About the Contributors

Lin Liu is professor of geography at the University of Cincinnati. His main area of expertise is geographic information science (GIS) and its applications to urban-economic problems. He became interested in crime analysis and simulation in year 2000. Dr. Liu is a former president of the Association of the Chinese Professionals in GIS—Abroad. He currently serves in the advisory panel of the Geography and Regional Science program at the National Science Foundation. Dr. Liu received his BS and MS degrees from Peking University and his PhD in Geography from the Ohio State University.

John Eck is professor of criminal justice at the University of Cincinnati. He has written extensively on police effectiveness, drug markets, crime patterns, and crime prevention. He is an individual affiliate of the Center for Problem-Oriented Policing and was a member of the National Academy of Sciences Committee to Review Research on Police Policy and Practices. Dr. Eck received his BS and MS degrees from the University of Michigan and his PhD in Criminology from the University of Maryland. Before earning his PhD, Eck directed research for the Police Executive Research Forum, a police research organization in Washington, D.C.

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Azadeh Alimadad completed her BS in Mathematics in Iran and holds a MS in Biostatistics from Carleton University. She is a PhD student in health modeling at SFU and is a member of the Complex Systems Modelling Group in the Center for Interdisciplinary Research in the Mathematical and Computational Sciences (IRMACS) at Simon Fraser University. She is focused on applying epidemiological compartmental models to problems both in epidemiology and other fields.

Mairon Belchior is an undergraduate student studying Computer Science at the University of Fortaleza. His research interests include Artificial Intelligence, Multi-Agents Systems, Genetic Algorithms and Swarm Intelligence. He had a scholarship from CNPQ (National Council for Scientific and Technological Development) in 2005 and 2006. Currently, he is an exchange student at Ball State University.

Daniel Birks is a Research Fellow at the UCL Jill Dando Institute of Crime Science. He has worked on numerous crime prevention research projects in conjunction with the Home Office and several police forces in the UK. His research interests include the development of innovative crime analysis and decision support techniques and tools. In particular, prospective models of crime, the application of simulation techniques within criminology, the study of offender predation patterns, and the use of data-mining in crime analysis.
Peter Borwein holds a Burnaby Mountain Chair in Mathematics at SFU and is the Executive Director of the Center for Interdisciplinary Research in the Mathematical and Computational Sciences (IRMACS). He is the author of 6 books and over 150 research articles. His research interests span Diophantine and computational number theory, classical analysis, and symbolic computation. An award-winning mathematician, he leads three major initiatives within the national mathematics groups, including MITACS, PIMS and IRMACS. He has been involved in a number of large-scale computational number theory and combinatorial problems. The highly successful CFI-funded IRMACS Centre is based on a unique model for interdisciplinary research. It builds on a core cluster of mathematical and computational expertise to forge multidisciplinary collaborations within the sciences.

P. Jeffrey Brantingham is a Professor of Anthropology at the University of California, Los Angeles. He studies the evolution of human foraging adaptations and conducts fieldwork in China, Mongolia, and Tibet. Mathematical and simulation modeling have become an increasingly important part of Brantingham’s work on understanding human foraging adaptations. His work on crime is based on the premise that criminal offenders are modern day hunter-gatherers and that many of the mathematical and simulation techniques that he uses for studying the archaeological record are equally applicable to the study of crime pattern formation.

Patricia Brantingham is RCMP University Professor of Computational Criminology, Director of the Institute for Canadian Urban Research Studies (ICURS) and Co-Director of the ICURS Laboratory at Simon Fraser University. A mathematician and urban planner by training, she is the author or editor of two-dozen books and scientific monographs and more than 100 articles and scientific papers. Dr. Brantingham is the leader of an international collaboration in computational criminology that links together a dozen university research laboratories around the world in the study of crime patterns using modern computational power. Recent research has looked at the patterns of crime at shopping malls and on transit systems, the distribution of crimes on road networks, and the location of crime in complex urban ecologies. She has been particularly interested in the use of intensive simulation techniques in modeling crime patterns and criminal justice system behavior.

