

Curriculum Vitae of Tamás Terlaky

George N. and Soteria Kledaras '87 Endowed Chair Professor

Chair, Department of Industrial and Systems Engineering, Lehigh University, Bethlehem, PA

PERSONAL INFORMATION:

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Lehigh University
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Bethlehem, PA, USA
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RECENT APPOINTMENTS:

- 2008– George N. and Soteria Kledaras '87 Endowed Chair Professor,
Chair of the Department of Industrial and Systems Engineering,
Lehigh University, Bethlehem, PA, USA.
- 2008– Adjunct Professor, School of Computational Engineering and Science,
McMaster University, Hamilton, ON, Canada.
- 2008–14 Distinguished Visiting Professor,
Department of Management Sciences, Strathclyde University, Glasgow, UK.
- 2005–08 Director, School of Computational Engineering and Science,
McMaster University, Hamilton, ON, Canada.
- 2005– Distinguished Visiting Professor,
Faculty of Information Technology, University of Veszprém, Hungary.
- 1999–08 Professor, Department of Computing and Software,
Canada Research Chair in Optimization (2002–08),
McMaster University, Hamilton, ON, Canada.
Associate member of the Department of Mathematics and Statistics
Associate member of the Department of Electrical and Computer Engineering.

EDUCATION, DEGREES:

- Doctor of the Academy of Sciences, Hungarian Academy of Sciences,
Budapest, Hungary, 2006.
- Candidate of Mathematical Sciences, Operations Research (something
like habilitation), Hungarian Academy of Sciences, Hungary, 1985.
- Dr. of Natural Sciences, (Ph.D.), Loránd Eötvös University, Budapest,
Hungary, 1981.
- M.Sc. Mathematics, Loránd Eötvös University, Faculty of Sciences, Bu-
dapest, Hungary, 1979.

SPECIAL TRAINING:

- Young Scientist Summer Program, IIASA, Laxenburg, Austria, (1988 – three months).
- European Summer Institute on Operational Research, Canterbury, England, (1986 – three weeks).

AWARDS, RECOGNITIONS:

- Award of Merit Selection Committee, Canadian Operational Research Society, 2015-2017.
- Program Committee Member of the 11th Conference on Parametric Optimization and Related Topics (PARAOPTXI), Prague, Czech Republic, 2017.
- **General Chair of the 2015 INFORMS Annual Meeting**, Philadelphia, PA.
- Program Committee Member of the 2016 INFORMS Optimization Society Conference, Princeton, 2016.
- INFORMS Nominating Committee, member, since 2015.
- **Award of Merit, Canadian Operational Research Society, 2015.**
- Chair of the Best Paper Prize Committee of the Journal Optimization and Engineering, 2015.
- Member of the Scientific Advisory Board, of IWR, the Interdisciplinary Center for Scientific Computing, The University of Heidelberg, Germany, 2014-present.
- Chair of the INFORMS Optimization Society Khachiyan Prize Committee, 2014.
- Four times in a row **Finalist of the UPS George D. Smith Prize**. In 2012, 2013, 2014, and also in 2015 the ISE Department in Collaboration with the Enterprize Systems Center was selected to be finalist by the prize committee of INFORMS, the Institute for Operations Research and the Management Sciences.
- External evaluator of the Industrial and Applied mathematics Research Center, University of Heidelberg, Germany, 2014.
- External evaluator of research Groups, University Accreditation Board, Hungary, 2013.
- External reviewer for the Business and Engineering program at Drexel University, Philadelphia, PA, 2013.
- Chair of the Mathematical Optimization Society-SIAM Lagrange Prize Committee, 2011-2012.
- Chair of the INFORMS Optimization Society Khachiyan Prize Committee, 2010. Member of the committee in 2011.
- Member of the Advisory Committee of CIDMA: Center for Research and Development in Mathematics and Applications, Aveiro, Portugal, 2010-2016.
- Member of the Industrial Advisory Board, The Fields Institute, Toronto, 2006–present.
- *Mentorship Award of Excellence, MITACS, 2008.*
- Chair of the Industrial Optimization Seminar Series Advisory Board, The Fields Institute, Toronto, 2004–2009.
- Member of the Fields Industrial Optimization Seminar Series Advisory Board, The Fields Institute, Toronto, 2003-2009
- Chair of the Continuous Optimization Steering Committee of the Mathematical Optimization Society, 2007-2010 and 2010-2013.

- Member of the Mathematical Programming Society Ad-Hoc Committee on Membership, 2007-2009.
- Member of South Africa's National Research Foundations Monitoring and Evaluation unit, 2009.
- Member of the INFORMS Optimization Society Farkas Prize Committee, 2008.
- Member of the Review Panel to evaluate all mathematics research centers in Portugal, 2007-2008. (Ministry of Research and Technology of Portugal).
- Member of the DFG (German Science Foundation) Accreditation Committee of Ph.D. programs and Networks of Excellences on the area of computational sciences, 2006.
- Chair of the INFORMS Optimization Society Farkas Prize Committee, 2006.
- Member of the INFORMS Committee on New Publication Products, 2006.
- Doctor of Science, Hungarian Academy of Science, Budapest, Hungary, 2006.
- **Fellow of The Fields Institute, 2005-present**
- Chair Elect (2004) and Chair (2005–2006) of INFORMS' Optimization Society (elevated from Optimization Section to Optimization Society in 2004).
- Chair of Industrial Optimization Seminar Series, The Fields Institute, Toronto, 2004-2008.
- Member Steering Committee "Continuous Optimization" of the Mathematical Programming Society, 2003–2005.
- Member Advisory Committee, Dean of Engineering, McMaster University, 2003-2005.
- *Canada Research Chair in Optimization, 2002-2008.*
- Member of the Review Panel to evaluate all mathematics research centers in Portugal, 2002. (Ministry of Research and Technology of Portugal).
- Chair of the 2004 and 2005 *Optimization Prize for Young Researchers* Selection Committee for INFORMS.
- Vice Chair for Linear Programming and Complementarity, INFORMS Optimization Section, 2001-2003.
- Chair (2000-2003) and *Honorary Chair* (since 2003) of EUROPT, the Continuous Optimization Working Group of EURO.
- Member of Subdivision Council of INFORMS, 2003 and 2005–2006.
- Member of Sections and Societies Committee of INFORMS, 2003–2006.
- Member of the 2001 and 2002 INFORMS George Nicholson Student Paper Competition Committees.
- Obermann Fellowship, Center of Advanced Studies, The University of Iowa, Iowa City, Iowa, (1994).
- The following paper is selected as "*The best OR paper of the year 1992*" by The Operations Research Society of Japan: Linear Complementarity and Oriented Matroids, (1992) *Japanese Journal of Operations Research* 35. 45–61. (Together with K. Fukuda).
- *Gy. Farkas Prize*, J. Bolyai Math. Society, Budapest, Hungary, 1984.

PRESTIGIOUS INVITED PRESENTATIONS:

- Distinguished Plenary Speaker at the PGM0 days 2015, Gaspard Monge Program for Optimization and Operations Research, Fondation Mathématique Jacques Hadamard, ENSTA Paris Tech., Palaiseau, France, October 27-28, 2015.

