

Appendix C

Sample workshop agenda – Penn State 2006 GISPopSci Workshop (June 5-16, 2006)

GIS and Population Science

PSU 2006 *June 5-June 16, 2006: University Park, PA*

Preliminary Workshop Agenda

All events are in IST 203 unless otherwise stated.

All morning sessions will begin promptly at 9.00am

All afternoon sessions will begin promptly at 1.30pm (unless otherwise stated).

Week One

Sunday, June 4

Arrival Day/Weekend

Morning: 10:00am - 4:30pm

Various Meet attendees at Airport and Bus Station throughout the day

Evening 5:00

Informal Meeting at the Residence Inn (1555 University Drive)

Evening 5:30

**Informal dinner at the Ruby Tuesday's restaurant
across Atherton Street from the Residence Inn (5 mins walk)**

Monday, June 5

9:00 - **Official Welcome and Introductions** - Stephen Matthews

10:30 - Break


10:45 - **Spatial Demography** - Stephen Matthews

[Spatial Demography: Methods, Applications, and Resources](#)


[Spatial Demography References](#)

Background Reading (password protected):

[GIS and Spatial Demography](#) - Stephen Matthews  (33kb)

[Comparison of a spatial approach with the multilevel approach for investigating place effects on health](#):  (531kb) the example of healthcare utilisation in France - Basile Chaix, Juan Merlo, and Pierre Chauvin

[Spatial Demography](#)  (101kb) - Kenneth W. Wachter

[The Examination of Neighborhood Effects on Health](#):  (252kb) Conceptual and Methodological Issues Related to the Presence of Multiple Levels of Organization

[Demography as a Spatial Social Science](#)  (253kb) - Paul R. Voss

[The Proceedings of the National Academy of Sciences \(U.S.\)](#) recently had a special issue on "Spatial Demography" -- (*Microsoft Word Document*) (19kb)

12:00 - Lunch

2:00 - **Visit by Tina Enderline** - (GIS Officer for Penn State)

2:15 - GIS, Spatially Explicit Data, and Privacy - Stephen A. Matthews

[Geographic Data and Privacy](#)

Background Reading (password protected):

[Geo-ethnography: Coupling Geographic Information Analysis Techniques with Ethnographic Methods in Urban Research](#)  (439kb)

[Geographically Masking Health Data to Preserve Confidentiality](#)  (376kb)

[Conflicting Demand](#)  (1.36MB)

3:00 - Break

3:15 - **Geospatial Data Sources** - Stephen Matthews

[Geospatial Data Resources](#)

[Some useful URL Links for on-line data](#)

4:00 - **Software Overview - Including CSISS Tools** - Stephen Matthews

[CSISS Tools and Spatial Analysis Software](#)

5:00 - End of Day

Evening: 7:30pm

Evening Consultation at the Residence Inn (Stephen Matthews) time approximate

Tuesday, June 6, Introduction to ArcGIS (Day One)

9:00 - **Exploring GIS concepts** - Michelle Zeiders

10:30 - Break

10:45 - **Displaying Data** - Michelle Zeiders

12:00 - Lunch

1:30 - **Querying your database** - Michelle Zeiders

3:00 - Break

3:15 - **Working with spatial data**

5:00 - End of Day

Wednesday, June 7, Introduction to ArcGIS (Day Two)

9:00 - **Introduction to ArcGIS Workshop** - Michelle Zeiders

10:30 - Break

10:45 - **Editing data** - Michelle Zeiders

12:00 - Lunch

1:30 - **Working with geo-referenced data** - Michelle Zeiders

3:00 - Break

3:15 - **Presenting data** - Michelle Zeiders

5:00 - End of Day

Thursday, June 8, Additional ArcGIS Exercises

9:00 - **Geocoding addresses** - Yosef Bodovsky, Stephen Matthews, Michelle Zeiders

10:30 - Break

10:45 - **Spatial Analyst Exercise** - Yosef Bodovsky, Stephen Matthews

12:00 - Lunch

2:00 - **Census Data Exercise** - Yosef Bodovsky, Stephen Matthews

3:15 - Break

3:30 - **International Data Exercise** - Stephen Matthews

5:00 - End of Day

Evening: 7:00pm

Evening Consultation at the Residence Inn (Stephen Matthews) time approximate

Friday, June 9, Introduction to GeoDa

9:00 - **Introduction to GeoDa for ESDA** - Stephen Matthews

[Exploratory Spatial Analysis \(And Navigating GeoDa\)](#) [Contraceptive Prevalence Rates in Nepal Using GeoDa](#)

10:30 - Break

10:45 - **GeoDA Lab** - Stephen Matthews

[GeoDa@ 0.95i Exercise A](#) [GeoDa 0.9 Exercise Data \(zip file\)](#) [Additional Material](#)