Paul Brantingham is RCMP University Professor of Crime Analysis and Co-Director of the ICURS Laboratory at Simon Fraser University. A lawyer and criminologist by training, he is author or editor of more than 20 books and scientific monographs, and more than 100 articles and scientific papers. Professor Brantingham has been involved in crime analysis and crime prevention research for more than 20 years. He is one of the co-developers of the primary/secondary/tertiary model of crime prevention now commonly used by criminologists and crime prevention specialists. He is well known for work on offender decision making and on the ways in which the physical environment shapes both the incidence and the fear of crime. Recent research has included study of the geography of persistent offending and of displacement phenomena and study of the complexity and diversity of crime patterns.

Alex Breuer is a graduate student in Computer Science at Indiana University, where he works at the Open Systems Lab. He received his B.S. in Computer and Information Science from the University of Delaware in 2002, and M.S. from Indiana University in 2007. His research interests focus on scientific computing and visualization.
Virginia Carver is a PhD candidate in Criminology and undergraduate lecturer at the University of Texas at Dallas (USA). Currently she is researching the relationship between drug use, drug arrest, and employment. Her professional presentations include the annual meetings of the American Society of Criminology and the Academy of Criminal Justice Sciences.

Spencer Chainey is Director of Geographical Information Science at the Jill Dando Institute of Crime Science, University College London. Much of his work is focused towards developing the utility of crime mapping to aid intelligence development and information sharing, including the development of techniques and approaches that are utilized by police forces and community safety partnerships. His work has influenced national policy, and has contributed to policing and crime reduction developments in the USA, Canada, Brazil, Australia, and New Zealand.

Bryan Chastain is a PhD candidate in Geospatial Information Sciences at the University of Texas at Dallas. Bryan has a background in computer science, with a BS from Baylor University in Waco, Texas, as well as in geography, with a M.A. from The Ohio State University in Columbus, Ohio. His current research focuses on applying agent-based modeling as a tool for spatial analysis and simulation within GIS. He has presented research at the annual meeting of the Association of American Geographers.

André L. V. Coelho was born on June 11, 1974, in Fortaleza, Ceará, Brazil. He received the BS degree in Computer Engineering in 1996, and earned the MS, and PhD degrees in Electrical Engineering (specialization in Computer Engineering) in 1998 and 2004, respectively, all from the State University of Campinas (Unicamp), Brazil. Currently, he is an adjunct professor affiliated with the Graduate Program in Applied Informatics at the University of Fortaleza (Unifor), Brazil, conducting research in computational intelligence, metaheuristics, multiagent systems, machine learning, and data mining. He has a record of published papers on these themes. He is a member of IEEE.

Kevin M. Curtin is an Assistant Professor of Geographic Information Science (GIS) at the University of Texas at Dallas. He specializes in network GIS, optimal location science, and transportation data modeling, and teaches courses in world regional geography, introductory GIS, network GIS, GIS theories, and transportation and logistics. He is the author of book chapters and peer reviewed journal articles in the fields of geography, location science, and transportation science. He works extensively with academic researchers, government agencies, and private businesses to provide geographically informed data analyses.

Vahid Dabbaghian-Abdoly received his PhD from Carleton University in computational algebra. His research interests include computational mathematics and mathematical modeling. He has developed a package for the computational algebra system GAP and worked on a number of joint projects with Maplesoft. He is currently a member of the Complex Systems Modelling Group in the Center for Interdisciplinary Research in the Mathematical and Computational Sciences (IRMACS) at Simon Fraser University.

Jake Desyllas is Director and a founding partner of Intelligent Space and directs the urban and public space division of the practice. He is responsible for the development of Intelligent Space’s pioneering software for modeling pedestrian flows. He was an independent cross-party expert advisor to the 2002
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**Susan Donkin** is a Research Fellow at the UCL Jill Dando Institute of Crime Science. After graduating from the University of Toronto, she worked in crime prevention and legal psychiatry, acquiring substantial experience in the development and delivery of both academic criminological research and practical crime prevention programs. Her research interests include the application of computer simulation in criminology, offender adaptation, political violence and terrorism, as well as alternative forms of justice.

**Anne Dray** is a Research Fellow at the Australian National University. An agronomist by training, her current research focuses on exploring complex systems using agent-based modeling. Relevant stakeholders and policy makers are involved in the early stages of models development through participatory modeling. She has applied this approach in diverse contexts including equitable water allocation in Tarawa (Republic of Kiribati), coral reef conservation in Mexico and groundwater salinity control in Western Australia. In the field of illicit drugs, she has developed SimDrug, an agent-based model dedicated to explore illicit drug markets in Australia.

