Nikos Kargas

Curriculum Vitæ

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Education

2015–present **Ph.D. in Electrical Engineering**, *University of Minnesota*, Minneapolis MN.
PhD Advisor: Prof. Nikolaos Sidiropoulos.

Aug. 2015 **Master of Science**, *Technical University of Crete*, Chania, Greece.
Thesis: SDR Readers for Gen2 RFID and Backscatter Sensor Networks.
MSc Advisor: Associate Prof. Aggelos Bletsas.

Sept. 2013 **Diploma of Engineering**, *Technical University of Crete*, Chania, Greece.
Thesis: Robust Localization for the RoboCup Standard Platform League.
Thesis Supervisor: Associate Prof. Michail G. Lagoudakis.

Research Interests

- Matrix/Tensor Factorization Models
- Machine Learning
- Optimization

Experience

2015-Now **Research Assistant**, *University of Minnesota*.
Latent Variable Modeling using Tensor Factorization.

2013-2015 **Research Assistant**, *Technical University of Crete*.
ERC-04-BLASE Research Project:
"Backscatter Networks for Large-Scale Environmental Sensing".

Fall 2014 **Teaching Assistant**, *Technical University of Crete*.
Analysis & Design (Synthesis) of Telecom Modules.

Spring 2013 **Teaching Assistant**, *Technical University of Crete*.
Telecommunication Systems II.

Publications

Journals

[J2] **N. Kargas**, N.D. Sidiropoulos, and X. Fu, "Tensors, Learning, and 'Kolmogorov Extension' for Finite-alphabet Random Vectors", arXiv preprint arXiv:1712.00205 (2017) (submitted to IEEE Transactions on Signal Processing).

[J1] **N. Kargas**, F. Mavromatis and A. Bletsas, "Fully-Coherent Reader with Commodity SDR for Gen2 FM0 and Computational RFID", IEEE Wireless Communications Letters (WCL), Vol. 4, No. 6, pp. 617-620, Dec. 2015.

Conference Publications

[C5] B. Yaman, S. Weingartner, **N. Kargas**, N.D. Sidiropoulos, and Mehmet Akcakaya, "Locally Low-Rank Tensor Regularization for High-Resolution Quantitative Dynamic MRI", in Proc. IEEE CAMSAP, Dec. 2017

[C4] **N. Kargas**, S. Weingartner, N.D. Sidiropoulos, and M. Akcakaya, "Low-Rank Tensor Regularization for Improved Dynamic Quantitative Magnetic Resonance Imaging", in Proc. SPARS, June 2017.

[C3] **N. Kargas** and N.D. Sidiropoulos, "Completing a Joint PMF from Projections: a Low-rank Coupled Tensor Factorization Approach", in Proc. IEEE ITA, Feb. 2017.

[C2] P. N. Alevizos, N. Fasarakis-Hilliard, K. Tountas, N. Agadakos, **N. Kargas** and A. Bletsas. "Channel Coding for Increased Range Bistatic Backscatter Radio: Experimental Results", in *IEEE RFID-TA*, Sept. 2014.

[C1] **N. Kargas**, N. Kofinas, E. Michelioudakis, N. Pavlakis, S. Piperakis, N. I. Spanoudakis, M. G. Lagoudakis. "Kouretes 2013 SPL Team Description Paper", *e-Proceedings of the 17th RoboCup International Symposium*, June 2013.

Technical Skills

- **Programming**: C/C++, Java, Python, MapReduce (Hadoop), Assembly, VHDL.
- **Environments and Tools**: Git, MATLAB, Microsoft Visual Studio, Eclipse IDE.

Software

- USRP RFID Reader https://github.com/nkargas/Gen2-UHF-RFID-Reader

Selected Graduate Coursework

Probability and Stochastic Processes, Matrix Theory, Optimization, Tensor Decomposition for Signal Processing and Machine Learning, Advanced Algorithms and Data Structures, Introduction to Data Mining, Detection and Estimation Theory, Processing and Analyzing Big Data, Machine Learning, Graphical Models.

Reviewer

IEEE Transactions on Wireless Communications, IEEE Wireless Communications Letters, IEEE Transactions on Medical Imaging.

International Research Competitions

RoboCup 2013, Eindhoven, Netherlands, 24-30 June 2013.

RoboCup Iran Open 2013, Teheran, Iran, 3-7 April 2013.

RoboCup Autcup 2012, Teheran, Iran, 20-25 October 2012.

References

- Available upon request.