

CURRICULUM VITAE



MANFRED M. FISCHER

Professor of Economic Geography

Vienna University of Economics and Business
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Formal Education

Habil degree, University of Vienna, May 1982, in Human Geography, Thesis Title – A Methodology of Regional Taxonomy [in German]

Dr rer nat, Friedrich-Alexander University Erlangen-Nuremberg [Germany], Jan 1975, in Geography and Mathematics, summa cum laude, Dissertation – Mathematical Urban Development Models [in German]

Staatsexamen (Master) degree, Friedrich-Alexander University Erlangen-Nuremberg [Germany], 1974, in Geography and Mathematics

Academic Positions and Professional Appointments

Professor and Chair (tenured), **WU Wien**, Dec 1988 – present

Director, Institute for Economic Geography and GIScience, **WU Wien**, Jan 1989 – present

Dean, Social Sciences, **WU Wien**, 2006 – 2009

Adjunct Professor, State Key Laboratory of Resources and Environmental Information Systems, **Chinese Academy of Sciences**, since 2011

Adjunct Professor, Institute for Geography and Regional Science, **University of Vienna**, since 1989

Associate Professor, Institute for Geography and Regional Science, **University of Vienna**, 1982 – 1988

Assistant Professor, Institute for Geography and Regional Science, **University of Vienna**, 1975 – 1982

Visiting Appointments and Affiliations

University of California, Santa Barbara [UCSB], Department of Geography: Visiting Professor, Winter Quarter 1988

Oskar Lange Academy of Economics, Institute for Economic Cybernetics, Wroclaw (Poland): Visiting Associate Professor, Sept 1978

Free University Amsterdam, Department of Spatial Economics: Visiting Professor, April 1993, April 1999, July 2000

University of Bologna, Department of Economics: Visiting Professor, April 1996

National Technical University Athens, Department of Geography and Regional Planning: Visiting Professor, April 1995, May 1999, April 2000

University of Joensuu, Department of Geography (Finland): Visiting Professor, April 1997

University of Hamburg, Department of Philosophy and Social Sciences, Institute for Sociology: Visiting Adjunct Professor, July 1977, July, 1979, July 1980, July 1982

University of Hanover, Institute for Economic and Cultural Geography: Visiting Professor, Jan 1998

University of Linz, Visiting Professor (Economic Geography), 1988 – 2003

Russian Open University, Moscow: Faculty Affiliate, 1992 – 1994

Distinguished Appointments

European Research Council: Peer Reviewer, 2008 – 2013

Economic and Social Research Council [ESRC], UK: Peer Reviewer, 2010

Excellence in Research for Australia [ERA] 2010 Evaluation Process: Peer Reviewer

European Science Foundation [ESF]: GISDATA [Geographic Information Systems, Data Integration and Database Design] – ESF Research Programme, Steering Committee, 1994 – 1997; Network on European Communications and Transportation Activity Research [NECTAR], 1987 – 1992

European Union Contest for Young Scientists: Jury Member, 2010

European Science Foundation [ESF]: Reviewer of ESF Research Conferences, 2010

Commission of the European Communities: COST [European Cooperation in the Field of Scientific and Technical Research]

Status: February 24, 2012

328, Integrated Strategic Infrastructure Networks in Europe, Technical Subcommittee (1993 – 1994), Management Committee (1994 – 1998): Representative of the Austria Federal Ministry for Science and Research

Commission of the European Communities, Research Evaluation: Project IST-2001-38068 G-NIKE, Project IST-2001-37493 COMPANION, and the Innovative Actions Programme of Sterea Ellada, 2002 – 2004

IGU [International Geographical Union] Commission on Mathematical Models: Elected Chair, terms of office 1988 – 1992, 1992 – 1996

Government of Canada, Canada Research Chairs Secretariat: Assessment Committee, 2008

The Royal Netherlands Academy of Arts and Sciences: Academy Professorship Programme Committee, Amsterdam, 2004 – 2007

Chinese Academy of Sciences: State Key Laboratory of Resources and Environmental Information Systems [LREIS], Academic Committee/International Advisory Committee, since 1997

Panteion University of Social and Political Sciences, Athens: Research Evaluation, Regional Development Institute, 2003; Undergraduate Study Programme Evaluation, Department of Economic and Regional Development, 2000

East China Normal University, Shanghai; Advisory Board, 1990 – 1997

European Advanced School of Logistics, Verona [Italy]: Scientific Committee, 1989 – 1992

Austrian Academy of Sciences: Institute for Urban and Regional Research, Director, 1996 – 1999

Association of German Geographers, Working Group on Theory and Quantitative Methods: Elected Chair, terms of office 1981 – 1989

Areas of Specialization

Economic geography and regional science, spatial economics, innovation economics, geographic information sciences, spatial analysis and spatial econometrics, computational intelligence and geocomputation

Research Grants (external competitive grants)

- 2010 **Federal Ministry for Transport, Innovates and Technology; Austrian Science Fund; Austria Research Promotion Agency; Austria Wirtschaftsservice** – Co-PI (with the Austrian Institute of Technology) – Innovation Economics Vienna Program; € 108,500
- 2006-2010 **Austrian Science Fund** – PI – Regional Income Growth and Club Convergence in Europe; Grant P19025-G11, €215,113.50
- 2005-2007 **Jubilee Fund, Austrian National Bank** – PI – The Spatial Dimension of Knowledge Spillovers in Europe, Grant 11329, € 72,000
- 2005-2006 **Austrian Federal Ministry for Traffic, Infrastructure and Technology, Austrian Federal Ministry for Economy and Labour** – Co-PI – Research and Development in South East Europe: A Cross-National Comparative Study, € 270,000 (with the Austrian Institute of Technology and the Centre for Social Innovation)
- 2004-2006 **Research Grants Council Hong Kong** – Co-PI – Knowledge Discovery for Classification with Mixed Spatial Data Types: A Rough Set Approach, HK \$ 376,320 (with Chinese University of Hong Kong)
- 2004 **Federal Ministry for Education, Science and Culture,** UniInfrastructure Programme II, € 47,700
- 2000-2002 **Commission of the European Communities, ACE Phare Programme, Action for Cooperation on the Field of Economics** – Co-PI – The Macroeconomics of Accession: Fiscal Consequences of European Monetary Integration, Contract No. P97-8623-F, € 84,780 (with CERGE Prague)
- 1999-2000 **Jubilee Fund, Austrian National Bank** – PI – The Role of Space in the Creation of New Technological Knowledge in Austria, Grant 7994, € 29,069
- 1998-2000 **Austrian Research Fund** – PI – Neural Spatial Interaction Models and Evolutionary Algorithms, Grant P12681-INF, € 25,466.89
- 1997-2000 **Austrian Science Fund** – Co-PI – Computational Intelligence, €107,265.09 [integral part of the Special Research Programm (SFB) 10 “Adaptive Information Systems and Modelling in Economics and Management Science”]
- 1998-1999 **City Government of Vienna (MA18: City Development and Planning)** – PI – Innovation, Networks and Regions, Grant 182018098, € 24,193.55
- 1998-1999 **Austrian Science Fund** – Co-PI – Knowledge Spillovers from University within the Austrian Innovation System, Grant P12742-OEK, € 42,444.82 (with ARC Systems Research)
- 1997-1999 **Commission of the European Communities Environment and Climate RTD Programme** – Co-PI – Modelling Sustainable Regional Development in the Information Society, Contract No. PL 970543, € 40,000 (with the Centre for Environmental Research, Leipzig)
- 1995-1997 **Commission of the European Communities, INTAS Programme** – Co-PI – Land Use Management through Distance Learning of Spatial Information Systems, Contract No. INTAS-94-3011, € 115,000 (with Free University Amsterdam, Russian Academy of Sciences and Tyuman State University)
- 1995-1996 **Austrian Federal Ministry for Science, Research and Arts** – Co-PI – The Potential of Neurocomputing in Regional Science, Contract No. 308.937/2-IV/3/95, € 67,911.71 (with IIASA)
- 1994-1996 **Austrian Science Fund** – PI – GIS and Exploratory Spatial Data Analysis, Grant P 09972-TEC, € 114,601.02

- 1994-1995 **Association of Austrian Industrialists, Chamber of Commerce Lower Austria and ECO Plus** – PI – Technology and Competitiveness of Industry in Lower Austria, € 42,444.82
- 1993-1995 **Commission of the European Communities, Human Capital and Mobility of Researchers Programme Fellowships** – Co-PI – Strategic Infrastructure Networks in Europe, Contract No. ERBCHBGCT 920162, € 204,382 (with Free University Amsterdam, University College London, University of Sheffield, University of Bergamo)
- 1992-1994 **Jubilee Fund, Austrian National Bank** – PI – Innovation and Policy Suggestions for the Inland Waterway Danube, Grant 4388, € 110,356.54
- 1990-1992 **Austrian Science Fund** – PI – Austria in European Communication Networks, Grant P 7516-SOZ, € 144,312.39
- 1987-1989 **Jubilee Fund, Austrian National Bank** – PI – Innovation Behaviour of Firms in Selected Industries in Austria, Grant 3010, € 50,933.79
- 1985-1987 **Austrian Science Fund** – Co-PI – Modelling Dynamic Development Processes in Metropolitan Areas, Grant 4561, € 114,601.02 (with Austrian Institute for Regional Planning)

Professional recognition related to scholarship

RSAI (Regional Science Association International) **Fellow**, awarded at the North American RSAI Conference Toronto, November 18, 2006

The Royal Netherlands Academy of Arts and Sciences, Foreign Member, elected 1999, Amsterdam

Austrian Academy of Sciences, Corr. Member, elected 1996, Vienna

International Eurasian Academy of Sciences, Fellow, elected 1995, Moscow

World Academy of Arts and Sciences, Fellow, elected 1981

Listed among the most cited regional science scholars during the 1977 – 1989 and the 1990 – 2001 periods, in "Intellectual leaders of regional science: A half-century citation study", Andrew M. Isserman, *Papers in Regional Science* 83 (2004): 91-126

Named as one of the 15 most influential authors in regional science over the period 1990 – 99 (based on pages published and citations), in "Regional Science Publication Patterns in the 1990s", Sergio Rey and Luc Anselin, *International Regional Science Review* 23 (2000): 323-344

Listed as the leading economic geographer in the German speaking world (based on research output and citations), Institute for Geography, University of Hannover, www.wigeo.uni-hannover.de/zitart.html

Honoured by special sessions, Association of American Geographers, April 18, 2008, Boston

Honoured by a special issue, *International Regional Science Review* 34(2), edited by Serge Rey and Sucharita Gopal, 2011

Honoured by a special issue, *The Review of Regional Studies* 37(1), edited by James P. LeSage, 2007

Honoured by Springer Book Publications "*Analysis and GeoComputation – Selected Essays*" and "*Innovation, Networks and Knowledge Spillovers – Selected Essays*", 2006

2007 WU Best Paper Award, for the paper "Pan-European Regional Income Growth and Club-Convergence", with C. Stirböck, *Annals of Regional Science* 40 (2006): 693-721

2003 WU Best Paper Award, for the paper "A Methodology for Neural Spatial Interaction Modelling", with M. Reismann, *Geographical Analysis* 34(2002): 207-228

Publications in Scholarly Journals

- 2012 LeSage, J. and Fischer, M.M. (2012): Estimates of the impact of static and dynamic knowledge spillovers on regional factor productivity. *International Regional Science Review* 35(1), pp. 103-127.
- 2011 Barber, M.J., Fischer, M.M. and Scherngell, T. (2011): The community structure of R&D cooperation in Europe. Evidence from a social network perspective. *Geographical Analysis* 43(4), pp. 415-432.
- Milcher, S. and Fischer, M.M. (2011) On labour market discrimination against Roma in South East Europe. *Papers in Regional Science* 90(4), pp. 773-788.
- Fischer, M.M. (2011): A spatial Mankiw-Romer-Weil model: Theory and evidence. *Annals of Regional Science* 47(2), pp. 419-436.
- 2010 Fingleton, B. and Fischer, M.M. (2010): Neoclassical theory versus new economic geography: Competing explanations of cross-regional variation in economic development. *Annals of Regional Science* 44(3), pp. 467-491.
- 2009 Fischer, M.M. (2009): Regions, technological interdependence and growth in Europe. *Romanian Journal of Regional Science* 3(2), pp. 1-17.
- Fischer, M.M., Bartkowska, M., Riedl, A., Sardadvar, S. and Kunnert, A. (2009): The impact of human capital on regional labor productivity in Europe. *Letters in Spatial and Resource Sciences* 2(2-3), pp. 97-108.
- Fischer, M.M., Scherngell, T. and Jansenberger, E. (2009): Geographic localisation of knowledge spillovers: Evidence from high-tech patent citations in Europe. *Annals of Regional Science* 43(4), pp. 839-858.
- Korber, M., Paier, M. and Fischer, M.M. (2009): An agent-based view of the biotech innovation system. *Region Direct* 2(2), pp. 33-55.