- Plenary Speaker, through internet, of the 2015 Conference of the Iranian Operations Research Society, May 2015.
- Plenary Speaker of the 2014 VOCAL Conference, Veszprém, Hungary, December 14-17, 2014.
- Plenary Speaker at the Numerical Analysis and Optimization 2014 Conference, Muscat, Oman, January 5-9, 2014.
- Plenary Speaker at the HPSC 2012 Conference, Hanoi, Vietnam, March 4-10, 2012.
- Distinguished Speaker at the Department of Mechanical and Industrial Engineering, Toronto, ON, Canada, October 29, 2011.
- Plenary Speaker at the West Coast Optimization Day, Kelowna, BC, Canada, October 1, 2011.
- Plenary Speaker at the Sino-Japanese Workshop on Optimization, Beijing, China, September 25-29, 2011.
- Semiplenary speaker at the EUROPT 2010 Workshop, Aveiro, Portugal, July 9-10, 2010.
- Simon Stevin Lecture at the University of Leuven, Leuven, Belgium, September 17, 2009.
- Semiplenary speaker at the INFORMS National Meeting, San Diego, CA, October 10-14, 2009.
- Semiplenary speaker at the CORS-INFORMS International Conference, Toronto, ON, Canada, June 13-17, 2009.
- Semiplenary speaker at the APMOD 2008 Conference, Bratislava, Slovakia, May 28-31, 2008.
- Invited teacher at the "First i-MATH Intensive School on Mathematical Programming and its Applications", CIEM, Castro Urdiales Santander, Spain, January-February 2008.
- PIMS Distinguished Lecturer at the University of Calgary, AB, Canada, October 2007.
- Invited tutorials at the "School on Nonlinear Optimization", CIME foundation, Cetraro, Calabria, Italy, July 1-7, 2007.
- The 2006 IVS-Nvision Distinguished Lecturer at the University of New Brunswick, NB, Canada, October 2006.
- Semiplenary speaker at EURO-XXI, Reykjavik, Iceland, July 2-5, 2006. *How Good Are Interior Point Methods: Klee-Minty Cubes Tighten Iteration Complexity Bounds.*
- Invited tutorials at the EURO Summer Institute "Optimization Challenges in Engineering: Methods, Software, and Applications", Wittenberg, Germany, August 18-Sept. 2, 2006.
- Plenary Speaker at the International conference on Numerical Linear Algebra and Optimization (ICNLAO), September 8-12, 2007, Urumuqi, China; August 10-13, 2005. Lhasa, Tibet, China; October 7-10, 2003, Guilin, China.
- Plenary Speaker at the EUROPT Workshop: Advances in Continuous Optimization, July 4-5, 2003, Istanbul, Turkey.
- Semi-Plenary Speaker at the annual CORS conference, June 2-5, 2003, Vancouver, BC, Canada.
- Plenary Speaker at the Montreal Optimization Days conference, May 4-6, 2003, Montréal, QC, Canada.
- Plenary Speaker at the First International Conference on Optimization Methods and Software, December 14-17, 2002, Hangzhou, China.
- Plenary Speaker at the International Conference on Mathematical Programming December 18-22, 2002, Shanghai, China. *Interior point v/s pivot methods: Pros and cons.*

- Plenary Speaker at Optimization 2001, Aveiro, Portugal, July 22-25, 2001. *Dynamic Update Self-Regular IPMs.*
- Semiplenary speaker at EURO-XVII, Budapest, Hungary, July 13–16, 2000. *Interior point versus pivot methods: Pros and cons.*
- Semiplenary speaker at EURO-XVI, Brussels, Belgium, July 12–15, 1998. *An Easy way to teach interior point methods.*
- Plenary speaker at APMOD-98, Nicosia, Cyprus, 11–13 March, 1998. *An easy way to teach interior point methods.*
- Plenary speaker at MOK-97, Pécs, Hungary, 16-18 October, 1997. *Interior Point Methods in Optimization – in memoriam for Gy. Sonnevend.*
- Semi-plenary (featured talk) speaker on the International Symposium on Mathematical Programming, Lausanne, Switzerland, August 25–28, 1997. Title: *The Criss-Cross Method: A Fresh View at Pivot Methods*

PROFESSIONAL EXPERIENCE:

- 2008– George N. and Soteria Kledaras Chair Professor,
Chair of the Department of Industrial and Systems Engineering,
Lehigh University, Bethlehem, PA, USA.
- 2008–13 Adjunct Professor, School of Computational Engineering and Science,
McMaster University, Hamilton, ON, Canada.
- 2008–14 Distinguished Visiting Professor,
Department of Management Sciences, Strathclyde University, Glasgow, UK.
- 2005– Distinguished Visiting Professor,
Faculty of Information Technology, University of Veszprém, Hungary.
- 2005–08 Director, School of Computational Engineering and Science,
McMaster University, Hamilton, ON, Canada.
- 1999–08 Professor, Department of Computing and Software,
Canada Research Chair in Optimization - 2002–2008,
McMaster University, Hamilton, Canada.
Associate member of the Department of Mathematics and Statistics, and
Department of Electrical and Computer Engineering.
- 1990–99 Associate Professor, Faculty of Technical Mathematics and Informatics,
Delft University of Technology, Delft, Delft, The Netherlands.
- 1989–90 Research Fellow, Faculty of Technical Mathematics and Informatics,
Delft University of Technology, Delft, Delft, The Netherlands.
- 1989–95 Associate Professor, Department of Operational Research,
Eötvös University, Budapest, Hungary.
- 1985–89 Assistant Professor, Department of Operational Research,
Eötvös University, Budapest, Hungary.

- 1982–85 Research Assistant, Department of Operational Research,
Eötvös University, Budapest, Hungary.
- 1981–82 Lecturer, Department of Numerical Analysis and Computer Science,
Eötvös University, Budapest, Hungary.
- 1981–86 Part time consultant, Hungarian Oil and Gas Industrial
Trust, Budapest and Százhalombatta, Hungary.
- 1980–81 Applied Mathematician, Computer Center of Hungarian Oil
and Gas Industrial Trust, Budapest, Hungary.
- 1979–80 Applied Mathematician, Computer Center of Oil Refinery Industry,
Százhalombatta, Hungary.

ADMINISTRATIVE DUTIES, COMMITTEES:

- Member Online Learning Advisory Committee, Lehigh University, 2013–2015.
- Member Lee Iacocca International Internship Steering Committee, Lehigh University, Since 2011.
- Member Lehigh’s Internal Review Committee, Lehigh University, since 2011.
- Member Dean’s Research Advisory Committee, RCEAS, Lehigh University, 2009-2013.
- Chair, Department of Industrial and Systems Engineering, Lehigh University 2008-present.
- Presidential Endowed Chair Search Committee Member, Lehigh University, 2010-2012.
- Anderson Faculty Chair Search Committee Member, Dept. Chemical Engineering, Lehigh University, 2011-present.
- Faculty Search Committee Member, Dept. Computer Science and Engineering, Lehigh University, 2008-2009.
- Faculty Search Committee Member, Dept. Electrical and Computer Engineering, Lehigh University, 2008-2009.
- Anderson Endowed Chair Search Committee Member, Dept. Chemical Engineering, Lehigh University, 2008-2011. • Member of Deans Advisory Council, Rossin College of Engineering and Applied Sciences, Lehigh University, 2008-2011.
- Member of Deans Strategic Advisory Committee, Rossin College of Engineering and Applied Sciences, Lehigh University, 2008-2011.
- Chair, High Performance Computing Sub-Committee, Rossin College of Engineering, and Applied Sciences, Lehigh University, 2008-2011.
- Member Strategic Plan Ad-hoc Committee, Lehigh University, 2008-2009.
- Director of the McMaster School of Computational Engineering and Science, McMaster University, Hamilton, ON, 2005–2008.
- Member Associate Dean of Research and International Affairs Selection Committee, Faculty of Engineering, McMaster University, Hamilton, ON, 2003.
- CORS Diploma Coordinator at CAS McMaster University, Hamilton, ON, 2003–2007.
- Member Dean of Engineering Selection Committee, McMaster U., Hamilton, ON, 2001.
- Member of the McMaster University Graduate Curriculum Committee, 2001–2003.
- Member Computer Science Grad. Committee, Dept. CAS, McMaster U., 2001–2002.
- Graduate Advisor, Dept. CAS, McMaster University, Hamilton, ON, 2000–2001.
- Member Appointment Committee Dept. CAS, McMaster U., Hamilton, ON, 2000–2006.
- Chair Graduate Curriculum Committee, Dept. CAS, McMaster U., Hamilton, ON, 2000–2002.
- Member Department Management Team, SSOR, TU Delft, NL, 1998–1999.
- Chair, Department of Operations Research, Eötvös U., Budapest, Hungary, 1994–1995.

