Biomedical and Health Informatics Lecture Series

Course Website: Link

Tuesday, April 30, 2013

12:00 - 12:50 p.m.

Health Sciences, Room T-474

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"A Big Data Revolution in Disease Burden Measurement"

The Global Burden of Disease Study is a systematic effort to quantify the health loss due to disease, injuries, and risk factors by age, sex, geography, and time. The latest iteration, the Global Burden of Diseases, Injuries, and Risk Factors Study 2010 was published in December of 2012, and supplemented by country-level data visualizations released in March 2013. It contains estimates of years of life lost and years lived with disability due to 291 diseases and injuries and 67 risk factors for 20 age groups, for two sexes, for 1990, 2005, and 2010, for 187 countries and regions. That is over 25 million estimates in total.

This big data output resulted from big science input, a collaboration of 488 researchers from 50 countries and 303 institutions. In this talk, I will highlight some of the findings of the study, and also take you on a tour of the novel methods and data that were essential to this endeavor. It is now up to all of us to turn the data into information and, eventually, knowledge and evidence.

Abraham Flaxman is Assistant Professor of Global Health at the Institute for Health Metrics and Evaluation (IHME) at the University of Washington. He is the research lead for the Computational Algorithms research team. Dr Flaxman is the primary architect of a software tool known as DisMod-MR that IHME is using to estimate the Global Burden of Disease. He and other researchers use the tool to fill in gaps in incomplete data on stroke, malaria, depression, and other diseases from government records and surveys and to correct for inconsistencies.

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NOTE: Podcasts from MEBI 590 Lecture Series talks for this quarter are available at
http://courses.washington.edu/mebi590/schedule.htm

Podcasts from previous quarters are available at
http://courses.washington.edu/mebi590/past.lecture.schedules.html