

MARTIN GRÖTSCHEL

detailed information at <http://www.zib.de/groetschel>

Date / Place of birth: Sept. 10, 1948, Schwelm, Germany

Family: Married since 1976, 3 daughters

Affiliation:

Full Professor at
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Selected (major) functions in scientific organizations and in scientific service:

Current functions:

since 2001 Member of the Executive Board of the Berlin-Brandenburg Academy of Science
since 2011 Chair of the Einstein Foundation, Berlin
since 2012 Coordinator of the Forschungscampus Modal

Former functions:

1984 – 1986 Dean of the Faculty of Science, U Augsburg
1985 – 1988 Member of the Executive Committee of the MPS
1989 – 1996 Member of the Executive Committee of the DMV, President 1992-1993
2002 – 2008 Chair of the DFG Research Center MATHEON "Mathematics for key technologies"
1999 – 2014 Member of the Executive Committee of the IMU
2007 – 2014 Secretary of the International Mathematical Union (IMU)

Scientific vita:

1969 – 1973 Mathematics and economics studies (Diplom/master), U Bochum
1977 PhD in economics, U Bonn
1981 Habilitation in operations research, U Bonn
1973 – 1982 Research Assistant, U Bonn
1982 – 1991 Full Professor (C4), U Augsburg (Chair for Applied Mathematics)
since 1991 Full Professor (C4), TU Berlin (Chair for Information Technology)
1991 – 2012 Vice president of Zuse Institute Berlin (ZIB)
since 2012 President of ZIB

Selected awards:

1982 Fulkerson Prize of the American Math. Society and Math. Programming Soc. (MPS)
1990 Karl Heinz Beckurts Prize (for technology transfer to industry)
1991 George B. Dantzig Prize of MPS and SIAM
1995 Leibniz Prize of the German Research Foundation (DFG)
1998 Honorary Member of the German Mathematical Society (DMV)
1999 Scientific Prize of the German Association of Operations Research (GOR)
2004 EURO Gold Medal (EURO - The Ass. of European Operational Research Societies)
2006 John von Neumann Theory Prize (INFORMS)
2008 Scientific Award of the Governing Mayor of Berlin
2009/10 SIAM Fellow, SIAM Prize for Distinguished Service to the Profession,
2014 Life Time Award of Heureka Foundation for Environment & Mobility
Four honorary PhD degrees, Distinguished Affiliated Professor (TU München)

Membership in scientific academies:

1995 Member of the Berlin-Brandenburg Academy of Sciences and Humanities (BBAW)
1999 Foreign Associate of the National Academy of Engineering, USA
2003 Member of acatech – German Academy of Science and Engineering
2005 Member of Leopoldina – German National Academy of Sciences

Selected invited and plenary lectures:

2000 17th International Symposium on Mathematical Programming, Atlanta, USA
2000 20th Conference on the Foundations of Theoretical Computer Science, New Delhi, India
2002 Mekler Lecture, Simon Fraser University, Burnaby, BC, Canada
2002 Plenary Lecture, SIAM 50th Anniversary Meeting, Philadelphia, USA
2002 Gödel Lecture, Austrian Academy of Sciences, Vienna, Austria
2004 20th European Conference on Operational Research, Rhodes, Greece
2005, 2009, 2013 Plenary Lectures at the Annual Meeting of the Chinese Mathematical Society
2006 International Congress of Mathematicians 2006, Madrid, Spain
2006 IFORS Distinguished Lecturer at XIII CLAIO, Montevideo, Uruguay
2008 Annual acadtech meeting – German Academy of Science and Engineering, Berlin, Germany
2009 4th International Conference on High Performance Scientific Computing, Hanoi, Vietnam
2012 Pinhas Naor Lecture at the ORSIS 2012 meeting, Jerusalem, Israel
2013 Distinguished Lecture, Beijing International School of Mathematics Research, Beijing, China
2014 Deng Kang Distinguished Lecture, Beijing, China
2014 RAMP Plenary Lecture, Tokyo, Japan

Conference Organization: Participating in the organization of two to three conferences or workshops every year, either as a member or chair of the organizing committee or as a member of the program committee. Major “job”: President of the organization committee of the International Congress of Mathematicians 1998 in Berlin

Editorship: Member of the editorial board of 16 scientific journals, currently active in 10 (e.g., Mathematical Programming Series A, Mathematical Methods of Operations Research, Networks, Journal of Mathematics in Industry)

Fields of research:

For detailed information see <http://www.zib.de/groetschel/research/projects.html>.

- Main research areas: optimization, discrete mathematics, and operations research
- Current special interest: design and implementation of practically efficient algorithms for the solution of hard real-world optimization problems
- More than thirty application projects with industry partners in areas such as gas pipeline optimization, infrastructure planning, telecommunication, manufacturing and production, logistics, public transportation, VLSI design, electronic information and communication
- Almost 50 PhD students and almost 200 diploma/master/bachelor students supervised

Selected publications:

For detailed information see <http://www.zib.de/groetschel/research/Musterbiblio.html>.

I have authored and edited 14 books and written more than 100 articles.

- Martin Grötschel, Klaus Lucas, Volker Mehrmann (eds.): *Production Factor Mathematics*, acadtech and Springer, 2010
- Martin Grötschel, Benjamin Hiller, Andreas Tuchscherer: *Structuring a Dynamic Environment: Combinatorial Online Optimization of Logistics Processes*, in: Klaus Lucas, Peter Roosen (eds.): *Emergence, Analysis and Evolution of Structures. Concepts and Strategies Across Disciplines*, Springer, 2009, 199-214
- Andreas Eisenblätter, Hans-Florian Geerdes, Martin Grötschel: *Planning UMTS Radio Networks*, *OR/MS Today*, 35:6 (2008) 40-46
- Hartwig Bosse, Martin Grötschel, Martin Henk: *Polynomial inequalities representing polyhedra*, *Math. Programming, Series A*, 103:1 (2005) 35-44
- Martin Grötschel, Olaf Holland: *Solution of large-scale symmetric travelling salesman problems*, *Math. Programming, Series A*, 51:2 (1991) 141-202
- Martin Grötschel, Klaus Truemper: *Decomposition and Optimization over Cycles in Binary Matroids*, *Journal of Combinatorial Theory, Series B*, 46:3 (1989) 306-337
- Martin Grötschel, László Lovász, Alexander Schrijver: *The ellipsoid method and its consequences in combinatorial optimization*, *Combinatorica*, 1:2 (1981) 169-197