



Geospatial Analysis for International Development:

A Two-day Symposium and Workshop

September 6-7, 2017 at UC Berkeley

Hosted by:

Center for Effective Global Action (CEGA)
Geospatial Innovation Facility (GIF), UC Berkeley
The Big Pixel Initiative (BPI), UC San Diego

Call for Papers

The Symposium on Geospatial Analysis for International Development invites papers on the use of state-of-the-art geospatial analytics to address issues of poverty, sustainable development, urbanization, climate change, and economic growth in developing countries. Authors of accepted papers will be invited to present a talk or poster at the symposium and will receive fast-track consideration for publication in *Development Engineering: the Journal of Engineering in Economic Development*.

Prospective authors are invited to submit an abstract of **no more than two (2) pages** by **July 9th, 2017**
Please submit abstracts to: bit.ly/GeospatialDevSymposium

The Symposium expects participants to be from a multitude of disciplines including computer science, engineering, public health, business and economics.



Topics of interest include:

- Remote sensing analysis of urban and rural areas in developing countries
- Remote sensing applications for social science, including rigorous impact evaluation and the measurement of poverty, inequality, development, and growth patterns
- Urban and peri-urban ecology
- Methods for satellite-based measurement or mapping of yields, electrification rates, infrastructure, and other indicators of development
- Application of remote sensing methods for economic model estimation, urban planning, and poverty reduction
- Measuring poverty in an era of climate change
- Improving public accessibility to environmental data

Symposium Chairs

Ran Goldblatt, UC San Diego
Nancy Thomas, UC Berkeley
Marshall Burke, Stanford University
Solomon Hsiang, UC Berkeley

Jennifer Burney, UC San Diego
Craig McIntosh, UC San Diego
Amit Khandelwal, Columbia University
Gordon Hanson, UC San Diego

Important dates:

- July 9th, 2017: submission of abstract
- August 1st, 2017: notification of acceptance
- September 1st, 2017: submission of full



Development Engineering is a peer-reviewed open access title that applies engineering and economic research to the problems of poverty. For more about the journal, visit <http://elsevier.com/locate/deveng>

Efforts will be made to ensure rapid publication of selected papers, and a limited number of waivers of the open access publication fee will be available.



Event Background

In developing countries, information about people living in poverty often relies on official statistics or *ad hoc* data collected by non-governmental organizations, which can be sparse and difficult to access. At the same time, there are now more than 1,400 satellites continuously collecting an unprecedented amount of data from Earth at ever-improving spatial, spectral and temporal resolutions. These advances, along with new methods for machine learning and parallel computing platforms with large storage capacities, are shifting the way we measure and understand our world. They also allow researchers to study and map human and physical environments at scale, in near real time, with the potential to revolutionize the way we address poverty and other societal challenges.

Recent applications of these technologies in developing countries include mapping of poverty at village and district scale; assessment of road quality and electricity provision; predictions of household consumption expenditure, asset wealth and inequality measures; and monitoring of smallholder farmers' yields in regions affected by drought. Researchers have also extracted meaningful information from rapidly urbanizing regions of the developing world to design environmentally responsible approaches to economic development.

Schedule

Day 1: Symposium on Geospatial Analysis for International Development

The symposium will bring together experts on data science, environmental engineering and geoscience together with social scientists and economists to present state-of-the-art algorithms, tools, and applications that use satellite data to measure and address the world's greatest social challenges.

Day 2: Geospatial Data Science Hands-On Workshop

The second day will feature a geospatial data science workshop, providing introductory training from academics and tech sector partners on the use of new tools, data, and platforms for conducting geospatial analytics. The workshop is designed for professors, postdocs, and Ph.D. students interested in incorporating geospatial and remote sensing techniques into their research.



Conference Organizers

The **Center for Effective Global Action (CEGA)** is a hub for research on global development, with a network of over 75 academic researchers extending across the University of California, Stanford University, and the University of Washington. CEGA brings a scientific lens to global development, integrating rigorous field experiments and tools from data science with deep expertise in agriculture, public health, education, engineering, and the environment.

UC San Diego's Big Pixel Initiative (BPI) at the School of Global Policy and Strategy is developing tools in computer vision, machine learning, GIS, remote sensing, and crowd-sourcing and a geospatial capacity to address our world's greatest challenges at scale. BPI provides a living, learning laboratory related to everything spatial, to design best practices in geospatial data visualization, user experience interfaces, and design techniques for scientific discovery and decision-making.

The **Geospatial Innovation Facility (GIF)** at UC Berkeley's College of Natural Resources provides leadership and training across a broad array of integrated mapping technologies. It develops engaging applications that leverage and build upon state-of-the-art geospatial and web technologies, and provides opportunities for researchers to learn how they can use spatial data to answer critical questions.