceedings of the 2007 RISP International Workshop in Nonlinear Circuits and Signal Processing*, pp. 461–464, 2007.

[207] A. Wautier, L. Husson, and D. P. Mandic, "Algorithms for BER–constrained variable–length equalizers driven by channel response knowledge over frequency-selective radio channels", *in the Proceedings of the 65th IEEE Vehicular Technology Conference – VTC2007-Spring*, pp. 1761–1765, 2007.

[208] T. Balli, R. Palanniapan, and D. P. Mandic, "On the linearity/non-linearity of mental activity EEG for brain-computer interface design", *in Proceedings of the 3rd Kuala Lumpur International Conference on Biomedical Engineering 2006*, pp. 451-454, 2006.

[209] B. Jelfs and D. P. Mandic, "Toward online monitoring of the changes in signal modality: The degree of sparsity", *in Proceeedings of the 7th IMA International Conference on Mathematics for Signal Processing*, pp. 29–32, 2006.

[210] M. Chen, D. P. Mandic, T. Gautama, and M. Griselli, "Nonlinear schemes for heart valve failure detection", *in Proceeedings of the 7th IMA International Conference on Mathematics for Signal Processing*, pp. 81–84, 2006.

[211] W. Leong and D. P. Mandic, "Towards blind separation of nonlinearly mixed sources", *in Proceeedings of the 7th IMA International Conference on Mathematics for Signal Processing*, pp. 178–181, 2006.

[212] Y. Washizawa, T. Tanaka, D. P. Mandic, and A. Cichocki, "Bandwidth control in empirical mode decomposition" (in Japanese), *in Proceedings of the 21st Japanese Signal Processing Conference (SIP–06)*, proceedings on CD, 2006.

[213] T. Tanaka, T. Gautama, and D. P. Mandic, "Extensions of empirical mode decomposition to complex-valued signals", *in Proceedings of the 21st Japanese Signal Processing Conference (SIP–06)*, proceedings on CD, 2006.

[214] D. P. Mandic and V. S. L. Goh, "Adaptive filtering in the complex domain: Nonlinear filters and augmented statistics", *in Proceedings of the 21st Japanese Signal Processing Conference (SIP–06)*, proceedings on CD, 2006.

[215] B. Jelfs, P. Vayanos, M. Chen, S. L. Goh, C. Boukis, T. Gautama, T. Rutkowski, A. Kuh, and D. P. Mandic, "An online method for detecting nonlinearity within a signal", *in Proceedings of the 10th International Conference on Knowledge-Based & Intelligent Information & Engineering Systems, KES–06*, pp. 1216–1223, 2006.

[216] A. Kuh, C. Zhu, and D. P. Mandic, "Sensor network localization using least squares kernel regression", *in Proceedings of the 10th International Conference on Knowledge-Based & Intelligent Information & Engineering Systems, KES–06*, pp. 1280–1287, 2006.

[217] T. M. Rutkowski, F. Vialatte, A. Cichocki, D. P. Mandic, and A. K. Barros, "Auditory feedback for brain computer interface management – an EEG data sonification approach", *in Proceedings of the 10th International Conference on Knowledge-Based & Intelligent Information & Engineering Systems, KES–06* , pp. 1232–1239, 2006.

[218] Y. Washizawa, T. Tanaka, D. P. Mandic, and A. Cichocki, "A flexible method for envelope estimation in empirical mode decomposition", *in Proceedings of the 10th International Conference on Knowledge-Based & Intelligent Information & Engineering Systems, KES–06*, pp. 1248–1255, 2006.

[219] M. Chen, D. Sommer, S. L. Goh, T. Gautama, D. Obradovic, M. Golz, M. Morrell, D. P. Mandic, "A novel tool for sequential fusion of nonlinear features: A sleep psychology application", *Proceedings of the International Conference on Multisensor Fusion and Integration for Intelligent Systems, MFI–2006*, pp. 474–478, 2006.

[220] W. Y. Leong, J. Homer, D. P. Mandic, and Z. Babic, "A two-stage algorithm for post-nonlinear blind source separation", *in Proceedings of NEUREL 2006*, pp. 93–98, 2006.

[221] M. Chen, T. Gautama, D. Obradovic, J. Chambers, and D. P. Mandic, "Exploiting signal non–Gaussianity and nonlinearity for performance assessment of adaptive filtering algorithms: Qualitative performance of Kalman filter", *Proceedings of the Nonlinear Statistical Signal Processing Workshop (NSSPW'06)*, Proc. on CD, 2006.