12:00 - Lunch

2:00 - **Introduction to GPS units and Geocaching** - Michelle Zeiders

2:45 - Break

3:00 - **Introduction to Spatial Regression Modeling** - Stephen Matthews

[GeoDa and Spatial Regression Modeling A GeoDa Demonstration Based on the Columbus Data](#)

4:00 - **GeoDa Lab** - Stephen Matthews

5:00 - End of Day

Saturday, June 10, Geocaching

Background Reading(password protected):

[Geocaching](#) (Microsoft Word Document) (28kb)

8:30 - **Orientation Meeting at Residence Inn**

9:00 - **Start of Geocaching Exercise** - Stephen Matthews

12:00 - Lunch at the Eutaw House

1:30 - **Continuation of Geocaching Exercise**

5:00 - **Rendezvous for BBQ at Blue Creek Park, Boalsburg**

7:00 - End of Day

Week Two

Sunday, June 11

Morning - Evening

Free Time


Monday, June 12, Measuring Spatial Segregation & Geovisualization

9:00 - **Working with Geocache data** - Michelle Zeiders (806 Oswald Tower)


10:15 - Break


10:30 - **Measuring Spatial Segregation** - Sean Reardon - Guest Speaker, (406 Oswald Tower)

Background Reading (password protected):

[The Segregation Profile: Investigating How Metropolitan Racial Segregation Varies by Spatial Scale](#)  (2MB) By: Sean F. Reardon, Stephen A. Matthews, David O'Sullivan, Barrett A. Lee, Glenn Firebaugh

and Chad R. Farrell


["Measures of Multigroup Segregation" \(Reardon & Firebaugh, 2002\)](#)  (153kb)

["Measures of Spatial Segregation" \(Reardon & O'Sullivan, 2004\)](#)  (260kb)

[Errata to:](#) (41kb)

"Measures of Multigroup Segregation" (Reardon & Firebaugh, 2002)

"Measures of Spatial Segregation" (Reardon & O'Sullivan, 2004)


[Beyond the Census Tract: Patterns and Determinants of Racial Residential Segregation at Multiple Scales](#)  (391kb)

12:00 - Lunch


2:00 - **Geovisualization of demographic and health data**


- Etien Koua - Guest Speaker, (Walker Building)

Background Reading (password protected):

Koua E. L., MacEachren A. & Kraak, M.J. (2006). [Evaluating the usability of visualization methods in an exploratory geovisualization environment](#)  (494kb) International Journal of Geographical Information Science, Volume 20, Number 4 / April 2006.

Koua E. L. and Kraak, M. J. (2004). [Geovisualization to support the exploration of large health and demographic survey data](#)  (1.5MB) International Journal of Health Geographics 2004, 3:12 (4 Jun 2004).

Koua, E. L. and Kraak, M. J.(2004). [Integrating computational and visual analysis for the exploration of health statistics](#)  (348kb) In: SDH 2004: Proceedings of the 11th international symposium on spatial data handling: advances in spatial data handling II. : 23-25 August 2004, University of Leichester. / ed. by P.F. Fisher. - Berlin etc.: Springer, 2004. pp. 653-664.

Robinson, A., Chen, J., Lengerich, E., Meyer, H. and MacEachren, A. (2005). [Combining Usability Techniques to Design Geovisualization](#)  (993kb) Tools for Epidemiology Cartography and Geographic Information Science. Vol. 32, 243-255

2:45 - Break

3:00 - **GeoVISTA Lab, based on ESTAT** - Etien Koua, Jin Chien, Adrienne Gruver (2nd Floor Walker Building)

Background Reading (password protected):

[ESTAT Tutorial](#)  (1.6MBb)

5:00 - End of GeoVISTA

7:00p - **Spatial Analysis - a roadmap** - David O'Sullivan - Invited Guest Speaker (Residence Inn)

Background Reading (password protected):

[Spatial Analysis: a roadmap \(Powerpoint Presentation\)](#)(2.2MB)

[Bibliography for 'Spatial Analysis: a primer'](#)  (89kb)

[Interactive techniques and exploratory spatial data analysis](#)  (587kb)

[Spatial analysis: retrospect and prospect](#)  (135kb)

[Spatial statistics](#)  (134kb)

9:00 - End of Day

Tuesday, June 13, Multilevel Modeling (LAFANS)




9:00 - **Defining Neighborhoods, Collecting Data, and Studying Neighborhood**

Effects in Los Angeles - Narayan Sastry, - Guest Speaker

Background Reading (password protected):

[Neighborhood Definitions and the Spatial Dimension of Daily Life in Los Angeles](#)  (154kb)

