

Andrew Stanley Walsh

Curriculum Vitæ

Language Technologies Institute
NSH 4523
5000 Forbes Avenue
Pittsburgh, PA 15213-3891

Phone: (412) 268-4944
Fax: (412) 268-6298
awalsh@cs.cmu.edu

Education

2000-2005 Johns Hopkins University PhD
Bloomberg School of Public Health Advisor: Dr. Gregory Glass
Baltimore, Maryland

Thesis – Extracting Knowledge from Data: Combining Environmental Measurements and Field Observations in Statistical Models of Infectious Disease Ecology

Courses – Probability theory, Statistics, Dynamical systems; Virology, Microbiology, Immunology, Epidemiology

1996-2000 Carnegie Mellon University BS in Biological Sciences
Mellon College of Science Minor in Chemistry
Pittsburgh, PA

Experience

Research Experience

10/05-present Postdoctoral Fellow Supervisor: Dr. Roni Rosenfeld
Carnegie Mellon University
School of Computer Science
Pittsburgh, PA

Research topics – Genotype-phenotype prediction through Machine Learning; Evolution of RNA viruses; Data visualization & exploration

Education – Audited Machine Learning & Graphical Models courses

9/00-9/05 Graduate Student Advisor: Dr. Gregory Glass
Johns Hopkins University
Bloomberg School of Public Health
Baltimore, MD

Research topics – Statistical modeling of disease vector populations

9/98-5/00 Research Assistant Advisor: Dr. Adam Linstedt
Carnegie Mellon University
Pittsburgh, PA

Teaching Experience

- 2008** Guest Lecturer – Computational Biology course
- 2005** TA – Introduction to R mini-course
Helped design a brand new course and course materials
- 2004** Computer Lab TA – Principles of Public Health Ecology
Helped plan new laboratory component and created all lab exercises

Skills

Computer Skills

Languages Java, R, Matlab, L^AT_EX, Shell scripting

Web Design XHTML, CSS, Flex/Flash

GIS Software ArcGIS, ERDAS

Statistics Software OpenBUGS, STATA

Platforms Windows 95/98/2000/XP, Debian-based Linux

Awards and Honors

- 2008** Awarded Duke Computational & Systems Immunology Symposium Travel Award
- 2004** Awarded ASTMH Travel Award
- 2002** Awarded Hegner-Cort-Root Honorary Fellowship
- 2001** Won “Outstanding Research Abstract” in Terraseer abstract competition
Awarded Eleanor Bliss Fellowship
- 2000** Graduated with University and College Honors from Carnegie Mellon University
Inducted into Phi Beta Kappa & Sigma Xi
- 1998** Inducted into Phi Kappa Phi

Publications

Peer Reviewed Journals

- 2008** “Predicting Seasonal Abundance of Mosquitoes Based on Off-season Meteorological Conditions”. Walsh AS, Glass GE, Lesser CR, Curriero FC. *Environmental and Ecological Statistics* DOI - 10.1007/s10651-007-0056-6 (online)
- 2007** “Detecting Multiple Levels of Effect during Survey Sampling Using a Bayesian Approach: Point Prevalence Estimates of Hantavirus in Cotton Rats (*Sigmodon hispidus*)”. Walsh AS, Louis TA, Glass GE. *Ecological Modelling* 205(1-2):29-38.

Software

- 2006-present** **VELMA:** A tool for the Visualization and Exploration of Large Multiple sequence Alignments
Primary Designer & Developer

Presentations

Invited Seminars

- 2007** “Visualization and Exploration of Large Multiple Sequence Alignments”, Carnegie Mellon Human-Computer Interaction Institute Seminar Series, Pittsburgh, PA
- “Visualization and Exploration of Large Multiple Sequence Alignments”, CMU-Pitt Program in Computational Biology Seminar Series, Pittsburgh, PA

Oral Presentations

- 2003** “A New Approach to Modeling Mosquito Population Dynamics.” Walsh AS, Ellis JH, Louis T, Lesser CR, Glass GE, 52nd Annual Meeting of the American Society of Tropical Medicine and Hygiene, Philadelphia, Pennsylvania

Poster Presentations

- 2008** “Proactive Antigenic Characterization and Early Detection of Vaccine Escape Via Computational Means” Walsh AS, Wu C, Rosenfeld R, 3rd Annual Computational & Systems Immunology Symposium, Raleigh-Durham, North Carolina
- 2007** “The Transmembrane Topology of the HIV gp41 Protein” Walsh AS, Ganapathiraju M, Newman J, Steckbeck J, Rosenfeld R, Montelaro RC, Klein-Seetharaman J, 51st Annual Biophysical Society Meeting, Baltimore, Maryland
- 2004** “Detecting Multiple Levels of Effect during Survey Sampling Using a Bayesian Approach: Point Prevalence Estimates of Hantavirus in Cotton Rats (*Sigmodon hispidus*)” Walsh AS, Louis TA, Glass GE, 53rd Annual Meeting of the American Society of Tropical Medicine and Hygiene, Miami, Florida
- “Estimating Mosquito Life Table Parameters from Surveillance Data Using a Kalman Filter” Walsh AS, Louis TA, Glass GE, 53rd Annual Meeting of the American Society of Tropical Medicine and Hygiene, Miami, Florida