

University Consortium for Geographic Information Science

2007 Candidates for President-Elect



May Yuan is an Edith Kinney Gaylord Presidential Professor in the Department of Geography at the University of Oklahoma (OU). She received her Ph.D. from the State University of New York at Buffalo in 1994 and has been the OU lead delegate to UCGIS since OU became a member in 1997. Since then, May has been privileged to work with dedicated delegates, intellectual leaders, and UCGIS officers in promoting GIScience research and education. Her primary UCGIS involvement has been with the research committee and the board. She had the honor to work with leading GIScientists in completing two chapters in the UCGIS book: *A Research Agenda for Geographic Information Science*, edited by R. McMaster and L. Usery; one chapter is on Extensions to Geographic Representations, and the other, Geospatial Data Mining and Knowledge Discovery. May was the secretary to the board 2003-2004 and was elected to the board 2004-2007. With a sponsorship from the intelligence community, she and Dr. K. Stewart Hornsby co-organized a UCGIS workshop in October 2006 on *Visualization and Computation for the Understanding of Dynamics in Geographic Domain*. May feels honored to be nominated for the UCGIS vice presidency. If elected, she will work with the UCGIS leadership and devoted delegates to substantiate UCGIS services to all members, broaden participation and involvement from UCGIS members, and strengthen UCGIS leadership in national and international GIScience.



Robert B. McMaster is Professor and Chair of The Department of Geography at the University of Minnesota. From 2002-2005 he served as Associate Dean for Planning in the College of Liberal Arts. He received a B.A. (cum laude) from Syracuse University in 1978 and a Ph.D. in Geography and Meteorology from the University of Kansas in 1983. He has held previous appointments at UCLA (1983-1988) and Syracuse University (1988-1989). At the University of Minnesota, his research interests include automated generalization (including algorithmic development and testing, the development of conceptual models, and interface design), environmental risk assessment (including assessing environmental injustice to hazardous materials, the development of new spatial methodologies for environmental justice, and the development of risk assessment models), Geographic information science and society (public participation GIS, alternative representations), and the history of U.S. academic cartography. Recently, he completed a

five-year NSF funded project to develop the "National Historical Geographic Information System". He has published several books including: *Map Generalization: Making Rules for Knowledge Representation* (with B. Buttenfield), *Generalization in Digital Cartography* (with K. Stuart Shea), *Thematic Cartography and Geographic Visualization* (with T. Slocum, F. Kessler and H. Howard), *A Research Agenda for Geographic Information Science* (with E. L. Usery), and *Scale and Geographic Inquiry* (with E. Sheppard). His papers have been published in *The American Cartographer*, *Cartographica*, *The International Yearbook of Cartography*, *Geographical Analysis*, *Geographical Systems*, *Cartography and GIS*, *The International Journal of Exposure Analysis*, and many conference proceedings, including Auto-Carto, and Spatial Data Handling.

Robert McMaster served as editor of the journal *Cartography and Geographic Information Systems* from 1990-1996, and the Association of American Geographers (AAG), *Resource Publications in Geography*. He served as Chair of both the AAG's Cartography and Geographic Information Systems Specialty Groups, served three years on the National Steering Committee for the GIS/LIS '92, '93, and '94 conferences, was Co-Director (with Marc Armstrong) of the Eleventh International Symposium on Computer-Assisted Cartography (Auto-Carto-11), served on the U.S. National Committee to the International Cartographic Association, and as a member of the Advisory Board for the Center for Mapping at Ohio State University. He also served as President of the United States' Cartography and Geographic Information Society and both Chair of the University Consortium for Geographic Information Science's (UCGIS) Research Committee and UCGIS Board Member (1999-2002 and 2005-present). In 1999, he was elected as a Vice President of the International Cartographic Association, and was re-elected in 2003. He was recently appointed to a term on the National Research Council's Mapping Science Committee.

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Kate Beard is a professor in the Department of Spatial Information Science Engineering at the University of Maine. She served as department chair for the last eight years. She has been a research faculty with the National Center for Geographic Information and Analysis (NCGIA) since its beginning in 1989 and is currently serving as the Acting Director for NCGIA-Maine. She holds a M.S. (1984) and Ph.D. (1988) from the Institute for Environmental Studies, Land Resources Program, University of Wisconsin-Madison where she specialized in geographic information systems.

Dr. Beard's current research interests include modeling, analysis and visualization of spatio-temporal phenomena. She currently serves as PI on an NSF grant funded through the Science and Engineering Information Integration and Informatics (SEIII) program working with oceanographers to develop an ontology of ocean related events, detect oceanographic events from ocean sensor data streams, and develop methods for visualization and exploration of event patterns. She is PI and Director of an NSF IGERT grant for a new PhD training program in Sensor Science, Engineering and Informatics. She is also coPI with Max Egenhofer on a grant from the Geospatial Intelligence Agency to develop Intelligent Spatial Technologies.

Dr. Beard maintains additional collaborations in the area of bioinformatics. She served as PI on a two-year grant from NSF to investigate the application of spatial concepts to genome mapping. She currently serves on the Executive Committee for the University of Maine NSF IGERT program in Functional Genomics.