GAVE COURSES ON THE FOLLOWING SUBJECTS:

- | | |
|---------------------------------------|---------------------------------|
| • Mathematical Programming | • Linear Programming |
| • Extensions of Linear Programming | • Nonlinear Programming |
| • Unconstrained Optimization | • Network Flows |
| • Introduction to Operations Research | • Dynamic Programming |
| • Engineering Mathematics | • Oriented Matroids |
| • Numerical Analysis | • Calculus |
| • OR for Civil Engineers | • Structured Optimization |
| • Convex Optimization in Engineering | • Interior Point Methods |
| • Introduction to Linear Optimization | • Network Models and Algorithms |
| • Design and Analysis of Algorithms | • Discrete Optimization |

- Algorithms for Continuous Optimization
- Optimization Software Design
- Optimization Algorithms and Software
- Optimization in Engineering
- Communication skills
- Introduction to Math. Optimization

AWARDS FOR DEPARTMENT:

In 2012, 2013, 2014, and 2015 four time in a row, the ISE Department of Lehigh University was chosen by the Institute for Operations Research and the Management Sciences as one of three finalists for the new UPS George D. Smith Prize. The Smith Prize promotes stronger ties between industry and higher education while recognizing an innovative academic department or program that effectively prepares students for careers in operations research, management science or analytics. *Lehigh's ISE department was the only department to reach the finalist status at the Smith Prize competitions, four times in a row.*

AWARDS FOR STUDENTS:

B.Sc. students: Ayako Watanabe received the Best Student Paper award in the undergraduate category from the Canadian Operations Research Society, 2003.

M.Sc. students: Supervised (co-supervised) more than 50 master students in OR/Optimization at the T.U. Delft, and at McMaster University. By the T.U. Delft Foundation, four of them, Astrid Wisse (1994), Sascha Lanser (1995), Lucie Aarts (1999) and Arjan de Jong (2000) were awarded the best M.Sc. thesis of the year in the Faculty of Mathematics and Informatics. Three others (Joost Warners in 1996, Arjan Berkelaar in 1997 and Lucie Aarts in 2000) received the annual VVS-price (price of the Dutch Statistics and O.R. Society) for the best master thesis in the field of Statistics and Operations Research in the Netherlands. Oleksandr Romanko received the "CORS Best Student Paper Prize", Banff, Alberta, 2004 (*the first time an M.Sc. student was awarded in the graduate student category*). Oleksandr Romanko received Honorable Mention (second prize) for his poster presentation at the conference "Large Scale Nonlinear and Semidefinite Programming", Waterloo, Ontario, 2004. Stephen Stoyan received a first prize for his poster presentation at the annual MITACS meeting, Halifax, NS, 2004.

Ph.D. students: Supervised (co-supervised) 24 Ph.D. students. Tibor Illés received the Farkas Prize of the Bolyai Mathematical Society, 1991 Budapest. Dick Den Hertog (1992), Benjamin Jansen (1995) and Jiming Peng (2001) received their degree cum laude. Dick Den Hertog was a finalist for the "Tucker Prize" at the International Symposium on Mathematical Programming, Ann Arbor 1994. Dick Den Hertog's, Benjamin Jansen's and Etienne de Klerk's thesis were published by Kluwer A.P.C. Jiming Peng was finalist for the "Best Young Scientist Paper" at the International Conference on Nonlinear Programming and Variational Inequalities, Hong Kong 1998. Jiming Peng received the Stieltjes Prize-2001 of the Stieltjes Institute for Mathematical Sciences, The Netherlands, February 2003. Jiming Peng was a finalist for the "Tucker Prize" at the International Symposium on Mathematical Programming, Copenhagen 2003. Maziar Salahi has won the best student paper prize of MITACS in 2005. Imre Pólik has won the best student paper prize of MITACS in 2006. Kimia Ghobadi, Olesya Peshko and Oleksandr Romanko won the first prize at the 1st International Operations Research Case Competition (IORCC 2007). Kimia Ghobadi, Olesya Peshko, Imre Pólik and Oleksandr Romanko won the first prize at the 1st CORS/VISUAL8 Student Simulation Competition, that was sponsored by the Visual8 Corporation as part of the 2007 Canadian Operational Research Society conference held in London (ON), May 13-16, 2007. O. Romanko received a First Prize for his poster presentation at the annual MITACS meeting, Winnipeg, MB, 2007. E. Nematollahi was finalist of the Young Researcher Competition, ICCOPT-II, August 2007. Olesya Peshko and Oleksandr Romanko won the second

prize at the 2nd CORS/VISUAL8 Student Simulation Competition, that was sponsored by the Visual8 Corporation as part of the 2008 Canadian Operational Research Society conference held in Quebec City (QC), May 10-13, 2008. Yuriy Zinchenko has been awarded the 2008 MITACS Award for Best Novel Use of Mathematics in Technology Transfer, CAIMS-MITACS, Montreal, June 1-4. Yang Li has been a finalist at the 2010 Best Student paper competition of the Canadian Operations Research Society, Edmonton, Alberta. Oleksandr Romanko has been a finalist at the Poster Competition of the 2011 INFORMS Annual Meeting, Charlotte, NC.

POST-DOCTORAL FELLOWS:¹

Co-supervised at T.U. Delft: Osman Güler (U. Iowa, 1991, 1994), John Kaliski (U. Iowa, 1993), Tibor Illés (Eötvös University, 1995, 1998), Tom Luo (McMaster, 1996), Erling Andersen (U. Odense, 1998-2000), John Mitchell (RPI, NY, 1998).

Supervised at McMaster: Petra Huhn (U. Augsburg, 2001), Francois Glineur (Polytechnic Mons, 2002), Guoqing Zhang (2001-2002), Yunbin Zhao (Chin. Acad. Sci., 2002 and 2005), Maziar Salahi (Sharif University, Teheran, 2002-2003), Alireza Ghaffary (Tabriz University, Tabriz, Iran, 2003), Mohamed Reza Peyghami (Sharif University, Teheran, Iran, 2003), Tongryeol Seoul (South Korea, 2003-2004), Yu Xia (2003-2004), Kartik Krishnan (2003-2006), Renata Sotirov (2003-2004), Tamon Stephen (2004-2005), Hu Zhang (2004-2007), Mohamed Saad (2004-2005), Warren Hare (2005-2007), Yuriy Zinchenko (2005-2008), Imre Pólik (2007-2008).

Supervised at Lehigh:

Zhouhong Wang (2010-11), Mohamed Raayatpanah (2012), Fatma Yerlikaya-Ozkurt (2014-15).

