GIS Day 2016 at WashU
Wednesday, November 16th

Schedule of Events

GIS Day Breakfast
9:00am - 10:00am
Rudolph Hall, Room 183
Come grab a coffee and talk all things GIS with users from around campus.
Let us know you are coming - GIS Day Breakfast Registration

GIS Day Georef-A-Thon
10:00am - Noon
Rudolph Hall, Room 183
Bring your laptop and dig into the past with WashU’s collection of historical maps. This is a drop in session and geo-referencing coaching will be provided!
Let us know you are coming - GIS Day Georef-A-Thon Registration

GIS Day Lightning Talks and Reception
Presentations - 2:00pm - 3:45pm
Reception - 3:45pm - 4:30pm
The Women's Building - Formal Lounge
GIS users from many disciplines will present short summaries of their work and experiences with GIS.
Let us know you are coming - GIS Day Lightning Talks Registration
Lightning Talks Speakers and Topics

Sundari Balan, PhD.
Research Associate, Washington University School of Medicine, Department of Psychiatry

Porpong (Paul) Boonmak, MD
McDonnell International Academy Scholar, Washington University School of Medicine, Department of Psychiatry

Using GIS to map Human Trafficking Risk factors for St. Louis area: New opportunities

The human trafficking epidemiology and prevention efforts in St. Louis present significant methodological challenges owing to anecdotal nature of evidence, lack of accurate incidence data and confusions over definitions among various stakeholders (law enforcement, service providers, academics etc..). In this lighting talk, Drs. Balan and Boonmak will share their experience and learning using GIS to map Human Trafficking risk factors for St. Louis region. The support for this study came from Institute of Public Health (IPH) PH3 funding to Rumi Price, PhD, MPE; Tonya Edmond, PhD; Min Lian, MD PhD.

Kaitlin Cruz
German Department

Tracing Readership: Library Patronage in Muncie, Indiana at the turn of the 20th Century

The project came out of the humanities digital workshop summer fellowship program under two project investigators, Dr. Matt Erlin in the German Department and Dr. Lynne Tatlock of the German and Comparative Literature departments. In seeking to learn more about readership habits of library patrons at the end of the nineteenth and the beginning of the twentieth centuries I became interested in the demographic and census data that were a part of the database supplied by Ball State University. I sought to create a map including as many of the patrons as possible and their physical addresses during that time.

Mary Druyvesteyn
Kiara Sample
Alumni & Development

Improving Fundraising using GIS

Donor information generates a lot of data, and positive donor engagement requires diligent data-mining and a mindful application of said information. GIS helps to turn the numbers into a narrative, transforming a static column of information into a splice of history. Come learn how GIS can give direction to fundraisers by providing a new way of seeing the data.
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Lightning Talks Speakers and Topics - continued

**Umber Dube**
Washington University School of Medicine, Department of Psychiatry

*Geocoding at the Zip Level*

Methods and available resources for geocoding at the Zip level.

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**Syrus Jin**
History Department

*Mapping the West River Network*

Professor Steven Miles of the History Department has been finishing his research into merchant networks in southern China in the late 18th and early 19th centuries. The cornerstone of visualizing such a network relies on analyzing stelae - or stone tablets usually found at temples or village halls which commemorate the construction of the building and list all the individuals who donated money for that construction. The mapping project has involved locating each of the stelae that Professor Miles visited, analyzing the text of the tablets, and identifying the places from which donations come from, with the end goal of developing an interactive map of the entire region. This project currently only has mapped a handful of stelae, but aims to eventually have several hundred stelae and their donor locations mapped.

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**Elisa Kim**
Architecture

*Extra-Geographic World Map*

An atlas of the sea, this project is a visual and textual record of the yet uncharted, but already contested territories of the ocean floor. New territorial claims resulting from the 1999 United Nations Commission on the Limits of the Continental Shelf allow, for the first time, a division of the sea bed and sovereign claims to the area of the deep sea. As such, a new world map is emerging underneath the surface of the sea. By drawing these extra-geographic territories, this project initiates exploration into the rediscovery of the sea as a collective space of public encounter and shared inhabitation, probing new opportunities for cross-border exchange and spatial structures.
Lightning Talks Speakers and Topics - continued

**Yinxuan Qiu**  
Energy, Environmental & Chemical Engineering Department

*An integrated framework based on ArcGIS and MATLAB for gers counting, image processing and statistical analyzing in the study on air pollution in Ulaanbaatar City Mongolia*

In the last few years, smog and ash have increasingly blotted out the sky in modern Mongolia's capital with its fast growing economy. The tens of thousands of coal heated gers, or yurts, clustered around the city's edges, are viewed as the chief culprits. We use the ArcGIS tool to deal with the satellite remote sensing picture of the city and get a visual distribution map for gers across the city. The data collected in each district by ArcGIS attribute table were used for further statistic analysis of the air pollution situation around the city.

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**Phil Skemer**  
**Alex Bradley**  
Earth & Planetary Sciences

*ArcGIS Online as a tool for freshman field geology*

Geology Bootcamp is a new Freshman Seminar in Earth and Planetary Sciences that aims to introduce first-year students to the techniques of field geology. Mapping is a critical skill and we perform several exercises over the course of the semester to introduce students to concepts such as map projections, coordinate systems, and GPS. Most critical is teaching how to map geological data using a topographic basemap or satellite photo. This year we used ArcGIS Online as a tool to help students build a map, as well as introduce them to GIS, using field data collected at Hawn State Park in southeast Missouri.

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**Jonathan Stitelman**  
Architecture & Urban Design

*Infinite Studio*

In celebration of the 10th Anniversary of the Sam Fox School of Design & Visual Arts, Jonathan Stitelman was commissioned to design an exhibition of Study Abroad Programs of the Art and Architecture Departments. The concept for the exhibit was that of virtual studios, that there are a set of experiences which are a part of the Sam Fox School, but which happen far outside the bounds of our campus. The exhibit used student-submitted photographs, renderings, videos, in addition to an interactive GIS Story Map to bring these experiences back to our campus in an ephemeral way. These media were projected on 30’ x 8’ hanging projection screens, making them an immersive experience, far from their source.
Lightning Talks Speakers and Topics - continued

Alena Wheeler
Public Health

A Regional Analysis of Health Insurance Marketplaces

The Affordable Care Act (ACA) required all 50 states and DC to establish Health Insurance Marketplaces (HIMs). Insurer participation in the marketplaces has changed over time, which in turn has affected market competition. This presentation uses a 15 state region to describe where firms are absent and characterize these places demographically. I will discuss how GIS was used to calculate distance and travel time to determine if either played a role in the absence of firms.