

## Refereed Publications

Subject: Computer Science, especially Signal Processing and Evolutionary Optimization

- [1] N. Amin, T. Gross, S. Rosenthal and M. Borschbach, "Impact of Microphone Orientation and Distance on BSS Quality within Interaction Devices", to appear, *Proc. of Intelligent Signal Processing Conference*, 2015.
- [2] N. Amin, T. Gross, S. Rosenthal and M. Borschbach, "Blind Source Separation Performance based on Microphone Sensitivity and Orientation within Interaction Devices", *Proc. of Interaccion, the 16th edition of the International Conference promoted by the Spanish Human Computer Association*, to appear in ACM 2015.
- [3] M. Offiah and M. Borschbach, "Mobile Porting and Multi-platform Runtime Performance Comparisons of Offline and Online BSS Algorithms", *Proc. of 3rd International Conference on Future Internet of Things and Cloud*, pp. 634-838, 2015
- [4] S. Rosenthal and M. Borschbach, "Aggregate Selection in Multi-objective Biochemical Optimization via the Average Cuboid Volume Indicator", *Proc. of Evolve*, to appear in *Advances in Intelligent Systems and Computing (AISC)*, 2015
- [5] S. Rosenthal and M. Borschbach, "A Concept for Real-Valued Multi-objective Landscape Analysis Characterizing Two Biochemical Optimization Problems", *Proc. of Evostar, EvoApplications*, pp. 897-909, 2015.
- [6] M. Borschbach, "Examples of Research Priorities based on Engineering Approaches of Artificial Intelligence within Signal Processing combined with a specific Human Machine Interface Design", *Keynote Speech*, Universal Researchers in Engineering Conferences, Dubai URCAE 2014.
- [7] S. Rosenthal and M. Borschbach, "Impact of Population Size, Selection and Multi-Parent Recombination within a Customized NSGA-II for Biochemical Optimization", *IARIA Journal on Advances in Life Sciences*, published by IARIA.ISSN, pp. 1942-2660, 2014.
- [8] N. Amin and M. Borschbach, "Obstacle Detection Techniques for Navigational Assistance of the Visually Impaired", *Proc. of International Conference on Control, Automation, Robotics and Vision*, pp. 1724-1728, ICARCV 2014.
- [9] N. Amin and M. Borschbach, "Classification Criteria for Local Navigation Digital Assistance Techniques for the Visually Impaired", *Proc. of International Conference on Control, Automation, Robotics and Vision*, pp. 1941-1944, ICARCV 2014.
- [10] S. Rosenthal, T. Gross, N. Amin, M. Offiah and M. Borschbach, "NUI for an Artificial Simulation of an Interactive Sound Source Enhancement to Restore Spatial Listening Experience", *Proc. of International Conference on Human Computer Interaction*, pp. 123-130, IHCI 2014.