[222] W. Leong, D. P. Mandic, and J. Chambers, "Blind sequential extraction of ill–conditioned post–nonlinearly mixed sources", *Proceedings of the Nonlinear Statistical Signal Processing Workshop (NSSPW'06)*, Proc. on CD, 2006.

[223] P. Vayanos, S. L. Goh, and D. P. Mandic, "Online detection of the nature of complex-valued signals", *Proceedings of the IEEE MLSP Workshop*, pp. 173–178, 2006.

[224] M. Chen, T. Gautama, M. Van Hulle, and D. P. Mandic, "Towards qualitative assessment of machine learning algorithms: Utilising signal modality characterisation", *Proceedings of the IEEE MLSP Workshop*, pp. 365–370, 2006.

[225] W. Y. Leong and D. P. Mandic, "Towards adaptive blind extraction of post–nonlinearly mixed signals", *Proceedings of the IEEE MLSP Workshop*, pp. 91–96, 2006.

[226] M. Golz, D. Sommer, and D. P. Mandic, "Establishing a gold standard for drivers microsleep detection", (Best Poster Award), *in Proceedings of the International Conference "Monitoring Sleep and Sleepiness - from Physiology to New Sensors"*, Proceedings on CD, 2006.

[227] Y. Hirata, H. Suzuki, K. Aihara, and D. P. Mandic, "Predicting the wind direction using observations taken from two separate points", *in Proceedings of the Experimenal Chaos Conference*, Proceedings on CD, 2006.

[228] W. Liu, D. P. Mandic and A. Cichocki, "An analysis of the CCA approach for blind source separation and its adaptive realization", *Proceedings of ISCAS 2006*, pp. 3590–3593, 2006.

[229] W. Liu, D. P. Mandic and A. Cichocki, "Blind source extraction of instantaneous noisy mixtures using a linear predictor", *Proceedings of ISCAS 2006*, pp. 4199–4202, 2006.

[230] S. L. Goh and D. P. Mandic, "An augmented extended Kalman filter algorithm for complex–valued recurrent neural networks", *in Proceedings of ICASSP'06*, vol. V, pp. 561–564, 2006.

[231] W. Liu and D. P. Mandic, "A normalised kurtosis based blind source extraction algorithm for noisy mixtures", *in Proceedings of ICASSP'06*, vol. V, pp. 641–644, 2006.

[232] A. Kuh and D. P. Mandic, "Sequential detection using least squares temporal difference methods", *in Proceedings of ICASSP'06*, vol. V, pp. 701–704, 2006.

[233] M. Chen, D. P. Mandic and D. Obradovic, "Optimal choice of parameters of pipelined recurrent neural networks", *in Proceedings of HIPNEF'06*, pp. 13–22, 2006.

[234] A. B. Cavalcante, D. P. Mandic, T. M. Rutkowski, and A. K. Barros, "Speech enhancement based on the response features of facilitated EI neurons", *in Proceedings of ICA 2006*, pp. 585–592, 2006.

[235] D. P. Mandic, S. L. Goh and K. Aihara, "Sequential data fusion via vector spaces: A modular neural network approach", *in Proceedings of the IEEE Workshop on Machine Learning for Signal Processing*, pp. 147–151, 2005.

[236] D. Obradovic, A. Szabo, and D. P. Mandic, "Novel EM-based method for channel estimation and signal detection in MIMO-OFDM systems", *in Proceedings of EUROCON'05*, pp. 1795–1798, 2005.

[237] R. Palaniappan, D. Obradovic, and D. P. Mandic, "On decision making ability of people under intoxicants using single trial visual evoked potential signals", *in Proceedings of EUROCON'05*, pp. 413–416, 2005.

[238] P. A. Kountouriotis, S. L. Goh, D. Obradovic, and D. P. Mandic, "Multi-step forecasting using echo state networks", *in Proceedings of EUROCON'05*, pp. 1574–1577, 2005.

[239] M. Golz, D. Sommer, and D. P. Mandic, "Microsleep detection in electrophysiological signals", in Proceedings of ICINCO'05, Proceedings on CD, 2005.

[240] T. M. Rutkowski and D. P. Mandic, "Communicative interactivity - a multimodal communicative situation classification approach", *in Proceedings of ICANN'05*, pp. 741–746, 2005.

[241] R. Palaniappan and D. P. Mandic, "Energy of brain potentials evoked during visual stimulus: A new biometric?", *in Proceedings of ICANN'05*, pp. 735–740, 2005.

[242] D. P. Mandic, D. Obradovic, A. Kuh, T. Adali, U. Trutschell, M. Golz, P. de Wilde, J. Barria, A. Constantinides, and J. Chambers "Data fusion in modern engineering applications: An overview", *in Proceedings of ICANN'05*, 715–721, 2005.