- LeSage, J., Banerjee S., Fischer, M.M. and Congdon P. (2009): Spatial statistics: Methods, models & computation. *Computational Statistics & Data Analysis* 53(8), pp. 2781-2786.
- Fischer, M.M., Scherngell, T. and Reismann, M. (2009): Knowledge spillovers and total factor productivity. Evidence using a spatial panel data model. *Geographical Analysis* 41(2), pp. 204-220.
- 2008 LeSage, J. and Fischer, M.M. (2008): Spatial growth regressions: Model specification, estimation and interpretation. *Spatial Economic Analysis* 3(3), 275-304.
- Fischer, M.M. and Griffith, D.A. (2008): Modeling spatial autocorrelation in spatial interaction data: An application to patent citation data in the European Union. *Journal of Regional Science* 48(5), pp. 969-989.
- Fischer, M.M. and Stumpner, P. (2008): Income distribution dynamics and cross-region convergence in Europe. Spatial filtering and novel stochastic kernel representations. *Journal of Geographical Systems* 10 (2), pp. 109-140.
- Leung, Y., Fischer, M. M., Wu, W.-Z. and Mi, J.-S. (2008): A rough set approach for the discovery of classification rules in interval-valued information systems. *International Journal of Approximate Reasoning* 47(2), pp. 233-246.
- 2007 LeSage, J., Fischer, M.M. and Scherngell, T. (2007): Knowledge spillovers across Europe: Evidence from a Poisson spatial interaction model with spatial effects. *Papers in Regional Science* 86 (3), pp. 393-421.
- Scherngell, T., Fischer, M.M. and Reismann, M. (2007): Total factor productivity effects of interregional knowledge spillovers in manufacturing industries across Europe. *Romanian Journal of Regional Science* 1 (1), pp. 1-16.
- Cukrowski, J. and Fischer, M.M. (2007): Efficient organisation of information processes. *Managerial and Decision Economics* 28 (1), pp. 13-26.
- 2006 Fischer, M.M. (2006): Neural networks. A general framework for non-linear function approximation. *Transactions in GIS* 10(4), pp. 521-533.
- Fischer, M.M., Scherngell, T. and Jansenberger, E. (2006): The geography of knowledge spillovers between high-technology firms in Europe: Evidence from a spatial interaction modelling perspective. *Geographical Analysis* 38 (3), pp. 288-309.
- Fischer, M.M. and Stirböck, C. (2006): Pan-European regional income growth and club-convergence. Insights from a spatial econometric perspective. *Annals of Regional Science* 40 (4), pp. 693-721.
- Fischer, M.M. and Stirböck, C. (2006): Convergencia regional en Europa. *Papeles de Economía Española* 107, pp. 30-44.
- 2003 Fischer, M.M. and Varga, A. (2003): Spatial knowledge spillovers and university research: Evidence from Austria. *Annals of Regional Science* 37(2), pp 303-322.
- Cukrowski J. and Fischer M.M. (2003): Strategic market research and industry structure in integrated economy. *Prague Economic Papers* 12, 2003(4), pp. 317-330.
- Fischer, M.M., Reismann, M. and Hlaváčková-Schindler, K. (2003): Neural network modelling of constrained spatial interaction flows: Design, estimation and performance issues. *Journal of Regional Science* 43(1), pp. 35-61.
- Cukrowski, J. and Fischer, M.M. (2003): Seignorage wealth and redistribution in Central and Eastern European countries. *Post-Communist Economies* 15(1), pp. 27-46.
- 2002 Fischer, M.M. (2002): Learning in neural spatial interaction models: A statistical perspective. *Journal of Geographical Systems* 4(3), pp. 287-299.
- Cukrowski, J. and Fischer, M.M. (2002): Information-processing, technological progress and retail markets dynamics. *Information Economics and Policy* 14(1), pp. 1-20.
- Fischer, M.M. and Reismann, M. (2002): Evaluating neural spatial interaction modelling by bootstrapping. *Networks and Spatial Economics* 2(3), pp. 255-268.
- Fischer, M.M. and Reismann, M. (2002): A methodology for neural spatial interaction modeling. *Geographical Analysis* 34(3), pp. 207-228.
- Fischer, M.M. and Varga, A. (2002): Technological innovation and interfirm cooperation. An exploratory analysis using survey data from manufacturing firms in the metropolitan region of Vienna. *International Journal of Technology Management* 24(7/8), pp. 724-742.
- Koller, W. and Fischer, M.M. (2002): Testing for non-linear dependence in univariate time series: An empirical investigation of the Austrian unemployment rate. *Networks and Spatial Economics* 2(2), pp. 191-209.
- Cukrowski, J., Aksen, E. and Fischer, M.M. (2002): Propagation of crises across countries: Trade roots of contagion effects. *Economia Internazionale* 55(2), pp. 213-227.
- Schartinger, D., Rammer, C., Fischer, M.M. and Fröhlich, J. (2002): Knowledge interactions between universities and industry in Austria: Sectoral patterns and determinants. *Research Policy* 31(3), pp. 303-328.
- 2001 Fischer, M.M. (2001): Innovation, knowledge creation and systems of innovation. *Annals of Regional Science* 35(2), pp. 199-216.
- 2000 Cukrowski, J. and Fischer, M.M. (2000): Theory of comparative advantage: Do transportation costs matter? *Journal of Regional Science* 40(2), pp. 311-322.
- Hlaváčková-Schindler, K. and Fischer, M.M. (2000): An incremental algorithm for parallel training of the size and the weights in a feedforward neural network. *Neural Processing Letters* 11(2), pp. 131-138.
- 1999 Fischer, M.M. and Getis, A. (1999): New advances in spatial interaction theory. *Papers in Regional Science* 78(2), pp. 117-118.
- Fischer, M.M. and Nijkamp, P. (1999): Regional Europe in the next millenium. *Policy Options Politiques* 20(9), pp. 44-47.
- Fischer, M.M. and Stauer, P. (1999): Optimization in an error backpropagation neural network environment with a performance test on a spectral pattern classification problem. *Geographical Analysis* 31(2), pp. 89-108.
- Fischer, M.M., Hlaváčková-Schindler, K. and Reismann, M. (1999): A global search procedure for parameter estimation in neural spatial interaction modelling. *Papers in Regional Science* 78(2), pp. 119-134.
- 1998 Fischer, M.M. (1998): Computational neural networks - A new paradigm for spatial analysis. *Environment and Planning A*

- 30(10), pp. 1873-1892.
- Fischer, M.M. and Leung, Y. (1998): A genetic-algorithms based evolutionary computational neural network for modelling spatial interaction data. *Annals of Regional Science* 32(3), pp. 437-458.
- 1997 Fischer, M.M. and Beguin, H. (1997): Recent developments in spatial information processing and modelling. *Geographical Systems* 4(1), pp. 1-3.
- Fischer, M.M. and Benedikt, J. (1997): The use of fuzzy set theory in remote sensing pattern recognition. *L'Espace Geographique* 26(2), pp. 183-192.
- Trapletti, A. and Fischer, M.M. (1997): Bayesian modelling of high frequency data in finance. *Neural Network World* 7(4/5), pp. 417-426.
- Fischer, M.M., Gopal, S., Staufer, P. and Steinnocher, K. (1997): Evaluation of neural pattern classifiers for a remote sensing application. *Geographical Systems* 4(2), pp. 195-226.
- 1996 Fischer, M.M. and Johansson, B. (1996): Opening up international trade in Eastern European countries: Consequences for aggregate trade flows in the Rhine-Main-Danube area. *Papers in Regional Science* 75(1), pp. 65-78.
- Gopal, S. and Fischer, M.M. (1996): Learning in single hidden-layer feedforward network models: Backpropagation in a spatial interaction modelling context. *Geographical Analysis* 28(1), pp. 38-55.
- Wang, J.F. and Fischer, M.M. (1996): Experiments of several methods for geo-point process prediction (in Chinese). *Journal of the Graduate School of Academica Sinica* 1996(2), pp. 43-53.
- 1995 Openshaw, S. and Fischer, M.M. (1995): A framework for research on spatial analysis relevant to GEO-statistical information systems. *Geographical Systems* 2(4), pp. 325-337.
- Suarez-Villa, L. and Fischer, M.M. (1995): Technology, organization, and export-driven R&D in Austria's electronics industry. *Regional Studies* 29(1), pp. 19-42.
- 1994 Fischer, M.M. (1994): From conventional to knowledge based Geographic Information Systems. *Computers, Environment and Urban Systems* 18(4), pp. 233-242.
- Fischer, M.M. (1994): Expert systems and artificial neural networks for spatial analysis and modelling: Essential components for knowledge based geographical information systems. *Geographical Systems* 1(3), pp. 221-235.
- Fischer, M.M. and Gopal, S. (1994): Artificial neural networks. A new approach to modelling interregional telecommunication flows. *Journal of Regional Science* 34(4), pp. 503-527.
- Fischer, M.M., Fröhlich, J. and Gassler, H. (1994): An exploration into the determinants of patent activities: Some empirical evidence for Austria. *Regional Studies* 28(1), pp. 1-12.
- Fischer, M.M. and Schuch, K. (1994): Technologische und organisatorische Kompetenz österreichischer Zulieferbetriebe. Eine empirische Untersuchung am Beispiel der Maschinen- und Stahlbauindustrie sowie der Elektro- und Elektronikindustrie. *Mitteilungen der Österreichischen Geographischen Gesellschaft* 136, pp. 179-202.
- 1993 Batten, D. and Fischer, M.M. (1993): Two alternative macro-based approaches to model telecommunication traffic. *Sistemi Urbani* 15(2/3), pp. 137-144.
- Fischer, M.M. and Gopal, S. (1993): Neurocomputing -- A new paradigm for geographic information processing. *Environment and Planning A* 25, pp. 757-760.
- Fischer, M.M., Essletzbichler, J., Gassler, H. and Trichtl, G. (1993): Interregional and international telephone communication. Aggregate traffic models and empirical evidence for Austria. *Sistemi Urbani* 15(2/3), pp. 121-135.
- Fischer, M.M., Essletzbichler, J., Gassler, H. and Trichtl, G. (1993): Telephone communication patterns in Austria. A comparison of the IPPF based graph-theoretic and the intramax approaches. *Geographical Analysis* 25(3), pp. 224-233.
- Fischer, M.M. and Rammer, C. (1993): Zur Entwicklung des grenzüberschreitenden Warenverkehrs im Einzugsbereich der RMD-Wasserstraße. *Mitteilungen der Österreichischen Geographischen Gesellschaft* 135, pp. 104-140.
- Fischer, M.M. and Staufer, P. (1993): Geoinformatik: Wege zum Verständnis komplexerer Zusammenhänge. *OCG-Kommunikativ* 18(6), pp. 23-25.
- 1992 Alderman, N. and Fischer, M.M. (1992): Innovation and technological change: An Austrian-British comparison. *Environment and Planning A* 24, pp. 273-288.
- Ernste, H. and Fischer, M.M. (1992): Latent class modeling and typological analysis. *Sistemi Urbani* 13, pp. 163-173.
- Fischer, M.M. and Nijkamp, P. (1992): Geographic information systems and spatial analysis. *Annals of Regional Science* 26(1), pp. 3-17.
- Fischer, M.M., Maggi, R. and Rammer, C. (1992): Telecommunication media choice behaviour in academia: An Austrian-Swiss comparison. *Geographical Analysis* 24, pp. 1-15.
- Fischer, M.M., Maggi, R. and Rammer, C. (1992): Stated preference models of contact decision behaviour in academia. *Papers in Regional Science* 71, pp. 359-371.
- Fischer, M.M. and Rammer, C. (1992): Kommunikationsnetze von Wissenschaftlern. Ergebnisse einer Fallstudie an Wiener Universitäten. *Mitteilungen der Österreichischen Geographischen Gesellschaft* 134, pp. 159-176.
- 1991 Fischer, M.M. (1991): Technological change and innovation behaviour in industry: A conceptual and methodological framework. *Sistemi Urbani* 13, pp. 61-80.
- Fischer, M.M. (1991): Spatial interaction and choice. *Environment and Planning A* 23, pp. 1233-1235.
- Fischer, M.M. and Menschik, G. (1991): Innovation und technologischer Wandel in Österreich. *Mitteilungen der Österreichischen Geographischen Gesellschaft* 133, pp. 43-68.
- Fischer, M.M., Maggi, R. and Rammer, C. (1991): Kommunikationsverhalten von Individuen. Ein methodologischer Aufsatz und ausgewählte empirische Ergebnisse. *Zeitschrift der Humboldt-Universität zu Berlin, Reihe Mathematik/Naturwissenschaften* 40(4), pp. 7-14.
- 1990 Fischer, M.M. and Schätzl, L. (1990): A general framework for analysing technological change and industrial restructuring.

- Sistemi Urbani** 12, pp. 247-250.
- Fischer, M.M., Maggi, R. and Rammer, C. (1990): Context specific media choice and barriers to communication in universities. **Annals of Regional Science** 24, pp. 253-269.
- 1989 Fischer, M.M. (1989): New scientific co-operations across Europe: The ESF scientific network initiative. **Environment and Planning A** 21, pp. 1-2.
- Fischer, M.M. and Petz, G. (1989): The timing of unemployment response in Austrian regional labour markets. The classical and an alternative mode of exploratory statistical analysis. **Sistemi Urbani** 10, pp. 171-193.
- 1988 Fischer, M.M. and Aufhauser, E. (1988): Housing choice in a regulated market: A nested multinomial logit analysis. **Geographical Analysis** 20, pp. 47-69.
- Fischer, M.M. and Nijkamp, P. (1988): Regional labour market policies: A cross-national overview. **Tijdschrift voor Economische en Sociale Geografie** 79, pp. 290-296.
- Fischer, M.M. and Nijkamp, P. (1988): The role of small firms for regional revitalization. **Annals of Regional Science** 22 (Special edition), pp. 28-42.
- Baumann, J., Fischer, M.M. and Schubert, U. (1988): A choice-theoretical labour market model: Empirical tests at the meso-level. **Environment and Planning A** 20, pp. 1085-1102.
- Fischer, M.M. and Nijkamp, P. (1988): Tendencias actuales de los mercados de trabajo regionales: Una comparación internacional. **Papeles de Economía Española** 35, pp. 165-187.
- 1987 Fischer, M.M. (1987): The economics of technological change: Some major research issues and gaps in knowledge. Guest-Editorial. **Environment and Planning A** 20, pp. 281-284.
- Fischer, M.M. and Nijkamp, P. (1987): From static towards dynamic discrete choice modelling. **Regional Science and Urban Economics** 17, pp. 3-27.
- Fischer, M.M. and Nijkamp, P. (1987): Categorical data analysis. An overview of explanatory discrete data methods and disaggregate choice models. **Belgian Journal of Operations Research, Statistics and Computer Science** 27(3), pp. 43-66.
- Folmer, H. and Fischer, M.M. (1987): Bootstrapping in spatial analysis. **Cahiers de Geographie de Besançon** 28, pp. 281-293.
- Fischer, M.M. (1987): Changing modes of reasoning in spatial choice analysis [in Russian]. Institute of Scientific and Technical Information, Moscow.
- 1986 Fischer, M.M. (1986): Why spatial labour market research: Guest-Editorial. **Environment and Planning A** 18, pp. 1417-1420.
- Fischer, M.M. and Maier, G. (1986): Testing alternative labour supply mobility choice models. **Cahiers de Geographie de Besançon** 28, pp. 167-174.
- Aufhauser, E., Fischer, M.M. and Schönhofer, H. (1986): A disaggregated probabilistic approach to a regulated housing market with an emphasis on the demand side: The Vienna case. **Papers of the Regional Science Association** 60, pp. 133-153.
- 1985 Fischer, M.M. (1985): Changing modes of reasoning in spatial choice analysis. **Papers of the Regional Science Association** 58, pp. 1-5.
- Fischer, M.M. (1985): Technological change, employment and regional development. Guest-Editorial. **Environment and Planning A** 17, pp. 869-871.
- Aufhauser, E. and Fischer, M.M. (1985): Log-linear modelling and spatial analysis. **Environment and Planning A** 17, pp. 931-951.
- Fischer, M.M. and Nijkamp, P. (1985): Developments in explanatory discrete spatial data and choice analysis. **Progress in Human Geography** 9, pp. 515-551.
- Maier, G. and Fischer, M.M. (1985): Random utility modelling and labour supply mobility analysis. **Papers of the Regional Science Association** 58, pp. 21-33.
- Fischer, M.M., Purschke, H. and Schubert, U. (1985): Urban development in Vienna -- Summary. **Scandinavian Housing and Planning Research** 2, pp. 195-199.
- 1984 Fischer, M.M. (1984): Some reflections on theory building and testing in the social sciences. Guest-Editorial. **Environment and Planning A** 16, pp. 1129-1132.
- Fischer, M.M. and Droth, W. (1984): Factorial ecology versus cluster analysis: The intra-urban residential structure of the city of Hamburg. **Sistemi Urbani** 2, pp. 217-235.
- 1983 Fischer, M.M. (1983): Reflections on spatial modelling. Guest-Editorial. **Environment and Planning A** 15, pp. 721-723.
- Fischer, M.M. and Folmer, H. (1983): Progress and problems in the methodology of regional science. **Papers of the Regional Science Association** 52, pp. 214-218.
- Baumann, J., Fischer, M.M. and Schubert, U. (1983): A multiregional labour supply model for Austria: The effects of different regionalisations in multiregional labour market modelling. **Papers of the Regional Science Association** 52, pp. 53-83.
- Fischer, M.M. (1983): Modelle zur Simulation der Wohnungsmarktentwicklung: Ein Vergleich ausgewählter Ansätze (Housing market simulation: A comparison of some model approaches). **AMR Info** 13(1-3), pp. 1-85.
- 1982 Fischer, M.M. and Folmer, H. (1982): Measurement of the effects of regional policy by means of time series analysis. **Papers of the Regional Science Association** 49, pp. 133-150.
- Fischer, M.M. (1982): Zur Entwicklung der Raumtypisierungs- und Regionalisierungsverfahren in der Geographie. **Mitteilungen der Österreichischen Geographischen Gesellschaft** 124, pp. 5-27.
- 1981 Bahrenberg, G. and Fischer, M.M. (1981): Planungstheorien – Zur Kritik des handlungstheoretischen und des politökonomischen Paradigmas. **Seminarberichte der Gesellschaft für Regionalforschung** 17, pp. 1-29.

