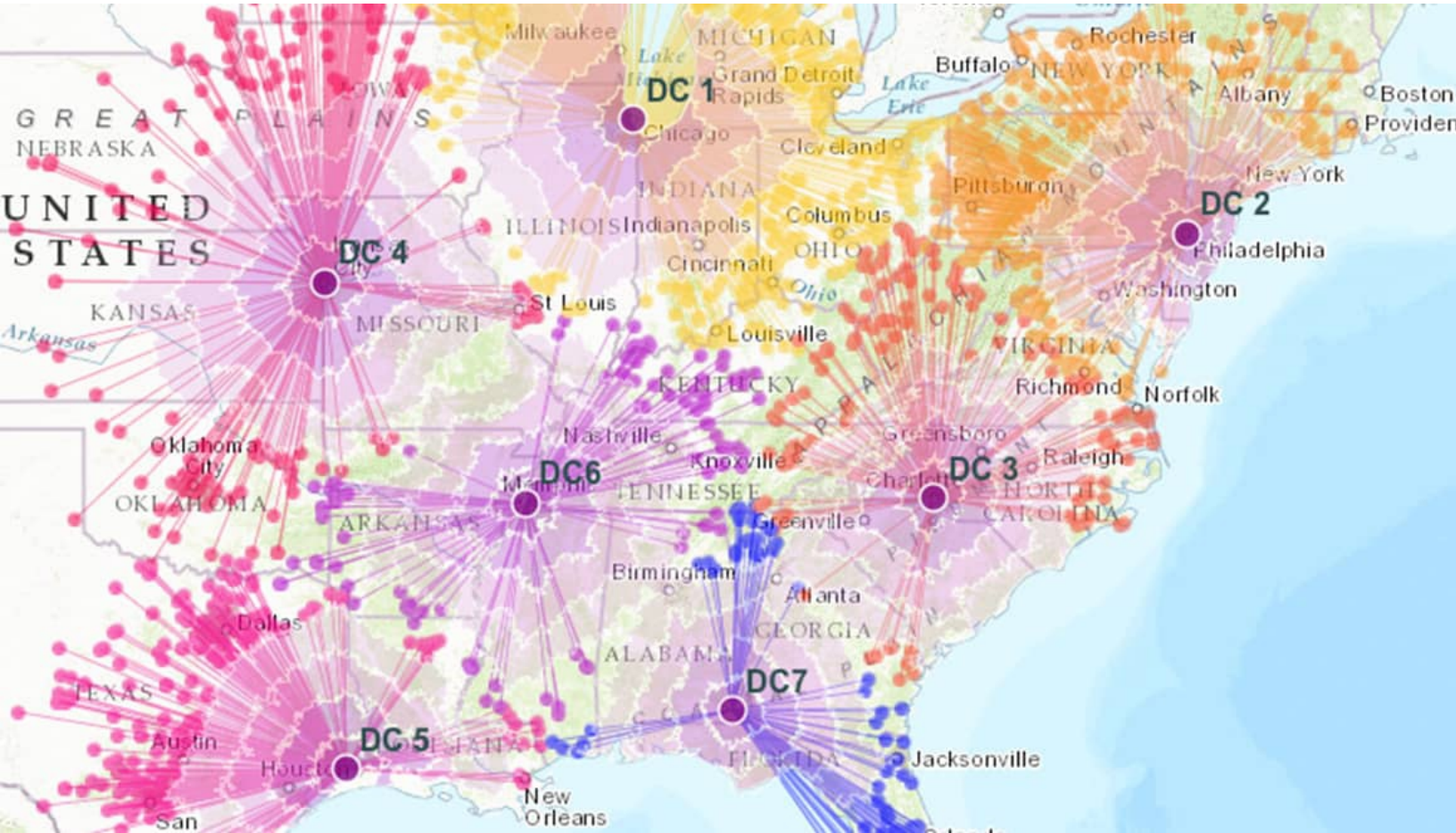
GEO157

Oral Presentations

(am Monday 14th & am Friday 18th May)

Andy Ridgwell



In order to understand the applications of GIS, we will ask that each of you give one ten-minute presentation on a case study of GIS work. Your presentation will be worth **10% of your grade**. We will dedicate time for presentations during. As our class is small, we hope this will offer a pleasant environment to practice public speaking, and a forum to discuss the benefits, drawbacks, and details of applying a GIS to problem solving in a number of different fields. To make this easier, we will provide a preliminary list (see next section) of case studies from which you can select those which interest you the most, or you can also select your own.

Instructions

First, chose a topic (paper). Submit your choice by filling out a sign-up sheet, by the end of class on Friday 11th May. (The sooner you can submit your choice, the sooner you can start on the presentation.)