EXTERNAL EXAMINER OF PH.D. COMMITTEES:

Andrew Kennings, ECE, University of Waterloo;
Jos Sturm, Erasmus University Rotterdam, The Netherlands;
Jos P. Warners, Technical University Eindhoven, The Netherlands;
Laleh Behjat, ECE, University of Waterloo;
Fatma Gzara, Management, McGill University;
Mohamed ElGhami, T.U. Delft, The Netherlands;
Zsolt Csizmadia, Eötvös University, Budapest, Hungary;
Ivan Ivanov, T.U. Delft, The Netherlands;
Guoyong Gu, T.U. Delft, The Netherlands;
Bib Pruhum Silalahi, T.U. Delft, The Netherlands;
Pooyan Shirvani Ghomi, University of Calgary, Calgary, AB, Canada;
Henrik A. Friberg, Technical University of Denmark, Lyngby, Denmark.

EXAMINER OF HABILITATION THESIS AND DSC THESIS COMMITTEES:

Petra Huhn, Augsburg University, Augsburg, Germany.
István Maros, Hungarian Academy of Sciences, Budapest, Hungary.

EXTERNAL EXAMINER IN TENURE and PROMOTION PROCEDURES AT:

Bilkent University, Ankara, Turkey;
Kuwait University, Kuwait;
Imperial College, London, UK (twice);
University of Edinburgh, Edinburgh, UK;
Catholic University of Leuven, Belgium (twice);
The University of Groningen, Groningen, The Netherlands;

¹Affiliation, when given, indicates that the fellow had a permanent appointment at the given institution at the time of fellowship.

The University of Colorado, Denver, Colorado (twice);
Rutgers University, New Brunswick, NJ (twice);
The University of Oklahoma, Norman, Oklahoma;
The University of Iowa, Iowa City, Iowa (twice);
Rensselaer Polytechnic Institute, Troy, NY;
State University of New York, Stony Brook, NY;
University of North Carolina, Chapel Hill, NC;
University of Houston, Texas;
Moi University, Kenya;
University of Pretoria, South Africa;
The University of Montreal, Montreal, QC;
Ecole Polytechnique Montreal, Montreal, QC (twice);
University of Waterloo, Waterloo, ON (5 times);
University of Windsor, Windsor, ON;
Carnegie Mellon University, Pittsburgh, PA (three times);
Northwestern University, Evanston, IL;
Georgia Institute of Technology, Atlanta, GA (twice);
University of Birmingham, UK;
University of Vienna, Austria;
York University, ON, Canada;
Koc University, Turkey;
National University of Singapore, Singapore.

EDITORSHIP:

- **Honorary Founding Editor in Chief** of the journal *Optimization and Engineering*, (2013–) Kluwer Academic Publishers.
- **Founding Editor in Chief** of the journal *Optimization and Engineering*, (1997-2013) Kluwer Academic Publishers.
- *Iranian Journal of Operations Research*, (since 2014).
- *Applied Mathematics and Computation*, Elsevier (since 2014).
- *Communications in Combinatorics and Optimization*, Azarbaijan Shahid Madani University (since 2014).
- *Foundations and Trends Series on Optimization*, NOW Publishers (since 2012).
- *SpringerBriefs in Optimization*, Springer Science, (since 2011).
- *Journal of Computational Science*, Elsevier (since 2009).
- *Numerical Mathematics and Stochastics*, Euclidean Press (since 2008).
- *Optimization and Its Applications*, Springer Book Series Advisory Board member (since 2007).
- *Encyclopedia of Optimization*, Advisory Board member (since 2006).
- *Optimization Letters*, Springer Science, (since 2005).
- *Central European Journal of Operations Research*. (since 2005).
- *International Journal of Engineering and Management Sciences (IJEMS)*, India (2005-2010).
- *Algorithmic Operations Research*, FACETS, Canada, (since 2004-2010).

- *Journal of Industrial and Management Optimization*, American Institute of Mathematical Sciences Since 2003).
- *European Journal of Operational Research*, EURO/Elsevier Publishing Company, (since 2000).
- *Optimization Methods and Software*, Taylor and Frances (since 1997). Software section editor (1997–2004).
- *Computational Optimization and its Applications*, Kluwer Academic Publishers Company. Area editor on software (since 1997).
- *Pure Mathematics and Applications*, Budapest University of Economy, Budapest, Hungary. Member of the editorial board (since 1999).
- Editor of the book *Interior Point Methods of Mathematical Programming*, (1996) Kluwer Academic Publisher Company.
- Guest editor, together with B. Karasözen, M.C. Pinar, and G.W. Weber of the special issue of *European Journal of Operational Research* Vol. 169/3, 1077–1078 (2006), devoted to the workshop *Advances on Continuous Optimization, Istanbul, 2003*.
- Guest editor, together with G. Still and J.G.B. Frenk of the special issue of *European Journal of Operational Research* 1xx/x, 2003, devoted to the workshop *International Workshop on Smooth and Nonsmooth Optimization, Rotterdam, 2001*.
- Guest editor, together with T. Illés and T. Rapcsák of the special issue of *European Journal of Operational Research* 143/2, 2002, devoted to the workshop *Interior Point Methods 2000, Budapest*.
- Guest editor, together with C. Roos, of the special issue of *Applied Numerical Mathematics* Vol.29 No.3. (1999), Elsevier, devoted to the HPOPT-96 workshop.
- Co-editor, together with J.G.B. Frenk, C. Roos and S. Zhang, of the conference proceedings *High Performance Optimization II, 1997*, Kluwer Academic Publishers Company, Vol. 29(3), (1999).
- Guest editor, together with F. Potra and C. Roos, of the special volume of *Optimization Methods and Software* Vol.11 & 12. (1999), Gordon and Breach, devoted to Interior Point Methods.
- Co-editor, together with F.E. Curtis, of the conference proceedings *Modeling Optimization, Theory and Applications, 2010*, Springer Science (2012).
- Co-editor, together with L.F. Zuluaga, of the conference proceedings *Modeling Optimization, Theory and Applications, 2012*, Springer Science (2013).
- Co-editor, together with M. Anjos and S. Ahmed, *Handbook of Optimization and Engineering*, (Publisher under negotiation) (2013).

REVIEWER FOR (selection):

- Mathematical Reviews
- Mathematical Programming
- Optimization
- Optima
- SIAM Journal on Optimization
- ITW News
- Management Science
- ZOR
- Ricerca Operativa
- Combinatorica
 - PUMA
 - JOGO
 - JOTA
 - SZIGMA
 - NSF (USA)
 - CEJOR
 - Journal of Heuristics
 - Computers and IE
 - AIChE Journal
 - Research Grants Council, Hong Kong
 - AFOSR (USA))
 - NSERC (Canada)
 - DFG (Germany)
 - NSF
 - MATH-AmSud Scientific projects between France and South America
 - Computers and Mathematics with Applications in Mathematical and Computer Modelling
 - Prepublication book-reviews for: Kluwer, Wiley, Springer, SIAM, Oxford U.P., Princeton U.P.
- Mathematics of Operations Research
- Linear Algebra and Its Applications
- European Journal of Operations Research
- Applied Mathematics Optimization
- Annals of Operations Research
- Numerical Linear Algebra with Applications
- Optimization Methods and Software
- Computational Optimization and Applications
- Applied Mathematics Letters
- European Journal of Combinatorics
 - Computational and Applied Mathematics
 - Journal of Combinatorial Optimization
 - Discrete Applied Mathematics
 - Alkalmazott Matematikai Lapok
 - Annales Univ. Budapest, Sectio Computatorica
 - SIAM Journal on Scientific Computing
 - Mathematical Methods of Operations Research
 - J. of Applied Mathematics and Decision Sciences
 - Computers and Operations Research
 - Chilean Research Fund Council (FONDECYT)
 - Czech Science Foundation
 - International J. of Systems Science
 - U.S.-Israel Binational Science Foundation
 - Journal of Advanced Research in Optimization

VISITED AND LECTURED AT THE FOLLOWING UNIVERSITIES:

(the list is not complete)

- **Asia:** Tokyo Institute of Technology (1988, 1989, 2002), University of Tsukuba (1988), University of Tsukuba in Tokyo (1989), University of Tokyo (1989), The Institute of Statistical Mathematics (1989), IBM-Japan (1989), Nanjing University (1998), Nanjing Forestry University (1998), Fudan University Shanghai (1998), Hong Kong University (1998), Chinese University of Hong Kong (2000), Chinese Academy of Sciences (2005), Tsinghua University, Beijing (2005), National University of Singapore (2006), Institute of Mathematics, Hanoi, Vietnam (2008, 2010, 2012), Beijing Jiaotong University (2011).
- **North America:** Cornell University (1992), RUTGERS University (1992, 2008, 2009, 2010, 2011), The University of Iowa (1994), The University of Oklahoma (1996). Georgia Institute of Technology, Atlanta (1996, 2003), The University of Florida, Gainesville (1997, 2007), University of Waterloo (1997, 2000-2008, 2014), Stanford University (1997), UCLA (2010), McMaster University, Hamilton (1998, 1999-2008, 2010), Princeton University (1999, 2010), MIT (2000), U. Pittsburgh (2008), Auburn U. (2010), U. Michigan Ann Arbor (2009), University of Maryland, Baltimore (2001, 2010), John Hopkins University (2001), Dalhousie University, NS (2002), Carleton University (2002, 2006), McGill University (2002, 2013), Guelph University (2002, 2005, 2006), Simon Fraser University (2002), Monterrey Technological, MX, (2004), University of Toronto (2000, 2005, 2011, 2014), Uni-

versity of Illinois, Urbana-Champaign (2006), NYU (2010), University of Baltimore (2010), Pennsylvania State University (2010, 2012).

- **Europe:** University of Köln (1985, 1990), University of Bonn (1985), University of Lisbon (1986), University of Sofia (1987), University of Belgrade (1988), University of Jena (1987), University of Krakow (1987), University of Trier (1998), Technical University Stockholm (1998), Southampton University (1998), University of Wien (1988), Delft University of Technology (1989-1999, 2000, 2001, 2005, 2010), University of Augsburg (1990), Erasmus University Rotterdam (1990, 1993), Fourier University Grenoble (1990), Technical University of Twente (1991), University of Zürich (1992, 1995), University of Coimbra (1993), Catholic University of Louvain (1993), University of Oviedo (1993), Technical University Braunschweig (1996), University of Macedonia, Thessaloniki (1996), University of Alicante (1996), Middle East University Cyprus (1996), Technical University Zürich (1995), The University of Padova (1994), The University of Geneva (1994), University of Oviedo (2001), University of Aveiro (2001, 2010), University of Paris VI (2011, 2014).
- **Hungary:** (several times) Eötvös University Budapest, University of Economy Budapest, Computer and Automation Institute of the Hungarian Academy of Sciences, Technical University Budapest, National Manager Training Institute Budapest, Technical University Miskolc, Janus Pannonius University Pécs, University of Veszprém, University of Pannonia, University of Kaposvár, University of Szeged, Kossuth University Debrecen, Széchenyi University Győr.

PARTICIPATED THE FOLLOWING CONFERENCES:

(the list is not complete)

- EURO and EURO – TIMS conferences: 1986 Lisbon, 1988 Paris, 1982 Helsinki, 1993 Lisbon, 1994 Glasgow, 1995 Jerusalem, 1998 Brussels (**featured speaker**), 2000 Budapest (**featured speaker**), 2001 Rotterdam, 2003 Istanbul, 2004 Rhodos, 2006 Reykjavik (**featured speaker**), 2007 Prague, 2010 Lisbon, 2013 Rome;
- EUROPT Workshops (2000, Budapest, 2001 Rotterdam, 2003 Ankara, 2004 Rhodos, 2006 Reykjavik, 2010 Aveiro, 2013 Florence, 2014 Perpignan), EURO Miniconference, 2005 Pécs;
- EURO Summer Institute on Operations Research (1986 Canterbury, 2006 Wittenberg);
- IFIP conferences (1985 Budapest, 1988 Leipzig, 1991 Zürich);
- International Symposium on Mathematical Programming (1988 Tokyo, 1991 Amsterdam, Ann Arbor 1994, Lausanne 1997 (**featured speaker**), 2000 Atlanta, 2003 Copenhagen, 2006 Rio de Janeiro, 2009 Chicago, 2012 Berlin);
International Conference on Continuous Optimization, (2004, RPI Tary, NY; 2007 Hamilton, ON; 2010 Santiago, Chile, 2013 Lisbon, Portugal);
- Franco – Japan Days on Combinatorics and Optimization (1988, 1989 Tokyo, 1990 Paris, 1991 Grenoble); Sino-Japanese Conference on Optimization (1997, 2001, 2011 (**plenary speaker**));
- NATO – Advanced Study Institute (1990 Ankara);
- Montreal Optimization Days (1995, 2003);
- SIAM Meeting on Interior Point Methods, (1990 Asylomar, California);
- SIAM Conference on Optimization, 1996 Victoria, 1999 Atlanta, 2002 Toronto, 2005 Stockholm, 2014 San Diego;

- ORSA/TIMS: 1991 Anaheim, 1992 San Francisco, 1994 Anchorage; INFORMS: 1996 Atlanta, 1997 San Diego, 1998 Montreal and Seattle, 2000 Salt Lake City, 2001 Miami, 2002 San Jose, 2003 Atlanta, 2004 Denver; 2005 San Francisco; 2006 Pittsburg; 2007 Seattle; 2008 Washington DC; 2009 San Diego (**semi-plenary speaker**); 2010 Austin, 2011 Charlotte, 2012 Phoenix;
- CORS conferences (2001 Quebec City, 2002 Toronto, 2003 Vancouver, 2004 Banff, 2007 Winnipeg, 2009 Toronto, 2011 St Jones NF, 2014 Ottawas);
- **Founding and managing the MOPTA conferences - each year since 2000;**
- IFORS conferences (1993 Lisbon, 1996 Vancouver, 1999 Beijing, 2014 Barcelona);
- SOR conferences (1995 Passau, 1996 Braunschweig);
- AMS/SIAM Workshop on Continuous Optimization (1995 Park City, Utah);
- Optimization in Industry (1997 Palm Coast, Florida, 1999 Banff, Alberta);
- ARIDAM-92, RUTCOR, Rutgers University (1992 New Brunswick);
- APMOD-93 and Interior Point Methods Workshop (1993 Budapest), APMOD-95 (1995 London), APMOD-98 (1998 Cyprus) (**plenary speaker**), APMOD-04 (2004 London); APMOD-08 (2008 Bratislava) (**plenary speaker**);
- Scandinavian Workshop on Linear Programming (1993 Copenhagen);
- International Conference on Numerical Linear Algebra and Optimization (ICNLAO) 2003 Guilin (**plenary speaker**), 2005 Tibet (**plenary speaker**), 2007 Urumuci (**plenary speaker**);
- Conference on Nonlinear Programming and Variational Inequalities, Hong Kong, 1999.
- International Conference on High Performance Scientific Computing, Modeling, Simulation and Optimization of Complex Processes, Hanoi, Vietnam, 2007, 2009, 2012 (**plenary speaker**).
- Several talks at smaller workshops and symposia (Alicante, Paris, Louvain-la-Neuve, Delft, Scheveningen, Rotterdam, Geneva, Tokyo, Hayama, Toronto, Palm Coast, Trier, Stockholm, Copenhagen, Berlin, Singapore, Ballarat, Surfers Paradise, Hanoi, Hamilton, Montreal, Gainsville, Rutgers U., Princeton, Snow Bird, Banff, Toronto, etc.);
- Talks at almost all the Hungarian OR Conferences and International Mathematical Programming Symposia (organized by the Computer and Automation Institute of the Hungarian Academy of Sciences) between 1981 and 1998 (**plenary speaker in 1998**).