- 1980 Ertl, H., Fischer, M.M. and Wohlschlägl, H. (1980): A methodological approach for large regional taxonomic problems: Spatial patterns of population development in Austria. *Papers of the Regional Science Association* 44, pp. 119-135.
- 1979 Fischer, M.M. (1979): Regional taxonomy: A comparison of some hierarchic and non-hierarchic strategies. *Regional Science and Urban Economics* 10, pp. 503-537.
- 1978 Fischer, M.M. (1978): Einige Entscheidungshilfen bei der Wahl eines adäquaten Verfahrens zur Lösung der regionaltaxonomischen Grundprobleme. *Seminarberichte der Gesellschaft für Regionalforschung* 13, pp. 115-159.
- 1977 Fischer, M.M. (1977): Computersimulation in der Stadt- und Regionalforschung: Eine allgemeine Charakterisierung. *AMR Info* 7(2/3), pp. 3-52.
- Fischer, M.M. (1977): FORRESTER's Computersimulationsmodell Urban Dynamics: Ein Überblick. *Mitteilungen der Österreichischen Geographischen Gesellschaft* 119, pp. 210-240.
- 1976 Fischer, M.M. (1976): Human geography. Evolution or revolution – Kritische Bemerkungen zu Chisholm. *AMR Info* 6(4), pp. 17-28.
- 1975 Fischer, M.M. and Bartenstein, R. (1975): The causes of Portugal's economic crisis. *Intereconomics* 11, pp. 344-348.

Edited Journal Special Issues

- 2012 Fischer, M.M. (2012): Special issue in honor of James P. LeSage. *Journal of Geographical Systems*, Vol. 14(1).
- 2009 LeSage, J., Banerjee, S., Fischer, M.M. and Congdon, P. (2009): Spatial Statistics. *Computational Statistics and Data Analysis*, Vol. 53(8).
- 2001 Fischer, M.M. and Getis, A. (2001): GeoComputation and Spatial Analysis. *Journal of Geographical Systems*, Vol. 3(3).
- 1999 Fischer, M.M. and Getis, A. (1999): New Advances in Spatial Interaction Theory. *Papers in Regional Science*, Vol. 78(2).
- 1996 Beguin, H. and Fischer, M.M. (1996): The 9th European Colloquium on Theoretical and Quantitative Geography. *Urban Systems*, Vol. 18(1).
- Fischer, M.M. and Beguin, H. (1996): Recent Developments in Spatial Information Processing and Modelling. *Geographical Systems*, Vol. 4(1).
- 1993 Fischer, M.M. and Rietveld, P. (1993): Barriers to Communication. *Sistemi Urbani*, Vol. 15(2/3).
- 1992 Fischer, M.M. and Nijkamp, P. (1992): Geographic Information Systems and Spatial Modelling. *Annals of Regional Science*, Vol. 26(1).
- Fischer, M.M., Casetti, E., Getis, A. and Gopal, S. (1992): The 1990 Boston Symposium of the IGU-Commission on Mathematical Models. *Geographical Analysis*, Vol. 24(1).
- 1991 Fischer, M.M. (1991): Spatial Interaction and Choice. *Environment and Planning A*, Vol. 23(9).
- 1990 Fischer, M.M. (1990): Dynamics and Spatial Processes. *Sistemi Urbani*, Vol. 12(1).
- Fischer, M.M. and Schätzl, L. (1990): Technological Change and Industrial Restructuring. *Sistemi Urbani*, Vol. 12(3).
- 1982 Bahrenberg, G. and Fischer, M.M. (1982): Papers from Germany and Austria. *Environment and Planning A*, Vol. 14(9).

Invited and Refereed Encyclopedia Articles

- 2010 Fischer, M.M. (2010): Spatial interaction models. In Warf, B. (ed.): *Encyclopedia of Geography*. pp. 2645-2647. Sage Publications, London.
- 2001 Fischer, M.M. (2001): Spatial analysis in geography. In Smelser, N.J. and Baltes, P.B. (eds.): *International Encyclopedia of the Social and Behavioral Sciences*, Vol. 22, pp. 14752-14758. Elsevier, Oxford.

Invited and Refereed Handbook Articles

- 2012 Fischer, M.M. (2012): Neural networks. A class of flexible non-linear models for regression and classification. In Karlsson C. and Andersson M. (eds): *Handbook of Research Methods and Applications in Economic Geography*. Edward Elgar, Cheltenham (forthcoming).
- 2011 Fischer, M.M. (2011): Discrete choice models. In Button K, Vega H. and Nijkamp P. (eds): *A Dictionary of Transport Analysis*, pp. 108-112. Edward Elgar, Cheltenham.
- Fischer, M.M. (2011): Geographical information systems. In Button K, Vega H. and Nijkamp P. (eds): *A Dictionary of Transport Analysis*, pp. 171-174. Edward Elgar, Cheltenham.
- 2010 Fischer, M.M. and Getis, A. (2010): Introduction. In Fischer M.M. and Getis A. (eds.): *Handbook of Applied Spatial Analysis*, pp. 1-24. Springer, Berlin, Heidelberg and New York.
- LeSage, J. and Fischer, M.M. (2010): Spatial econometric methods for modeling of origin-destination flows. In Fischer M.M. and Getis A. (eds.): *Handbook of Applied Spatial Analysis*, pp. 409-433. Springer, Berlin, Heidelberg and New York.
- Fischer, M.M. and Stumpner, P. (2010): Income distribution dynamics and cross-region convergence in Europe. In Fischer M.M. and Getis A. (eds.): *Handbook of Applied Spatial Analysis*, pp. 599-628. Springer, Berlin, Heidelberg and New York, [=reprint, *Journal of Geographical Systems* 10(2), 109-140].
- Fischer, M.M., Bartkowska, M., Riedl, A., Sardadvar, S. and Kunnert, A. (2010): The impact of human capital on regional labour productivity in Europe. In Fischer M.M. and Getis A. (eds.): *Handbook of Applied Spatial Analysis*, pp. 583-597. Springer, Berlin, Heidelberg and New.
- 2009 Fischer, M.M. (2009): Neural networks for spatial data analysis. In Fotheringham, A.S. and Rogerson, P.A. (eds.): *The*

- SAGE Handbook of Spatial Analysis**, pp. 375-396. Sage Publications, London.
- Fischer, M.M. and Nijkamp, P. (2009): Entrepreneurship and regional development. In Capello, R. and Nijkamp, P. (eds.): **Handbook of Regional Growth and Development Theories. Advances in Regional Economics**, pp. 182-198. Elsevier, Amsterdam.
- 2006 Fischer, M.M. (2006): Changing modes of reasoning in spatial choice analysis. In Reggiani A., Button K.J. and Nijkamp P. (eds.): **Classics in Planning Series, Vol. 2, Planning Models**, pp. 254-258. Edward Elgar, Cheltenham [=reprint, Papers of the Regional Science Association 58, 1-5].
- Fischer, M.M., Reismann, M. and Hlavackova-Schindler, K. (2006): Neural network modeling of constrained spatial interaction flows: Design, estimation and performance issues. In Reggiani A., Button K.J. and Nijkamp P. (eds.): **Classics in Planning Series, Vol. 2, Planning Models**, pp. 431-457. Edward Elgar, Cheltenham [=reprint, Journal of Regional Science 43(1), 35-61].
- 2004 Fischer, M.M. (2004): GIS and network analysis. In Hensher, D., Button, K., Haynes, K. and Stopher, P. (eds.): **Handbook of Transport Geography and Spatial Systems**, pp. 391-408. Elsevier, Amsterdam, New York, Oxford.
- 2003 Fischer, M.M. (2003): The new economy and networking. In Jones, D.C. (ed.): **New Economy Handbook**, pp. 343-367. Academic Press, San Diego [CA].
- 2000 Fischer, M.M. (2000): Regionaldemographische Ansätze als formales Gerüst für die Formulierung von Prognosemodellen. In Mueller, U., Nauck, B. and Diekmann, A. (eds.): **Handbuch der Demographie**, Vol. 1, pp. 238-297. Springer, Berlin, Heidelberg and New York.
- 1999 Fischer, M.M. (1999): Spatial analysis: Retrospect and prospect. In Longley, P., Goodchild, M.F., Maguire, D.J. and Rhind, D.W. (eds.): **Geographical Information Systems: Principles, Technical Issues, Management Issues and Applications**, pp. 283-292. Wiley, New York [Second Edition 2005].
- 1996 Fischer, M.M. and Aufhauser, E. (1996): Housing choice in a regulated market: A nested multinomial logit analysis. In Fischer, M.M., Button, K.J. and Nijkamp, P. (eds.): **Modern Classics in Regional Science, Vol. 5, Regional Housing and Labour Markets**, pp. 220-242. Edward Elgar, Cheltenham [= reprint, Geographical Analysis 20, 47-69].
- Fischer, M.M. and Gopal, S. (1996): Artificial neural networks: A new approach to modeling interregional telecommunication flows. In Haynes, K.E., Button, K., Nijkamp, P. and Qiangsheng, L. (eds.): **Modern Classics in Regional Science, Vol. 4, Regional Dynamics**, pp. 593-617. Edward Elgar, Cheltenham [= reprint, Journal of Regional Science 34, pp. 503-527].
- Aufhauser, E., Fischer, M.M. and Schönhofer, H. (1996): A disaggregated probabilistic approach to a regulated housing market with emphasis on the demand side: The Vienna case. In Fischer, M.M., Button, K.J. and Nijkamp, P. (eds.): **Modern Classics in Regional Science, Vol. 5, Regional Housing and Labour Markets**, pp. 26-46. Edward Elgar, Cheltenham [= reprint, Papers of the Regional Science Association 60, pp. 133-153].
- Baumann, J., Fischer, M.M. and Schubert, U. (1996): A multiregional labour supply model for Austria: The effects of different regionalisations in multiregional labour market modelling. In Fischer, M.M., Button, K.J. and Nijkamp, P. (eds.): **Modern Classics in Regional Science, Vol. 5, Regional Housing and Labour Markets**, pp. 366-396. Edward Elgar, Cheltenham [= reprint, Papers of the Regional Science Association 60, pp. 133-153].
- Button, K.J., Fischer, M.M. and Nijkamp, P. (1996): Regional housing and labour markets: Introduction. In Fischer, M.M., Button, K.J. and Nijkamp, P. (eds.): **Modern Classics in Regional Science, Vol. 5, Regional Housing and Labour Markets**, pp. xv-xxviii. Edward Elgar, Cheltenham.

Books Published

- 2012 Wang, J., Fischer, M.M. and Liu, T. (2012) **Spatial Data Analysis in the Social and Environmental Sciences** [in Chinese]. Science Press, Beijing (148 pp.).
- 2011 Fischer, M.M. and Wang, J. (2011) **Spatial Data Analysis: Models, Methods and Techniques** (Springer Briefs in Regional Sciences). Springer, Berlin, Heidelberg and New York (82 pp.).
- 2010 Fischer, M.M. and Getis, A. (eds.) (2010): **Handbook of Applied Spatial Analysis**. Springer, Berlin, Heidelberg and New York (812 pp.).
- 2006 Fischer, M.M. (2006): **Spatial Analysis and GeoComputation – Selected Essays**. Springer, Berlin, Heidelberg and New York (336 pp.).
- Fischer, M.M. (2006): **Innovation, Networks and Knowledge Spillovers – Selected Essays**. Springer, Berlin, Heidelberg and New York (272 pp.).
- Fischer, M.M., Revilla Diez, J. and Snickars, F. (2006): **Metropolitan Innovation Systems [in Chinese]**. Shanghai People's Publishing House, Shanghai (225 pp.).
- 2002 Atalik, G. and Fischer, M.M. (eds.) (2002): **Regional Development Reconsidered**. Springer, Berlin, Heidelberg and New York (214 pp.).
- 2001 Fischer, M.M. and Fröhlich, J. (eds.) (2001): **Knowledge, Complexity and Innovation Systems**. Springer, Berlin, Heidelberg and New York (473 pp.).
- Fischer, M.M. and Leung, Y. (eds.) (2001): **GeoComputational Modelling: Techniques and Applications**. Springer, Berlin, Heidelberg and New York (275 pp.).
- Fischer, M.M., Revilla Diez, J. and Snickars, F. (2001): **Metropolitan Innovation Systems: Theory and Evidence from Three Metropolitan Regions in Europe**. Springer, Berlin, Heidelberg and New York (270 pp.).
- 1999 Fischer, M.M. and Nijkamp, P. (eds.) (1999): **Spatial Dynamics of European Integration**. Springer, Berlin, Heidelberg and New York (367 pp.).
- Fischer, M.M., Suarez-Villa, L. and Steiner, M. (eds.) (1999): **Innovation, Networks and Localities**. Springer, Berlin, Heidelberg and New York (336 pp.).