She has investigated several aspects of digital libraries from metadata support for information description and retrieval to visualization of metadata for efficient information browsing and quality evaluation. Dr. Beard was a cooperator on the Alexandria Digital Library project centered at the University of California Santa Barbara. Her current research on digital libraries addresses gazetteer development and the extension of the gazetteer concept to geographic knowledgebase.

She is a member of GITA, ACM and IEEE.



Daniel G. Brown received his Ph.D. in Geography from the University of North Carolina at Chapel Hill (1992). After serving as an Assistant and Associate Professor of Geography at Michigan State University, he moved to the University Michigan in 1999, where he is an Associate Professor of Natural Resources and Environment. His work, published in over 60 refereed-articles, chapters, and proceedings papers, focuses on understanding human-environment interactions through a focus on land-use and land-cover changes, modeling these changes, methods for characterizing various aspects of landscape, spatial analysis and remote sensing. An important theme throughout much of his work has been the attempt to understand the relationships between observable spatial

landscape patterns and the processes that give rise to those patterns. Recent work has explored the potential various forms of spatial simulation, including agent-based models for representing spatial dynamics. He chairs the Land Use Steering Group, under the auspices of the Climate Change Science Program, and has served as a member of the NASA Land Cover and Land Use Change Science Team, on a variety of panels for the National Research Council, NASA, and the National Science Foundation, on the Editorial Boards for *Landscape Ecology* and the *Journal of Land Use Science*, and guest editor for special issues of the *International Journal of Geographical Information Science*, *Computers Environment and Urban Systems*, *Ecological Applications*, *Plant Ecology*, and *GeoCarto International*.

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2007 Candidates for Board of Directors (cont'd)



Donna Peuquet is a Professor of Geography at The Pennsylvania State University. Current research interests include theory of geographic knowledge representation, spatio-temporal data representation, spatial cognition, spatial analysis methodologies, geographic database design, and the use of GIS in epidemiological research. My recently published book, entitled *Representations of Space and Time*, with support in part from a Guggenheim Fellowship, develops an integrated perspective on philosophical, cognitive and technical issues on spatial and space-time representation. I am also PI on a project to develop an integrated database and visualization environment for space-time information exploitation, called STNexus, in collaboration with Alan MacEachren and others at Penn State.

Recent teaching at the undergraduate level includes Mapping our Changing World, Introduction to GIS, and Geographic Information Management. At the graduate level, I have taught courses on spatial databases and various aspects of geographic representation.

Other current activities include membership on the Editorial Board of the *International Journal of Geographical Information Systems* and membership on the Editorial Advisory Board of the *ISPRS Journal of Photogrammetry and Remote Sensing*. Numerous invited talks nationally and internationally include most recently an invited talk at The Computer: The Once and Future Medium for the Humanities and Social Sciences Symposium, 2006 Canadian Congress Social Sciences and Humanities in Toronto.

Service to UCGIS includes membership on the UCGIS Board of Directors (1996-1998), membership on the Research Committee and lead person in the effort to define the UCGIS Research Initiative on Extensions to Geographic Representation (1996-1999), membership on the Education Committee (1998-1999), and member of UCGIS Model Curricula Task Force (1998-2004).

As member of the UCGIS Board of Directors, I would actively work to promote the visibility of UCGIS among federal agencies, as well as corporations and universities, through continuing contact throughout the year. This is essential in enhancing the visibility already achieved through organized events. I would also work to see the Model Curricula Project continue. I consider this to potentially be a valuable resource to our member institutions, as well as a contribution to the field of GIScience in general. The recent publication of the GI S&T Body of Knowledge is an important first step.



Marc P. Armstrong is Professor and Chair of the Department of Geography at The University of Iowa where he also holds an appointment in the Graduate Program in Applied Mathematical and Computational Sciences. Armstrong was named a College of Liberal Arts and Sciences Collegiate Fellow in 2005 and served as Interim Dean for Research in CLAS during Fall 2006. Armstrong's Ph.D. is from the University of Illinois at Urbana-Champaign. A primary focus of his research is on the use of grid computing to improve the performance of spatial analysis methods. Other active areas of interest are in mobile computing, privacy aspects of geo-spatial technologies, and evolutionary computation. Dr. Armstrong has served as North American Editor of the *International Journal of Geographical Information Science*, Associate Editor of *Cartography and Geographic Information Systems*, co-director of Auto-Carto 11 and as Conference Chair for GIS/LIS '94. He now serves on the editorial boards of *International Journal of Geographical Information Science*, *Cartography and Geographic Information Science*, *Geoinformatica* and *Geographical Analysis*. Dr. Armstrong has published more than 100 academic papers including articles in a wide variety of peer-reviewed journals such as *Annals of the Association of American Geographers*, *Environment and Planning A, B & C*, *Photogrammetric Engineering and Remote Sensing*, *Geographical Analysis*, *Geographical Systems*, *Journal of the Urban and Regional Information Systems Association*, *Statistics and Medicine*, *Mathematical Geology*, *Computers & Geosciences*, *International Journal of Geographical Information Science*, *Parallel Computing*, *Computers, Environment and Urban Systems*, and *Journal of the American Society for Information Science*.