**Henk Elffers** graduated in mathematical statistics at the University of Amsterdam and got his Ph.D. in psychology of law at Erasmus University Rotterdam, on a thesis on income tax evasion. He held various research appointments in Amsterdam (mathematics), Utrecht (geography), Rotterdam (law and psychology) and is presently senior-researcher at the Netherlands Institute for the Study of Crime and Law Enforcement NSCR (Leiden, the Netherlands), and professor of Psychology and Law at Antwerp University (Belgium). His research interest comprise spatial aspects of crime, rational choice theory of rule compliance, simulation methods in criminology, statistics in the courtroom, relationship between judges and the general public, and measurement in criminology.

**Ron Ferguson** completed a PhD in Mathematics at the University of British Columbia in the field of computational algebra. Dr. Ferguson has a broad research background in mathematics, including pure and computational problems. For the last two years he has been a member of the Complex Systems Modelling Group in the Center for Interdisciplinary Research in the Mathematical and Computational Sciences (IRMACS) at Simon Fraser University where he has focused on system dynamics and analytic methods.

**Ellen Fowler** holds a Master of Science in Operations Research from the University of British Columbia and a Bachelor of Arts in Economics from Simon Fraser University. In addition, she is a lecturer at the Business Schools of both alma maters and an O.R. consultant. Her main interests lie in mathematical programming, discrete event simulation and optimization. Currently, she is a member of the Complex Systems Modelling Group in the Center for Interdisciplinary Research in the Mathematical and Computational Sciences (IRMACS) at Simon Fraser University.

**Vasco Furtado** is professor of computer science at University of Fortaleza (UNIFOR), Brazil, where he also leads a team of researchers in the Knowledge Engineering group that studies agent-based simulation and agent’s explanation on the Web. He has coordinated and developed research and development
About the Contributors

projects on the law enforcement domain. Furtado holds a PhD in Informatique from the University of Aix-Marseille III, France. He has just finished his sabbatical year in the Knowledge Systems Laboratory at Stanford University in 2006–07. Further information about publications and projects is available at http://www.mentores.com.br/vasco/index.html.

Amir Ghaseminejad, a faculty member of School of Business at Capilano College and Computer Science and Information Systems Department at Langara College, holds a MS in Computer Hardware Engineering from Sharif University. His research interests include technology and society interrelationships, systems analysis, databases and information management. He has many years of experience in design, development and management of Software Projects and is an expert in Internet technologies, operating systems and databases. His current research is focused on the application of hybrid models combining process control and discrete event simulation in modeling complex systems and the effect of modern technologies on democratic decision-making. Currently, he is a member of the Complex Systems Modelling Group in the Center for Interdisciplinary Research in the Mathematical and Computational Sciences (IRMACS) at Simon Fraser University.

Christopher Giles completed a BA in criminology from the University of Manitoba and holds a Master of Arts degree in criminology from Simon Fraser University. At present, Mr. Giles is completing his Doctor of Philosophy degree in Criminology at Simon Fraser University. He is a researcher in the Institute for Canadian Urban Research Studies, where he is involved in modeling and simulation of criminal justice systems. His areas of interest include criminal careers, research methodology in criminology and mathematical modeling and simulation of criminal justice systems.

Uwe Glässer is Associate Professor and Director of Computing Science and Director of the Software Technology Laboratory at Simon Fraser University. He is Co-Director of the ASM Research Center, a virtual research center with research groups all over Europe and North America. In his research on formal aspects of software technology and applications of formal methods, he regularly collaborates with industry and public agencies. He is a coauthor of a widely used ITU-T industry standard and known for his work on semantic foundations of system design languages. More recent work focuses on intelligent decision support and computational models of security processes.

Elizabeth Groff has spent the last 15 years applying spatial analysis to the study of crime-related issues at both the local and national levels. As GIS Coordinator, she institutionalized the use of geographic information systems (GIS) at the Charlotte-Mecklenburg Police Department. As a Social Science Analyst at the National Institute of Justice’s Crime Mapping Research Center she promoted the analytic use of mapping in criminal justice agencies. As a Senior Research Associate at the Institute for Law and Justice she began a micro level longitudinal study of crime in Seattle, Washington; started testing the use of simulation models for understanding street robbery; and completed an examination of the impacts of technology acquisitions in law enforcement agencies. She is currently an Assistant Professor in the Department of Criminal Justice at Temple University. Her research interests include: crime and place; modeling geographical influences on human activity; crime prevention; and policing.