- 1997 Fischer, M.M. and Getis, A. (eds.) (1997): **Recent Developments in Spatial Analysis – Spatial Statistics, Behavioural Modelling and Neurocomputing**. Springer, Berlin, Heidelberg and New York (433 pp.).
- 1996 Fischer, M.M., Button, K. and Nijkamp, P. (eds.) (1996): **Regional Housing and Labour Markets** (Classics in Regional Science, vol. 5). Edward Elgar, Cheltenham (553 pp.).
Fischer, M.M., Scholten, H. and Unwin, D. (eds.) (1996): **Spatial Analytical Perspectives on GIS**. Taylor & Francis, Basingstoke [=GISDATA 4] (256 pp.).
- 1995 Bertuglia, C.S., Fischer, M.M. and Preto, G. (eds.) (1995): **Technological Change, Economic Development and Space**. Springer, Berlin, Heidelberg and New York (354 pp.).
Fischer, M.M., Sikos, T. and Bassa, L. (eds.) (1995): **Geographic Information, Theory, Analysis and Decision. Proceedings of the 8th European Colloquium on Theoretical and Quantitative Geography**. Geomarket, Budapest (294 pp.).
- 1994 Fischer, M.M. and Menschik, G. (1994): **Innovationsaktivitäten in der österreichischen Industrie. Eine empirische Untersuchung des betrieblichen Innovationsverhaltens in ausgewählten Branchen und Raumtypen** (Innovation activities in Austrian industry. An empirical study of innovation behaviour in selected industries and regions). Abhandlungen zur Geographie und Regionalforschung 3, University of Vienna (272 pp.).
- 1993 Button, K., Brown, P., Fischer, M.M., Maggi, R., Ouwersloot, H., Rammer, C., Rietveld, P. and Salomon, I. (1993): **Academic Links and Communications**. Avebury, Aldershot (117 pp.).
- 1992 Fischer, M.M. and Nijkamp, P. (eds.) (1992): **Geographic Information Systems, Spatial Modelling and Policy Evaluation**. Springer, Berlin, Heidelberg and New York (280 pp.).
- 1990 Fischer, M.M., Nijkamp, P. and Papageorgiou, Y.Y. (eds.) (1990): **Spatial Choices and Processes**. North-Holland, Amsterdam (371 pp.).
- 1987 Fischer, M.M. and Nijkamp, P. (eds.) (1987): **Regional Labour Markets: Analytical Contributions and Cross-National Comparisons**. North-Holland, Amsterdam [=Contributions to Economic Analysis 168] (371 pp.).
Fischer, M.M. and Sauberer, M. (1987): **Gesellschaft-Wirtschaft-Raum: Beiträge zur modernen Wirtschafts- und Sozialgeographie** (Society-Economy-Space: Towards a Modern Economic and Social Geography). Working Group for New Methods in Regional Science, Vienna (311 pp.).
Bahrenberg, G., Deiters, J., Fischer, M.M., Hard, G. and Löffler, G. (1987): **Geographie des Menschen – Dietrich Bartels zum Gedenken** (Human Geography – Dietrich Bartels in Memory). University of Bremen Press, Bremen (573 pp.).
- 1986 Bahrenberg, G. and Fischer, M.M. (eds.) (1986): **Theoretical and Quantitative Geography, Proceedings of the Third European Colloquium held at Augsburg, 13th-17th September 1982**. University of Bremen Press, Bremen (423 pp.).
Fischer, M.M. and Kemper, F.-J. (1986): **Modelle für diskrete Daten und raumbezogene Probleme. Beiträge zum Symposium des Arbeitskreises "Theorie und quantitative Methodik in der Geographie"** (Discrete Data Models and Spatial Problems. Proceedings of the Symposium of the Working Group Theory and Quantitative Methods in Geography", Bonn, March 4-5, 1985). ÖIR-Forum Series B 12, Vienna (192 pp.).
- 1984 Bahrenberg, G., Fischer, M.M. and Nijkamp, P. (eds.) (1984): **Recent Developments in Spatial Data Analysis: Methodology, Measurement, Models**. Gower, Aldershot (426 pp.).
Bahrenberg, G. and Fischer, M.M. (1984): **Theorie und Quantitative Methoden in der Geographie** (Theoretical and Quantitative Methods in Geography). University of Bremen Press, Bremen (245 pp.).
- 1983 Hellwig, Z. and Fischer, M.M. (1983): **Basic Problems of Modern Econometrics: Linear Econometrics and Some Problems of its Applicability and Interpretation**. Reports of the Austrian Society for Cybernetics 27, Vienna (84 pp.).
- 1982 Fischer, M.M. (1982): **Eine Methodologie der Regionaltaxonomie. Probleme und Verfahren der Klassifikation und Regionalisierung in der Geographie und Regionalforschung** (A methodology of regional taxonomy: Problems and methods of classification and regionalisation in geography and regional science [=Habilitation Thesis]). Bremer Beiträge zur Geographie und Raumplanung 3, University of Bremen (318 pp.).
- 1979 Fischer, M.M. and Sauberer, M. (1979): **Neuere Entwicklungen der regionaldemographischen Modellbildung: Modellstruktur und Anwendungsmöglichkeiten am Beispiel Österreichs** (Recent developments in regional demographic modelling: Structure and applications illustrated by the example of Austria). Materialien des Österreichischen Instituts für Raumplanung 11, Vienna (122 pp.) [second edition: 1980].
- 1976 Fischer, M.M. (1976): **Mathematische Stadtentwicklungsmodelle vom Garin-Lowry Typ** (Mathematical urban development models of the Garin-Lowry type). AMR Forum 3, Vienna (111 pp.).
Fischer, M.M. (1976): **Eine theoretische und methodische Analyse mathematischer Stadtentwicklungsmodelle vom Lowry Typ** (A theoretical and methodical analysis of mathematical urban development models of the Lowry type [=Ph.D. Thesis]). Rhein-Mainische Forschungen 83, Frankfurt (326 pp.).
Fischer, M.M. (1976): **Nicht-hierarchische Clusteranalyse in der Regionalforschung** (Non-hierarchical cluster analysis in regional science). Berichte der Österreichischen Studiengesellschaft für Kybernetik 10, Vienna (108 pp.) [second edition: 1980].

Chapters in Books

- 2009 Fischer, M.M. (2009): The geography of knowledge spillovers in Europe. In: Noronha Vaz, T. de (ed.): *Innovation for Development*, pp. 97-108. Foundation for the Development of the University of the Algarve, Faro.
Fischer, M.M., Scherngell, T. and Jansenberger, E. (2009): Patents, patent citations and the geography of knowledge spillovers in Europe. In Karlsson, C., Andersson, A.E., Cheshire, P.C. and Stough, R.R. (eds.): *New Directions in Regional Economic Development*, pp. 331-345. Springer, Berlin, Heidelberg and New York.
Fischer, M.M. (2009): Principles of neural spatial interaction modeling. In Sonis, M. and Hewings, G.J.D. (eds.): *Tool Kits in Regional Science. Theory, Models, and Estimation*, pp. 199-214. Springer, Berlin, Heidelberg and New York

- Fischer, M.M., Reismann, M. and Scherngell, T. (2009): Spatial interaction and spatial autocorrelation. In Anselin, L. and Rey, S. (eds.): *Perspectives on Spatial Data Analysis*, pp. 45-62. Springer, Berlin Heidelberg and New York.
- 2006 Fischer, M.M. (2006): Introduction. In Gesellschaft zur Förderung der Forschung (ed.): *Research and Development in South East Europe*, pp. 43-45. Neuer Wissenschaftlicher Verlag, Vienna and Graz.
- Fischer, M.M. (2006): The conceptual framework of the study. In Gesellschaft zur Förderung der Forschung (ed.): *Research and Development in South East Europe*, pp. 47-56. Neuer Wissenschaftlicher Verlag, Vienna and Graz.
- Fischer, M.M. (2006): The input side of the national innovation system. In Gesellschaft zur Förderung der Forschung (ed.): *Research and Development in South East Europe*, pp. 57-86. Neuer Wissenschaftlicher Verlag, Vienna and Graz.
- 2005 Fischer, M.M., Scherngell, T. and Jansenberger, E. (2005): Patents, patent citations and the geography of knowledge spillovers in Europe. In Markowski T. (ed.): *Regional Scientists' Tribute to Professor Ryszard Domanski, Studia Regionalia Vol. 15*, pp. 57-75. Polish Academy of Sciences, Committee for Space Economy and Regional Planning, Warsaw.
- Fischer, M.M. (2005): Spatial analysis. In Longley P., Goodchild M.F, Maguire D.J. and D.W Rhind (eds.): *Geographical Information Systems. Principles, Techniques, Management and Applications. Second Edition, Abridged*, (CD-ROM) John Wiley & Sons, Hoboken, New Jersey.
- Fischer, M.M. (2005): Innovation, knowledge and regional development. In Lambrinidis, M., Pakos, T., Papadaskalopoulos, A. and Richardson C. (eds.): *Studies in Honour of Professor Nicholas Konsolas*, pp. 59-75. Panteion University of Social Sciences.
- 2004 Fischer, M.M. and Hlavackova-Schindler, K. (2004): Spatial interaction modelling: Neural network methods and global optimization. In Diappi, L. (ed.): *Evolving Cities. Geocomputation in Territorial Planning*, pp. 45-61. Ashgate, Aldershot (England) and Burlington (USA).
- Fischer, M.M. and Reggiani, A. (2004): Spatial interaction models: From the gravity to the neural network approach. In Cappello, R. and Nijkamp, P. (eds.): *Urban Dynamics and Growth. Advances in Urban Economics*, pp. 319-346. Elsevier, Amsterdam [=Contributions to Economic Analysis 266].
- 2002 Fischer, M.M. (2002): The systems of innovation approach: A novel conceptual framework for innovation analysis. In Higano, Y., Nijkamp, P., Poot, J. and Wijk, J.J., van (eds.): *The Region in the New Economy: An International Perspective on Regional Dynamics in the 21st Century*, pp. 115-138. Ashgate, Aldershot.
- Fischer, M.M. (2002): A systemic approach to innovation. In Atalik, G. and Fischer, M.M. (eds.): *Regional Development Reconsidered*, pp. 15-31. Springer, Berlin, Heidelberg and New York.
- Fischer, M.M. and Atalik, G. (2002): Regional development reconsidered: A prologue. In Atalik, G. and Fischer, M.M. (eds.): *Regional Development Reconsidered*, pp. 1-12. Springer, Berlin, Heidelberg and New York.
- Fischer, M.M. and Varga, A. (2002): Geographic spillovers of university research on patent activities of the high technology sectors in Austria. In Acs, Z.J., de Groot, H.L.F. and Nijkamp, P. (eds.): *The Emergence of the Knowledge Economy: A Regional Perspective*, pp. 139-153. Springer, Berlin, Heidelberg and New York.
- 2001 Fischer, M.M. (2001): Computational neural networks -- Tools for spatial data analysis. In Fischer, M.M. and Leung, Y. (eds.): *GeoComputational Modelling: Techniques and Applications*, pp. 15-34. Springer, Berlin, Heidelberg and New York.
- Fischer, M.M. (2001): Neural spatial interaction data analysis. In Fischer, M.M. and Leung, Y. (eds.): *GeoComputational Modelling: Techniques and Applications*, pp. 195-219. Springer, Berlin, Heidelberg and New York.
- Fischer, M.M. (2001): Central issues in neural spatial interaction modelling: The model selection and the parameter estimation problem. In Gastaldi, M. and Reggiani, A. (eds.): *New Analytical Advances in Transportation and Spatial Dynamics*, pp. 3-19. Ashgate, Aldershot.
- Fischer, M.M. and Fröhlich, J. (2001): Knowledge, complexity and innovation systems: Prologue. In Fischer, M.M. and Fröhlich, J. (eds.): *Knowledge, Complexity and Innovation Systems*, pp. 1-17. Springer, Berlin, Heidelberg and New York.
- Fischer, M.M. and Gopal, S. (2001): Fuzzy ARTMAP – A neural classifier for multispectral image classification. In Fischer, M.M. and Leung, Y. (eds.): *GeoComputational Modelling: Techniques and Applications*, pp. 165-194. Springer, Berlin, Heidelberg and New York [= reprint from Fischer, M.M. and Getis, A. (eds.) (1997): *Recent Developments in Spatial Analysis*, pp. 306-359. Springer, Berlin, Heidelberg and New York].
- Fischer, M.M. and Leung, Y. (2001): GeoComputational modelling: Techniques and applications: Prologue. In Fischer, M.M. and Leung, Y. (eds.): *GeoComputational Modelling: Techniques and Applications*, pp. 1-12. Springer, Berlin, Heidelberg and New York.
- Fischer, M.M., Fröhlich, J., Gassler, H. and Varga, A. (2001): The role of space in the creation of technological knowledge in Austria: An exploratory spatial data analysis. In Fischer, M.M. and Fröhlich, J. (eds.): *Knowledge, Complexity and Innovation Systems*, pp. 124-145. Springer, Berlin, Heidelberg and New York.
- Fischer, M.M. and Schneider, M. (2001): Multiregionale allgemeine Gleichgewichtsmodelle zur Schätzung von regionalen Handelseffekten: Grundstruktur und Anwendung. In Institute for Geography and Regional Research, University of Vienna (ed.), *Geographischer Jahresbericht aus Österreich* 58, pp. 25-35.
- Fischer, M.M. and Stauer-Steinnocher, P. (2001): Business-GIS und Geomarketing -- GIS für Unternehmen. In Institute for Geography and Regional Research, University of Vienna (ed.), *Geographischer Jahresbericht aus Österreich* 58, pp. 9-24.
- Fischer, M.M. and Varga, A. (2001): Geographic knowledge spillovers and university research: Some evidence from Austria. In Institute for Geography and Regional Research, University of Vienna (ed.), *Geographischer Jahresbericht aus Österreich* 58, pp. 37-47.
- Fischer, M.M., Leitner, M. and Stauer-Steinnocher, P. (2001): Spatial point pattern analysis: Some useful tools for analysing locational data. In Institute for Geography and Regional Research, University of Vienna (ed.), *Geographischer Jahresbericht aus Österreich* 58, pp. 49-65.