For the presentation itself:

- Presentations will take place during the classes of Monday 14th and Friday 18th May. Unless you have notified the Instructor with a valid reason for not attending one class or the other, the time and day will be decided based on the paper you pick. You will be notified of your time/day, at the start of class on Monday 14th. So come prepared to be first(!)
- Time allowed is 5 minutes (plus 2-3 minutes for questions).
- The length of the presentations is deliberately short to reduce the preparation burden and stress (hopefully). There will be a points penalty if your presentation goes over 6 minutes.
- The presentations need to be created in Powerpoint (or otherwise created digitally, and saved as a PDF) and in fairness to people going first (vs. those who present at the end of the week), **ALL presentations files need to be handed in at the start of class on Monday 14th May**.[1] Presentations are to be handed in via a USB pen drive.

[1] Presentations not handed in at that time, will score zero.

Content/marking criteria

(Marked out of 100%.)

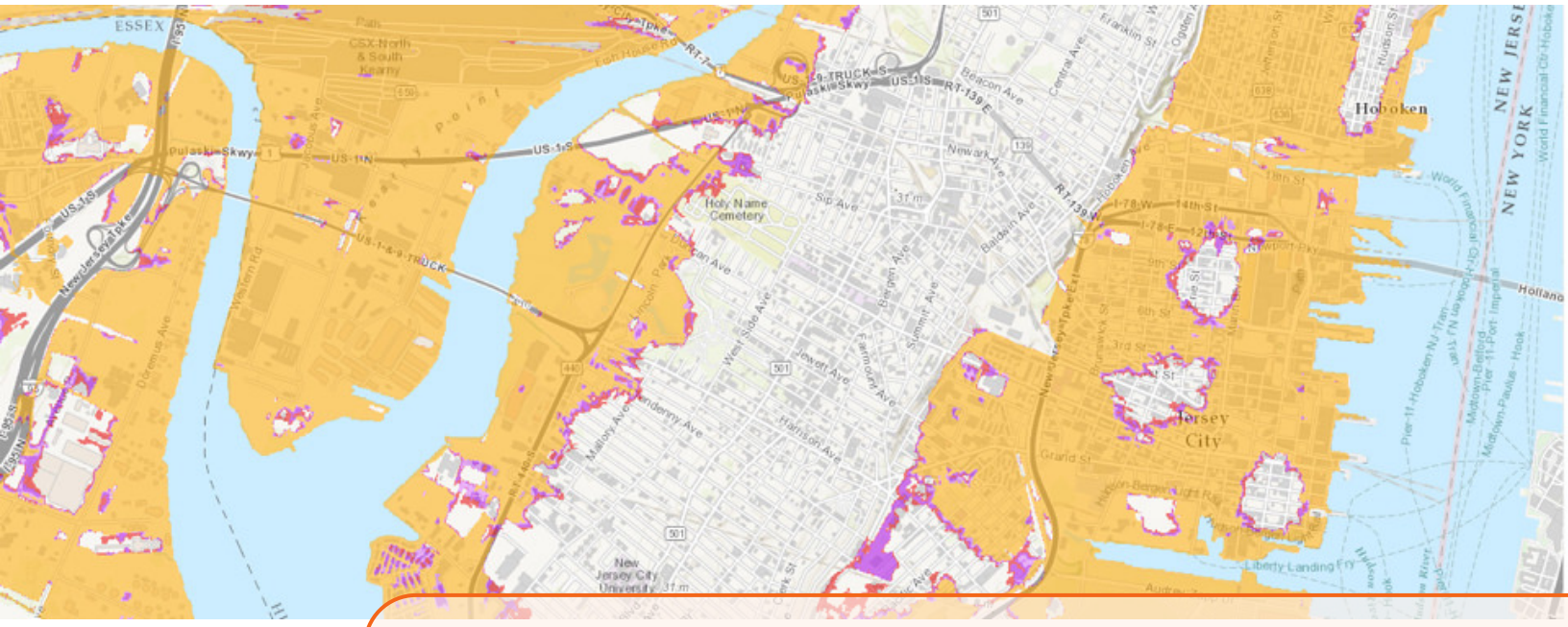
Category	Scoring Criteria	Maximum marks available
Intro. & Background	Makes clear the purpose of GIS in the case study.	5
	Introduces the research question(s) and the motivation for the study clearly.	10
	Provides an accurate and complete summary of the key concepts underlying the case study.	10
Content	Accurately identifies the spatial and non-spatial features and entities used in the GIS of the case study and discusses how the chosen features AND entities help answer the case study's research question.	10
	Accurately identifies what kinds of data were used to represent each spatial and non-spatial feature (i.e. census data, photographs, GPS data, remote sensing data, etc.).	10
	Accurately identifies what spatial models were used and discusses their advantages and disadvantages.	10
	Discusses other options for data which might enhance the case study and help answer the research questions and suggests plausible alternative maps and uses of GIS which might enhance the case study.	20
Presentation	Information is clearly communicated.	10
	Powerpoint slides are well prepared, informative, effective, and not distracting. Maps included from case study are readable to audience.	20
	Length of presentation is no more than 6 minutes.	5

Some presentation guidance ...