- [11] M. Borschbach, "Smart Orientierungshilfe zum Erhalt und Steigerung der sozialen Integrationskompetenz natürlicher Autonomie in alltäglichen Szenarien sozialer Lebenswirklichkeiten", BMBF-Visionenworkshop, Posterpräsentation, Juni 2014.
- [12] M. Offiah, S. Rosenthal and M. Borschbach, "Assessing the Utility of Mobile Applications with Support for or as Replacement of Hearing Aids", *Proc. of the 9th International Conference on Future Networks and Communications (FNC'14)/The 11th International Conference on Mobile Systems and Pervasive Computing, (MobiSPC'14)/Affiliated Workshops*, Procedia Computer Science Vol.34, pp. 593-600, 2014.
- [13] S. Rosenthal and M. Borschbach, "Impact of Population Size and Selection within a Customized NSGA-II for Biochemical Optimization Assessed on the Basis of the Average Cuboid Volume Indicator", *Proc. of the Sixth International Conference on Bioinformatics, Biocomputational Systems and Biotechnologies*, BIOTECHNO 2014.
- [14] N. Amin, T. Ross, M. Offiah, S. Rosenthal, N. El-Sourani and M. Borschbach, "Stabilization of Endoscopic Videos using Camera Path Global Motion Vectors", *Proc. of 9th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory Application*, pp. 130-137, VISAPP (1) 2014.
- [15] N. Amin, T. Ross, M. Offiah, S. Rosenthal, N. El-Sourani and M. Borschbach, "Optimization of Endoscopic Video Stabilization By Local Motion Exclusion", *Proc. of 9th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory Application*, pp. 64-72, VISAPP (3) 2014.
- [16] S. Rosenthal, N. El Sourani and M. Borschbach, "Impact of Different Recombination Methods in a Mutation-Specific MOEA for a Biochemical Application", *Proc. of EVOSTAR*, pp. 188-199, EVOBIO 2013.
- [17] N. Röckendorf, M. Borschbach and A. Frey, "Molecular Evolution of Peptide Ligands with Custom-tailored Characteristics", *PLOS Computational Biology*, open access journal, December 2012.
- [18] S. Rosenthal, N. El Sourani, M. Borschbach, "Introduction of a Mutation Specific Fast Non-Dominated Sorting GA Evolved for Biochemical Optimizations", *Proc. of Simulated Evolution and Learning (SEAL)*, pp. 158-167, 2012.
- [19] M. Offiah, Navya Amin, Thomas Gross, Nail El-Sourani, Markus Borschbach, "An approach towards a full-reference-based benchmarking for quality-optimized endoscopic video stabilization systems.", *Proc. of the Eighth Indian Conference on Computer Vision, Graphics and Image Processing, ICVGIP*, pp. 65-71, 2012.
- [20] M. Offiah, N. Amin, T. Gross, El-Sourani, M. Borschbach, "Towards a Benchmarking Framework for Quality-Optimized Endoscopic Video Stabilization", *Proc. of 54th International Symposium ELMAR-2012*, pp. 23-26, 2012.

- [21] N. El-Sourani and M. Borschbach, "Algebraic Group Theory Driven Divide and Evolve of Multi Objective Problems", *Proc. of the VII ALIOEURO, Workshop on Applied Combinatorial Optimization*, pp. 18-21, 2011.
- [22] J. Driver, D. Heider, S. Hauke, M. Borschbach, M. Pyka M, "Hierarchical Text Clustering Based on Independent Component Analysis", *Proc. of the Computational Linguistics-Applications Conference*, Warsaw, Poland, ISBN: 978-83-60810-47-7, pp. 17-21, 2011.
- [23] N. El Sourani, M. Borschbach, "Design and Comparison of two Evolutionary Approaches for Solving the Rubik's Cube", *Proc. of Parallel Problem Solving from Nature, PPSN XI*, Lecture Notes in Computer Science, Volume 6239, 442-451, 2011.
- [24] N. El-Sourani, S. Hauke, M. Borschbach, "An Evolutionary Approach for Solving the Rubik's Cube Incorporating Exact Methods", *Proc. of Applications of Evolutionary Computation*, Volume 6024, pp. 80-89, 2010.
- [25] S. Hauke, M. Pyka, M. Borschbach, D. Heider, "Harnessing Recommendations from Weakly Linked Neighbors in Reputation-based Trust Formation", *Proc. of the 2010 International Conference on Cyberworlds*, 2010.
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- [28] S. Hauke, M. Pyka, M. Borschbach, D. Heider, "Reputation-Based Trust Diffusion in Complex Socio-Economic Networks, Information Retrieval and Mining in Distributed Environments", *Studies in Computational Intelligence*, Springer-Verlag, ISBN 978-3-642-16088-2, pp. 21-40, 2010.
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- [32] M. Borschbach, C. Grelle, S. Hauke, "HuGO!: A New Paradigm of Incorporating Human Strategies into Evolutionary Computation", Technical Report FHDW 2009, Nominated and Presented

at the 2009 humies award competition, Genetic and Evolutionary Computation Conference (GEC-CO), 2009.

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- [34] M. Borschbach, S. Hauke, M. Pyka and D. Heider, "Opportunities and limitations of a principle component analysis optimized machine learning approach for the identification and classification of cancer involved proteins", to appear, *International Transactions on Systems Science and Applications, Communications of SIWN (CoSIWN Journal, System and Information Sciences Notes*, ISSN 1757-4439), Vol. 6, April 2009, pp. 85-89, Selected and Invited at BSB 2009.
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- [45] M. Borschbach, "Cumulative Habilitation Script", Dissertation submitted for "Habilitation"-degree (Associated Professor-Thesis), University of Münster, December 2006.
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