Tobler Memorial Lecture
Mobility In The Smart City
By Dr. Michael F. Goodchild

Abstract: Improvements in data sources, computing power, and connectivity are allowing an unprecedented new burst of research on mobility in the city, at finer spatial and temporal resolutions. While these efforts are undoubtedly useful, to date they have fallen somewhat short of permitting the kinds of research that we associate with understanding and explanation. The Tobler Hiking Function is a valuable tool in understanding the spatial behavior of pedestrians, but it addresses only the minimization of travel time for average walking humans. Generalizations are needed for the elderly, the mobility impaired, alternative modes of transport, and alternative objective functions. Significant advances will also be needed in the databases on which wayfinding and route choice currently rely. The presentation ends with a discussion of the implications for connected and autonomous vehicles, and for individual privacy.

Bio: Dr. Michael F. Goodchild is Emeritus Professor of Geography at the University of California, Santa Barbara, where he also holds the title of Research Professor. He is also Distinguished Chair Professor at the Hong Kong Polytechnic University and Research Professor at Arizona State University, and holds many other affiliate, adjunct, and honorary positions at universities around the world. Until his retirement in June 2012 he was Jack and Laura Dangermond Professor of Geography, and Director of UCSB's Center for Spatial Studies. He received his BA degree from Cambridge University in Physics in 1965 and his PhD in geography from McMaster University in 1969, and has received five honorary doctorates. He was elected member of the National Academy of Sciences and Foreign Member of the Royal Society of Canada in 2002, member of the American Academy of Arts and Sciences in 2006, and Foreign Member of the Royal Society and Corresponding Fellow of the British Academy in 2010; and in 2007 he received the Prix Vautrin Lud. He was editor of Geographical Analysis between 1987 and 1990 and editor of the Methods, Models, and Geographic Information Sciences section of the Annals of the Association of American Geographers from 2000 to 2006. He serves on the editorial boards of ten other journals and book series, and has published over 15 books and 500 articles. He was Chair of the National Research Council's Mapping Science Committee from 1997 to 1999, and of the Advisory Committee on Social, Behavioral, and Economic Sciences of the National Science Foundation from 2008 to 2010. His research interests center on geographic information science, spatial analysis, and uncertainty in geographic data.

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Buchanan Hall, Room 1930,
3:30pm - 4:45pm