SEMINAR SERIES:

- Organizer of the weekly *Advanced Optimization Seminar* series at McMaster University, Hamilton, ON, Canada, since 2000–2008.
- Organizer of the monthly *Fields Industrial Optimization Seminar* series at The Fields Institute, Toronto, ON, Canada, 2004–2008.

CONFERENCE ORGANIZATION:

(the list is not complete)

- **program Committee Chair**, Computational Optimization: 70 years after the simplex method, EURO Mini Conference, August 2017, Budapest, Hungary.

- Cluster Chair Linear optimization, ICCOPT 2016, Tokyo, Japan.
- Member Program Committee ICCS 2016, the International Conference On Computational Science, San Diego, CA, 6-8 June, 2016
- Member of the Program Committee of the 2016 EUROPT Meeting in Warsaw, Poland, July 1–2, 2016.
- **General Chair, INFORMS Annual Meeting**, Philadelphia, November 7–11, 2015.
- Co-Organizer of the Workshop on Nonlinear Optimization Algorithms and Industrial Applications, The Fields Institute, Toronto, ON, Canada, June 2–4, 2016.
- Member Program Committee ICCS 2015, the International Conference On Computational Science, Reykjavik, Iceland, 1-3 June, 2015
- Member of the Program Committee of the 2015 EUROPT Meeting in Edinburgh, UK, July 8–10, 2015.
- Member Program Committee ICIAM 2015 as Plenary Speakers Chair, 2015.
- Member of the Program Committee of the 2014 EUROPT Meeting in Perpignan, France, July 10–12, 2013.
- Member of the Scientific Committee of the Conference on Engineering and Applied Sciences Optimization (OPTI 2014), Kos Island, Greece on 4-6 June 2014.
- Member of the Programme Committee International Conference of Computational Science (ICCS) 2014, Clarms, Australia, June 10–12, 2014.
- Member of the Programme Committee International Conference of Computational Science (ICCS) 2013, Barcelona, Spain, June 5–7, 2013.
- Member of the Scientific Committee of the AMMCS 2013 (Applied Mathematics, Modeling and Computational Science) meeting in Waterloo, Ontario, Canada.
- Member of the Organizing Committee of the 2013 EURO Meeting in Rome, Italy, July 1–4, 2013.
- Member of the Program Committee of the 2013 EUROPT Meeting in Florence, Italy, June 28–30, 2013.
- Program Committee Co-Chair, INFORMS North-Eastern Regional Conference, Amherst, MA, May 6–8, 2010.
- Cluster Chair Optimization, CORS–INFORMS Conference, Toronto, June 14–17, 2009.
- Member of the Scientific Committee, 4th International Conference on High Performance Scientific Computing, Modeling, Simulation and Optimization of Complex Processes, Hanoi, Vietnam, March 2-6, 2009.
- Conference Chair of the Veszprém Optimization Conference: Advanced Algorithms (VOCAL), Veszprém, Hungary, 2006, 2008, 2010.
- MOPTA Conference series, founder and either Chair or Advisory Committee Chair, 2000-2016 each years.
- Member of the International Advisory Board "EngOpt 2008", International Conference on Engineering Optimization, Rio de Janeiro, Brazil, 2–5 June 2008, also for EngOpt 2012, Rio de Janeiro.
- Member of the Program Committee. 2nd Optimization Society Conference: Theory, Computation and Emerging Applications, Atlanta, GA, 14-16 March 2008.
- **Conference Chair and Member of Program Committee ICCOPT 2007**, and MOPTA 2007, August 12–18, 2007, McMaster University, Hamilton, Ontario.

- Member of the Program Committee. Joint EUROPT-OMS Meeting, July 4-7, 2007, in Prague, Czech Republic.
- Member of the Steering Committee of the 7th International Conference on Optimization: Techniques and Applications (ICOTA 7) Kobe, Japan on Dec. 12-15, 2007, and (ICOTA 8) Shanghai, China, December 10-13, 2010.
- Member Organizing Committee. International Conference on "Nonconvex Programming and Global Optimization: Theory, Algorithms and Applications, 17-20 December, 2007, Rouen, France.
- Member of the Program Committee, EURO 2007, Prague, Czech Republic, July 8-13, 2007.
- Invited Minisymposium on "Linear, polyhedral optimization and their relatives" organizer and chair. CANADAM, Banff, Alberta, 28 - 31 May, 2007.
- Stream Chair Linear and Conic Linear Programming, ISMP 2006, July 30– August 4, Rio de Janeiro, Brazil.
- Organizer of the BIRS Workshop Mathematical Programming and Data Mining, January 13 - January 18, 2007, Banff, Alberta.
- Member of International Advisory Committee, Symposium on Operations Research, Simon Fraser University, Burnaby, BC, Canada January 27-28, 2006.
- Organizer of the BIRS Workshop (06w5081) Optimization and Engineering Applications, November 11 - November 16, 2006, Banff, Alberta.
- Member of the Scientific Committee of The EURO Summer Institute - ESI XXIV "Optimization and Engineering", Wittenberg, Germany, August 18– September 2, 2006.
- Conference Chair of the Veszprém Optimization Conference: Advanced Algorithms (VOCAL), Veszprém, Hungary, December 11–13, 2006; December 12–14, 2008, December 13–15, 2010.
- Cluster Chair Conic Linear and Semidefinite Programming, ISMP 2006, July 30 – August 3, Rio de Janeiro, Brazil.
- Session Organizer of the Annual MITACS Meeting, June 18–21, 2006, York, Ontario.
- Member of the Organizing Committee HPOPT2006, June 15–16, 2006, Delft, The Netherlands.
- Cluster Chair Nonlinear Programming, CORS 2006, May 8–10, Montreal, Quebec.
- Member of the Scientific Committee of the INFORMS 2006 Optimization Society Conference: Optimization and HealthCare, February 3-5, 2006, San Antonio, TX, USA.
- Conference Co-Chair, of the workshop Optimization and data Mining, McMaster University, June 1–4, 2005.
- Member Program Committee of the ComAL – Franco–Canadian Workshop on Combinatorial Algorithms, McMaster University, August 18–20, 2005.
- Program Chair of the 17th EURO Mini Conference: Continuous Optimization in Industry, Pécs, Hungary, June 29 - July 1, 2005.
- Member Organizing Committee of the 7th IMACS International Symposium on Iterative Methods in scientific Computing. Fields Institute, University of Toronto, Ontario, Canada, May 4–7, 2005.
- Conference Chair of the Veszprém Optimization Conference: Advanced Algorithms (VOCAL), Veszprém, Hungary, December 13–15, 2004.

