

CURRICULUM VITÆ

IMRE PÓLIK

OPTIMIZATION SOLVER DEVELOPER

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Languages: Hungarian (native), English (nearly native), Italian (fluent)

Previous affiliations

2008-2010: Visiting Assistant Professor, Lehigh University, Department of Industrial and Systems Engineering, Bethlehem, PA, USA

2007-2008: Postdoctoral Research Fellow, School of Computational Engineering and Science, McMaster University, Hamilton, Ontario, Canada

2002-2007: Ph.D. in Mathematics, McMaster University, Hamilton, Ontario, Canada
Supervisor: Tamás Terlaky, Department of Computing and Software
Thesis: Generalized duality concepts in conic and quadratic optimization

1997-2002: M.Sc. in Mathematics, Eötvös Loránd University of Sciences, Budapest, Hungary
Supervisor: Tibor Illés, Department of Operations Research
Thesis: A novel way of analyzing interior point methods for linear optimization

Research interest

High-performance computing, optimization software design (C/C++, Matlab, Python)

Implementation of interior-point and simplex algorithms

Algorithm development for conic optimization

SeDuMi: software package for conic optimization (<http://sedumi.ie.lehigh.edu>)

Adaptive methods, artificial intelligence in optimization algorithms

Duality concepts in conic optimization (S-lemma, Ramana-dual, approximate duality)

Teaching experience

2008-2009 Spring: Nonlinear Programming (doctoral course)

2008-2009 Spring: Semidefinite Optimization: Theory, Applications, Modeling, and Software (graduate course)

2008-2009 Fall: Introduction to Operations Research (upper level undergraduate course)

2007-2008 Spring: Computational Linear Algebra (doctoral course)

2007-2008 Spring: Convex Optimization in Engineering (doctoral course)

2002-2007: Teaching Assistant for various undergraduate courses (Linear Algebra, Calculus, Differential Equations)

Scholarships and prizes

2008: 2nd prize at the 2008 Canadian Operational Research Society/VISUAL8 simulation competition (advisor of Team OptLab)

2007: 1st prize at the 2007 Canadian Operational Research Society/VISUAL8 simulation competition (Team OptLab)

2006: MITACS Best Student Paper Award (PhD students)

2005-2006: McMaster Marauder Scholar Award for achievement in academics and athletics

2003: 1st prize at the Matlab Programming Contest organized by The Mathworks

2002-2003: Milos Novotny Fellowship (McMaster University)

2001: Scholarship of the Inter-University Centre for Telecommunications and Informatics

2001: 1st prize at the 25th National Conference for Universities (Hungary)
Special prize of the John von Neumann Computer Science Society

2000-2001: Scholarship of the Pázmány-Eötvös Foundation

1999-2000: Scholarship of Panasonic, Inc.

Organizational and administrative duties

Organizer: 2009 MOPTA Conference

Committee member: High Performance Computing Steering Committee, Lehigh University

Team advisor: Team Optlab, 2nd CORS/VISUAL8 Simulation Competition (Team finished 2nd)

Student seminar coordinator: Advanced Optimization Lab, McMaster University, 2007-2008.

Volunteer coordinator: 2007 ICCOPT/MOPTA Conference, McMaster University, Hamilton.

Desktop publishing: Designer and creator of the 2007 ICCOPT/MOPTA conference book.

Student ambassador: Liaison for Hungarian students at McMaster University, 2005-2008.

System administrator: Advanced Optimization Lab, McMaster University, 2004-2008.

Editing: Translator, proofreader and layout editor of the Hungarian translation of the book *Nonlinear Optimization* by E. de Klerk, C. Roos and T. Terlaky, Budapest, 2004.

Research group activities

2008-2010: COR@L Lab, Lehigh University

2002-2008: MITACS project: New Interior Point Methods and Software for Convex Conic-Linear Optimization and Their Application to Solve VLSI Circuit Layout Problems

2002-2008: Advanced Optimization Laboratory, McMaster University, Canada
conic optimization, duality concepts, high performance computing

2001-2002: Inter-University Centre for Telecommunications and Informatics, Hungary
elliptic curves, coding theory, applications in telecommunications

1999-2001: Neural Information Processing Group, Eötvös University, Hungary
artificial intelligence, machine learning, robust control systems

Scientific refereeing

Automatica

Computational Optimization & Applications

Journal of Global Optimization

Linear Algebra and Its Applications

Mathematical Programming

Optimization Letters

Optimization Methods and Software

Operations Research

SIAM Journal on Optimization

Professional organizations

MOS (Mathematical Optimization Society)

INFORMS

SIAM

Extracurricular activities, hobbies

Music: playing the piano and the organ

Music typesetting: setting sheet music for choir and piano, contributor of the Mutopia Project.

Sports: soccer, ping-pong, chess, fencing

Reading: history of mathematics, music; crime stories

References

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