Karen L. Hayslett-McCall is currently an Assistant Professor of Criminology and GIS at the University of Texas at Dallas. She received her PhD from The Pennsylvania State University in 2002. While
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**Josh Hursey** is a PhD bound graduate student at Indiana University. He received his BA in Computer Science from Earlham College in the spring of 2003. He received his MS degree in Computer Science from Indiana University in the spring of 2006. He is currently working in the Open Systems Laboratory on the Open MPI project under the direction of Dr. Andrew Lumsdaine. His primary research interests focus on parallel and distributed systems, scalable fault tolerance techniques, and scientific computing.

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**Eric Jefferis** is an Assistant Professor in the Department of Justice Studies at Kent State University. He is also a Research Fellow at Kent State University’s Institute for the Study and Prevention of Violence (ISPV). Dr. Jefferis’ research interests include the spatio-temporal analysis of crime; hot spotting methods; factors that influence citizens’ perceptions of the police; and the effectiveness of new policing strategies and technologies. Prior to joining the ISPV, he was a Social Science Analyst at the National Institute of Justice. He received his Ph.D. in Criminal Justice from the University of Cincinnati.

**Shane D. Johnson** is currently a senior lecturer (Associate Professor) at the UCL Jill Dando Institute of Crime Science. He has a particular interest in the spatial and temporal distribution of crime, crime forecasting and design against crime. He has conducted work for a variety of sponsors including the Arts and Humanities Research Council (AHRC) and the Home Office, and currently coordinates an international research network funded by the British Academy. He has published over 40 original research papers within the fields of criminology and forensic psychology in journals including the Journal of Quantitative Criminology and Criminology and Public Policy.

**Youngho Kim** is a geographer who is interested in space-time surveillance, spatial statistics, econometrics, and GIS with applications to criminology and epidemiology modeling. Kim, as a PhD student in the OSU geography department, has taught several courses such as World Regional Geography, GIS, Cartography, and Spatial Statistics as an instructor or TA. He received a research development award by the Criminal Justice Research Center in the Ohio State University in 2003. Currently, Kim has been an active member of the Association of American Geographer since 2002 and has participated in the SAM (Spatial Analysis and Modeling) paper competition in 2007.
About the Contributors

Yushim Kim is a postPhD researcher at the John Glenn School of Public Affairs at the Ohio State University. Her research interests include decision-making and policy analysis focusing on health/welfare programs and public management. She has utilized spatial analysis and social simulation techniques for crime in a public service delivery program. Email: kim.1031@osu.edu.

Bryan Kinney is Assistant Professor of Criminology and Co-Director of the Institute for Canadian Urban Research Studies (ICURS) Laboratory at Simon Fraser University. His recent publications include collaborative projects with researchers from computing and geographic information sciences in the development of computational methods for criminology. Dr. Kinney’s primary research area focuses on understanding the distribution of crime and the movement of agents within the criminal justice system. He is currently overseeing the development of an interoperable crime information warehouse for criminal justice data in the province of British Columbia.

Jenny Li holds a BS in Mathematics from Simon Fraser University. Currently, she is a student in the applied mathematics program at Simon Fraser University. Ms. Li is a member of the Complex Systems Modelling Group in the Center for Interdisciplinary Research in the Mathematical and Computational Sciences (IRMACS) at Simon Fraser University where she works on discrete event simulation models in various applied fields.

Xia Li is professor of the School of Geography and planning, Sun Yat-sen University. His major research interests include remote sensing, geographical information systems, land use changes, and urban simulation. His papers have been widely published in known international journals, such as International Journal of Geographical Information Science, Remote Sensing of Environment, Photogrammetric Engineering & Remote Sensing, International Journal of Remote Sensing, Environment and Planning A, Environment and Planning B, Journal of Environmental Management, Landscape and Urban Planning.