- 2000 Fischer, M.M. (2000): Spatial interaction models and the role of geographic information systems. In Wegener, M. and Fotheringham, S. (eds.): *Spatial Models and GIS: New Potential and New Models*, pp. 33-43. Taylor & Francis, London.
- Fischer, M.M. (2000): Methodological challenges in neural spatial interaction modelling: The issue of model selection. In Reggiani, A. (ed.) *Spatial Economic Science: New Frontiers in Theory and Methodology*, pp. 89-101. Springer, Berlin, Heidelberg and New York.
- Fischer, M.M. (2000): Travel demand -- Theory. In Polak, J.B. and Heertje, A. (eds.): *Analytical Transport Economics*, pp. 51-78. Edward Elgar, Cheltenham.
- Fischer, M.M. and Abrahart, B. (2000): Neurocomputing -- Tools for geographers. In Openshaw, S. and Abrahart, R.J. (eds.): *GeoComputation*, pp. 187-217. Taylor & Francis, London.
- Schneider, M. and Fischer, M.M. (2000): Multiregional computational general equilibrium and spatial interaction trade modelling: An empirical example. In Clarke, G. and Madden, M. (eds.): *Regional Science in Business*, pp. 61-78. Springer, Berlin, Heidelberg and New York.
- Openshaw, S., Fischer, M.M., Benwall, G. and Macmillan, B. (2000): GeoComputation research agendas and futures. In Openshaw, S. and Abrahart, R.J. (eds.): *GeoComputation*, pp. 379-400. Taylor & Francis, London.
- 1999 Fischer, M.M. (1999): The innovation process and network activities of manufacturing firms. In Fischer, M.M., Suarez-Villa, L. and Steiner, M. (eds.): *Innovation, Networks and Localities*, pp. 318-322. Springer, Berlin, Heidelberg and New York.
- Fischer, M.M. (1999): Intelligent GI analysis. In Stillwell, J., Geertman, S. and Openshaw, S. (eds.): *Geographical Information and Planning*, pp. 349-368. Springer, Berlin, Heidelberg and New York.
- Fischer, M.M. and Nijkamp, P. (1999): Spatial dynamics of European integration: Prologue. In Fischer, M.M. and Nijkamp, P. (eds.): *Spatial Dynamics of European Integration*, pp. 1-10. Springer, Berlin, Heidelberg and New York.
- Fischer, M.M. and Suarez-Villa, L. (1999): Innovation, networks and localities: An introduction. In Fischer, M.M., Suarez-Villa, L. and Steiner, M. (eds.): *Innovation, Networks and Localities*, pp. 1-7. Springer, Berlin, Heidelberg and New York.
- Fischer, M.M., Hlávacková-Schindler, K. and Reismann, M. (1999): An evolutionary mutation-based algorithm for weight training in neural networks for telecommunication flow modelling. In Mohammadian, M. (ed.) *Computational Intelligence for Modelling, Control and Automation*, pp. 54-59. IOS Press, Amsterdam.
- Fischer, M.M., Suarez-Villa, L. and Steiner, M. (1999): Innovation, networks and localities: Concluding remarks. In Fischer, M.M., Suarez-Villa, L. and Steiner, M. (eds.): *Innovation, Networks and Localities*, pp. 318-322. Springer, Berlin, Heidelberg and New York.
- 1998 Fischer, M.M. (1998): Computational neural networks: An attractive class of mathematical models for transportation research. In Himanen, V., Nijkamp, P. and Reggiani, A. (eds.): *Neural Networks in Transportation Applications*, pp. 3-20. Ashgate, Aldershot.
- 1997 Fischer, M.M. and Getis, A. (1997): Advances in spatial analysis. In Fischer, M.M. and Getis, A. (eds.): *Recent Developments in Spatial Analysis -- Spatial Statistics, Behavioural Modelling and Computational Intelligence*, pp. 1-12. Springer, Berlin, Heidelberg and New York.
- Gopal, S. and Fischer, M.M. (1997): Fuzzy ARTMAP -- A neural classifier for multispectral image classification. In Fischer, M.M. and Getis, A. (eds.): *Recent Developments in Spatial Analysis - Spatial Statistics, Behavioural Modelling and Computational Intelligence*, pp. 306-335. Springer, Berlin, Heidelberg and New York.
- Russo, R.E. and Fischer, M.M. (1997): Rail-road interconnectivity in the Alpine freight transport: Bottlenecks and policies from an Austrian-Italian perspective. In Faller, P. and Gürtlich, G.H. (eds.): *Verkehrsinfrastruktur -- Voraussetzungen für Kommunikation, Mobilität und Güter austausch*, pp. 140-166. Österreichische Verkehrswissenschaftliche Gesellschaft, Vienna.
- Staufer, P. and Fischer, M.M. (1997): Spectral pattern recognition by a two layer perceptron: Effects of training set size. In Kanellopoulos, I., Wilkinson, G., Roli, F. and Austin, J. (eds.): *Neurocomputation in Remote Sensing Data Analysis*, pp. 105-116. Springer, Berlin, Heidelberg and New York.
- 1996 Fischer, M.M. (1996): Towards knowledge based GIS. In Fung, T., Lai, P.C., Lin, H. and Yeh, A.G.O. (eds.): *GIS in Asia*, pp. 15-25. GIS Asia Pacific, Singapore.
- Fischer, M.M., Scholten, H. and Unwin, D. (1996): Geographic information systems, spatial data analysis and spatial modelling -- Problems and possibilities. In Fischer, M.M., Scholten, H. and Unwin, D. (eds.): *Spatial Analytical Perspectives on GIS*, pp. 3-19. Taylor & Francis, London.
- Fischer, M.M., Trofimov, A.M. and Pudovick, E.M. (1996): Geographical information systems and basic tendencies in their development. In Trofimov, A.M. (ed.) *Geosituation Analysis: Conceptual Analysis of Spatio-Temporal Structures*, pp. 50-64. Kazan.
- 1995 Fischer, M.M. (1995): Fundamentals in neurocomputing. In Fischer, M.M., Sikos, T. and Bassa, L. (eds.): *Recent Developments in Spatial Information, Modelling and Processing*, pp. 31-43. Geomarket, Budapest.
- Fischer, M.M. and Rammer, C. (1995): Trade effects of the emerging market economies: A study of the transport potential of the Rhine-Main-Danube waterway. In Cocossis, H. and Nijkamp, P. (eds.): *Overcoming Isolation. The Role of Information and Transportation Networks in Development Strategies for Peripheral Areas*, pp. 179-194. Springer, Berlin, Heidelberg and New York.
- Bertuglia, C.S., Fischer, M.M. and Preto, G. (1995): Concluding comments and future outlook. In Bertuglia, C.S., Fischer, M.M. and Preto, G. (eds.): *Technological Change, Economic Development and Space*, pp. 334-338. Springer, Berlin, Heidelberg and New York.
- Bertuglia, C.S., Fischer, M.M. and Preto, G. (1995): Technological change, economic development and space: An introduction. In Bertuglia, C.S., Fischer, M.M. and Preto, G. (eds.): *Technological Change, Economic Development and Space*, pp. 1-9. Springer, Berlin, Heidelberg and New York.
- Fischer, M.M. (1995): Technological change and innovation behaviour. In Bertuglia, C.S., Fischer, M.M. and Preto, G. (eds.): *Technological Change, Economic Development and Space*, pp. 145-159. Springer, Berlin, Heidelberg and New York.

- 1994 Fischer, M.M. and Johansson, B. (1994): Networks for process innovation by firms: Conjectures from observations in three countries. In Karlsson, C., Johansson, B. and Westin, L. (eds.): *Patterns in a Network Economy*, pp. 261-274. Springer, Berlin, Heidelberg and New York.
- Gopal, S. and Fischer, M.M. (1994): Application of neural networks in remote sensing: Theoretical and methodological issues. In Ernste, H. (ed.) *Pathways to Human Ecology*, pp. 17-36. Steiner, Wiesbaden.
- Fischer, M.M., Schuch, K. and Stauer, P. (1994): The regional economy of Carinthia in a frontier-region perspective. In Ratti, R. and Reichmann, S. (eds.): *Theory and Practice of Transborder Cooperation*, pp. 145-166. Helbig & Lichtenhahn, Basel and Frankfurt/Main.
- Fischer, M.M., Maggi, R. and Rammer, C. (1994): Contact decision behaviour in a knowledge context: A discrete choice modelling approach using stated preference data. In Karlsson, C., Johansson, B. and Westin, L. (eds.): *Patterns in a Network Economy*, pp. 229-241. Springer, Berlin, Heidelberg and New York.
- 1993 Fischer, M.M. (1993): Travel demand. In Polak, J. and Heertje, A. (eds.): *European Transport Economics*, pp. 6-32. Blackwell, Oxford and Cambridge.
- Fischer, M.M., Maggi, R. and Rammer, C. (1993): Scholarly communication in Europe. Stated communication media and contact decision models based on laboratory choice experiments in universities. In Nijkamp, P. (ed.) *Europe on the Move*, pp. 311-330. Aldershot, Avebury.
- Fischer, M.M., Grossmann, W.-D. and Pfisterer, J. (1993): Ein systemdynamischer Ansatz zur Modellbildung der Nutzung des European Academic Research Network. In Giffinger, R. (ed.) *Beiträge des 9. Kolloquiums für Theorie und Quantitative Modelle in der Geographie*, pp. 151-160. [=Klagenfurter Geographische Schriften 11].
- 1992 Fischer, M.M. (1992): The economic role of producer services. In Tykkäläinen, M. (ed.) *Development Issues and Strategies in the New Europe*, pp. 171-187. Aldershot, Avebury.
- Fischer, M.M. and Nijkamp, P. (1992): Design and use of geographic information systems and spatial models. In Fischer, M.M. and Nijkamp, P. (eds.): *Geographic Information Systems, Spatial Modelling and Policy Evaluation*, pp. 1-13. Springer, Berlin, Heidelberg and New York.
- 1991 Fischer, M.M. and Nijkamp, P. (1991): Major issues in regional labour market analysis. In Boyce, D., Nijkamp, P. and Shefer, D. (eds.): *Regional Science -- Retrospect and Prospect of Regional Science*, pp. 43-78. Springer, Berlin, Heidelberg and New York.
- Traxler, J., Fischer, M.M., Nöst, A. and Schubert, U. (1991): Producer service networks in the metropolitan region of Vienna. In Bergman, E., Maier, G. and Tödtling, F. (eds.): *Regions Reconsidered: Networks, Innovation and Local Development*, pp. 197-212. Cassell, London.
- 1990 Fischer, M.M. (1990): The micro-electronic revolution and its impact on labour and employment. In Cappellin, R. and Nijkamp, P. (eds.): *The Spatial Context of Technological Development*, pp. 43-74. Avebury, Aldershot.
- Fischer, M.M. (1990): Innovation, diffusion and regions. In Andersson, A.E., Batten, D. and Karlsson, C. (eds.): *Knowledge and Industrial Organization*, pp. 47-61. Springer, Berlin, Heidelberg and New York.
- Aufhauser, E., Fischer, M.M. and Schönhofer, H. (1990): The Vienna housing market: Structure, problems and policies. In Quigley, J. and Harsman, B. (eds.): *Housing Markets and Housing Institutions: An International Comparison*, pp. 235-281. Kluwer, Dordrecht.
- Fischer, M.M., Nijkamp, P. and Papageorgiou, Y.Y. (1990): Current trends in behavioural modelling. In Fischer, M.M., Nijkamp, P. and Papageorgiou, Y.Y. (eds.): *Spatial Choices and Processes*, pp. 1-14. North-Holland, Amsterdam.
- Fischer, M.M., Haag, G., Sonis, M. and Weidlich, W. (1990): Account of different views in dynamic choice processes. In Fischer, M.M., Nijkamp, P. and Papageorgiou, Y.Y. (eds.): *Spatial Choices and Processes*, pp. 27-47. North-Holland, Amsterdam.
- Fischer, M.M., Latzer, M., Maier, G., Sint, P.P., Stöhr, W.B. and Warmuth, H. (1990): Transport, communications and mobility -- Austria. In Nijkamp, P., Reichman, S. and Wegener, H. (eds.): *Euromobile: Transport, Communications and Mobility in Europe*, pp. 119-134. Avebury, Aldershot.
- 1987 Fischer, M.M. (1987): Some fundamental problems in homogenous and functional regional taxonomy. In Bahrenberg, G., Deiters, J., Fischer, M.M., Hard, G. and Löffler, G. (eds.): *Geographie des Menschen - Dietrich Bartels zum Gedenken*, pp. 267-282. University of Bremen Press, Bremen.
- Fischer, M.M. (1987): Travel demand modelling: A state-of-the-art review. In Nijkamp, P. and Reichman, S. (eds.): *Transportation Planning in a Changing World*, pp. 171-188. Gower, Aldershot.
- Fischer, M.M. (1987): Business formation and regional development: Some major issues. In Giaoutzi, M., Nijkamp, P. and Storey, D.J. (eds.): *Small and Medium Size Enterprises and Regional Development*, pp. 85-103. Routledge, London.
- Fischer, M.M. and Nijkamp, P. (1987): Spatial labour market analysis: Relevance and scope. In Fischer, M.M. and Nijkamp, P. (eds.): *Regional Labour Markets: Analytical Contributions and Cross-National Comparisons*, pp. 1-33. North-Holland, Amsterdam.
- Fischer, M.M. and Nijkamp, P. (1987): Labour market theories: Perspectives, problems and policy implication. In Fischer, M.M. and Nijkamp, P. (eds.): *Regional Labour Market. Analytical Contributions and Cross-National Comparisons*, pp. 37-52. North-Holland, Amsterdam.
- Evers-Koelman, I., Fischer, M.M. and Nijkamp, P. (1987): Cross-national comparisons of regional labour markets in 15 countries. In Fischer, M.M. and Nijkamp, P. (eds.): *Regional Labour Market. Analytical Contributions and Cross-National Comparisons*, pp. 369-483. North-Holland, Amsterdam.
- Fischer, M.M. and Nijkamp, P. (1987): Some concluding reflections. In Fischer, M.M. and Nijkamp, P. (eds.): *Regional Labour Market. Analytical Contributions and Cross-National Comparisons*, pp. 485-488. North-Holland, Amsterdam.
- Fischer, M.M. and Nijkamp, P. (1987): The structure of regional labour markets: Problems and perspectives. In Fischer, M.M. and Sauberer, M. (eds.): *Gesellschaft-Wirtschaft-Raum: Beiträge zur modernen Wirtschafts- und Sozialgeographie* Mitteilungen des Arbeitskreises für Neue Methoden in der Regionalforschung 17, pp. 150-161.
- Fischer, M.M. and Nijkamp, P. (1987): Current trends in regional labour markets. In Gordon, I. (ed.) *Unemployment*,

