

REMOTELY-SENSED MEASUREMENT FOR A RESILIENT AND SUSTAINABLE URBAN FUTURE

Thursday, September 15, 2016

University of Pennsylvania, Lauder-Fischer Hall, Room 303

10:00 AM - 10:30 AM
REGISTRATION

10:30 AM - 10:40 AM
INTRODUCTION

Carl Shapiro, Director, USGS Science and Decisions Center
Susan Wachter, University of Pennsylvania

10:40 AM - 11:00 AM
OPENING ADDRESS: THE SUSTAINABLE SITES INITIATIVE
Frederick Steiner, University of Pennsylvania

11:00 AM - 12:15 PM
SESSION 1: GLOBAL URBAN GROWTH AND REMOTE SENSING IMAGERY
Martino Pesaresi, European Commission
Patrick Lamson-Hall, NYU Marron Institute of Urban Management
Christopher Small, Columbia University
Eugenie Birch, University of Pennsylvania
Susan Wachter, University of Pennsylvania (Moderator)

12:15 PM - 1:15 PM
LUNCH KEYNOTE ADDRESS: ATLAS FOR THE END OF THE WORLD
Richard Weller, University of Pennsylvania

1:15 PM - 2:30 PM
SESSION 2: MODELS AND SPATIAL DATA FOR A SUSTAINABLE AND RESILIENT URBAN FUTURE
Marc Imhoff, University of Maryland
Mark Montgomery, Population Council
Gilles Duranton, University of Pennsylvania
Peter Christensen, University of Illinois, Urbana-Champaign
Susan Wachter, University of Pennsylvania (Moderator)

2:30 PM - 2:45 PM
BREAK

2:45 PM - 4:00 PM
SESSION 3: IDENTIFYING THE IMPACT OF URBAN EXPANSION ON ECOSYSTEM SERVICES
Richard Bernknopf, University of New Mexico and
Dianna Hogan, USGS Eastern Geographic Science Center
Yuyu Zhou, Iowa State University
Hans-Peter Plag, Old Dominion University
Carl Shapiro, USGS Science and Decisions Center (Moderator)

4:00 PM - 4:30 PM
PERSPECTIVES ON THE DAY
Ken Bagstad, USGS Geosciences & Environmental Change Science Center
Jerry Miller, The National Academies of Sciences, Engineering, and Medicine
Gregory Snyder, USGS Capabilities and Analysis Land Remote Sensing Program
Dianna Hogan, USGS Eastern Geographic Science Center (Moderator)

4:30 PM
PROGRAM CONCLUSION
Carl Shapiro, Director, USGS Science and Decisions Center
Susan Wachter, University of Pennsylvania

BIOGRAPHIES

FREDERICK STEINER



OPENING REMARKS

Frederick Steiner is Dean and Paley Professor, School of Design, University of Pennsylvania. Most recently, he served as Dean of the School of Architecture and Henry M. Rockwell Chair in Architecture at The University of Texas at Austin for 15 years. He is a Fellow of both the American Society of Landscape Architects and the Council of Educators in Landscape Architecture, as well as a Faculty Fellow of the Penn Institute for Urban Research.

RICHARD WELLER



LUNCH KEYNOTE ADDRESS

Richard Weller is Martin and Margy Meyerson Chair of Urbanism, Professor and Chair, Landscape Architecture, School of Design, University of Pennsylvania. He also acts as Adjunct Professor, University of Western Australia. His research projects have involved scenario planning for cities, megaregions and nations and his current work concerns the application of United Nations (CBD) biodiversity targets.

RICHARD BERNKNOPF



Richard L. Bernknopf is Research Professor, Department of Economics, University of New Mexico. Prior, he was an economist with the U.S. Geological Survey for more than 38 years. His research focuses on the demonstration of the relevance and value of data including earth observation and its translation into a form compatible with decision-making processes.

EUGENIE BIRCH



Eugénie L. Birch is Nussdorf Professor of Urban Research, School of Design, and Co-Director of the Penn Institute for Urban Research, and co-editor of Penn Press's *The City in the 21st Century* series. She currently chairs UN-HABITAT's World Urban Campaign, as well as President of its initiative, the General Assembly of Partners toward Habitat III.

