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AaronBrooks/PhD

Science of complex biological systems

Publications

S Imam, S. Schaueble, **AN Brooks**, NS Baliga, ND Price. **A framework for data-driven integration of genome-scale gene regulatory and metabolic network models.** *Submitted.*

DM Salvanha, **AN Brooks**, DJ Reiss, RZN Vêncio, NS Baliga. **iGB^{web}: an interactive genome browser for the web.** *In preparation.*

CL Plaisier, FY Lo, J Ashworth, **AN Brooks**, KD Beer, A Kaur, M Pan, DJ Reiss, FT Facciotti, NS Baliga. (2014) **Evolution of Context Dependent Regulation by Expansion of Feast/Famine Regulatory Proteins.** *BMC Systems Biology* 8(1):122.

H Westerhoff*, **AN Brooks***, E Simeonidis*, R García-Contreras*, F Boogerd, F He, VJ Jackson, V Goncharuk, A Kolodkin. (2014) **Macromolecular networks and intelligence in microorganisms.** *Front.Microbiol.* 5:379.

AN Brooks*, DJ Reiss*, A Allard, W Wu, DM Salvanha, CL Plaisier, S Chandrasekaran, M Pan, A Kaur, NS Baliga. **A system-level model for the microbial regulatory genome.** *Mol Syst Biol.* (2014) 10: 740.

AN Brooks, S Turkarslan, KD Beer, FY Lo, NS Baliga. (2011) **Adaptation of cells to new environments.** *Wiley Interdiscip Rev Syst Biol Med.* 3(5): 544–561.

* Denotes equal contribution

Education

2008 - 2014 **PhD in Molecular and Cellular Biology** — University of Washington
Thesis: "Data-driven inference of dynamic transcriptional regulatory mechanisms in prokaryotes: a systems perspective."
Advisor: Prof. Nitin Baliga, Institute for Systems Biology

2002 - 2007 **BS in Biochemistry, Summa Cum Laude** — University of New Mexico
Thesis: "Characterization of the dynamic interactions of cytoplasmic poly(A) binding protein with poly(A) RNA."
Thesis Honors: Robert B. Loftfield Award
Advisor: Prof. David G. Bear

2002 - 2007 **BA in Political Science, Summa Cum Laude** — University of New Mexico
General University Honors
Minor: Philosophy

In the news

05/2014 **Knowing Networks** — NIH NIGMS Inside Life Science
Outreach at USA Science and Engineering Festival

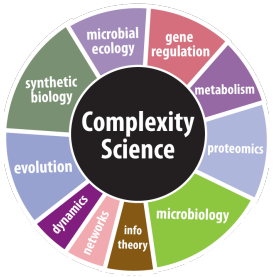
Awards

2010-2013 **Office of Science Graduate Fellowship** Department of Energy

2009 **Graduate Research Fellowship** National Science Foundation
Honorable Mention

2006 **Goldwater Scholarship** Barry M. Goldwater Foundation

Research Interests



Wetlab

MolBio ★★★★★
Cytometry ★★★★★
Expression ★★★★☆
Bioreactor ★★★★☆
Sequencing ★★★☆☆
Microscopy ★★☆☆☆

Programming

R ★★★★★
Python ★★★★☆
Bash ★★★★☆
SQL ★★★☆☆
Malab ★★★☆☆
HTML/JS ★★★☆☆
C++ ★☆☆☆☆

Research Summary

Teaching & Outreach

2014 **USA Science and Engineering Festival** Washington, D.C
Designed and facilitated a hands-on activity and web-based game to understand the structure and function of networks. Over 300 students have played the online game.

2011 **Introduction to Systems Biology** Institute for Systems Biology
Co-organizer, lecturer

2009-now **Science Communication Fellow** Pacific Science Center, Seattle WA

2010 **Graduate Teaching Assistant** Microbiology, University of Washington
MICRO 411: Gene Action

Students mentored

08-12/2012 **Robin Green** PhD student at University of Washington, WA
Currently at Fred Hutchinson Cancer Research Center

05-08/2011 **Darach Miller** Undergraduate at UC Davis, CA
Currently PhD student at NYU

05-08/2010 **Alexis Valauri-Orton** Undergraduate at Davidson College, NC
Currently Ocean Acidification Intern at Ocean Conservancy

Other

2011 **Complex Systems Summer School** Santa Fe Institute

2010 **MCB Student Symposium** Fred Hutchinson Cancer Research Center
Co-organizer, *Bioplasticity: flexibility within and beyond the code*

References

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