[243] D. Sommer, M. Chen, M. Golz, U. Trutschell and D. P. Mandic, "Fusion of state space and frequency domain features for improved microsleep detection", *in Proceedings of ICANN'05*, pp. 753–759, 2005.

[244] D. P. Mandic, D. Obradovic, and A. Kuh, "A robust general normalised gradient descent algorithm", in Proceedings of the IEEE Workshop on Statistical Signal Processing, pp. 133-136, 2005.

[245] W. Liu and D. P. Mandic, "A class of novel blind source extraction algorithms based on a linear predictor", *In Proceedings of the International Symposium on Circuits and Systems, ISCAS'05, Kobe Japan*, pp. 3599–3602, 2005.

[246] S. L. Goh and D. P. Mandic, "A class of gradient–adaptive step size algorithms for complex–valued nonlinear neural adaptive filters", *in Proceedings of the International Conference on Acoustics, Speech and Signal Processing, ICASSP'05*, vol. V, pp. 253–256, 2005.

[247] W. Liu and D. P. Mandic, "Semi-blind source separation for convolutive mixtures based on frequency invariant transformation", *in Proceedings of the International Conference on Acoustics, Speech and Signal Processing, ICASSP'05*, vol. V, pp. 285–288, 2005.

[248] M. Chen, T. Gautama, M. Van Hulle, and D. P. Mandic, "On nonlinear modular neural filters", *in Proceedings of the International Conference on Acoustics, Speech and Signal Processing, ICASSP'05*, vol. V. pp. 317–320, 2005.

[249] M. Chen, T. Gautama, M. Van Hulle, and D. P. Mandic, "A class of modular recurrent neural networks: Preservation of signal modality", *in Proceedings of the IMA Conference on Mathematics in Signal Processing*, pp. 43–46, 2004.

[250] S. L. Goh and D. P. Mandic, "A data reusing sign error algorithm for complex valued adaptive filters", *in Proceedings of the IMA Conference on Mathematics in Signal Processing*, pp. 87–90, 2004.

[251] S. L. Goh, Z. Babic, D. Popovic, T. Tanaka, and D. Mandic, "Complex – valued neural network schemes for online processing of wind signal", *Proceedings of NEUREL 2004*, pp. 249–253, 2004.

[252] M. Chen, T. Gautama, M. Bozic, M. Van Hulle, and D. Mandic, "Does iterative nonlinear neural filtering affect the nature of the processed signal", *Proceedings of NEUREL 2004*, pp. 21–25, 2004.

[253] T. Tanaka and D. P. Mandic, "A direct design framework for a class of oversampled perfect reconstruction filter banks", *in Proceedings of the International Symposium on Communications and Information Technologies, ISCIT 2004, Saporro Janap*, pp. 1059–1064, 2004.

[254] S. L. Goh and D. P. Mandic, "A class of low complexity and fast converging algorithms for complex-valued neural networks", *in Proceedings of the International Workshop on Machine Learning for Signal Processing, MLSP'04*, pp. 13–22, 2004.

[255] E. James, A. K. Barros, T. Yoshinori, D. P. Mandic, and N. Ohnichi, "Speech enhancement by lateral inhibition and binaural masking", *in Proceedings of the International Workshop on Machine Learning for Signal Processing, MLSP'04*, pp. 365–360, 2004.

[256] S. L. Goh, D. Popovic and D. P. Mandic, "Complex valued estimation of wind profile and wind power", *in Proceedings of Melecon 2004*, (Best Student Paper Award), vol. 3, pp. 1037-1040, 2004.

[257] M. Chen and D. P. Mandic, "Quality assessment of hybrid nonlinear filters", *Proceedings of ICASSP'04*, vol. V, pp. 785-788, 2004.

[258] Z. V. Babic and D. P. Mandic, "An efficient small-scale noise removal and edge preserving convolution filter", *in Proceedings of the 6th International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Services, TELSIKS 2003*, pp. 538-541, 2003.

[259] S. L. Goh, Z. V. Babic and D. P. Mandic, "An adaptive amplitude learning algorithm for nonlinear adaptive IIR filters", *in Proceedings of the 6th International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Services, TELSIKS 2003*, pp. 313–316, 2003.

[260] D. P. Mandic, A. Cichocki and U. Manmontri, "An on–line algorithm for blind source extraction based on nonlinear prediction approach", *in Proceedings of the IEEE Workshop on Neural Networks for Signal Processing*, pp. 429–438, 2003.

