

Seyedalireza Yektamaram

Ph.D. Industrial and Systems Engineering
Amsterdam, Netherlands

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EDUCATION

- Lehigh University, Bethlehem PA, United States** *Aug 2012 - Dec 2017*
Ph.D., Department of Industrial and Systems Engineering *GPA: 3.97/4*
Dissertation: Optimization Algorithms for Machine Learning Designed for Parallel and Distributed Environments, Prof. Katya Scheinberg
- Sharif University of Technology, Tehran, Iran** *Sep 2009 - Jan 2012*
Ms. Industrial Engineering *GPA: 18.06/20*
Thesis: Sports Scheduling: Premier League Structure, Prof. Nasser Salmasi
- Azad University Tehran-North Branch, Tehran, Iran** *Sep 2005 - Jun 2009*
Bs. Industrial Engineering *GPA: 17.42/20*
Thesis: Implementation of Cost and Time Management based on PMBOK for library construction project Prof. Hassan Shahmohammad

EXPERIENCE

- SAS Institue B.V. Huizen, Netherlands** *Jan 2018 - present*
Operations Research Specialist
- SAS Institute, Cary NC, United States** *Sep 2017 - Dec 2017*
Operations Research Specialist
- SAS Institute, Cary NC, United States** *June 2015 - Aug 2017*
Operations Research Fellow (Graduate Intern)
- Lehigh University, Bethlehem PA, United States** *Aug 2012 - May 2015*
Teaching and Research Assistantship

PUBLICATIONS

- Zhou, Akrotirianakis, **Yektamaram**, and Griffin (2019). A matrix-free line-search algorithm for non-convex optimization, *Optimization Methods and Software*, 34:1, 1-24.
- Yektamaram** (2018). Optimization Algorithms for Machine Learning Designed for Parallel and Distributed Environments. Dissertation. Lehigh University.
- Azad, Saharidis, Davoudpour, Malekly, and **Yektamaram**. "Strategies for protecting supply chain networks against facility and transportation disruptions: an improved Benders decomposition approach." *Annals of Operations Research* 210, no. 1 (2013): 125-163.

CONFERENCE AND PRESENTATIONS

- Strategies for Maintaining Sparse Dual Solutions in Large-scale Nonlinear Support Vector Machines, *INFORMS 2016*, Nashville, Tennessee

A Nonconvex Hessian-free Method for Deep Learning Problems, SLDS 2016, Conference on Statistical Learning and Data Science, Chapel Hill, North Carolina

Distributed Parallel Coordinate Descent Methods for Sparse Inverse Covariance Problem, INFORMS 2015, Philadelphia, Pennsylvania

Parallel SINCO-2D, ISMP 2015, 22nd International Symposium on Mathematical Programming, Pittsburgh, Pennsylvania

Accelerated Coordinate Descent Method for Sparse Inverse Covariance Selection. NYAS 2015, 9th Annual Machine Learning Symposium, New York

Parallel Greedy Coordinate Descent Method for Sparse Inverse Covariance Selection. MOPTA 2014, Conference, Lehigh University, Pennsylvania

RESEARCH AND PROJECT PARTICIPATIONS

SAS Research Projects June 2015 - present
SAS Institute

- A Robust and Efficient Stochastic L-BFGS Method for Deep Learning
- GPU Computing on the edge, Deep Learning on IOT devices
- Mixed precision training and use of Tensor Cores for high performance Deep Learning
- Sparse Solver for traditional Machine Learning (SVM Lasso)
- Gradient Compression, communication efficient distributed training
- Deep Learning and Optimization using graphical processing unit
- Parallel second order optimization in machine learning based on curvature information
- Negative Curvature exploration using batched methods in DNN using eigen information
- Fast Algorithms for Support Vector Machines (Cascade SVM, Merging support vectors)

Distributed Coordinate Descent Sep 2013 - May 2015
Lehigh University

- Sparse Inverse Covariance Selection
- Parallel second order optimization using curvature information

Binary Semidefinite Optimizer using Linearized Cuts Sep 2014 - Dec 2014
Lehigh University

- Integer Programming Course Project (Prof. Ted Ralphs)
- Application in Sports Scheduling

Precipitation Prediction using Conditional Random Fields Sep 2012 - Sep 2013
Lehigh University

- Data Processing of Time Series, Fast Cholesky Decomposition

Change Detection in Sparse Gaussian Graphical Models Sep 2012 - Dec 2012
Lehigh University

- Use of Different Graphical Models in Change Detection (MATLAB)

TEACHING ASSISTANTSHIP EXPERIENCE

Optimization Models and Applications , Prof. Katya Scheinberg	<i>Fall 2013</i>
Stochastic Processes , Prof. George Wilson	<i>Spring 2013</i>
Sequencing and Scheduling , Prof. Nasser Salmasi	<i>Spring 2012</i>
Advanced Linear Programming , Prof. Nasser Salmasi	<i>Fall 2011</i>

RESEARCH INTERESTS

Deep Learning Optimization
Computational Operations Research Parallel Computing - GPU Computing
Optimization in Machine Learning Scalable Algorithms
Graph Theory and Discrete Optimization

LANGUAGE

English: Fluent, **Persian:** Native

SELECTED COURSES

Optimization Methods in Machine Learning (Graphical Models, Lasso)
Computational Methods in Optimization (Parallel Computing, Data Structures)
Nonlinear Optimization
Conic Optimization (Second order Cone Programming, Semidefinite Programming)
Convex Analysis
Integer Programming
Design and Analysis of Algorithms
Graph Theory

COMPUTER SKILLS

Programming	C, C++ , PYTHON, BLAS, MATLAB, Excel (VBA)
Deep Learning	SAS, Tensorflow, Caffe, Theano
Linux	Bash Scripting
GPU Programming	CUDA, Thrust
Parallel Systems	MPI, OpenMP, Pthreads, Cilk, Hadoop
Operations Research	Lingo, GAMS, CPLEX (C++ Integrated), SAS
Workflow	Git, SVN, JIRA
Data-mining	Weka, R
Web-design and Database	HTML, CMS, MySQL
Industrial Engineering	GPSS, Minitab, Arena, Primavera, Decision Tools