

Currently
Postdoc @ EMBL

Aaron Brooks/PhD

Science of complex biological systems

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Publications

DM Salvanha, N Jiang, **AN Brooks**, RZN Vêncio, NS Baliga. **GGB_{web}: a Gagggle-enabled, interactive genome browser for the web.** *In preparation.*

S Imam, S. Schaeuble, **AN Brooks**, NS Baliga, ND Price. (2015) **Data-driven integration of genome-scale regulatory and metabolic network models.** *Front. Microbiol.* 6:409

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 Turkarlan, 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

Research

2015 - now **Postdoc** [EMBL | Genome Biology Unit](#)
Project: "Multiomics characterization of genetic variation in yeast."
Advisor: Prof. Lars Steinmetz, Associate Head of Unit and Senior Scientist

Education

2008 - 2014 **PhD Molecular and Cellular Biology** [University of Washington](#)
Dissertation: "Data-driven inference of dynamic transcriptional regulatory mechanisms in prokaryotes: a systems perspective."
Advisor: Prof. Nitin Baliga, SVP and Director, Institute for Systems Biology

2002 - 2007 **BS Biochemistry & BA Political Science** [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
Summa Cum Laude
General University Honors
Minor: Philosophy

Research Interests



Wetlab

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

Programming

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

Research Summary



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 Honorable Mention** [National Science Foundation](#)

2006 **Goldwater Scholarship** [Barry M. Goldwater Foundation](#)

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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