

Neda Bagheri, Ph.D.

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EDUCATION

Ph.D. (2007), **B.S.** (2002), Electrical and Computer Engineering, **University of California Santa Barbara.**

PROFESSIONAL EXPERIENCE

- **Assistant Professor**, Chemical and Biological Engr., **Northwestern University**; 2012-present.
Secondary appointment in Feinberg School of Medicine Department of Pulmonary and Critical Care.
 - Northwestern Center for Synthetic Biology
 - NSF-Simons Center for Quantitative Biology
 - Northwestern Institute of Complex Systems
 - Chemistry of Life Processes Institute
 - Interdisciplinary Biological Sciences Program
 - Biotechnology Training Program
 - Robert H. Lurie Comprehensive Cancer Center
- **Scientific Advisory Board Member**, Allen Institute for Cell Science; 2018-present.
- **Scientific Advisory Board Member**, NSF Center for Cellular Construction; 2017-present.
- **Scientific Advisory Board Member**, Immuneering Corporation; 2012-present.
- **Postdoctoral Fellow**, Biological Engr., **Massachusetts Institute of Technology**; 2008-2011.
- **Graduate Student**, Electrical Engr., **University of California Santa Barbara**; 2003-2007.
- **Visiting Research Fellow**, **Max Planck Institute** for Dynamics of Complex Technical Systems in Magdeburg, Germany; 2004.

HONORS AND AWARDS

- **Distinguished Speaker** for the Accelerated Discovery Forum at IBM Research-Almaden; 2018.
- **NSF CAREER Award**, National Science Foundation Directorate for Engineering; 2017-2021.
- **Keynote Speaker** at 15th International Conference on Molecular Systems Biology (**ICMSB**) (Raitenhaslach, Germany); 2017.
- **Cornew Innovation Award**, Chemistry of Life Processes; 2014-2017.
- **Northwestern Searle Fellow**, Searle Scholars Teaching Program; 2013-2014.
- **International Challenge**, Dialogue for Reverse Engineering Assessments and Methods (DREAM); 2013. (Placed **6/65** for network inference and **2/14** for high-dimensional visualization).
- **Best Paper Award**, Computers and Chemical Engineering; 2006.
- **Research Fellow**, Air Force Research Laboratory; 2005-2007.
- **NSF Integrative Graduate Education and Research Trainee**; 2004-2007.
- **IEEE Control Systems Magazine Featured Student**; 2004.
- **NSF Fellow and invited participant**, 3rd International Summer School on Biocomplexity from System to Gene. Dartmouth College, NH; 2003.

SELECT LEADERSHIP AND SERVICE

- **PLOS ONE Editorial Board Member**; 2018-present.
- Institute of Electrical and Electronic Engineers (**IEEE**):
 - **Operations Chair** for annual Conference on Decision and Control (CDC) (Miami, FL); 2018.
 - **Technical Committee on Systems Biology**, Control Systems Society; 2017-present.
- Foundations of Systems Biology in Engineering (**FOSBE**) conference:
 - **Co-Chair** (Chicago, IL); 2018.
 - **International Planning Committee** (Magdeburg, Germany); 2016.
 - **Session Chair** (Boston, MA); 2015.
- **Founding Member**, Center for Synthetic Biology at Northwestern; 2017-present.

- *Processes* journal:
 - **Editorial Board** Member; 2018-present.
 - **Guest Editor**, special issue on “Control of Disease States”; 2018.
 - **Guest Co-Editor**, special issue on “Biological Networks”; 2017.
- **AFOSR Grand Challenge Workshop**, “The Compositionality Problem in Synthetic Biology: New Directions for Control Theory” (Boston, MA); Jun 2017.
- **Planning Committee**, bid for 22nd International Federation of Automatic Control (**IFAC**) World Congress; 2016.
- **Task Force** to engage junior faculty in International Federation of Automatic Control (**IFAC**) activities; 2015.
- **NSF Grand Challenge Workshop**, “Deciphering Genome to Phenome (G2P) Relationships; Interdisciplinary Research at the Interface of the Biological and Mathematical Sciences” (Arlington, VA); Oct 2015.
- **NSF Grand Challenge Workshop**, “How Organisms Walk the Tightrope Between Stability and Change” (Cold Spring Harbor, NY); Feb 2013.

