



UNIVERSITÀ DI PAVIA

Corso di Dottorato in Tecnologie per la Salute,
Bioingegneria e Bioinformatica

COURSE

Multi-Agent Models in Biomedical Simulation

Prof. John H, Holmes, PhD

DPEI - Department for Biostatistics, Epidemiology and Informatics
University of Pennsylvania - Philadelphia, PA, USA

Monday 08 - Wednesday 10 July 2019

Time: 9:30 - 12:30, 14:00 - 17:00

Rooms: D8 (D Floor) and C1 (C Floor)

Department of Electrical, Computer and Biomedical Engineering, University of Pavia.

Via Ferrata, 5 – 27100 Pavia

In this three-day short course, we will develop agent-based models for simulating a variety of biomedical problems. We will be using the NetLogo software package, which is in extensive use in agent-based modeling of a very wide variety of domains, not solely biomedical. NetLogo supports an intuitive graphical interface that allows the user to change parameters that have been specified by a developer, as well as a programming language (based on Logo, and early entry into the game programming market). Although NetLogo will be used for purposes of creating the models, we will also introduce the theory of agent-based and complex systems as well as a process for modeling agent-based models that has a seamless development pipeline from initial specification of a problem domain through the implementation of a model.

At the end of the course, each student will:

- Demonstrate familiarity with the theory of agent-based models and complex adaptive systems
- Show intermediate- to advanced-level of competency with developing and using an agent-based model implemented in NetLogo
- Describe uses of agent-based models in biomedical domains

Credits are available for students of the PhD program in HEALTH TECHNOLOGIES, BIOENGINEERING AND BIOINFORMATICS

Signup: <https://forms.gle/nMEZ6AQHp747sPnm7>

Full information: <http://cht.unipv.it/multiagentmodels2019>

Organizer
Prof. Lucia Sacchi