- Member of the Scientific Committee of The EURO Summer Institute - ESI XXII "Optimization and Data Mining", Ankara, Turkey, July 9-25, 2004.
- Member Scientific Committee of the Workshop on Challenges of Continuous Optimization in Theory and Applications, Rhodes, Greece, July 2–3, 2004.
- Member of the Steering Committee and the International Program Committee of the International Conference of Optimization Theory and Applications (ICOTA), Ballarat, Australia, December 9–11, 2004.
- Member of the Organizing Committee: Large Scale Nonlinear and Semidefinite Programming, University of Waterloo, Ontario, Canada, May 12–41, 2004.
- Member of the International Committee of the Applied Mathematical Programming and Modelling (APMOD-2004) conference, Brunel University, London, June 21–23, 2004.
- Chair of the MOPTA conferences; MOPTA 01, August 2–4 2001, McMaster University; Hamilton, Ontario, Canada; MOPTA 02, August 1–3 2002, McMaster University; MOPTA 03, July 30 – August 1 2003; MOPTA 04, July 28–30, 2004, McMaster University; MOPTA 09, August 19–21, 2009, Lehigh. U.; MOPTA 10, August 18–20, 2010, Lehigh U.; Co-Chair MOPTA 05, July 25-27, 2006 University of Windsor, Member of Organizing Committee MOPTA 06, July 24–26, 2006 University of Waterloo; MOPTA 11, August 19–20, 2011, Lehigh U.; MOPTA 12, July 30 – August 1, 2012, Lehigh U.; MOPTA 13, August 10–12, 2013, Lehigh U.
- Co-organizer (Chair) of the *McMaster Optimization Workshop*. May 23-24 (2002) McMaster University, Hamilton, ON, Canada.
- Cluster chair of "Linear Programming" at the INFORMS meeting November 2001, Miami, Florida; "Linear Programming and Complementarity" at the INFORMS meeting November 16–20, 2002, San Jose, California and the INFORMS meeting October 19–22, 2003, Atlanta, Georgia;
- Co-organizer, Conference Chair of the *South Ontario Numerical Analysis Day*, May 30 (2003) McMaster University, Hamilton, ON, Canada
- Co-organizer of the *Workshop on Advanced Optimization Techniques and Applications*. August 4 (2000) McMaster University, Hamilton, ON, Canada.
- Co-organizer of the *Workshop "IPM-2000" on Cone Linear Optimization*. July 14–15 (2000) Budapest, Hungary.
- Organizer of three minisymposia for the SIAM Optimization Conference, Atlanta, May 10–12, 1999; two minisymposia for the SIAM Optimization Conference, Toronto, May 20–22, 2002; two minisymposia for the SIAM Conference Mathematics for Industry: Challenges and Frontiers, Toronto, June 23–25, 2003;
- Organizer of special sections on interior point methods and coordinator of the nonlinear optimization stream at the conference *Nonlinear Programming and Variational Inequalities*, Hong-Kong, 16-19 December, 1998.
- Organizer of special sections on interior point methods for the conference *IFORS '96*, Vancouver Canada, 1996, *IFORS '99*, Beijing, China, 1999.
- Member of the Organizing Committee *International Symposium on Applied Mathematical Programming and Modeling-APMOD95*, Brunel University, England, April 3–5, 1995 and *APMOD98*, Limassol, Cyprus April 1998, *APMOD2000*, Brunel University, London, April 2000, *APMOD2004*, Brunel University, London, June 2004..

- Member of the Program Committee of the *First Rumanian – Hungarian Mathematical Meeting*, Ilien Rumania, June, 1995.
- Organizer of special sections on interior point methods for the conference *EURO–XIII/OR36*, Glasgow, Scotland, 19–22 July, 1994 and *EURO–XVI/OR*, Brussels, Belgium, 12–15 July, 1998.
Coordinator of the linear and nonlinear programming substream, *EURO-XVII*, Budapest, July 2000, *EURO-XVIII*, Rotterdam July 2001, *EURO-XX*, Istanbul, July 2003.
- Co-organizer of the *International Workshop: High Performance Optimization*: Delft, The Netherlands, September 19–20, 1996; Rotterdam, The Netherlands, August 20–22, 1997; Rotterdam, The Netherlands, June 17–19, 1998.
- Co organizer of the *Second International Workshop: High Performance Optimization*. Rotterdam, The Netherlands, August 20–22, 1997.
- Organizer of special sections on interior point methods for the *International Symposium on Mathematical Programming* Lausanne, Switzerland August 25–28, 1997, Atlanta, GA August 5–8, 2000, Copenhagen, Denmark August 18–22, 2003.
- Organizer of special sections on interior point methods for the conferences *INFORMS '96 Atlanta*, '97 San Diego, '97 Dallas, '98 Montreal and '99 Cincinnati, 2000 Salt Lake City.
- Co-organizer of the *International Workshop: Optimization in Production & Transportation*. Scheveningen, The Netherlands, November 9–11, 1993.
- Co-organizer of the *LNMB Workshop on Linear and Nonlinear Programming*. May 17–19 (1993) Delft, The Netherlands.
- Co-organizer of the *Workshop on Interior Point Methods*. January 5 (1993) Budapest, Hungary; the workshop Interior Point Methods 2000, Budapest Hungary; the International Workshop on Smooth and Nonsmooth Optimization, Rotterdam, The Netherlands, 2001. The workshop Advances in Continuous Optimization, Istanbul, Turkey, 2003.
- Co-organizer of the *International Symposium on Interior Point Methods for Linear Programming: Theory and Practice*. January 18–19 (1990) Scheveningen, The Netherlands.

FIELDS OF INTEREST:

- Engineering optimization;
- Interior Point Methods for linear and nonlinear optimization, conic linear optimization, semidefinite Optimization;
- Integer conic linear optimization
- Linear optimization, pivot methods, network flows, applications;
- Sensitivity analysis, quadratic optimization, linear complementarity problems;
- Nonlinear optimization, geometrical programming, *lp*–programming, cutting plane and decomposition methods;
- Optimization Software, computational optimization;
- Applications of OR and optimization methods, including engineering areas, such as VLSI and structural design, water management, optimizing nuclear reactors, process control, production;
- Applications of Optimization in Healthcare, including MRI imaging, signal processing, radiation therapy treatment optimization.

- Integer and combinatorial optimization, Oriented matroid programming.
- Complexity theory.

MEMBER OF:

- 2011– New York Academy of Sciences
- 2008– Institute of Industrial Engineers
- 2000– Canadian Operations Research Society
- 1994– SIAM
- 1992– Operations Research Society of America (till 1995), INFORMS (since 1995)
- 1991– Hungarian Operations Research Society
- 1991– Mathematical Programming Society (till 2011), Mathematical Optimization Society (since 2012)
- 1989–91 American Mathematical Society
- 1987–88 Operational Research Society (England)
- 1979–97 Bolyai Mathematical Society (Hungary)

FUNDED PROJECTS:

- Sponsorship generated for the 2015 INFORMS Annual Meeting, Philadelphia, \$45,000.
- SAS - Mixed Integer Second Order Cone Optimization (2015-2017), full funding for a Ph.D. student \$5,300.
- AFOSR - Optimal Composite material Wing Design Via Disjunctive Conic Cuts (2015-2018), approved for funding, contract not signed yet, Leading co-PI, interdisciplinary and multi-institutional collaboration, Co-PI Luis Zuluaga, ISE Lehigh and Joaquim Martins, Aerospace Engineering. University of Michigan, \$899,619.
- Department of Correction, Pennsylvania - Multiobjective Integer Linear Optimization (MILO) Models for Inmates Institutional Assignment (2015-2018), Co-PI, Project leader, \$250,000.
- Department of Correction, Pennsylvania - Optimal Inmate Assignment (2014-2015), Co-PI, Project leader, \$49,874.
- NSF - High-performance numerical methods supporting radiation therapy treatment planning (2014) Sole -PI, \$50,000.-
- Mitsubishi Research Labs, Boston, MA - Dynamical Systems and Optimization (2014), \$5000.-
- Department of Correction, Pennsylvania - Optimal Inmate Assignment (2011-2012), Co-PI, Project leader, \$49,712.
- AFOSR - Mixed Integer Conic Optimization (2010-2013), sole PI, \$.
- MOPTA Conference support from various optimization and modeling software companies, \$6,000–\$10,000 each year since 2009.
- TAMOP Project - Simulation and Optimization in Engineering Applications (2012-2014), sub-project leader, Széchenyi University, Győr, Hungary. Funded by the European Union.
- TAMOP Project - Simulation and Optimization in Engineering Applications (2009-2011), sub-project leader, Széchenyi University, Győr, Hungary. Funded by the European Union.
- Lehigh University Start-up Research Grant - Optimization Methods and Applications (2008-2013).
- MITACS - Princes Margaret Hospital: 2D Fluoroscopic Image Registration for Target Localization and Patient Monitoring in Image-Guided Radiation Therapy (2007).

