Clinic on Dynamical Approaches to Infectious Disease Data

December 15-19, 2014

Gainesville, FL

Program Information

Overview

This intensive, 1-week clinic will provide an introduction to dynamical models used in the study of infectious disease dynamics. Instruction will focus on how the complex dynamics of pathogen transmission influence study design and data collection for addressing problems in infectious disease research.

The Clinic will consist of a series of interactive lectures and tutorials that will guide participants through the uses of dynamical modeling in epidemiology. Various modeling paradigms will be discussed, and participants will be given guidance regarding the appropriate use of models to address their own research questions. Participants are encouraged to bring data sets and questions to the Clinic, and to start collaborative projects with each other or the organizers. ***Working closely with their peers and with Clinic faculty, each participant will develop a research plan that describes a roadmap for integration of dynamic modeling with data collection and/or analysis in a study system of their choosing.*** The research plan can be used as a framework for grant or dissertation proposals when participants return to their home institutions.

Note that we place heavy emphasis on evaluation of the program and feedback from participants. The schedule will include 2 group feedback sessions run by our program evaluator, Dr. Gavin Hitchcock. Dr. Hitchcock will attend the entire program and compile feedback from these sessions and individual interviews to help us improve the Clinic for future years.

The Clinic on Dynamical Approaches to Infectious Disease Data (DAIDD) is part of the International Clinics on Infectious Disease Dynamics and Data (ICI3D) Program and is supported by the National Institute of General Medical Science of the U.S. National Institutes of Health under award number R25GM102149.

Clinic goals

Our goals are for participants to leave with:

- An understanding of dynamic principles and their role in the epidemiology of infectious diseases
- A familiarity with diverse modeling frameworks
- Guided experience with construction of simple models
- A conceptual framework for fitting models to data
- Experience creating a model world to address a research question
- A set of identified resources for continued learning

Ground rules

- All DAIDD participants are expected to engage fully in the clinic program. This includes attending all DAIDD sessions.
- Please be aware that participants come from a wide variety of backgrounds and cultures. This diversity adds greatly to the DAIDD experience, and all participants should strive to create a welcoming, respectful learning environment.
- Laptop use will not be allowed in the lecture hall during lectures or discussions.

Preparation

Before the Clinic, you should:

- Create a GitHub account (register for an account at https://github.com/)
- Email your GitHub username and a recent photograph to github@ici3d.org **by 2pm on December 4**; photographs will be used to create a directory of participants
- Prepare a short oral presentation summarizing your research (2 minutes **max**, 1 slide in PDF format)
- Post your slide and a more detailed description of your research on the DAIDD 2014 repository (instructions to follow)
- Read the introductory handout posted as pre-assigned reading,

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- Install the required software on the laptop computer you will bring to the Clinic,
- Work through the R Studio tutorial to familiarize yourself with this software, and
- If you are unfamiliar with or rusty on your understanding of the Binomial Distribution, work through the introductory tutorial provided

All of the materials you will need to prepare for the Clinic will be made available through a GitHub repository accessible to all ICI3D program participants and faculty. You will receive access to the repository after you send us your GitHub username.

Schedule

The general daily structure will be as follows:

- 8:30, 8:45 Shuttle from hotel to EPI
- 9:00-10:45 Lecture/discussion followed by a practicum
- 11:15-12:15 Writing exercise
- 1:15-3:00 Lecture/discussion followed by a practicum
- 3:15-5:00 Lecture/discussion followed by a practicum
- 5:00-6:00 Interactive sessions and exercises

We will start earlier on Monday, with shuttles at 8:00 and 8:15 and welcome/introductions from 8:30-9:00. There will be a mid-session evaluation on Wednesday evening. The Clinic will officially end by 5pm on Friday, though there will be an optional field trip on Saturday morning. A draft of the full Clinic schedule is available at:

http://www.ici3d.org/daidd/schedule/

Logistics

Accommodations have been arranged for those of you coming from out of town. You will be staying at:

The Lodge at Gainesville
3726 SW 40th Boulevard, Gainesville, Florida, 32608, USA
Website: http://www.lodgeatgainesville.com/
Phone: +1-352-375-2400

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The hotel has an **airport shuttle** that can provide round-trip service to and from GNV. Shuttles will be arranged in advance, and participants arriving at a similar time will share a shuttle (so you may have a small amount of time to kill at the airport). The shuttle pick-up times will be posted in the DAIDD 2014 repository. If your flight is delayed so that you will not make your shuttle time, please call the hotel to inform them and arrange a new shuttle time.

DAIDD will be held at the Emerging Pathogens Institute (EPI) on the University of Florida campus. During the Clinic, the hotel will provide a **shuttle to and from EPI**.

For most non-local participants, **expenses** associated with travel to and from Gainesville, plus room and board during the Clinic, will be covered by the ICI3D Program. Some expenses will be reimbursed following the workshop. Questions about logistics and reimbursement should be sent to Jake Ball (ICI3D Program Assistant) at ici3d@epi.ufl.edu.

The **climate** in Gainesville is mild. Average temperatures for mid-December range from the low-to-mid 40's (overnight low) to the upper 60's (daytime high).

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