

Currently
Postdoc @ EMBL

Aaron Brooks/PhD

Genetics of complex adaptive biological systems

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Publications

AN Brooks, WF Mueller, LM Steinmetz (2016) **SYGNALing a Red Light for Glioblastoma**. *Cell systems* 3 (2), 118-120

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: "Molecular consequences of large-scale genome variation in synthetic yeast."
Advisors: Prof. Lars Steinmetz, Associate Head of Unit and Senior Scientist at EMBL, Dr. Oliver Stegle, Group leader at EMBL-EBI

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. Lottfield Award
Advisor: Prof. David G. Bear
Summa Cum Laude
General University Honors
Minor: Philosophy

Research Interests



Wetlab

MolBio ★★★★★
 Sequencing ★★★★★
 Bioreactor ★★★★★
 Microscopy ★★★★★

Programming

R ★★★★★
 Python ★★★★★
 Bash ★★★★★
 HTML/JS ★★★★★
 SQL ★★★★★
 Malab ★★★★★
 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 Postdoctoral 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

References

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