Puzzles in the pattern of plagues

Dr. David Earn

Math Professor, McMaster University

Date: Tuesday, February 11

Time: 1:00 - 1:50 pm

Location: Room 703, Thackeray Hall

David Earn was an undergraduate in math at the University of Toronto. He obtained his PhD from the University of Cambridge, England, where his research involved mathematical methods in theoretical astrophysics. During his postdoctoral years he became interested in biological problems and shifted focus entirely to math biology, especially the epidemiology of infectious diseases. Dr. Earn is currently a Professor in the Department of Mathematics and Statistics at McMaster University, where he has been since January 2000. He is a recipient of a New Investigator Award from the Canadian Institutes of Health Research (CIHR), an Ontario Premier's Research Excellence Award and a J. S. McDonnell Foundation Research Award.

Over the last century, there has been tremendous progress in understanding the transmission of infectious diseases in human populations. However, most historical outbreaks have not been studied in detail because data that might permit such investigations are buried in thousands of handwritten records. In recent years, my research group has digitized a large number of these historical records and begun to dissect the epidemic patterns. Modern computers allow us to visualize these patterns, and mathematical methods are helping us unravel the biological mechanisms that gave rise to the outbreaks. I will discuss our ongoing work, focusing primarily on outbreaks of plague, from the Black Death in the 14th century to the Great Plague of London in the 17th century. Food and drinks will be provided!

SPEAKER(S) FOR NEXT WEEK:

Dr. Evgeni Trofimov

Organized by: Derek Orr, Tom Everest, Jeremiah Morgan, and Jeff Wheeler