[261] S. L. Goh and D. P. Mandic, "Nonlinear adaptive prediction using a complex–valued PRNN", *in Proceedings of the IEEE Workshop on Neural Networks for Signal Processing, NNSP 2003*, pp. 779–788, 2003.

[262] T. M. Rutkowski, M. Yokoo, K. Yagi, Y. Kameda, M. Minoh, and D. P. Mandic, "Active speakers's position, identification and tracking in noisy environments", *in Proceedings of IWAENC*, pp. 283–286, 2003.

[263] Su Lee Goh and D. P.Mandic, "A Data–reusing gradient descent algorithm for complex–valued recurrent neural networks", *Proceedings of the Knowledge-Based Intelligent Information and Engineering Systems (KES 2003)*, vol. II, pp.340-350, 2003.

[264] M. Jafari, D. P. Mandic, and J. A. Chambers, "A fast converging cyclostationary natural gradient algorithm", *Proceedings of the Knowledge-Based Intelligent Information and Engineering Systems (KES 2003)*, vol. I, pp.1343-1349, 2003.

[265] T. Gautama, D. P. Mandic, and M. M. Van Hulle, "Complex surrogate data", Proceedings of the Knowledge-Based Intelligent Information and Engineering Systems (KES 2003), vol. I, pp.1364-1371, 2003.

[266] G. C. Cawley, N. L. C. Talbot, R. J. Foxall, S. R. Dorling, and D. P. Mandic, "Unbiased estimation of conditional variance in heteroscedastic kernel ridge regression", *in Proceedings of the European Symposium on Artificial Neural Networks (ESANN–2003)*, proceedings on CD, 2003.

[267] D. P. Mandic and A. Cichocki, "An online algorithm for blind extraction of sources with different dynamical structures", *Proceedings of the 4th International Symposium on Independent Component Analysis and Blind Signal Separation (ICA 2003)*, pp. 283–286, 2003.

[268] T. Gautama, D. P. Mandic and M. M. Van Hulle, "Differential entropy for determining the optimal embedding dimension", *Proceedings of the International Conference on Acoustics, Speech and Signal Processing, ICASSP'03*, vol. VI, pp. 29–32, 2003.

[269] C. G. Boukis, D. P. Mandic and A. G. Constantinides, "A Gradient adaptive step size algorithm for IIR filters", *Proceedings of the International Conference on Acoustics, Speech and Signal Processing, ICASSP'03*, vol. VI, pp. 85–88, 2003.

[270] A. I. Hanna, I. Yates, and D. P. Mandic, "An adaptive error adaptive normalised algorithm for complex valued FIR filters", *Proceedings of the International Conference on Acoustics, Speech and Signal Processing, ICASSP'03*, vol. II, pp. 705–708, 2003.

[271] D. P. Mandic, E. V. Papoulis, and C. G. Boukis, "A normalised mixed norm adaptive filtering algorithm robust under impulsive noise interference", *Proceedings of the International Conference on Acoustics, Speech and Signal Processing, ICASSP'03*, vol. VI, pp. 333–336, 2003.

[272] A. S. Palmer, M. Razaz, and D. P. Mandic, "Adaptive nonlinear feedback methods for the solution of image restoration problems", *in Proceedings of the 4th International Conference on Recent Advances in Soft Computing, RASC'02*, pp. 53–54, proceedings on CD, 2002.

[273] J. Kukkonen, A. Karppinen, L. Wallenius, J. Ruuskanen, T. Patama, M. Kolehmainen, S. Dorling, R. Foxall, G. Cawley, D. Mandic, T. Chatterton, M. Zickus, and A. Grieg, "Evaluation of neural network stastical and deterministic models against the measured concentrations of NO_2, PM_{10}, and $PM_{2,5}$ in an urban area", *Proceedings of the 8th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes*, pp. 63–67, 2002.

[274] K. Pauwels, T. Gautama, D. P. Mandic, and M. M. Van Hulle, "Towards mode detection", *in Proceedings of the 4th International Conference on Recent Advances in Soft Computing, RASC'02*, pp. 77–78, proceedings on CD, 2002.

[275] I. R. Radojicic, D. P. Mandic and D. Vulic, "Searching for a simple ventricular arrhythmia detector", *in Proceedings of the 2nd European Medical & Biological Engineering Conference EMBEC'02*, vol. 3, pp. 366–367, 2002.

[276] A. Palmer, M. Razaz, and D. P. Mandic, "Spatially adaptive image restoration by neural network filtering", *in Proceedings of the VII Brazilian Symposium on Neural Networks*, pp. 184–189, 2002.

