

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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Scientific vita:

1969 – 1973 Mathematics and economics studies (Diplom/master), U Bochum
1977 PhD, U Bonn
1981 Habilitation, U Bonn
1973 – 1982 Research Assistant, U Bonn
1982 – 1991 Full Professor, U Augsburg (Chair for Applied Mathematics)
since 1991 Full Professor at TU Berlin, Inst. of Mathematics, and Vice President of ZIB
2002 – 2008 Chair of the DFG Research Center MATHEON "Mathematics for key technologies"

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 the MPS and the Soc. for Ind. and Appl. Math. (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 SIAM Fellow
Three honorary degrees

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 since 2000:

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 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 Landau Center Anniversary Symposium, Jerusalem, Israel
2006 International Congress of Mathematicians 2006, Madrid, Spain
2006 IFORS Distinguished Lecturer at XIII CLAIO, Montevideo, Uruguay
2007 Tata Institute of Fundamental Research, Mumbai, India
2008 Annual acatech meeting – German Academy of Science and Engineering, Berlin, Germany
2009 4th International Conference on High Performance Scientific Computing, Hanoi, Vietnam
2009 Annual Meeting of the Chinese Mathematical Society, Xiamen City, China

Editorship: Member of the editorial board of 16 scientific journals, currently active in 8 (e.g., Mathematical Programming, Mathematical Methods of Operations Research)

Selected functions in scientific organizations, scientific service:

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
1998 President of the Organizing Committee of the ICM 1998 in Berlin
since 2001 Member of the Executive Board of BBAW
since 1999 Member of the Executive Committee of the International Mathematical Union (IMU)
since 2007 Secretary of IMU

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 twenty 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
- 30 PhD students and over 150 master 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.

- 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

Statement and description of activities

I have begun to serve the IMU in 1994 when I became President of the ICM 1998 Organizing Committee. I have been a member of the IMU Executive Committee since 1999, of the Committee on Electronic Information and Communication 1998-2006, and I have been serving IMU as Secretary since 2007. Although the Secretary's work load is much higher than I expected I do enjoy spending time and energy for IMU activities.

The progress achieved in promoting and fostering mathematics in the last years the world over is remarkable, in particular considering the humble financial IMU means and the fact that all IMU representatives are working in honorary capacity. It is a pleasure to cooperate with so many committed colleagues from all regions of the world and all branches of mathematics.

I am ready and willing to serve the IMU as Secretary for another term. The main task in the next four years will be to establish the stable office (if the GA agrees), to hire dedicated persons, and to build up the capacity IMU needs to continue and extend its wide range of activities. Important aspects will be the creation of an institutional memory in order to run all recurring IMU activities (preparation of EC meetings, organization of the ICM and the GA, handling travel support, etc.) more smoothly and the definition of all organizational processes to relieve the IMU officers and representatives from many of the bureaucratic tasks they still have to execute. The IMU archive has to be reestablished and secretarial support for IMU's committees and commissions has to be set up. Profiting from my experience in these areas in the last years I feel I have a chance to achieve these goals – at least to some extent.