

Curriculum Vitae – Javier Turek

Address & Personal information

Parallel Computing Lab,
Intel Labs,
Hillsboro, Oregon, USA.
Telephone: +1-503-712-0404.
E-mail: javier.turek@intel.com
Webpage: <http://www.javierturek.com>
Born in Argentina, June 9th, 1981.
Married to Natacha. Father of Shirley.

Academic Education

2003 – 2007: B.Sc., Computer Science, Cum Laude.
Technion, Israel Institute of Technology, Haifa, Israel.
2008 – 2015: Ph.D., Computer Science (Direct Track).
Technion, Israel Institute of Technology, Haifa, Israel.
Advisors: Prof. Michael Elad and Prof. Irad Yavneh.
Dissertation: Topics in Sparse Representation Modeling.

Professional Experience

6.2015 – Present: Research Scientist in Machine Learning at Intel Labs, Oregon, USA.
7.2012 – 10.2012: Research Intern in Medical Imaging at G.E. Healthcare, Israel.
2.2006 – 5.2008: Research Developer in Parallel Optimization at IBM Haifa Research Lab, Israel.
2.2004 – 2.2006: Software Developer in CAD Systems at Intel, Haifa, Israel.

Teaching Experience

5.2008 – 9.2014: Computer Science, Technion: Lecturer and teaching assistant in Introductory courses to Computer Science and Programming.

Research Interests

Image and Signal Processing, Inverse Problems, Optimization, Sparse Representations, Signal Statistics, Medical Imaging, Computer Vision, Machine Learning.

Academic Activities

- Journal and Conference Refereeing:
IEEE Transactions in Image Processing
IEEE Transactions in Signal Processing
International Journal of Computer Vision
Numerical Linear Algebra with Applications
Advances in Neural Information Processing Systems (NIPS)

Awards

- 2014: 2nd place award student poster competition: CS research day, Technion.
- 2013: Winner of student poster competition: CS research day, Technion.

Journal Papers

1. E. Treister, **J.S. Turek**, I. Yavneh. A Multilevel Framework for Sparse Optimization with Application to Inverse Covariance Estimation and Logistic Regression. To appear *SIAM Journal on Scientific Computing (SISC)*, 2016
2. **J. S. Turek**, I. Yavneh, and M. Elad. Clutter Mitigation on Echocardiography using Sparse Signal Separation. *International Journal in Biomedical Imaging*, 2015.
3. **J. S. Turek**, I. Yavneh, and M. Elad. On MMSE and MAP Estimators for the Co-sparse Analysis Model. *Elsevier Digital Signal Processing*, 2014.
4. **J. S. Turek**, I. Yavneh, and M. Elad. On MMSE and MAP Denoising Under Sparse Representation Modeling over a Unitary Dictionary. *IEEE in Transactions in Signal Processing*, 2011.
5. M. Biberstein, S. Dori-Hacohen, Y. Harel, A. Heilper, B. Mendelson, U. Shvadron, E. Treister, **J. Turek**, and M. S. Chang. Cell/B.E. Processor Performance Optimization: Tracing Tools Implementation and Use. *IBM Journal of Research and Development, Special Issue on Hybrid Systems*, 2009.

Refereed Conference Papers

1. **J. S. Turek**, T. L. Willke, P.-H. Chen, P. J. Ramadge. A Semi-Supervised Method for Multi-Subject fMRI Functional Alignment. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2017.
2. M.J. Anderson, M. Capotă, **J. S. Turek**, X. Zhu, T. L. Willke, Y. Wang, P.-H. Chen, J. R. Manning, P. J. Ramadge, K. A. Norman. Enabling Factor Analysis on Thousand-Subject Neuroimaging Datasets. IEEE International Conference on Big Data (BigData), 2016.
3. **J. S. Turek**, J. Sulam, M. Elad, I. Yavneh. Fusion of Ultrasound Harmonic Imaging with Clutter Removal Using Sparse Signal Separation. *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, 2015
4. E. Treister and **J. S. Turek**. A Block-Coordinate Descent Approach for Large-scale Sparse Inverse Covariance Estimation. *Advances in Neural Information Processing Systems 27 (NIPS)*, 2014.

5. **J. S. Turek**, M. Elad, and I. Yavneh. Sparse Signal Separation with an Off-line Learned Dictionary for Clutter Reduction in Echocardiography. *IEEE 28-th Convention of Electrical and Electronics Engineers in Israel*, 2014.
6. M. Biberstein, U. Shvadron, **J. Turek**, B. Mendelson, and M. S. Chang. Trace-based Performance Analysis on Cell BE. Proceedings of the *IEEE International Symposium on Performance Analysis of Systems and Software (ISPASS)* 213–222, 2008.

Preprints

1. H. Zhang, P.-H. Chen, J. Chen, X. Zhu, **J. S. Turek**, T. L. Willke, U. Hasson, P. J. Ramadge. A Searchlight Factor Model Approach for Locating Shared Information in Multi-Subject fMRI Analysis. arXiv:1609.09432, 2016.
2. P.-H. Chen, X. Zhu, H. Zhang, **J. S. Turek**, J. Chen, T. L. Willke, U. Hasson, P. J. Ramadge. A Convolutional Autoencoder for Multi-Subject fMRI Data Aggregation. arXiv:1608.04846, 2016.

International Conferences

1. **J. S. Turek**, M. J. Anderson, P.-H. Chen, T. L. Willke, P. J. Ramadge. Enabling Brain Functional Alignment for a Thousand Subjects. Algorithms for Modern Massive Data Sets (MMDS), June 2016.
2. **J. S. Turek**, E. Treister. A Multilevel Acceleration for l1-regularized Logistic Regression. Optimization Workshop at Advances in Neural Information Processing Systems 28th (OPT at NIPS'15), December 2015.
3. E. Treister, **J. S. Turek**, I. Yavneh. A Multilevel Framework for Sparse Inverse Covariance Estimation. Optimization Workshop at Advances in Neural Information Processing Systems 27th (OPT at NIPS'14), December 2014.
4. **J. S. Turek**, I. Yavneh and M. Elad. Clutter Mitigation on Echocardiography using Sparse Signal Separation. *Signal Processing with Adaptive Sparse Structured Representations (SPARS)*, July 2013.
5. **J. S. Turek**, I. Yavneh and M. Elad. On MMSE and MAP Estimators for the Co-sparse Analysis Model. *Signal Processing with Adaptive Sparse Structured Representations (SPARS)*, July 2013.

Undergraduate Research

- 2006: B.Sc Research Project on Multiframe Demosaicing and Super-Resolution of Color Images, Geometric Image Processing Lab, CS Dept., Technion.
- 2005: B.Sc Research Project on Cropping of Scanned Images, Geometric Image Processing Lab, CS Dept., Technion.

Extracurricular Activities & Service

- 2011: Project Mentor at SciTech Summer Camp for high-school students, Technion.
- 2008 – 2010: Military Service, Israel Defense Forces Junior Command Preparatory School.

Last update: 18-Apr-17