[The design of a multilevel survey of children, families, and communities:](#)

[The Los Angeles Family and Neighborhood survey](#)  (299kb)
[Neighborhood and School Effects on Children's Development and Well-Being](#)  (103kb)
[Family and Neighborhood Sources of Socioeconomic Inequality
 in Children's Achievement](#)  (175kb)
[Defining Neighborhoods, Collecting Data, and Studying Neighborhood Effects
 in Los Angeles \(Powerpoint Presentation\)](#) (903kb)

10:15 - Break

10:30 - **Open Lab - Time for own projects**

(opportunities to meet with Narayan Sastry)

12:00 - Lunch (opportunities to meet with Narayan Sastry)

2:00 - **Open Lab - Time for your own projects**

3:15 - Break (approximate)

3:30 - **Open Lab - Time for your own projects**


5:00 - End of Day


7:00 - **Evening consultation at the Residence Inn (time approximate)**

Wednesday, June 14, Health and Environment Issues and Geostatistics


9:00 - **Health and Environment** - Marcia Castro, - Guest Speaker

Background Reading (password protected):

Castro MC, Monte-Mor, RL, Sawyer, DO, Singer, BH. 2006 "[Malaria risk on the Amazon Frontier](#)"  (1.1MB) Proceedings of the National Academy of Sciences, 103(7): 2452-2457.

Castro MC, Singer BH. 2006. "[A new approach to account for multiple and dependent tests in local statistics of spatial association: controlling the false discovery rate](#)".  (401kb) Geographical Analysis, 38(2): 180-208.

Castro MC, Sawyer, DO, Singer, BH. 2006. "[Spatial patterns of malaria in the Amazon: implications for surveillance and targeted interventions](#)"  (805kb) In press, Health and Place.

Singer BH, Castro MC. 2001. "[Agricultural Colonization and Malaria on the Amazon Frontier](#)"  (16.7MB) In: Weinstein M, Hermalin AI, Stoto MA (eds.) Population Health and Aging: strengthening the dialogue between epidemiology and demography. Annuals of the New York Academy of Sciences, vol. 954:184-222.

[A Spatial Approach for Malaria Monitoring & Risk Assessment](#)  (1.9MB) - Marcia Castro

[Local Spatial autocorrelation Statistics: Distributional Issues and an Application](#)  (734kb)

[The Analysis of Spatial Association by Use of Distance Statistics](#)  (726kb)

10:15 - Break

10:30 - **Geostatistics Lab (Marcia Castro)**

12:00 - Lunch (opportunities to meet with Marcia Castro)

2:00 - **Open Lab - Time for own projects**

3:00 - Break (approximate)

3:30 - **Open Lab - Time for own projects**

5:00 - End of Day


Thursday, June 15, Spatial Econometric Modeling

9:00 - **Spatial Heterogeneity and Spatial Dependence in Spatial Regression Modeling
 (Application to Child Poverty in the U.S.)** - Paul Voss ? Guest Speaker

Background Reading (password protected):

["County Child Poverty Rates in the U.S.: A Spatial Regression Approach"](#)  (960kb)

Paul R. Voss, David D. Long, Roger B. Hammer, Samantha Friedman

["Spatial Heterogeneity and Spatial Dependence in Spatial
 Regression Modeling"](#)  (452kb)

Paul R. Voss, Katherine Curtis White, David D. Long

10:15 - Break

10:30 - **Open Lab - Time for own projects** (opportunities to meet with Paul Voss)

12:00 - Lunch (opportunities to meet with Paul Voss)

2:00 - **Open Lab - Time for your own projects**

3:15 - Break (approximate)

3:30 - **Open Lab - Time for your own projects**

5:00 - End of Day

7:00 - **Evening consultation at the Residence Inn (time approximate)**

Friday, June 16, Presentation and Awards Day

8:30 - **Group A presentations** - Jessica, Kanisha, Juan, Pedro, Chelsea, Sandile

10:15 - Break

10:30 - **Group B presentations** - Merlin, Becki, Vincent, Jeff, Michelle, Lissette, Kuniko

12:00 - Lunch

1:00 - **Group C presentations** - David, Mira, Kevin, Katherine, Pearl, Gloria, Iliana

2:45 - Break

3:00 - **Group D presentations** - Benjamin, Meredith, Matthew, Sarah, Ashley, Heidi

4:30 - **Awards**

5:00 - Reception or Dinner (location to be determined and depends on how many attendees are staying overnight)

Saturday, June 17, Departure Day

7:15 - **Breakfast at the Waffle Shop if anyone is interested/available**

(Stephen Matthews will collect from Residence Inn)

9:00 - **Back to Residence Inn**