Week 13: Reading Assignment, Homework Assignment

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Course Website: http://courses.physics.illinois.edu/phys598aem/

All lecture notes, homework, demos, references, *etc*. are available on the P598AEM website. Please spend some time checking these out!

Course Organization:

A. Lectures: Tuesday & Thursday, 12:30-1:50 pm, in 136 Loomis.
B. Weekly Reading and Homework Assignments: HW due following Thursday, in class.
C. Take-Home Midterm Exam: Oct. 10th, due Oct. 17th (in lieu of P598AEM HW 7).
D. Take-Home Final Exam: Dec. 10th, due Dec. 17th.

Reading Assignment For Week 13: Please read/work through P598AEM Lect. Notes 24-26.
Homework Assignment For Week 13: See/do HW # 13 problems on following pages.

Physics 598AEM Week 13 Homework Assignment

1.) Go to Google Maps Fastest Roundtrip Solver http://www.gebweb.net/optimap/ which uses the Metropolis-Hastings algorithm to minimize the total length of a trip. Please see/read **Help** info… Enter up to 25 cities into the data entry port for a **roundtrip** starting (and ending) at **Champaign, IL** (*n.b*. this is the format you enter – city, XX where XX = 2-letter abbreviation for the state the city is located in). Then click on the **Calculate Fastest Roundtrip** button. It ***will*** take several minutes to compute the solution, so be patient!

Please turn in a hardcopy of your map and the roundtrip distance and total traveling time written on it. If you are using a Windows machine, note that you can copy the current image on the monitor screen to the **Clipboard** by hitting **Print Screen** or (**Alt-Print Screen**), then use the **Paint** application to **Paste** (ctrl-V) the screen-captured image to the **Paint** canvas. Then use the **Crop** feature in **Paint** to save just the map, then **Cut** (ctrl-X) the existing image, then **Paste** (ctrl-V) the cropped image back into the **Paint** canvas. Then **Save** your cropped map image *e.g*. to a *.jpg or *.png file. Then print out your *.jpg or *.png file.

2.) Scroll down on this web page, click on **About** and then click on "Behind the Scenes of Optimap" which takes you to http://gebweb.net/blogpost/2007/07/05/behind-the-scenes-of-optimap/ and read the info there about what this algorithm is doing.

3.) You can also get a copy of/look at the source code for this program at:
http://code.google.com/p/google-maps-tsp-solver/