- Regions and Labour Markets: Reactions to Recession* [= London Papers in Regional Science 17], pp. 15-43. Pion, London.
- Fischer, M.M. (1987): Zum methodischen Fortschritt in der Geographie: Einleitende Bemerkungen. In Bahrenberg, G., Deiters, J., Fischer, M.M., Hard, G. and Löffler, G. (eds.): *Geographie des Menschen - Dietrich Bartels zum Gedenken*, pp. 261-265. University of Bremen Press, Bremen.
- Fischer, M.M. and Aufhauser, E. (1987): Probabilistische diskrete Entscheidungsmodelle: Ein flexibles Methodeninstrumentarium zur Analyse räumlicher und nicht-räumlicher Entscheidungsprozesse. In Bahrenberg, G., Deiters, J., Hard, G. and Löffler, G. (eds.): *Geographie des Menschen - Dietrich Bartels zum Gedenken*, pp. 311-328. University of Bremen Press, Bremen.
- Bahrenberg, G., Deiters, J., Fischer, M.M., Hard, G. and Löffler, G. (1987): Modelle und Methoden. Einleitung. In *Geographie des Menschen - Dietrich Bartels zum Gedenken*, pp. 261-265. University of Bremen Press, Bremen.
- 1986 Fischer, M.M. (1986): Theory testing via the latent variable model approach LISREL. In Bahrenberg, G. and Fischer, M.M. (eds.): *Theoretical and Quantitative Geography*, pp. 60-84. Bremer Beiträge zur Geographie und Raumplanung 8.
- Fischer, M.M. and Nijkamp, P. (1986): Technological change and regional employment research. In Nijkamp, P. (ed.) *Technological Change, Employment and Spatial Dynamics*, pp. 454-462. Springer, Berlin, Heidelberg and New York.
- Fischer, M.M., Kemper, F.-J. (1986): Modelle für diskrete Daten und raumbezogene Probleme. In Modelle für diskrete Daten und raumbezogene Probleme. Beiträge zum Symposium des Arbeitskreises 'Theorie und quantitative Methodik in der Geographie' (Bonn, 4.-5. März 1985), Hrsg. Fischer, M. M. and Kemper, F.-J., 1-8. Wien
- Fischer, M.M. (1986): Theory testing via the latent variable model approach LISREL. In Bahrenberg, G. and Fischer, M.M. (eds.): *Theoretical and Quantitative Geography*, Bremer Beiträge zur Geographie und Raumplanung 8, pp. 60-84. University of Bremen Press, Bremen.
- 1985 Fischer, M.M. and Nijkamp, P. (1985): Categorical data and choice analysis in a spatial context. In Hutchinson, B., Nijkamp, P. and Batty, M. (eds.): *Optimization and Discrete Choice in Urban Systems* Lecture Notes in Economics and Mathematical Systems 247, pp. 1-30. Springer, Berlin, Heidelberg and New York.
- Fischer, M.M., Nijkamp, P. (1985): Discrete data and probabilistic choice analysis: Alternative models and methods. In: Bahrenberg, G., Deiters, J. (eds.): *Methodology, Models and Methods in Regional Science*. German-Dutch Symposium on Theoretical and Quantitative Geography (Osnabrück, March 1984). Osnabrücker Studien zur Geographie, 5, 77-99
- 1984 Fischer, M.M. (1984): Theory and testing in empirical sciences. In Bahrenberg, G., Fischer, M.M. and Nijkamp, P. (eds.): *Recent Developments in Spatial Data Analysis: Methodology, Measurement, Models*, pp. 51-71. Gower, Aldershot.
- Fischer, M.M. and Slater, P.B. (1984): Structuring relation matrices: Hierarchical migration patterns in the Federal Republic of Germany. In Bahrenberg, G. and Fischer, M.M. (eds.): *Theorie und quantitative Methodik in der Geographie*, pp. 174-201. Bremer Beiträge zur Geographie und Raumplanung 4.
- Bahrenberg, G., Fischer, M.M. and Nijkamp, P. (1984): Methodology, measurement and models in spatial data analysis: Some major lines of recent developments. In Bahrenberg, G., Fischer, M.M. and Nijkamp, P. (eds.): *Recent Developments in Spatial Data Analysis: Methodology, Measurement, Models*, pp. 3-31. Gower, Aldershot.
- Fischer, M.M. (1984): Test delle teorie causali tramite l'approccio del modello Lisrel. In Clemente, F. (ed.) *Pianificazione del territorio e sistema informativo*, pp. 99-128. Franco Angeli Libri, Milano.
- Fischer, M.M. (1984): Tassonomia regionale: Alcuni riflessioni sullo stato dell' arte. In Clemente, F. (ed.) *Pianificazione del territorio e sistema informativo*, pp. 365-400. Franco Angeli Libri, Milano.
- 1981 Fischer, M.M. (1981): Zur Theoriebildung und Theorietestung: Eine Diskussion von Grundlagenproblemen am Beispiel der Sozialraumanalyse. In Ostheider, M. and Steiner, D. (eds.): *Theorie und quantitative Methodik in der Geographie*, pp. 81-118. Zürcher Geographische Schriften 1.
- Fischer, M.M. (1981): Regionalstruktur und regionale Disparitäten in Portugal. In Jüngst, P. (ed.) *Portugal nach 1974: Regionale Strukturen und Prozesse* (Portugal after 1974: Regional Structures and Processes), pp. 5-73. Urbs et Regio 23 -- Kasseler Schriften zur Geographie und Planung.
- 1978 Fischer, M.M. (1978): Theoretische und methodische Probleme der regionalen Taxonomie. In Bahrenberg, G. and Taubmann, W. (eds.): *Quantitative Modelle in der Geographie und Raumplanung*, pp. 19-50. University of Bremen, Bremen.

Publications in Journals and Books (Chinese, Romance Languages, Russian and Albanian)

- 2008 Sokol, A., Fischer M.M., Gjoni, F. and Dema, B. (2008): Aspekte sociale e të zhvillimit të popullsisë së rajonit të shkodrës në perindhën e tranzicionit. *Studime Albanologjike* 13(4): 63-72 (University of Tirana Press, Albania)
- 2006 Fischer, M.M. and Stirböck, C. (2006): Convergencia regional en Europa. *Papeles de Economía Española* 107, pp. 30-44.
- 1996 Wang, J.F. and Fischer, M.M. (1996): Experiments of several methods for geo-point process prediction (in Chinese). *Journal of the Graduate School of Academia Sinica* 1996(2), pp. 43-53.
- 1988 Fischer, M.M. and Nijkamp, P. (1988): Tendencias actuales de los mercados de trabajo regionales: Una comparación internacional. *Papeles de Economía Española* 35, pp. 165-187.
- 1987 Fischer, M.M. (1987): Changing modes of reasoning in spatial choice analysis [in Russian]. Institute of Scientific and Technical Information, Moscow.
- 1984 Fischer, M.M. (1984): Test delle teorie causali tramite l'approccio del modello Lisrel. In Clemente, F. (ed.) *Pianificazione del territorio e sistema informativo*, pp. 99-128. Franco Angeli Libri, Milano.
- Fischer, M.M. (1984): Tassonomia regionale: Alcuni riflessioni sullo stato dell' arte. In Clemente, F. (ed.) *Pianificazione del territorio e sistema informativo*, pp. 365-400. Franco Angeli Libri, Milano.

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Organization of Conferences, Symposia and Workshops

Conference Organizing Committee / Program Committee / Advisory Board

- 15th International Symposium on Spatial Data Handling, Geospatial Dynamics, Geosimulation and Exploratory Visualization, Bonn 2012
- Paradigms of the Future Changes in the 21st Century (Infrastructure of the Society, Infrastructure of Man, Controlled Society), Smolenice (Slovakia), 2012
- International Spatial Accuracy Research Association (ISARA), The Tenth International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences, Florianópolis (Brazil) 2012
- International Symposium on Geospatial Information Science, Hong Kong 2010
- Conference of the Croucher Advanced Study Institute on Neural and Evolutionary Computations for Spatial Data Analysis, Hong Kong 2000
- International Conference on Modelling Geographical and Environmental Systems with Geographic Information Systems, Hong Kong 1998
- Geoinformatics'95, Hong Kong 1995
- Asian GIS/LIS AM/FM and Spatial Analysis Conference, Hong Kong 1994
- 7th International Workshop on Geographical Information Systems, Beijing 2007
- International Conference on Geoinformatics & Geographical Systems Modelling, Beijing 2004
- Seminar on GIS and Spatial Analysis, LREIS, Chinese Academy of Sciences, Beijing 1998
- Regional IGU Conference on Mathematical Models and Geographical Information Systems, Beijing 1990
- IEEE Congress on Evolutionary Computation [Programme Committee], New Orleans 2011, Trondheim 2009, Singapore 2007, Vancouver 2006, Edinburgh 2005, Portland 2004, Canberra 2003
- IEEE World Congress on Computational Intelligence – Congress on Evolutionary Computation, Honolulu 2002
- North-American Conference of the North-American Regional Science Association, Santa Barbara 1989 [Co-Chair]
- Congress of the European Regional Science Association, Barcelona 2011, Jönköping 2010, Liverpool 2008, Paris 2007, Volos 2006, Porto 2004, Jyväskylä 2003, Dortmund 2002, Zagreb 2001, Vienna 1998 [Chair of the Local Organizing Committee]
- European Conference on Spatial Information Science 1998, 1997, 1996, 1995, 1994
- GIS PLANET'98, International Conference and Exhibition on Geographic Information, Lisbon 1998
- 3rd Central European Conference in Regional Science, Kosice 2009
- 8th International Conference on Informatics in Economy, Bukarest 2007
- Austrian Economic Association, Annual Meeting 2007 [Co-Chair, Programme Committee]
- Geoinformatics Forum, Salzburg 2007, 2008, 2009, 2010, 2011
- EXYSTENCE Thematic Institute for Complexity and Innovation, Vienna 2004

European Regional Science Association [ERSA]

- 52nd Scientific Committee, Stream Convenor on Recent Advances in Spatial Econometrics, Bratislava 2012
- 50th Congress: Stream Convenor on Geographical Information Systems and Spatial Analysis, Jönköping 2010
- 48th Congress: Stream Convenor on Complexity, Evolution and Spatial Phenomena, Liverpool 2008
- 46th Congress: Stream Convenor on Geographical Information Systems and Spatial Analysis, Volos 2006
- 43rd Congress: Sessions on Spatial Econometrics and Spatial Statistics, and Novel Approaches in GIS and Spatial Modelling, Jyväskylä 2003
- 42nd Congress: Sessions on New Frontiers in Theory and Methodology, Dortmund 2002
- 33rd Congress: Special Sessions on Recent Developments in Geo-Information Processing, Moscow 1993
- 32nd Congress: Special Sessions on GIS and Spatial Analysis, Louvain-la-Neuve 1992
- 31st Congress: Special Sessions on GIS and Spatial Modelling, Lisbon 1991
- 30th Congress: Special Sessions on Residential Location and Housing Markets, Istanbul 1990
- 29th Congress: Special Sessions on Dynamics and Spatial Processes, Cambridge 1989
- 26th Congress: Sessions on Housing and Labour Markets: Policies and Modelling Issues, Krakov 1986
- 24th Congress: Sessions on Recent Methodological Developments in Spatial Analysis, Milan 1984

North-American Regional Science Association

- 39th Conference: Special Sessions on Recent Developments in Spatial Information Processing, Chicago 1992 (jointly with Peter Rogerson, State University of New York at Buffalo)
- 36th Conference: Sessions on Movement, Migration and Transportation: Regional Science Perspectives, Santa Barbara 1989 (jointly with Luc Anselin, University of California at Santa Barbara)

World Congress of the Regional Science Association International

- 9th World Congress: Scientific Committee, Timisoara (Romania) 2012
- 6th World Congress: Special Sessions on Spatial Dynamics, Simulation and Neurocomputing, Lugano 2000 (jointly with Aura Reggiani, University of Bologna)

International Geographical Union

- 33rd International Geographical Congress: Session on Spatial Statistics and Applications (Commission on Modelling Geographical Systems), Cologne 2012
- 28th International Geographical Congress: Sessions on Geo-Informatics and Neurocomputing, and Analyzing and Modelling Urban Systems, The Hague 1996
- Global Change and Geography Conference: Packaged Paper Sessions on *Geoinformation* Systems and Mathematical Models, Moscow 1995 (jointly with V. Tikunov)
- 27th International Geographical Congress: Packaged Paper Sessions on GIS and Spatial Analysis, and Conceptual and Methodological Issues in Modeling Human Behaviour, Washington DC 1992
- Regional Conference on Asian Pacific Countries: Section 13 Mathematical Models and Geographic Information Systems, Beijing 1990 (jointly with Lin Bingyao, Chao Zhang and other Chinese scholars)
- Congresses of the Commission on Mathematical Models: Princeton 1996 (jointly with Arthur Getis), Prague 1994 (jointly with Denise Pumain, Chair of the Commission on Urban Development and Urban Life), Odessa 1991 (jointly with Alexander Topchiev), Boston 1990 (jointly with Sucharita Gopal, Boston University), Shanghai 1990 (jointly with Chao Zhang, East China Normal University)
- 26th International Geographical Congress, IGU Mathematical Models Working Group: Special Sessions on Recent Developments in Discrete Choice Analysis, Canberra 1988

Association of German Geographers

- 52nd Congress: Session on GI: From the Data Revolution Towards a Methods Revolution, Hamburg 1999 (jointly with Gerhard Bahrenberg, University of Bremen)
- 47th Congress: Session on Technological Change and Industrial Restructuring, Saarbrücken 1989, (jointly with Ludwig Schätzl, Technical University Hanover)

European Science Foundation

- Workshop on Infrastructure, Networks and Communication, Vienna 1994
- Expert Meeting on GIS and Spatial Analysis, Amsterdam 1993
- Workshop on Barriers to Communication, Vienna 1991

Other Workshops / Symposia

- International Workshop on Technological and Environmental Requisites and Consequences of Transnational Networks, Boston 1991
- Third European Colloquium on Theoretical and Quantitative Geography, Augsburg 1982 (jointly with Gerhard Bahrenberg, University of Bremen)
- German-Dutch Symposium on Theoretical and Quantitative Geography, Osnabrück 1984 (jointly with Gerhard Bahrenberg, University of Bremen)
- Working Group on Theory and Quantitative Methods: Meetings of the Association of German Geographers 1981, 1983, 1984, 1985, 1986, 1987, 1989
- Workshop on Advances in Modeling: Paradigms, Methods and Applications, IIASA, Laxenburg 1998
- Workshop on Neurocomputing in Regional Science, IIASA, Laxenburg 1996
- Austrian Symposia for Regional Science and Geography, Seekirchen 1985, Neuberg 1987
- International Workshop on Knowledge, Complexity and Innovation Systems, Vienna 2000
- Symposium on Urban and Regional Labour Markets: Problems, Perspectives and Policies, Vienna 1986

Papers Read and Presentations

Regional Science Conferences

- World Conferences: Timisoara 2012, Lugano 2000, Tokyo 1996, Jerusalem 1989, Rotterdam 1984
- Pacific Regional Science Conferences: Acapulco 2003, Portland 2001, International Symposium of the PRSCO Secretariat Tokyo 2000, Seoul 1999
- Western Regional Science Congresses: Kona 1997, Napa 1988, 1996

- North-American Conferences: Miami 2011, New York 2008, Savannah 2007, Toronto 2006, Las Vegas 2005, Philadelphia 2003, Montreal 1999, Houston 1993, Chicago 1992, New Orleans 1991, Boston 1990, Santa Barbara 1989, Columbus, Ohio 1986
- South Africa: Port Elizabeth 2000
- European Congresses: Barcelona 2011, Jönköping 2010, Łódź 2009, Liverpool 2008, Paris 2007, Volos 2006, Amsterdam 2005, Porto 2004, Jyväskylä 2003, Dortmund 2002, Zagreb 2001, Barcelona 2000, Dublin 1999, Vienna 1998, Rome 1997, Zurich 1996, Odense 1995, Groningen 1994, Moscow 1993, Louvain-la-Neuve 1992, Lisbon 1991, Istanbul 1990, Cambridge 1989, Stockholm 1988, Athens 1987, Krakov 1986, Budapest 1985, Milan 1984, Groningen 1982, Barcelona 1981, London 1979, Krakov 1977
- European Regional Science Summer Institutes: Istanbul 2000, Arco 1988, Umea 1986
- British Section: Dublin 1994, Bristol 1986
- German Speaking Section: Turrach 1977, Windischgarsten 1981
- French Speaking Section: Paris 1986
- Central European Conference on Regional Science: Kosice 2009
- Romanian Regional Science Association: Galati 2004, Baia Mare 2009