PETER CHRISTENSEN



Peter Christensen is Assistant Professor, Agricultural and Consumer Economics, University of Illinois, Urbana-Champaign. His research uses modeling to investigate urbanization and uncertainty in climate change. He is a contributing author to the Intergovernmental Panel on Climate Change 5th Assessment Report and member of Working Group III.

GILLES DURANTON



Gilles Duranton is Professor of Real Estate, Dean's Chair in Real Estate, The Wharton School. He researches urban and transportation issues, land use, urban growth, and the estimation of the costs and benefits of cities and clusters. He is also interested in the effects of transportation infrastructure on urban development and the evaluation of local policies.

MARC IMHOFF



Marc Imhoff is Visiting Research Scientist with University of Maryland's Earth System Science Interdisciplinary Center, where he uses Earth observations, models, and tools for addressing a broad range of sustainability issues. He held various science and leadership roles at NASA's Goddard Space Flight Center and PNNL's Joint Global Change Research Institute.

PATRICK LAMSON-HALL



Patrick Lamson-Hall is an urban planner and a research scholar at the NYU Stern Urbanization Project. His research addresses urbanization in the developing world, alternative transportation, and public space. He manages the India Urban Expansion Observatory and the Ethiopia Urban Expansion Initiative, projects to prepare rapidly growing cities spatially.

JERRY MILLER



Jerry Miller is Director, Science and Technology for Sustainability Program, Policy and Global Affairs Division, National Academies of Science, Engineering, and Medicine. A senior executive with expertise in science and resource management policy with more than 20 years of experience, He is the senior scientist driving policy and program direction on sustainability-related issues.

MARK MONTGOMERY



Mark Montgomery is Professor of Economics, Stony Brook University and Senior Associate, Poverty, Gender and Youth Program, Population Council in New York. At Stony Brook he teaches economic demography and econometrics. His current research interests include empirical modeling of urban poverty and health and forecasting city growth with attention to climate related risks.

MARTINO PESARESI



Martino Pesaresi is Scientific Officer, Join Research Centre, the European Commission. He designed the Global Human Settlement Layer, involving planetary-scale, detailed data analytics from open satellite remote sensing, census data and crowd-sourced information. His research focuses on big remote sensing data analytics, automatic image understanding, machine learning, and spatial statistics.

HANS-PETER PLAG



Hans-Peter Plag is Professor, Ocean, Earth, and Atmospheric Sciences, Old Dominion University. He joined as Co-Director, Climate Change and Sea Level Rise Initiative (CCSLRI) and now is Director, Mitigation and Adaptation Research Institute (MARI). His research focuses on climate change, sustainability, local to global sea level changes, solid Earth geophysics, and Earth system dynamics.

CHRISTOPHER SMALL



Christopher Small is Lamont Research Professor, Lamont-Doherty Earth Observatory, Columbia University. His research focuses on using satellite remote sensing to quantify changes in Earth's surface and causes and consequences of such changes and encompasses many cross-disciplinary collaborations ranging from tropical deforestation monitoring to urban growth mapping.

YUYU ZHOU



Yuyu Zhou is Assistant Professor, Department of Geographic and Atmospheric Sciences, Iowa State University. His research addresses applications of geospatial technologies including remote sensing, GIS, and spatial analytic tools as well as integrated assessment modeling to understanding the environmental change problems and potential solutions for sustainable environments.

DIANNA HOGAN



Dianna Hogan is Research Physical Scientist, U.S. Geological Survey Eastern Geographic Science Center. Her work focuses on urban land use, stormwater management, and effects on stream hydrology and chemistry, as well as ecosystem services, including the effects of changing land use on service provision, and the use of ecosystem services in decision making.

CARL SHAPIRO



Carl Shapiro has been an economist at the USGS for over 35 years and is currently Director of the USGS Science and Decisions Center (SDC). SDC's mission is to increase the use and value of scientific information in public policy and societal decisions. He is an adjunct professor of economics in the School of Public Affairs at American University in Washington, DC.

SUSAN WACHTER



Susan M. Wachter is Sussman Professor and Professor of Real Estate and Finance, The Wharton School. She is former Assistant Secretary for Policy Development and Research, HUD; Co-Director, Penn Institute for Urban Research; and Co-Editor, *The City in the 21st Century* Series, Penn Press; and Director, Wharton GIS Lab, and SILUS.