5 (under 6) minutes is not long. As a general rule-of-thumb – one minute per slide. But ... title slides take almost no time. A conclusion slide might be short ... but could take a minute if you labour through all the words on a long list of conclusions. (Here, a conclusion slide is not essential or even necessarily needed.) Often slides can take much less than 1 minutes to go through – it all depends on the detail/content, and how the slides follows on from the previous one (i.e. if the concepts have already been introduced, and/or the information is somewhat incremental, then the slide should not take long to present).

As a guide – title/intro plus first main slide might cover 'Introduction & Background'. The next 4 slides could cover the facets of 'Content'. BUT, in practice, the papers vary and you need to weight the presentation depending on the contents of the paper and what you have to say about it.

Ideally – you write a draft presentation. Practice it and time it. Cut down slides if overall, way too long. Also – delete any slides you have difficulty introducing or linking to the previous slide – an obvious indicator either of unnecessary information, or of poor presentation structure.



Paper list

Below ... are some possible suggestions from which you might chose a paper to read and present on. You are welcome to chose a different paper (i.e. one not on the list), but please clear it with / notify the Instructor first.

Agriculture

- Agriculture Margosian, M. L., Garrett, K. A., & Hutchinson, J. S. (2009). Connectivity of the American agricultural landscape: assessing the national risk of crop pest and disease spread. BioScience, 59(2), 141–151.

Criminology

- Caplan, J. M., Kennedy, L. W., & Miller, J. (2011). Risk terrain modeling: brokering criminological theory and GIS methods for crime forecasting. Justice Quarterly, 28(2), 360–381.

Climate Change

- Bolch, T. (2007). Climate change and glacier retreat in northern Tien Shan (Kazakhstan/Kyrgyzstan) using remote sensing data. Global and Planetary Change, 56(1), 1–12.
- Kueppers, L. M., Snyder, M. A., Sloan, L. C., Zavaleta, E. S., & Fulfrost, B. (2005). Modeled regional climate change and California endemic oak ranges.Proceedings of the National Academy of Sciences of the United States of America, 102(45), 16281–16286.

Disease

- Fang, L. Q., De Vlas, S. J., Feng, D., Liang, S., Xu, Y. F., Zhou, J. P., ... & Cao, W. C. (2009). Geographical spread of SARS in mainland China. Tropical Medicine & International Health, 14(s1), 14–20.
- Foley, D. H., Wilkerson, R. C., Birney, I., Harrison, S., Christensen, J., & Rueda, L. M. (2010). MosquitoMap and the Mal--area calculator: new web tools to relate mosquito species distribution with vector borne disease. Int J Health Geogr,9(11).

- McLeod, K. S. (2000). Our sense of Snow: the myth of John Snow in medical geography. Social science & medicine, 50(7), 923–935.[2]

Ecology

- Hetherington, D. A., Miller, D. R., Macleod, C. D., & Gorman, M. L. (2008). A potential habitat network for the Eurasian lynx Lynx lynx in Scotland. Mammal review, 38(4), 285–303.
- Ruczyński, I., Nicholls, B., MacLeod, C. D., & Racey, P. A. (2010). Selection of roosting habitats by Nyctalus noctula and Nyctalus leisleri in Białowieża Forest—Adaptive response to forest management?. Forest ecology and management,259(8), 1633–1641.

Energy and Environment

- Carranza, V., Rafiq, T., Frausto-Vicencio, I., Hopkins, F. M., Verhulst, K. R., Rao, P., Duren, R. M., and Miller, C. E.: Vista-LA: Mapping methane-emitting infrastructure in the Los Angeles megacity, Earth Syst. Sci. Data, 10, 653-676, https://doi.org/10.5194/essd-10-653-2018, 2018.

Natural Hazards

- Carrara, A., Guzzetti, F., Cardinali, M., & Reichenbach, P. (1999). Use of GIS technology in the prediction and monitoring of landslide hazard. Natural hazards, 20(2–3), 117–135.
- Huang, R. Q., & Li, A. W. (2009). Analysis of the geo--hazards triggered by the 12 May 2008 Wenchuan Earthquake, China. Bulletin of Engineering Geology and the Environment, 68(3), 363–371.
- Kamp, U., Growley, B. J., Khattak, G. A., & Owen, L. A. (2008). GIS-based landslide susceptibility mapping for the 2005 Kashmir earthquake region .Geomorphology, 101(4), 631–642.
- McCrory, P. A., Blair, J. L., Oppenheimer, D. H., & Walter, S. R. (2004). Depth to the Juan de Fuca slab beneath the Cascadia subduction margin: A 3-D model for sorting earthquakes. US Department of the Interior, US Geological Survey.
- Nishimura, T., Sagiya, T., & Stein, R. S. (2007). Crustal block kinematics and seismic potential of the northernmost Philippine Sea plate and Izu microplate, central Japan, inferred from GPS and leveling data. Journal of Geophysical Research: Solid Earth (1978-2012), 112(B5).

[2] If you choose this article, you must also explain the methodology used by Snow in 1854 to identify the source of Cholera in London.