- NSERC-RTI: High Performance Computational Optimization (2006).
- MITACS - Princes Margaret Hospital: Robust IMRT Optimization (2006).
- MITACS Project: High Performance Optimization and Engineering Applications (2006–2008).
- NSERC Canada: High Performance Optimization (2004-2009).
- Fields Institute - MITACS: Fields Industrial Optimization Seminar Series (since 2004)
- MITACS Project: New Interior Point Methods and Software For Convex Conic-Linear Optimization and Application to VLSI Circuit Layout Problems (2001–2006).
- Hooker Distinguished Professorship for Prof. Andrew Conn, McMaster University (2002).
- MOPTA 03, McMaster University, Fields Institute, MITACS, IBM (2002-2003).
- MOPTA 02, McMaster University, Fields Institute, MMO, IBM (2001-2002).
- McMaster Optimization Workshop 2002, McMaster University, MITACS (2002).
- MOPTA 01, McMaster University, Fields Institute, MMO, IBM (2000-2001).
- Novel Interior Point Methods, IBM SUR grant (2000-2001).
- Novel Interior Point Methods, IBM FPP grant (2000-2001).
- Canada Resaerch Chair in Optimization (2001-2008).
- CFI /OIT Canada: Information Technology Center (2001-2003)
- Optimization Research Seminar Series, McMaster University (2000-2003).
- Hooker Distinguished Professorship for Prof. Yurii Nesterov, McMaster University (2000).
- CFI/OIT Canada: Advanced Optimization Laboratory (2000-2003).
- NSERC Canada: High Performance Optimization (2000-2004).
- Mc Master University Start-up Research Grant - Interior Point Methods and Applications (1999-2003).
- NWO-project: High Performance Methods of Mathematical Optimization. (Ph.D. project, J. Peng) 1997-2001.
- Reactor Core optimization (Ph.D.-project Arie Quist). In cooperation with the TU. Delft Interfaculty Reactor Institute (Dr. Ir. Hoogenboom) 1995-1999.
- NWO-project 613-302-216/004: High Performance parallel algorithms for frequency assignment problem. (postdoc project, D. Pasechnik) 1997-1999.
- NWO-project 613-304-044: Semidefinite optimization and system control (Ph.D. project). In cooperation with Control Theory groups of Electrotechnic (Prof. Ir. H.B. Verbruggen) and Mechanical Engineering (Prof. Ir. O.H. Bosgra) 1997-2001.
- STW-project DPR66.4056: Design and Implementation of Mixed Integer Non-linear Programming Algorithms (Ph.D. project G.J. Kloosterman). In cooperation with Paragon Decision Technology B.V., Haarlem (Prof. Dr. J. Bischof) 1997-1998.
- STW-project: Integral Lineair LF Vermogensversterkers (Ph.D. project Reza Mahmoudi). In cooperation with Philips and the Faculty of Electrotechniek (DIMES, Prof. Dr. Ir. J.W. Slotboom, Prof. Dr. C.I.M. Beenakker, J.L.Tauritz, M.Sc) 1996-1999.
- Ph.D. program: Optimization of Batch Processes in cooperation with Interduct (Prof. Dr. Ir. M.P.C. Weijnen) 1996-2000.
- SHELL-project on sensitivity analysis, with Prof. Dr. H. Greenberg (University of Colorado at Denver, USA) 1997.

- AQARIUS-project. Research contract with the Faculty of Civil Engineering, Department of Water Management (Prof. Ir. W.A. van Segeren, Dr. A. Lobbrecht) en Dr. Cs. Mészáros (Computer and Automation Institute, Hungarian Academy of Sciences) 1995-1997.
- Guest professorship for Prof. Dr. A. Nemirovski (TECHNION), 1998 en Prof. Dr. R. Freund (MIT) 1999.
- Marie Curie fellowship (post-doc project by EU) 1998-2000: Dr. E. Andersen (Odense University, Denmark).
- Research-fellow (post-doc project) 1997-1998: Prof. J.E. Mitchell (Rensselaer Polytechnic Institute, Troy NY).
- Research-fellow (post-doc project) 1996-1997: Dr. Tibor Illés (Eötvös University, Budapest, Hungary).
- Host and supervisor for "Perigrinato" fellowship for Dr. T. Illés (1994) and M. Ujvári (1999), both Eötvös University Budapest.
- Host and supervisor in 1999 for Belgian scientific research fellowship of F. Glineur, Polytechnique de Mons.
- Participant of the NATO CALMA project "*Radio Link Frequency Assignment*". Delft. (1994–1995)
- Participant of the project "*Interior Point Methods*". NWO (National Science Foundation), Delft. (1991–1995)
- Leader of the project "*Interior Point Methods for Linear and Nonlinear Programming*". Hungarian National Sciences Foundation, No. OTKA 2116. (1990–94)
- Leader of the project "*Pivot Methods and Oriented Matroid Programming*". Hungarian National Sciences Foundation, No. OTKA 2115. (1990–94)
- Participant of the project "*Interior Point Methods*". Koninklijke/Shell-Laboratorium, Amsterdam. (1989–1993)
- Leader and participant of several theoretical and applied research projects in Hungary. (Hungarian National Science Foundation (OTKA), Hungarian Airlines (MALÉV), Hungarian Oil and Gas Industry.)
- Supervisor of more than 50 masters students, several Ph.D. students and post doctoral fellows.

RECENTLY SUBMITTED, NOT FUNDED PROJECTS:

- NSF – Optimization and Invariance in Dynamical Systems, (2014) \$398,164.-
- FIG, Lehigh – Optimization Methodology for Invariance Preserving Discretizations of Dynamical Systems (2014) \$25,000-
- NSF – Collaborative Research: Exact Mixed-Integer Second-Order Conic Optimization Methods to Simultaneously Select Isocenters and Sector Durations in Radiosurgery, Leading Co-PI, Interdisciplinary multy institutional, (2013) \$355,636.-
- ACCELERATOR, Lehigh – Integrated Healthcare Delivery Institute, Co-PI's Robert Storer (ISE), Tamás Terlaky (ISE), Hisham Nabaa (ISE), Aurelie Thiele (ISE), Luis Zuluaga (ISE), Susan Sherer (Mngmt), Chad Meyerhoefer (Eco); Hank Korth (CSE), (2013) \$100,000.-

- NSF, Smart Integrated Health – SCH: EXP: Integrated Healthcare Delivery Institute at Lehigh University, Leading Co-PI (2013) \$746,538.-
- FIG, Lehigh – Dynamical Systems and Optimization: Trajectories, Discretization, Dikin Ellipsoids and Second Order Cones (2013) \$25,000-
- NSF – Probing the boundary of polynomial solvability (2012) \$396,804.-
- NSF – Collaborative Research: Novel interior point constraint generation algorithms with healthcare applications, Leading Co-PI, Interdisciplinary multy institutional, (2013) \$401,188.
- NSF – Exploring the Power of Rescaling (2012) \$430,789.-

LANGUAGES:

Native Hungarian; English; Dutch; Russian (reading).