[277] B. P. Milner, D. P. Mandic and D. Kolonic, "Deriving the optimal payload size for packet–based communication over a binary symmetrical channel", *Proc. of the Second Conference on Mathematics in Communications*, proceedings on CD, 2002.

[278] S. L. Goh, D. P. Mandic, and M. M. Bozic, "A Nonlinear neural adaptive filter with a trainable activation function", *in Proceedings of the Sixth IEEE Seminar on Neural Network Applications in Electrical Engineering, NEUREL'02*, pp. 7–10, 2002.

[279] A. I. Hanna, I. R. Krcmar, and D. P. Mandic, "Perlustration of error surfaces for linear and linear stochastic gradient descent algorithms", *in Proceedings of the Sixth IEEE Seminar on Neural Network Applications in Electrical Engineering, NEUREL'02*, pp. 11–16, 2002.

[280] C. Boukis, D. P. Mandic, and A. G. Constantinides, "A hierarchical feedforward adaptive filter for system identification", *in Proceedings of the IEEE Workshop on Neural Networks for Signal Processing, NNSP'02*, pp. 269–278, 2002.

[281] W. C. Siaw, S. L. Goh, A. I. Hanna, and D. P. Mandic, "Fully adaptive neural nonlinear FIR filters", *in Proceedings of the IEEE Workshop on Neural Networks for Signal Processing, NNSP'02*, pp. 279 -288, 2002.

[282] R. J. Foxall, G. C. Cawley, S. R. Dorling, and D. P. Mandic, "Error functions for prediction of episodes of poor air quality", *in Proceedings of the International Conference on Artificial Neural Networks, ICANN'02*, pp. 1031–1036, 2002.

[283] C. Boukis and D. P. Mandic, "A global gradient descent algorithm for hierarchical FIR adaptive filters", *in Proceedings of the 14 International Conference on Digital Signal Processing DSP'02*, vol. II, pp. 1285–1288, 2002.

[284] C. Boukis, D. P. Mandic, and A. G. Constantinides, "Insights into the hierarchical gradient descent algorithm", *Proceedings of the IEE Workshop on Non-Linear and Non-Gaussian Signal Processing - N2SP*, proceedings on CD, 2002.

[285] K. Pauwels, T. Gautama, D. P. Mandic, M. M. Van Hulle, and A. G. Constantinides, "Towards characterisation of nonstationary time series", *Proceedings of the IEE Workshop on Non-Linear and Non-Gaussian Signal Processing - N2SP*, proceedings on CD, 2002.

[286] I. Radojicic, T. Gautama, and D. P. Mandic, "A Comparison of two novel methods for characterization of heart rate variability series", *in Proceedings of the 16th Biennial International EURASIP Conference BIOSIGNAL2002*, pp. 84–87, 2002.

[287] D. P. Mandic, A. I. Hanna, and D. I. Kim, "A General adaptive normalised nonlinear gradient descent algorithm for nonlinear adaptive filters", *in Proceedings of International Conference on Acoustics, Speech and Signal Processing, ICASSP'02*, vol. II, pp. 1353–1356, 2002.

[288] A. I. Hanna and D. P. Mandic, "A normalised complex backpropagation algorithm", *in Proceedings of International Conference on Acoustics, Speech and Signal Processing, ICASSP'02*, vol. I, pp. 977–980, 2002.

[289] D. H. Kolonic, D. P. Mandic, B. Milner and R. Harvey, "On the derivation of the optimal payload size for packet based transmission over a binary symmetrical communication channel", *in Proceedings of International Conference on Acoustics, Speech and Signal Processing, ICASSP'02*, vol. IV, pp. 4120–4123, 2002.

[290] W. Sherliker, I. R. Krcmar, M. M. Bozic, and D. P. Mandic, "On sensitivity for a class of adaptive filters", *in Proceedings of International Conference on Acoustics, Speech and Signal Processing, ICASSP'02*, vol. I, pp. 1061–1064, 2002.

[291] R. J. Foxall, G. C. Cawley, N. L. C. Talbot, S. R. Dorling, and D. P. Mandic, "Heteroscedastic regularised kernel regression for prediction of episodes of poor air quality", *in Proceedings of the 10th European Symposium on Artificial Neural Networks ESANN-02*, pp. 19–24, 2002.

[292] I. Radojicic and D. P. Mandic, "On the presence of deterministic chaos in HRV signals", *Proceedings the 28th Annual Computers in Cardiology Congress*, pp. 465–468, 2001.