Lorraine Mazerolle is a Professor in the School of Criminology and Criminal Justice at Griffith University and the Deputy Director of the Key Centre for Ethics, Law, Governance and Justice. She received her Ph.D. from Rutgers University, New Jersey in 1993 and spent an additional seven years as an academic in the USA (at Northeastern University and the University of Cincinnati). She is the recipient of numerous US and Australian national competitive research grants on topics such as problem-oriented policing, police technologies (e.g., crime mapping, gunshot detection systems, 3-1-1 call systems), community crime control, civil remedies, street-level drug enforcement, and policing public housing sites. In 2003, Professor Mazerolle was admitted as a Fellow of the Academy of Experimental Criminologists and now serves as the Vice President of the Academy. She also serves on the Board of Studies for the Australian Institute for Police Management, on the Capital Cities Lord Mayors Drug Advisory Board and as an Associate Editor of the Journal of Experimental Criminology. Professor Mazerolle is the lead author (with Janet Ransley) of Third Party Policing (Cambridge University Press), sole author of Policing Places with Drug Problems (Sage Publications) and a co-editor, with Jan Roehl, of Civil Remedies and Crime Prevention (Criminal Justice Press). She has written many scholarly articles on policing, drug law enforcement, displacement of crime, and crime prevention.
Mahbubur R. Meenar is the Senior GIS Design Specialist of the Center for Sustainable Communities and Adjunct Assistant Professor of the Community and Regional Planning Department at Temple University. Mr. Meenar received his MS degree in Urban Planning from the State University of New York at Buffalo and a BS degree in Architecture from Bangladesh University of Engineering and Technology. His research interests include environmental modeling, 3-D GIS visualization, sustainable development, and GIS applications in disaster management and environmental planning.

Adriano Melo is a MS student at the Master of Applied Informatics at the University of Fortaleza (UNIFOR/MIA). His research interests include Multi-Agents Systems, Genetic Algorithms and Swarm Intelligence. He majored Computer Science at the University of Fortaleza in 2003 and received a diploma of Specialist in Information Technology from the Federal University of Ceará in 2005.

Ronaldo Menezes is associate professor in computer science at Florida Institute of Technology. He received his BS in computer science in 1992 from the University of Fortaleza, Brazil. He was awarded MS (by research) in Computer Science in the field of Parallel Computing Models in 1995 from the State University of Campinas, Brazil. In 2000 he was awarded his PhD in computer science at the University of York, UK. He is a member of many organizations such as IEEE, ACM, SBC and AWC. He is currently member of the elected group of officials of the ACM SIGAPP (Special Interest Group in Applied Computing). He has published more than 40 papers in international events and journals. He is a program committee member of many conferences and workshops in Swarm Intelligence and Coordination. His research interests are in the field of Swarm Intelligence and Coordination in Multi-agent Systems.

Pascal Perez, associate professor, is presently developing an international research network called “Human Ecosystems Modelling with Agents (HEMA)”. Multi-agent system approaches are used to implement companion modeling with local communities in the Asia-Pacific region. Field research is used to nurture a postgraduate course based on these innovative methodologies. Associate Professor Perez's research interests include water management, cropping systems and evaluation of irrigation efficiency, crop water balance modeling, and simulation of social/environmental interactions through a Multi Agent Systems approach. He has worked extensively in Western Africa, Middle East, South East Asia (Indonesia, Thailand). His published papers have appeared in Environmental Modelling & Software, Agronomie, and Agri, Ecos & Env.

Nahanni Pollard is a third-year PhD student in the School of Criminology at Simon Fraser University, and currently works as a Research Advisor for the Vancouver Police Department. Her research background focuses on criminal justice system analysis, chronic offenders, sentencing practices, police studies, advanced statistical techniques, and spatial analysis of crime patterns. Her BA and MA are both from Simon Fraser University, where she has studied primarily with Patricia and Paul Brantingham.

Fang Qiu is currently an Associate Professor of GIS and Remote Sensing at the University of Texas at Dallas. He received his PhD from the University of South Carolina in 2000. Dr. Qiu's research and instructional areas are remote sensing, neural network and fuzzy logic, GIS application software development, spatial analysis, modeling and simulation, and their application in public health and crime related problems. His research work at the University of Texas at Dallas is being funded by major federal government agencies, such as NSF, NASA, EPA, CDC, and so forth.
**About the Contributors**

**J. Raul Ramirez** is the president of R2 Research and Consulting, a Mapping and GIS consulting company in Columbus, Ohio. Before that, he worked at The Ohio State University Center for Mapping and retired in 2005. Doctor Ramirez has more than 30 years of research experience in mapping and GIS and has published more than 60 technical papers describing his research.

