

**Currently**  
Postdoc @ EMBL

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# AaronBrooks/PhD

Science of complex biological systems

## Publications

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 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

## 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

2016-2019 **EMBL Interdisciplinary Postdoc Fellowship (EIPOD)** [EU Marie Curie Actions](#)  
2010-2013 **Office of Science Graduate Fellowship** [Department of Energy](#)  
2006 **Goldwater Scholarship** [Barry M. Goldwater Foundation](#)

## Teaching & Outreach

2015 **EMBL: Data Mining and Integration with Networks** [Heidelberg, Germany](#)  
*Co-organizer, lecturer*  
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*  
2009-2015 **Science Communication Fellow** [Pacific Science Center, Seattle WA](#)

## 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*