[293] A. I. Hanna, D. P. Mandic, and M. Razaz, "A normalised backpropagation algorithm for neural adaptive filters", *Proceedings of the XI IEEE Workshop on Neural Networks for Signal Processing NNSP'01*, pp. 63–72, 2001.

[294] Z. V. Babic and D. P. Mandic, "A computationally efficient algorithm for fast convolution/correlation", *Proceedings of the 5th International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Services - TELSIKS 2001*, vol. 2, pp. 595–598, 19–21 September 2001.

[295] M. M. Bozic and D. P. Mandic, "A fully adaptive algorithm for FFNNs", *Proceedings of the IX International Conference on Control and Automation – MED'01*, 2001, proceedings on CD.

[296] I. R. Radojicic, D. P. Mandic and D. Vulic, "Searching for an optimal time-delay in the state-space reconstruction of a heart rate variability signal", *Proceedings of the IX IFMBE Mediterranean Conference on Biomedical Signal Processing (MEDICON'01)*, vol. *II*, pp. 893–896, 2001.

[297] I. R. Krcmar and D. P. Mandic, "A fully adaptive NNGD algorithm", *in Proceedings of the International Conference on Acoustics, Speech and Signal Processing, ICASSP'01*, vol. *VI*, pp. 3493–3496, 2001.

[298] R. Foxall, I. R. Krcmar, S. Dorling, G. Cawley, and D. P. Mandic, "Nonlinear modelling of air pollution time series", *in Proceedings of the International Conference on Acoustics, Speech and Signal Processing, ICASSP'01*, vol. *VI*, pp. 3505–3508, 2001.

[299] D. P. Mandic, I. R. Krcmar, W. Sherliker, and G. D. Smith, "A data–reusing stochastic approximation algorithm for neural adaptive filters", *in Proceedings of the International Conference on Artificial Neural Nets and Genetic Algorithms ICANNGA'01*, pp. 422–425, 2001.

[300] R. Foxall, I. Krcmar, G. Cawley, S. Dorling, and D. P. Mandic, "On nonlinear processing of air pollution data", *in Proceedings of the International Conference on Artificial Neural Nets and Genetic Algorithms ICANNGA'01*, pp. 477–480, 2001.

[301] I. R. Krcmar, D. P. Mandic, and R. J. Foxall, "On predictability of atmospheric pollution time series", *in Proceedings of the International Conference on Artificial Neural Nets and Genetic Algorithms ICANNGA'01*, pp. 481–484, 2001.

[302] G. C. Cawley, S. Dorling, R. J. Foxall, and D. P. Mandic, "Estimating the costs associated with worthwhile predictions of poor air quality", *in Procedings of the International Conference on Artificial Neural Nets and Genetic Algorithms ICANNGA'01*, 485–488, 2001.

[303] D. P. Mandic, "The use of Möbius transformations in neural networks and signal processing", *Proceedings of the X IEEE Workshop Neural Networks for Signal Processing NNSP'00*, pp. 185-194, 2000.

[304] D. P. Mandic, "On fixed points of a general neural network via Möbius transformations", *in Proceedings of the Fifth International Conference on Mathematics in Signal Processing*, 2000, proceedings on CD.

[305] M. Fisher, D. P. Mandic, and R. Harvey, "Visualising error performance surfaces for adaptive filters using morphological scale trees", *in Proceedings of the Fifth International Conference on Mathematics in Signal Processing*, 2000, procedings on CD.

[306] Z. Babic, S. Kalaba, and D. P. Mandic, "Polynomial modelling in diagnostics and perceptual adjustment systems design", *Proceedings of the 8th International Conference on Software, Telecommunications and Computer Networks (SoftCOM-2000)*, vol. I, pp. 189–198, 2000.

[307] D. P. Mandic, R. Harvey, and D. H. Kolonic, "On the choice of tactile code", *in Proceedings of IEEE Conference on Multimedia and Expo, ICME2000*, vol. I, pp. 567–570, 2000.

[308] D. P. Mandic and I. R. Krcmar, "On training with slope adaptation for feedforward NNs", *Proceedings of the Fifth IEEE Seminar on Neural Network Applications in Electrical Engineering (NEUREL-2000)*, pp. 42–45, 2000.

[309] I. Krcmar, M. M. Bozic, and D. P. Mandic, "Global asymptotic stability of RNNs with bipolar activation functions", *Proceedings of the Fifth IEEE Seminar on Neural Network Applications in Electrical Engineering (NEUREL-2000)*, pp. 33–36, 2000.

[310] J. A. Chambers, W. Sherliker, and D. P. Mandic "A Normalized gradient algorithm for an adaptive recurrent perceptron", *in Proceedings of the International Conference on Acoustics, Speech and Signal Processing, ICASSP'00*, vol. I, pp. 396–399, 2000.