Geographical Conferences

- International Geographical Union [IGU]: The Hague 1996, Washington 1992, Beijing 1990
- IGU-Commission/Working Group on Mathematical Models: The Hague 1996, Odense 1995, Prague 1994, Bratislava 1994, Princeton 1992, Odessa 1991, Boston 1990, Shanghai 1990, Canberra 1988, Besançon 1984, Lagos 1978
- IGU-Conference on Global Change and Geography: Moscow 1995
- Association of American Geographers: Boston 2008, 1998, San Francisco 1994, San Diego 1992, Phoenix 1988
- European Colloquia on Theoretical and Quantitative Geography: Tomar 2005, Durham 1999, Rostock 1997, Spa 1995, Budapest 1993, Stockholm 1991, Chantilly 1989, Bardonecchia 1987, Veldhoven 1985, Augsburg 1982, Cambridge 1980, Strasbourg 1978
- Association of German Geographers: Hamburg 1999, Saarbrücken 1989, Göttingen 1979
- Working Group Theory and Quantitative Methods: Villach 1992, Bonn 1985, Klagenfurt 1981, Zürich 1980, Osnabrück 1984, Bremen 1977
- Symposium of the Humboldt-University Berlin on "*Mathematical Modelling in Geography*", 1991

GI Science Conferences

- 1st IEEE International Conference on Spatial Data Mining and Geographical Knowledge Services (ICSDM 2011) in conjunction with the 8th International Workshop on Geographical Information Science (BJ-IWGIS-2011), Fuzhou, 2011
- Joint International Conference on Theory, Data Handling and Modelling GeoSpatial Information Science, Hongkong 2010
- International Workshop on Geographical Information Systems, Beijing 2007
- International Conference on Geoinformatics & Geographical Systems Modelling, Beijing 2004
- Seminar on GIS and Spatial Analysis, The Chinese Academy of Sciences, Beijing 1998
- International Conference on Modeling Geographical and Environmental Systems with Geographical Information Systems, Hong Kong 1998
- Asia GIS/LIS AM/FM and Spatial Analysis Conference, Hong Kong 1994
- International Geoscience and Remote Sensing Symposium – Singapore 1997, Lincoln, USA 1996
- NCGIA-Specialist Meeting on GIS and Spatial Analysis, San Diego 1992
- International Conferences on GeoComputation, Leeds 1996, Bristol 1998, Fredericksburg, USA 1999
- EURO XIV: OR - Towards Intelligent Decision Support Systems, Jerusalem 1995
- Joint European Conference and Exhibition on Geographical Information, Barcelona 1996
- Third European Conference on Geographical Information Systems (EGIS 92), Munich 1992
- DOSES Workshop on New Tools for Spatial Analysis, Lisbon 1993
- COMPARES (Connectionist Methods for Preprocessing and Analysis of Remote Sensing Data) Workshops, Cagliari 1996, York, England 1996
- 16th Urban Data Management Symposium, Vienna 1993
- AGIT, Salzburg 2001

European Science Foundation Conferences

- GISDATA: Le Bischenberg 1997, Stockholm 1995, Aalborg 1994, Amsterdam 1993, Sintra 1992
- NECTAR: Vienna 1994, Padua 1993, Louvain-la-Neuve 1992, Leiden 1992, Amsterdam 1992, Loughborough 1991, Vienna 1991, Athens 1990, Zürich 1989, Strasbourg 1989, Vienna 1984
- Programme on Regional and Urban Restructuring in Europe: Lisbon 1991

Computational Intelligence Conferences

- IEEE World Congress on Computational Intelligence – Congress on Evolutionary Computation, Honolulu 2002
- International Joint INNS-IEEE Conference on Neural Networks, Washington DC 2001
- IPL (Institute Para Limes) Workshop on Complexity, Evolution and Learning: in Search of Simplicity, Lochem/Barchem [The Netherlands] 2007
- Croucher Advanced Study Institute on Neural and Evolutionary Computations for Spatial Data Analysis, Hong Kong 2000
- International Joint Conference on Neural Networks, Nagoya, Japan 1993
- EUFIT (European Congress on Intelligent Techniques and Soft Computing), Aachen 1996
- Conference of the Research Year The Sciences of Complexity: From Mathematics to Technology to a Sustainable World, Bielefeld 2000
- Workshop on Neural Networks, Milan 1995
- International Workshop on Parallel Applications in Statistics and Economics, Trier 1995
- Workshop on Cellular Automata, Neural Networks and Multi-Agent Systems in Urban Planning, Milan 2001
- Workshop on Neurocomputing in Regional Science, IIASA, Laxenburg 1996
- Workshop on Neural Nets for Decision Support, IIASA, Laxenburg 1993
- International Conference on Modelling, Control and Automation – CIMCA '99, Vienna 1999
- First Austrian Workshop on Neural Networks, Graz 1997

Spatial Econometrics Conferences

- World Conferences of the Spatial Econometrics Association: Cambridge 2007, New York 2008, Barcelona 2009
- International Workshop on Spatial Econometrics and Statistics, University LUISS, Rome 2006
- Spatial Econometrics Workshop, Kiel Institute for World Economics, Kiel 2005
- SNSF International Exploratory Workshop on Advances in the Statistical Modelling of Spatial Interaction Data, Lugano 2011

Other Conferences

- Conference on Innovation and Development, Faro 2008
- 10th Uddevalla Symposium on Institutions for Knowledge Generation and Knowledge Flows, Uddevalla 2007
- International Workshop on Modelling the Entrepreneurial and Innovative Space-Economy, Tinbergen Institute, Amsterdam 2005
- International Workshop on Innovation, Dynamic Regions and Regional Dynamics, Jönköping 2005
- International Workshop of the KTH Centre of Excellence for Science and Innovation Studies, Stockholm 2003, 2004
- International Workshop on Knowledge, Complexity and Innovation Systems, Vienna 2000
- International Symposium on R & D, Industrial Change and Economic Policy, Karlstad 1987
- International Conference on Technology Alternatives and Employment Policy Options to the Year 2000, Laxenburg 1986
- Workshop on Technological Change and Employment: Urban and Regional Dimensions, Zandvoort 1985
- STELLA Workshop on Globalisation, E-Economics and Trade, Siena 2002
- STRC Swiss Transport Research Conference, Ascona 2004
- Workshop on New Regional Economies in Central Europe, Vienna 2006
- 3rd Annual Meeting of the European Economics and Finance Society European Integration and World Economy, Gdansk 2004
- European Workshop on Interregional Co-operation and Development in the European Fringe Areas, Joensuu 1990
- Colloquium of the Association de Science Regionale de la Langue Française and of the Associação Portuguesa para o Desenvolvimento Regional: Sessions on Urban Problems and Policies, Lisbon 1987
- International Symposium on Regional Labour Markets in Transition, Vänersborg 2001
- Austrian-French Expert Meeting on The Role of the Social Economy in the Creation of Local Employment, Vienna 1987
- International Symposium on The Role of Small and Medium Sized Enterprises for Regional Development, Samos 1986
- Conference on *The Development and the Strategies of SME's in the 1990s*, Mikkeli, Finland 1993
- International Research Conference on Housing Policy, Gävle 1986
- Symposium on Metropolitan Housing Markets under Different Policy Regimes, Stockholm 1985
- International Seminar on Regional Planning and Information System Requirements, Bologna and Cagliari 1983
- International Seminar on Regional Planning in Sardinia, Vienna 1982
- Austrian Economic Association Annual Meeting, Vienna 2004, Klagenfurt 2007
- Workshop on Spatial Aspects of Demography, Max Planck Institute for Demographic Research, Rostock 2001
- Statistische Woche 1994, Vienna 1994

Invited Seminar Presentations (location only)

USA and Canada

Boston University (1990, 1989, 1986), State University of New York at Buffalo (1995, 1988), McMaster University Hamilton (2006, 1988), University of Toronto (1988), UCLA (1988, 1986), UC Santa Barbara (1994, 1988, 1986), UC Berkeley (1986), UC Irvine (1997, 1994, 1992)

Asia and Australia

The Chinese Academy of Sciences (Beijing, 2011, 1998, 1997, 1990), The Chinese University of Hong Kong (2006, 1994, 1990), CSIRO (Highett, 1988), East China Normal University Shanghai (1990)

Austria, Germany, Switzerland

Institut für Arbeitsmarkt- und Berufsforschung der Bundesanstalt für Arbeit in Nürnberg (1999), Free University Berlin (1982), Umweltforschungszentrum Leipzig (1998, 1995), University of Bonn (1996), University of Bremen (1978), University of Cologne (1994), University of Dresden (1994), Johann Wolfgang Goethe University Frankfurt (1987), University of Hamburg (1982, 1980, 1979, 1978), University of Hanover (1998, 1988), University of Jena (1992), University of Karlsruhe (1999, 1978), University of Kiel (1978), University of Munich (1990), Swiss Institute of Technology (1987, 1979), University of Zürich (1985), Austrian Academy of Sciences (1997), University of Vienna (1994, 1982, 1975), Vienna University of Economics and Business (1995, 1994, 1993, 1991, 1986), Vienna Institute of Technology (1994, 1992), University of Klagenfurt (1992)

Scandinavia

University of Helsinki, Helsinki School of Economics and Swedish School of Economics (2003), Royal Institute of Technology (Stockholm 2011, 2002, 1997), University of Joensuu (1997), Norwegian School of Economics and Business Administration (Bergen, 1995, 2011)

Western Europe

National University of Ireland (National Centre for Geocomputation, 2006), Free University Amsterdam (2000, 1999, 1995, 1993, 1986), Netherlands Institute for Advanced Study in the Humanities and Social Sciences (NIAS, 1991), Erasmus University Rotterdam (1982), University of Groningen (1980)

Southern Europe

University of Lisbon (1991), University of Algarve (2011, 2008), Joint Research Centre, European Commission, Ispra (1996), University of Bologna (1996), Oskar Lange Academy of Sciences (Wroclaw, 1978), Panteion University of Social and Political Sciences (Athens 2003, 2000, 1995), National Technical University of Athens (2000, 1999, 1995)

Eastern Europe

Institute of Geography at the Russian Academy of Sciences (1992), Center for the Study of Democracy (Sofia, 1995), Oskar Lange Academy of Economics (Wroclaw, 1978), Faculty of Mathematics, Physics and Informatics at Comenius University in Bratislava (2010), Institute of Geography at the Slovak Academy of Sciences (1996, 1992), Slovak Regional Science Association in Bratislava (2000), Centre for Economic Research and Graduate Education (CERGE), Charles University & Economics Institute, Academy of Sciences of the Czech Republic (1997), Keldysh Institute at the Russian Academy of Sciences (1992)

Membership in Professional Societies

American Economic Association
Association of American Geographers
Econometric Society
European Economic Association
IEEE Computational Intelligence Society
Regional Science Association International
Regional Studies Association
Spatial Econometrics Association

Courses Taught

University of California, Santa Barbara: Introduction to Human Spatial Behaviour (undergraduate upper level, Spatial Decision Making (graduate)

Oskar Lange Academy of Economics, Wroclaw (Poland, September 1978): Cluster Analysis for Social Scientists (post graduate)

National Technical University, Athens (Greece): Business GIS: Theory and Practice (graduate), Erasmus Course on European Integration, Transportation and Mobility (graduate)

Free University Amsterdam, University of Bologna, and University of Joensuu: Erasmus Course on European Integration, Transportation and Mobility (graduate)

University of Hamburg: Cluster Analysis for Social Scientists (post graduate), Urban and Regional Models (post graduate), Recent Developments in Urban Economics (post graduate), Urban Development Models (post graduate)

University of Hanover: Migration and Travel Behaviour: Methodology and Research Issues (graduate)

University of Linz: Economic Geography (graduate)

University of Vienna: Economic Geography (undergraduate), Theoretical Geography (graduate), Quantitative Methods in Geography and Regional Science (graduate), Analytical Philosophy of Science (graduate)

WU Wien: Economic Geography (undergraduate), Spatial Economics (graduate), Innovation Economics (graduate), GIScience (graduate), Economic Geography Doctoral Seminar

External Service: Universities

USA: Arizona State University (2010, 2012), Boston University (1994, 1990); Clark University (USA) and Development Study Center (Israel) (1991); Indiana University (1989); Pennsylvania State University (1990, 1989); University of California, Santa Barbara (1997, 1996); University of South Carolina (1996), Ohio State University (2001, 1991, 1988), University of West Florida (2009)

Canada: University of Alberta (1993); McMaster University, Hamilton (2008, 2006, 1995); University of Waterloo (1987)

Australia: University of New England (2008), University of New South Wales (1991), University of Western Australia (1997)

New Zealand: University of New England (2008), University of Auckland (1990)

Hong Kong: Chinese University of Hong Kong [Office of the Chancellor] (2010, 2006, 2003, 2002, 2000)

India: University of Madras (1990); University of Calcutta (1992)

Israel: Bar Ilan University (1993, 1992, 1990); The Hebrew University of Jerusalem (1992)

England: University College London (2012), University of Cambridge (1992); University of Manchester (2001, 1989); University of Leeds [Office of the Chancellor] (2004, 2002); London School of Economics & Political Sciences (1995), University of London (2002), University of Liverpool (1989)

Netherlands: Free University of Amsterdam (2008)

Belgium: Université Catholique Louvain la Neuve (2000)

Spain: Universidad de Alcalá (1996)

Italy: European University Institute, Florence (1997)

Czech Republic: Charles University Prague (2002), The Centre for Economic Research and Graduate Education/Charles University Prague (2006, 1995)

Slovakia: Comenius University Bratislava (1999)

Hungary: College for Modern Business Studies, Tatabanya (2000); Technical University of Budapest (1996)

Switzerland: University of Zurich (2003/04), Swiss Institute of Technology (1997, 1991)

Germany: University of Dortmund (1996, 1995, 1992); University of Dresden (1994); Johann Wolfgang Goethe University Frankfurt (1991); University of Hamburg (1994); Centre for Interdisciplinary Research, University of Bielefeld (1998); University of Hanover (2005, 2004, 2001); University of Münster (1998); University of Osnabrück (1992); University of Stuttgart (2001, 1989)

Austria: Vienna Institute of Technology (1995, 2007); University of Salzburg (1995/96, 2005); University of Klagenfurt (2004)

Supervision of Ph D Dissertations (Completed)

Milcher Susanne: Title: Vulnerability and Labour Market Discrimination of Roma in South East Europe, Vienna University of Economics and Business, 2011