**Alison Ritter** is an Associate Professor at the National Drug and Alcohol Research Centre, with adjunct appointments with the Regulatory Institutions Network, The Australian National University and the Key Centre for Ethics, Law, Justice and Governance, Griffith University. After completing her MS in Clinical Psychology, she worked full-time as a clinical psychologist. During this time, she commenced her PhD in treatment outcomes associated with acquired brain injury. A subsequent move to a policy position with the Victorian Department of Human Services led to a secondment to establish the Turning Point Alcohol and Drug Centre on behalf of Government in 1994. As Deputy Director of Turning Point Alcohol and Drug Centre from 1995 to 2005, Alison completed numerous clinical research projects, including trials of new medications for the treatment of heroin dependence and managed epidemiological, health services research and evaluation. With an NHMRC Research Fellowship and a significant philanthropic grant, Alison is currently director of a major illicit drug policy research program, the Drug Policy Modelling Program in collaboration with scholars from The ANU, Turning Point Alcohol and Drug Centre and Griffith University School of Criminology. The goal of the work is to advance illicit drug policy through improving the evidence-base, developing new policy decision-making tools and understanding the best mix of policy options (law enforcement, prevention, treatment, and harm reduction) and the ways in which these different policy options dynamically interact. Associate Professor Ritter is Executive Editor of the Drug and Alcohol Review, Vice President of the Australian Professional Society on Alcohol & Drugs, and a member of the College of Problems on Drug Dependence (CPDD). A/Prof Ritter reviews for a range of competitive funding bodies and international addictions journals.

**Alexander Rutherford** is the Leader of the Complex Systems Modelling Group at IRMACS and an Adjunct Professor in the Department of Mathematics. Prior to joining IRMACS, he was the Scientific Executive Officer at the Pacific Institute for the Mathematical Sciences (PIMS). He holds a PhD in Mathematical Physics from the University of British Columbia and held post PhD fellowships at the Swiss Federal Institute of Technology (ETH) in Zurich, Switzerland, and the International School for Advanced Studies (SISSA) in Trieste, Italy. His research spans a wide range of fields within the mathematical sciences. In mathematical physics his main focus has been on quantum many-body problems. In health research, he worked on the design and evaluation of protocols for electronic health records, surgical waitlists and queuing theory and epidemiological compartmental models. His current interests include applying first principles from theoretical physics to problems in the health and social sciences.

**Janis L. Schubert** is a PhD candidate in Geospatial Information Sciences at the University of Texas at Dallas and a National Defense Science and Engineering Graduate (NDSEG) Fellow. Janis has a background in psychology, with a BA from Rice University in Houston, Texas (USA), as well as over 10 years of professional experience in computer software and database design and implementation. Her current research focuses on the analysis of space-time issues and the development of GIS applications to facilitate this analysis. She has presented research at the annual meetings of the American Society of Criminology and the Association of American Geographers.
Tonya Stroman is a second year MS student in Human Computer Interaction at the School of Informatics at Indiana University. Her main area of interest is user-experience in living and learning spaces. More specifically, she is interested in research involving virtual technology as a research and solution tool in these domains. Currently she is exploring these questions through her research in increasing habitability of space structures intended for long-term space missions.

Joseph Szakas is an Associate Professor in the Computer Information Systems Department at The University of Maine at Augusta. He obtained MS Degrees in both Computer Science and Geodetic Sciences, and received his PhD in Geodetic Science from The Ohio State University, where he worked at the OSU Center for Mapping. Dr. Szakas also worked at the Crime Mapping Research Center at the National Institute of Justice in Washington, DC. His research interests are in computational geometric algorithms for massively parallel machines and applying that research to the field of crime mapping.

George Tita is a Professor of Criminology at the University of California, Irvine. His interests include the study of interpersonal violence with a focus of homicide, urban street gangs, and the community context of crime. His methodological toolkit includes both qualitative and quantitative approaches, with a strong interest in mapping and spatial analysis. Tita is involved with an interdisciplinary group of scholars working to promote the use of spatial statistics and analysis throughout the social sciences. Additionally, Tita is continuing his work on modeling the epidemics/spatial diffusion of violence over space and time.