[311] R. Harvey, D. P. Mandic, and D. H. Kolonic, "Some potential pitfalls with s to z–plane mappings", *in Proceedings of the International Conference on Acoustics, Speech and Signal Processing, ICASSP'00*, vol. VI, pp. 3530–3533, 2000.

[312] D. P. Mandic, J. A. Chambers, and M. M. Bozic, "On global asymptotic stability of fully connected recurrent neural networks", *in Proceedings of the International Conference on Acoustics, Speech and Signal Processing, ICASSP'00*, vol. VI, pp. 3406–3409, 2000.

[313] M. Fisher, D. P. Mandic, J. A. Bangham, and R. Harvey, "Visualising error surfaces for adaptive filters and other purposes", *in Proceedings of the International Conference on Acoustics, Speech and Signal Processing, ICASSP'00*, vol. VI, pp. 3522–3525, 2000.

[314] D. P. Mandic and J. A. Chambers, "Global asymptotic stability of nonlinear relaxation equations realised through a recurrent perceptron", *in Proceedings of the International Conference on Acoustics, Speech and Signal Processing, ICASSP'99*, vol. 2, pp. 1037-1040, 1999.

[315] D. P. Mandic and J. A. Chambers, "A nonlinear adaptive predictor realised via recurrent neural networks with annealing", *in the Digest of the IEE Colloquium – Statistical Signal Processing*, pp. 2/1-2/6, 1999.

[316] D. P. Mandic and J. A. Chambers, "From an a priori RNN to an a posteriori PRNN nonlinear predictor", *in Proceedings of the VIII IEEE Workshop Neural Networks for Signal Processing NNSP'98*, pp. 174-183, 1998.

[317] D. P. Mandic and J. A. Chambers, "Advanced PRNN based nonlinear prediction/system identification", *in the Digest of the IEE Colloquium Non-linear Signal and Image Processing*, pp. 11/1-11/6, 1998.

Book chapters:

[1] D. Mandic, S. Kanna, Y. Xia, and A. G. Constantinides, "A data analytics perspective of fundamental power grid analysis techniques", in A. Tajer, S. M. Perlaza, and H. V. Poor (editors), *Advanced Data Analytics for Power Systems*, Cambridge University Press, pp. 285–311, 2020.

[2] I. Kisil, G. G. Calvi, B. Scalzo Dees and D. P. Mandic, "Tensor decompositions and practical applications: A hands-on tutorial", in *L. Oneto, N. Navarin, A. Sperduti, and D. Anguita (editors)*, Recent Trends in Learning From Data, Springer, pp. 69-97, 2020.

[3] T. Konstantinidis, B. S. Dees, G. G. Calvi, and D. P. Mandic, "Text mining - a key lynchpin in the investment process: A survey", in *N. Petkov, N. Strisciuglio, and C. Travieso-Gonzalez et al. (editors)*, Frontiers in AI and Applications (FAIA), series *Applications of Intelligent Systems*, Proceedings of the 1st International APPIS Conference 2018, IOS Press, pp. 181–194, 2018.

[4] A. Hemakom, K. Powezka, V. Goverdovsky, U. Jaffer, J. Chambers, and D. P. Mandic, "Measuring precise inter–person physiological synchrony and its trends through adaptive, data-driven algorithms: Combining NA–MEMD and the synchrosqueezing transform to identify synchronised respiratory and HRV frequencies", in *W. C. Siu et al. (editors)*, Learning Approaches in Signal Processing, Pan Stanford DSP Book Series, pp. tba, 2018.

[5] Y. Xia, S. Kanna, and D. P. Mandic, "Diffusion augmented complex extended Kalman filtering for adaptive frequency estimation in distributed power networks", in *P. Djuric and C. Richard (editors), Cooperative and Graph Signal Processing*, pp. 735–755, Elsevier, 2018.

[6] I. Mostafanezhad, O. Buric–Lubecke, D. P. Mandic, and E. Yavari, "Noise– and interference–reduction methods for microwave Doppler radar vital signs monitors", in *I. Mostafanezhad, O. Boric–Lubecke, and J. Lin (editors), Medical and Biological Microwave Sensors and Systems*, pp. 202–227, Cambridge University Press, 2018.

[7] Y. Xia, M. Xiang, Z. Li, and D. P. Mandic, "Echo state networks for multidimensional data: Exploiting noncircularity and widely linear models", in *D. Comminiello and J. Principe (editors), Adaptive Learning Methods for Nonlinear System Modelling*, pp. 267–288, Elsevier, 2018.