Sardadvar Sascha: Title: Economic Growth in the Regions of Europe. Theory and Empirical Evidence from a Spatial Growth Model, Vienna University of Economics and Business, 2009

Scherngell Thomas: Title: Internationale Wissensspillovers zwischen europäischen Regionen. Eine empirische Analyse am Beispiel der High-Tech Industrie, University of Vienna, 2006

Cesnik Hermann-Stefan: Title: Methodische Probleme beim Forschungsdesign empirischer Studien, dargestellt am Fallbeispiel einer Longitudinalstudie, University of Vienna, 2003

Schuch Klaus: Title: Central Europe and the European Framework Programmes for RTD, University of Vienna, 2003

Chen Hongyan: Title: Spatial Interaction Modelling in a GIS Environment: Visualization of Flow Data, University of Vienna, 2002

Roediger-Schluga Thomas: Title: The Techno-Economic Consequences of Environmental Regulation – The Case of Austrian VOC Emission Standards, Vienna University of Economics and Business, 2002

Kressler Florian: Title: Supervised Multispectral Classification. The Multilayer Perceptron versus the Maximum Likelihood-Classifier, Vienna University of Economics and Business, 2001

Paparella Christof JG: Title: What Regional Multilateral Development Banks Do? A Comparative Study on Institutional Characteristics, Operational Agenda, and Development Assistance Output of Asian Development Bank and Inter-American Development Bank, Vienna University of Economics and Business, 1999

Fischer Gabriele: Title: Markteintrittsstrategien europäischer Unternehmen im Kontext der Reformpolitik Vietnam, Vienna University of Economics and Business, 1997

Hartmann Judith: Title: Technological Change in Austrian Industry: R&D and Adoption of New Production Technologies in Selected Industries, Vienna University of Economics and Business, 1997

Rammer Christian: Title: Zur Erklärung regionaler Profitratenunterschiede. Konzeptionelle und empirische Modelle für die

österreichische Sachgüterproduktion, University of Vienna, 1997

Staufer Petra, Title: Überwachte Klassifikation multispektraler Fernerkundungsdaten mit 2-Layer Perceptron Netzen: Performanz und Stabilität lokaler Parameteroptimierungsalgorithmen, University of Vienna, 1997

Watzek Harald, Title: Konzept-UVp als Bestandteil einer interdisziplinären Evaluation strategischer Maßnahmen, illustriert am Strukturfondsprogramm Burgenland, Vienna University of Economics and Business, 1996

Benedikt Josef, Title: Die Theorie unscharfer Mengen zur Modellierung vager Landnutzungsklassen in der Satellitenbildverarbeitung, University of Vienna, 1995

Cukrowski Jacek, Title: Essays in Economics of Managing, Centre for Economic Research and Graduate Education, Charles University, Economics Institute, 1995

Silber Georg, Title: Innovationsnetzwerke in der österreichischen Industrie, Vienna University of Economics and Business, 1995

Gilch Stefan, Title: Internationale Zulieferungen und industrielle Entwicklung in Entwicklungsländern, Vienna University of Economics and Business, 1994

Krendlesberger Wolfram, Title: Handelbare Belastungsrechte als umweltpolitisches Instrument, Vienna University of Economics and Business, 1994

Aufhauser Elisabeth, Title: Wohnungschancen–Wohnungsrisiken. Räumliche Mobilität und Wohnungsnachfrage in Wien im gesellschaftlichen Wandel, University of Vienna, 1993

Gärtner Irene Beate, Title: Artificial Intelligence in Distribution Logistics: A Comparison with Conventional Techniques, Vienna University of Economics and Business, 1993

Menschik Gottfried, Title: Techno-ökonomischer Wandel in der österreichischen Industrie – Kontinuität oder Paradigmenwechsel? Eine empirische Untersuchung in ausgewählten Regionen und Branchen, University of Vienna, 1993

Steinmetz Michael, Title: A Metamodel Approach to Life-Cycle Modeling, Vienna University of Economics and Business, 1992

Bodda Luigi, Title: From Limits to Growth to Sustainable Development, Vienna University of Economics and Business, 1991

Co-Supervision of Ph D Dissertations (Completed)

Pennerstorfer Dieter, Title: Strategische Interaktion und räumlicher Preiswettbewerb im Treibstoff Einzelhandel. Eine räumlich-ökonomische Analyse, Vienna University of Economics and Business, 2008

Plätzer Egon, Title: Linienverkehrsmodell zur Beseitigung von Schwachstellen in der Transportorganisation auf der Wasserstraße Donau, Vienna University of Economics and Business, 2007

Wagner David Markus, Title: Imageanalyse europäischer Städte mittels Faktoren- und Faktorkongruenzanalyse. Eine Studie am Beispiel der Städte Berlin, Dublin, Edinburgh, Heidelberg und Tallinn, Vienna University of Economics and Business, 2004

Urbanek Dagmar, Title: Der Transaktionskostenansatz in der Kreditwirtschaft: Eine instrumentelle Anwendung anhand der Gegenüberstellung der Governance Strukturen Filial- und Internetvertrieb, Vienna University of Economics and Business, 2003

Glatzer Ernst, Title: Residualdiagnostiken für die Variogrammschätzung, Vienna University of Economics and Business, 2002

Leutgeb, Daniela, Title: Der Beitrag ausgewählter Controllinginstrumente in der Handelspolitik vor dem Hintergrund des Efficient Consumer Response, Vienna University of Economics and Business, 2000

Riemann Gerald, Title: Zehn Jahre danach: Eine wirtschaftspolitische Analyse der Integration und Transformation Ostdeutschlands, Vienna University of Economics and Business, 2000

Spitzer Gerald, Title: Sonderwerbformen im TV. Entwicklung eines konzeptionellen Planungsansatzes für Kommunikations-Kooperationen zwischen Fernsehen und Wirtschaft, Vienna University of Economics and Business, 1995

Zhao Shangfeng, Title: Das chinesische Wirtschaftssystem im Vergleich zu Österreich und die Möglichkeiten der Kooperation, Vienna University of Economics and Business, 1995

Richar Harald, Title: Neue Ansätze der Regionalisierungspolitik in Niederösterreich am Beispiel der Grenzregion Waldviertel, University of Vienna, 1993

Hatz Gerhard, Title: Strukturen und Entwicklungstendenzen des Lebensmitteleinzelhandels in Wien, University of Vienna, 1991

Eigler Robert, Title: Der 18. Wiener Gemeindebezirk Währing. 150 Jahre Siedlungs- und Bautätigkeit 1840-1990, University of Vienna, 1990

Vielhaber Christian, Title: Freizeitwohnsitze in einem großstädtischen Naherholungsraum. Ein sozialgeographischer Beitrag zur Erforschung des Phänomens Freizeitwohnen am Beispiel des Neusiedlerseeraumes, University of Vienna, 1990

Ernste Huib, Title: Büro-Standorte und Informationstechnik, Swiss Institute of Technology, Zürich, 1987

Heilig Maximilian, Title: Ökologische Wertung des Marchfeldes am Beispiel der Gemeinde Franzensdorf, University of Vienna, 1987

Kytir Josef, Title: Bevölkerungsgeographische Untersuchungen in einem peripheren Raum: Bevölkerungsentwicklung, Bevölkerungsstruktur und ausgewählte Aspekte demographischen Wandels in den drei Osttiroler Gemeinden Matrei, Prägraten und Virgen, University of Vienna, 1984

Husa Karl, Title: Kleinräumige Mobilitätsprozesse im Umland von Wien: Eine empirische Analyse des Wohnstandortverhaltens von Zuwanderern in Wiener Umlandgemeinden, dargestellt am Beispiel der Zuwanderung nach Korneuburg, Langenzersdorf und Bisamberg, University of Vienna, 1983

Service at WU

Dean, Humanities, Social and Formal Sciences, 2002-2003

Dean, Social Sciences, 2004 – 2009

Director, Institute for Economic Geography and GIScience, 1989 – present

Academic Senate, 1989 – 2000, 2002 – 2009

Chair, Committee for Academic Study Programs, 2009 – present

Austrian IIASA (International Institute for Applied Systems Analysis) Commission, WU-Delegate, 2000 – present

Supervisor of the Joint Study Programs with the University of Illinois at Urbana-Champaign, 1989 – 1990; the University of California, 1991 – 1994; Anderson School at UCLA, 1994 – 2002; Graduate School of Management at UC Irvine, 1994 – 2008; Humboldt University Berlin, 2007 – 2008; Universidade Nova de Lisboa, 2007 – 2008; Universidade Católica Portuguesa (Lisboa), 2007 – 2008; Instituto Superior de Ciências do Trabalho e da Empresa (Lisboa), 2007-2008; Erasmus/Socrates Exchange with Free University of Amsterdam, 1991 – 1997; University of Hanover, 1991 – 1997

Served / chaired numerous University committees, including many Professor Search Committees

External Service: Contributions to Peer Review for Granting Agencies

Commission of the European Communities (1999, 2003, 2004)

Economic and Social Research Council [ESRC], peer reviewer 2010, ESRC Centre mid term review

US National Science Foundation [NSF, Geography-Regional Science Programme, Economics Programme, Social Behavioural and Economic Research] (1988, 1989, 1999, 2000)

John Simon Guggenheim Memorial Foundation (1984, 1992, 2009)

Research Council of Canada [Social Sciences and Humanities] (1996, 1999, 2006, 2007)

Research Council of Canada [Natural Sciences and Engineering] (2008, 2009)

Australian Research Council (1995, 1996, 1997, 1998, 1999, 2002, 2003, 2004, 2005)

Research Grants Council Hong Kong (1990, 1993, 1994, 1995, 1996, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2009)

Korea Research Foundation (2008)

The Royal Netherlands Academy of Arts and Sciences, Assessment Committee of the Academy Professorship Programme (2004, 2005, 2006)

Science Foundation Ireland [Research Professorship] (2003)

Slovak National Science Foundation (2008)

National Science Fund of Bulgaria (2008)

Israel Science Foundation (2009)

Netherlands Organisation for Scientific Research [NWO Traffic and Transportation] (2001)

Swiss National Science Foundation (2000, 2001, 2004, 2005)

German-Israeli Foundation for Scientific Research and Development (2001)

Braunschweigische Wissenschaftliche Gesellschaft (2002)

Volkswagenstiftung (1999)

Centre for Interdisciplinary Research, University of Bielefeld, Germany (1998)

External Service: Contributions to Peer Review for Academic Publishers

Butterworth Heinemann (1993)

Gordon & Breach (1995, 1996)

John Wiley (1998, 2001)

Kluwer Academic Publishers (1992, 1995, 1996, 1999)

Martinus Nijhoff (1986)

MIT Press (1997)

North-Holland (1983, 1987)

Springer (1995, 1996, 1998-2002, 2004-2012)

External Service: Contributions to Peer Review for Scholarly Journals

Annals of Economics and Statistics

Annals of Regional Science
 Annals of the Association of American Geographers
 Computers, Environment and Urban Systems
 Computers & Geosciences
 Discrete Dynamics in Nature and Society
 Economic Geography
 Empirical Economics
 Environment and Planning A
 Environment and Planning B
 Environment and Planning D
 Geographical Analysis
 Geoinformatica
 Geoscience and Computing
 German Economic Review
 IEEE International Geoscience and Remote Sensing Symposium
 IEEE Transactions on Geoscience and Remote Sensing
 IEEE Transactions on Neural Networks
 International Journal of Entrepreneurship and Innovation Management
 International Journal of Geographical Information Systems
 International Regional Science Review
 Journal of Artificial Intelligence Research
 Journal of Econometrics
 Journal of Economic Geography
 Journal of Intelligent Systems
 Journal of Regional Science
 Letters in Spatial and Resource Sciences
 Management and Information Systems
 North American Journal of Economics and Finance
 Papers in Regional Science
 Regional Science and Urban Economics
 Regional Studies
 Romanian Journal of Regional Science
 Scandinavian Housing and Planning Research
 Scienze Regionali, Italian Journal of Regional Science
 Sensors
 Sistemi Urbani
 Small Business Economics
 Spatial Economic Analysis
 Tijdschrift voor Economische en Sociale Geografie
 Transactions in GIS
 Transportation
 Transportation Research C
 Transport Reviews
 Urban Studies
 Zeitschrift für Wirtschafts- und Sozialwissenschaften, Verein für Sozialpolitik

International Service: Professional Societies

Fellows Awards Committee, Regional Science Association International, 2006 – 2008, 2011 – 2013, Chair 2008, 2013
Dissertation Competition Committee, Regional Science Association International, Las Vegas 2005
Epainoz Prize Committee, European Regional Science Association, 2001 – 2003
Councillor, Regional Science Association International, 1999 – 2001
38th Congress of the European Regional Science Association, Vienna, Chair, Organizing Committee, 1998
Nominating Committee for the President, European Regional Science Association, 1993 – 1994
36th North-American Conference of the Regional Science Association International, Santa Barbara, **Co-Chair, Programme Committee**, 1989
Executive Committee, European Organising Committee, 1986 – 1999

IGU (International Geographical Union) **Commission on Mathematical Models**, Chair, 1988 – 1996, Austrian National Committee, 2006-2010

Book Series Editorships

Advances in Spatial Science, Springer, Co-Founder (with Folke Snickars, Royal Institute of Technology, Stockholm), and Co-Editor with Geoffrey Hewings, Peter Nijkamp, Folke Snickars (1995 – present)

Gesellschaft, Raum und Umwelt, Gordon & Breach, Co-Founder (with Gerhard Bahrenberg), and Co-Editor (1993 – 1999)

Journal Editorships

Journal of Geographical Systems, Co-Founder (with Arthur Getis, San Diego State University) and Editor-in-Chief (1999 – present), Springer

Geographical Systems, Gordon & Breach, Co-Founder (with Arthur Getis, San Diego State University) and Editor (1994 – 1998),

Geographical Analysis, Consulting Editor (1985 – present)

Annals of Regional Science, Associate Editor (1989 – present)

Service on Editorial Boards

Environment and Planning A, Pion (1983 – 1993)

Papers in Regional Science, Springer (until 2004)/Blackwell (1991 – 2004, 2009 – 2014)

International Regional Science Review, Sage Publication (1986 – 1988)

Letters in Spatial and Resource Sciences, Springer (2009 – 2014)

Sistemi Urbani, Guida Editori (1988 – 1993)

Geographica Helvetica, Verlag Geographie Schweiz (1999 – 2006)

Acta Geographica Sinica (English), The Chinese Academy of Sciences (1998 – present)

Acta Geographica Sinica (Chinese), The Chinese Academy of Sciences (1998 – present)

URISA Journal [Urban and Regional Information Science] (Article Review Board, 2000 – present)

Open Environmental Sciences (2007 – present)

Romanian Journal of Regional Science (2008 – present)

Tourismus Journal, Lucius & Lucius (1997 – 2006)