INVITED CONFERENCE PRESENTATIONS

- International Conference on Biomolecular Engineering (**ICBE**; Newport Beach, CA); Jan 2019. *Unable to attend.*
- The American Society for Cell Biology Annual Meeting (**ASCB**; San Diego, CA); Dec 2018. *Unable to attend.*
- Mathematical Biosciences Institute (**MBI**) workshop on Multiscale Dynamics of Infections (Columbus, OH); Apr 2018.
- Mathematical Biosciences Institute (**MBI**) workshop on Control of Disease: Personalized Medicine across Heterogeneous Populations (Columbus, OH); Oct 2017.
- *In silico* Systems Biology technical session at the American Institute of Chemical Engineers (**AICHE**) annual conference (Minneapolis, MN); Oct 2017.
- Keynote Speaker at 15th International Conference on Molecular Systems Biology (**ICMSB**) (Raitenhaslach, Germany); Jul 2017.
- Eleventh Annual q-Bio Conference (New Brunswick, NJ); Jul 2017.
- Society for Industrial and Applied Math (**SIAM**) Conference on Applications of Dynamical Systems (Snowbird, UT); May 2017.
- Midwest q-Bio symposium (Notre Dame, IN); Apr 2017.
- Foundations of Systems Biology in Engineering (**FOSBE**) (Boston, MA); Aug 2015.
- Modeling in Cell Biology - Scale and Granularity (San Francisco, CA); May 2015.
- NYU Abu Dhabi Genomics and Systems Biology Symposium (Abu Dhabi, UAE); Feb 2014.
- Society for Integrative and Comparative Biology (**SICB**) (Austin, TX); Jan 2014.
- Symposium on the Systems Biology of Stem Cells (Irvine, CA); Jun 2013.
- International Conference on Frontiers in Systems and Synthetic Biology (Atlanta, GA); Mar 2013.
- Society for Industrial and Applied Math (**SIAM**) Conference on Life Sciences (San Diego, CA); Aug 2012.
- Mathematical Biosciences Institute (**MBI**) workshop on Robustness in Biological Systems (Columbus, OH); Feb 2012.

INVITED SEMINAR PRESENTATIONS

- Distinguished Speaker for the Accelerated Discovery Forum in IBM Research-Almaden; Jul 2018.
- University of Illinois Urbana–Champaign Decision and Controls Seminar Series; Apr 2018.
- Purdue University Weldon School of Biomedical Engineering Seminar Series; Apr 2018.
- UC San Francisco CCB (Chemistry and Chemical Biology)/iPQB (Integrative Program in Quantitative Biology) seminar series; Nov 2017.
- Johns Hopkins University Genomics seminar series; Dec 2015.
- Otto-von-Guericke-Universität joint with Max Planck Institute in Magdeburg, Germany; Sept 2015.
- University of Pittsburgh Chemical Engineering department seminar; Oct 2014.
- Eidgenössische Technische Hochschule (ETH) Chemical and Bioengineering, Zürich; Jul 2014.

- Marine Biological Laboratory in Woods Hole; Oct 2013.
- Illinois Institute of Technology Chemical Engineering; Mar 2013.
- Associated Colleges of the Chicago Area; Jan 2013.
- Loyola University Math and Statistics; Jan 2013.
- Tufts University School of Medicine Center of Cancer Systems Biology; Apr 2012.
- University of Wisconsin-Madison Biomedical Engineering; Apr 2012.

PEER-REVIEWED PUBLICATIONS

For latest information, please visit <http://bagheri.northwestern.edu/publications.html> or [NCBI public bibliography](#)

- 18 publications, including articles in *PNAS* (2018 & 2012), *ACS Anal. Chem* (2017), *Curr. Opin. Biotechnol.* (2016), *Integr. Biol.* (2015), *Biotech & Bioeng* (2014), *PLoS Comp Bio* (2011, 2008).
- 3 pending manuscripts under review.

OUTREACH

- **K-5 children's STEM books** (ongoing).
- **Science Speaks Chicago.** Adler Planetarium Youth Council hosts a TED-style event that will bring attention to unheard and underrepresented voices of young adults in STEM fields in the Chicagoland area; Apr 2018.
- **Co-producer of ETOPIA, the Engineering Transdisciplinary Outreach Project in the Arts**, an annual professional theater performance staged in McCormick School of Engineering and Applied Sciences to inspire cross-disciplinary dialogue about the role of science and technology in society. Performances are free and open to the public.
2015 performance: Bertolt Brecht's Galileo.
- **Faculty fellow:**
Slivka Student Residential College; 2014-present.
Chapin Student Residential College; 2014-2017.
International Student Residential College; 2012-2014.
- **Faculty advisor:**
The NU American Institute of Chemical Engineers (**AIChE**) group; 2014-present.
Engineers in Science Policy; 2017-present.
Code for Chicago; 2015-2017.
- **Society of Women Engineers** (SWE) banquet keynote; May 2014.

SOCIETY MEMBERSHIPS

- American Association for the Advancement of Science (**AAAS**)
- American Institute of Chemical Engineers (**AIChE**)
 - Society for Biological Engineering (**SBE**)
 - Computing and Systems Technology Division (**CAST**)
- Institute of Electrical and Electronic Engineers (**IEEE**)
- Biomedical Engineering Society (**BMES**)