[8] D. Looney, P. Kidmose, M. Morrell, and D. P. Mandic, "Ear-EEG: Continuous brain monitoring", in *C. Guger* et al. *(editors), Brain-Computer Interface Research*, pp. 63-71, Springer, 2014.

[9] D. Looney, P. Kidmose, and D. P. Mandic, "Ear-EEG: User-centered and wearable BCI", in *C. Guger* et al. *(editors), Brain-Computer Interface Research*, pp. 41–50, Springer, 2014.

[10] N. Rehman and D. P. Mandic, "Adaptive multiscale time–frequency analysis", in *N. Kasabov (editor), "Springer Handbook of Bio- and Neuro-Computing*, pp. 745–764, Springer, 2014.

[11] L. Li, Y. Saito, D. Looney, T. Tanaka, J. Cao, and D. P. Mandic, "Data fusion via fission approach for the analysis of brain death", in *P. Angelov, D. P. Filev, and N. Kasabov, (editors), Evolving Intelligent Systems: Methodology and Applications*, pp. 229–245, Wiley-Blackwell, 2010.

[12] D. Looney and D. P. Mandic, "Empirical mode decomposition for simultaneous image enhancement and fusion", in *T. Stathaki, (editor)*, *Image Fusion: Algorithms and Applications*, pp. 327–341, Academic Press, 2008.

[13] B. Jelfs, P. Vayanos, S. L. Goh and D. P. Mandic, "Collaborative adaptive filters for online knowledge extraction and information fusion", in *D. Mandic, M. Golz, A. Kuh, D. Obradovic, and T. Tanaka, (editors)*, *Signal Processing Techniques for Knowledge Extraction and Information Fusion*, pp. 1–20, Springer Boston, 2008.

[14] D. P. Mandic, G. Souretis, W. Y. Leong, D. Looney, M. M. Van Hulle, and T. Tanaka, "Complex empirical mode decomposition for multichannel information fusion", in *D. Mandic, M. Golz, A. Kuh, D. Obradovic, and T. Tanaka, (editors)*, *Signal processing techniques for knowledge extraction and information fusion*, pp. 243–260, Springer Boston, 2008.

[15] T. Rutkowski, A. Cichocki, and D. P. Mandic, "EMDsonic - an empirical mode decomposition based brain signal activity sonification approach", in *D. Mandic, M. Golz, A. Kuh, D. Obradovic, and T. Tanaka, (editors)*, *Signal Processing Techniques for Knowledge Extraction and Information Fusion*, pp. 261–275, Springer Boston, 2008.

[16] P. Vayanos, M. Chen, B. Jelfs, and D. P. Mandic, "Exploiting nonlinearity in signal processing: Qualitative assessment of adaptive filtering algorithms and signal modality characterisation", in *M. Cethouani et al., (editors)*, *Advances in Nonlinear Speech Processing*, Lecture Notes in Computer Science, pp. 57–77, Springer, 2007.

[17] T. Rutkowski and D. P. Mandic, "Modelling the communication atmosphere:- A human centered multimedia approach to evaluate communicative situations", in *T. Huang, A. Nijholt, M. Pantic, and A. Pentland, (editors)*, *Human Computing*, Lecture Notes in Artificial Intelligence, pp. 155–169, Springer Berlin & Heidelberg 2007.

[18] T. Rutkowski and D. P. Mandic, "Modelling communication interactivity", in *T. Nishida, (editor)*, *Engineering Approaches to Conversational Informatics*, pp. 353–370, Wiley 2007.

[19] K. Pauwels, T. Gautama, D. P. Mandic, and M. M. Van Hulle, "Towards model–independent mode detection and characterisation of very long biomedical time series", in A. Lofti and J. Garibaldi, (editors), *in "Applications and Science in Soft Computing: Advances in Soft Computing"*, Springer Verlag, pp. 213–218, 2004.

[20] D. P. Mandic, S. L. Goh, and A. I. Hanna, "Data reusing algorithms for complex valued adaptive filters", in A. Hirose, (editor), *Complex Valued Neural Networks*, World Scientific Publishing, Singapore, pp. 131–153, 2003.

[21] D. P. Mandic, J. Baltersee, and J. A. Chambers, "Non-linear adaptive prediction of speech with a pipelined recurrent neural network and advanced learning algorithms", in A. Prochazka, J. Uhlir, P. W. Rayner, and N. G. Kingsbury, (editors), *Signal Analysis and Prediction*, pp. 291–309, Birkhauser, Boston, 1998.