

Adam Robert Pah, Ph.D.

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Education

Doctor of Philosophy in Interdisciplinary Biological Sciences 2008–2013
Northwestern University; Evanston, Illinois.

Thesis: “Cartography of metabolism and its uses in assessing data reliability and understanding cellular network functionality”

Bachelor of Science in Molecular Biosciences and Biotechnology 2004–2008
Arizona State University; Tempe, Arizona.
Graduated *Summa Cum Laude*

Positions

Clinical Assistant Professor 2015–Present
Dept of Management and Organizations, Kellogg School of Management
Northwestern University; Evanston, IL.

Assistant Research Professor 2015–Present
Associate Director
Northwestern Institute for Complex Systems (NICO); Evanston, IL.

Postdoctoral Fellow 2013–2015
Dept of Chemical and Biological Engineering at Northwestern University; Evanston, IL.

Postdoctoral Fellow 2013–2014
Dept of General Internal Medicine at Northwestern University; Chicago, IL.

Data Scientist 2013
TTX Corporation; Chicago, IL

Data Scientist 2012
Datascope Analytics; Chicago, IL

Visiting Scholar 2011
The Donnelly Centre at University of Toronto; Toronto, ON, CA.

Student Researcher 2004–2008
The Biodesign Institute at Arizona State University; Tempe, Arizona.

Teaching

Northwestern Programming Bootcamp Fall 2014, Spring 2015
Instructor

Each bootcamp enrolled 100 undergraduate or graduate students for a one-week intensive course on programming, data analysis, and data visualization. I helped organize the curriculum, integrate and distribute lecture content, and manage Teaching Assistants during daily activities. I also developed and delivered original lecture material on structured data analysis, network analysis, and other topics.

Molecular Biology, BIOL.SCI 309 Fall 2010
Teaching Assistant

Average Review Score: 5.035 (out of 6.0)

Led discussion section (20 students, 1 hour weekly) on original scientific research and findings related to Molecular Biology topics. I wrote and graded weekly homeworks as well as Final Exam questions.

Genetics and Evolutionary Biology, BIOL.SCI 210 Fall 2009
Teaching Assistant

Average Review Score: 5.000 (out of 6.0)

Led two lab sections (~20 students in each section, 2 hours for each section weekly) in conducting experiments with model organisms. Graded lab reports as well as Midterms and Finals for the lecture course.

Honors and Awards

Northwestern Graduate School (TGS) Travel Grant 2013

IBiS Departmental Travel Grant 2013

Chicago Biomedical Consortium Scholar 2011-2012

One of three students selected from Northwestern University

Chicago Biomedical Consortium

Northwestern Biotechnology Training Program Trainee 2009-2011

Northwestern University, NIH-funded

President's Scholarship 2004–2008

Arizona State University

Arizona State University Deans List 2004–2008

Publications

Kho AN, Cashy JP, Jackson KL, Pah AR, Goel S, Boehnke J, Humphries JE, Kominers SD, Hota BN, Sims SA, Malin BA, Meltzer D, Kaleba E, Jones R, and Galanter WL (*Accepted*). Distributed Common Identity for Integration of Regional Health Data (DCIFIRHD). *Journal of American Medical Informatics*.

Pah AR, Rasmussen-Torvik LJ, Goel S, Greenland P, and Kho AN (2015). Big Data: What is it and what does it mean for cardiovascular research and prevention policy. *Current Cardiovascular Risk Reports* 9(1), 1-9.

Weiss CH, Poncela-Casasnovas J, Glaser JJ, Pah AR, Persell SD, Baker, DW, Wunderink, RG, and Amaral, LAN. (2014). Adoption of a High-Impact Innovation in a Homogeneous Population. *Physical Review X* 4, 041008.

Pah AR, Guimera R, Mustoe AM, and Amaral LAN. (2013). Use of a global metabolic network to curate organismal metabolic networks. *Scientific Reports*, 3: 1695.

Daskalova SM, Pah AR, Baluch DP, and Lopez LC. (2009). *Arabidopsis thaliana* putative sialyl-transferase resides in plant Golgi but lacks the ability to transfer sialic acid. *Plant Biology*, 11(3): 284–299.

Talks

Weiss CH, Poncela-Casasnovas J, Glaser JJ, Pah AR, Persell SD, Baker, DW, Wunderink, RG, and Amaral, LAN. (2015). Adoption of a High-Impact Innovation in a Homogeneous Population. *Physics Meets the Social Sciences*, Granada, Spain.

Pah AR, Jennings A, and Amaral LAN (2015). Longitudinal analysis of shooting incidents at schools in the United States. *Computational Social Science Summit*, Evanston, IL.

Jackson K, Pah AR, Pacheco J, and Kho AN (2015). Effect of Care Fragmentation on Performance of Asthma Phenotype Algorithm Using Electronic Health Records. *American Medical Informatics Association - Clinical Research Informatics 2015*, San Francisco, CA.

Behrens J, Pah AR, and Kho AN (2015). Quantifying Geo-imputation Error: Using Gaussian Geostatistical Simulations (GGS) to Disaggregate Zip Code Data and Estimate Positional Error. *American Medical Informatics Association - Clinical Research Informatics 2015*, San Francisco, CA.

Pah AR, Behrens J, Goel S, and Kho AN (2014). Unzipping zip codes: A methodology to assign de-identified health data to smaller geographic localities. *American Medical Informatics Association - Clinical Research Informatics 2014*, San Francisco, CA.

Pah AR, Mustoe AM, Guimera R, and Amaral LAN. (2012). *Res Potentia* Networks: A route to understanding function and evolution of cellular networks. *NetSci 2012*, Evanston, IL.

Poster Presentations

Pah AR, Mustoe AM, Guimera R, and Amaral LAN. (2013). *Res Potentia* Networks: A route to understanding function and evolution of cellular networks. *q-Bio Winter 2013*, Honolulu, HI.

Pah AR and Amaral LAN. (2011). Debugging Biology: Detecting Evolutionary Changes in Metabolic Networks. *2011 Complexity Conference*, Evanston, IL.

Pah AR, Guimerá R, Mustoe A, and Amaral LAN. (2010). Evolutionary Dynamics of Metabolic Networks. *Dynamics Days: International Conference on Chaos and Nonlinear Dynamics*, Evanston, IL.

Burk DR, Pah AR, Lopez LC, and Daskalova SM. (2008). Anti-inflammatory and Antioxidant Activities of C. Vulgare L. *In Vitro Cellular and Developmental Biology*, Tucson, AZ.

Intellectual Property and Copyrights

“A Tool for the Secure Aggregation of De-Identified Medical Data” 2014
Disclosure Number NU2014-141
IP Assigned to Health DataLink LLC

Professional Service and Outreach

- Reviewer for Physical Review Journals (X, L, and E), Royal Society Interface, PLoS One, and Journal of Statistical Mechanics: Theory and Experiment.
- Northwestern Computational Research Day Poster Judge 2015
- IBiS Student Organization Invited Speaker Chair 2012
- Chicago Public School Annual Regional Science Fair Judge 2010-2013
- McCormick Engineering’s Career Day for Girls Host 2009-2011, 2014

Mentored Students

Undergraduate:

- Andrew Jennings (2014)
Project: Longitudinal analysis of shooting incidents at schools in the United States
Presented at: Northwestern Computational Research Day (Awarded 2nd Prize)
- Jaesuk Park (2014)
Project: Geographic differences in hospitalization of asthma patients
Presented at: Chicago Area Undergraduate Research Symposium

High School:

- Sarah Otis (2014)
Project: Socioeconomic associations to differences in asthma hospitalization rates