Michael Townsley is currently a Senior Research Fellow at the UCL Jill Dando Institute of Crime Science, University College London. Trained as a statistician, his research has focussed on crime analysis, problem-oriented policing and quantitative methods in a criminal justice setting, all with a view to preventing crime. His current research projects include the spatial and temporal modeling of crime and the analysis of large novel data sets.

Christian Trefftz received a BS in Computer Science from Universidad EAFIT, a MS in Computer Science from Western Michigan University and a PhD in Computer Science from Michigan State University. His research interest is parallel processing and its applications. He is currently an Associate Professor at the School of Computing at Grand Valley State University in Allendale, Michigan.

Mona Vajihollahi is currently a PhD candidate of computing science at Simon Fraser University (SFU). She is Project Manager and Research Assistant at the Institute for Canadian Urban Research Studies (ICURS) and the Software Technology Laboratories at SFU. Her research focuses on novel applications of formal methods, and computational modeling, and simulation of public safety and security systems. Her work includes developing intelligent decision support systems in Computational Criminology and new tools for analyzing civil aviation security procedures.

Pieter van Baal graduated in economics at Erasmus University Rotterdam and got his Ph.D. in criminology at the same university, on a thesis on computer simulations of criminal deterrence. He is presently a researcher at the National Institute for Public Health and the Environment RIVM in Bilthoven, The Netherlands. His research activity is focusing on ex ante evaluation of health policy measures, by
studying effects on life expectancy, quality of life and health, using simulation methods in the framework of the RIVM Chronic Disease Model, of which he is one of the co-authors.

Alexa van der Waall received her PhD in Mathematics at the Universiteit Utrecht in the Netherlands. Her mathematical fields of expertise include differential Galois theory, number theory, and computer algebra. She developed and implemented specialized software code on the topic of differential Galois theory for the computer algebra system MAGMA at the University of Sydney, Australia. She is and has been involved in various scientific projects at Simon Fraser University (SFU) in British Columbia. Currently, she is a member of the Complex Systems Modelling Group in the Center for Interdisciplinary Research in the Mathematical and Computational Sciences (IRMACS) at Simon Fraser University where she develops systems dynamics models for various applied fields.

Arvind Verma has served in the Indian police for 17 years in the State of Bihar, holding several senior level positions such as Superintendent and Assistant Inspector General in the organization. His first degree was in Engineering Mathematics from the Indian Institute of Technology- Kanpur and he earned his PhD degree in Criminology from Simon Fraser University- Canada. His PhD work was concerned with analysis of criminal justice data using a variety of mathematical techniques such as Fuzzy Logic, Topology and Fractals. He has served as the Managing Editor of Police Practice and Research: An International Journal and continue to be its Continental Editor. He is an advisor to the Bureau of Police Research and Development in India. His current research interests are in Data Analysis and Visualization, Criminal Justice in India and Comparative Policing. He is the author of three books and numerous articles.

Xuguang Wang received his PhD in Geography from the University of Cincinnati. He is currently a GIS software engineer in the Environmental Systems Research Institute (ESRI), Inc. He specializes in developing raster-based spatial analysis functionalities. He has been involved in developing cellular automata and agent-based models for crime simulation purposes. His research interest also includes map animation and temporal GIS.

Heng Wei is an Assistant Professor of Transportation Systems Engineering at The University of Cincinnati. His research is on microscopic traffic simulation modeling, advanced technology and quantitative methods for highway safety, and traffic flow theory and characteristics. Dr. Wei is internationally recognized for his over 75 published papers and book chapters, and recipient of 10 national and international professional awards. Dr. Wei received M.S. and Ph.D. degrees from The University of Kansas, B.S. and MS degrees from Beijing University of Technology, China, all in Civil Engineering.

Melanie Wellsmith is employed as a Senior Lecturer in criminology at the University of Huddersfield. Prior to this she spent four years as a research fellow with the UCL Jill Dando Institute of Crime Science. During this time she was involved in numerous research projects, primarily using secondary analysis of police crime data. She has published in the areas of offender self-selection, stolen property and emerging methods of car theft. Her current research is focused on the locations of crime events; most notably the concepts of crime attractors, crime generators and risky facilities. In addition to her academic career, Melanie has worked as a special constable (volunteer police officer) and a crime analyst.
Ningchuan Xiao is an assistant professor at Department of Geography in The Ohio State University. His research interests include geographical information science, spatial analysis, and spatial decision support systems.