

# Nikolai Slavov

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## CONTACT INFORMATION

Mugar # 334, Boston, MA 02115  
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WWW: [slavovlab.net](http://slavovlab.net)  
ORCID ID: [0000-0003-2035-1820](https://orcid.org/0000-0003-2035-1820)

## EDUCATION

Princeton University, Princeton, USA  
**Ph.D.** in Molecular and Quantitative Cell Biology **06.2010**  
**M.A.** in Molecular Biology **02.2006**  
**Dissertation:** Universality, specificity and regulation of *S. cerevisiae* growth rate response in different carbon sources and nutrient limitations  
**Mentor:** David Botstein  
Massachusetts Institute of Technology (MIT), Cambridge, USA  
**B.S.** in Biology **06.2004**

## ACADEMIC APPOINTMENTS

Northeastern University, Boston, USA  
Department of Bioengineering  
Assistant Professor **2015–present**  
Broad Institute of Harvard and MIT, Cambridge, USA  
Proteomics Platform **2015–2017**  
Harvard University, Cambridge, USA  
Departments of Systems Biology and Statistics **2014–2015**  
Massachusetts Institute of Technology (MIT), Cambridge, USA  
Departments of Biology and Physics  
Postdoc in the van Oudenaarden Laboratory **2011–2013**

## AWARDS & FELLOWSHIPS

✓ NIH Director's New Innovator Award (\$ 2,352,750) **2016**  
✓ Broad Institute of Harvard and MIT SPARC Award **2014**  
✓ Princeton University Dean's Award **2010**  
✓ IRCSET Postgraduate Research Fellowship (72,000 €) **2007**  
✓ Finalist in the Young European Entrepreneur Competition **2006**  
✓ Princeton Graduate Fellowship (\$ 45,000) **2004**  
✓ MIT Undergraduate Fellowship (\$ 125,000) **2001**  
✓ Eureka Fellowship for Academic Excellence (10,000 €) **2000**  
✓ Bronze Medal in the 31<sup>st</sup> International Chemistry Olympiad (*IChO*) **1999**  
✓ National Diploma for Exceptional Achievements in Chemistry **1999**

2020

2020

- ✓ Slavov N. ✉  
Unpicking the proteome in single cells  
*Science*, 367 (6477) :512513, DOI: [10.1126/science.aaz6695](https://doi.org/10.1126/science.aaz6695)

2019


2019

- ✓ Slavov N. ✉ *et al.*  
Voices in methods development: Single-cell proteomics  
*Nature Methods*, DOI: [10.1038/s41592-019-0585-6](https://doi.org/10.1038/s41592-019-0585-6)
- ✓ Huffman RG, Chen AT, Specht H & Slavov N. ✉  
DO-MS: Data-Driven Optimization of Mass Spectrometry Methods  
*Journal of Proteome Research*, DOI: [10.1021/acs.jproteome.9b00039](https://doi.org/10.1021/acs.jproteome.9b00039)
- ✓ Chen AT, Franks A & Slavov N. ✉  
DART-ID increases single-cell proteome coverage  
*PLoS Computational Biology*, DOI: [10.1371/journal.pcbi.1007082](https://doi.org/10.1371/journal.pcbi.1007082) [OA]
- ✓ Emmott EP, Jovanovic M & Slavov N. ✉  
Approaches for studying ribosome specialization  
*Trends in Biochemical Sciences*, DOI: [10.1016/j.tibs.2019.01.008](https://doi.org/10.1016/j.tibs.2019.01.008)
- ✓ Emmott EP, Jovanovic M & Slavov N. ✉  
Ribosome stoichiometry: from form to function  
*Trends in Biochemical Sciences*, DOI: [10.1016/j.tibs.2018.10.009](https://doi.org/10.1016/j.tibs.2018.10.009)
- ✓ Malioutov D., Chen T., Jaffe J., Airoidi E., Budnik B. & Slavov N. ✉  
Quantifying homologous proteins and proteoforms  
*Molecular & Cellular Proteomics*, DOI: [10.1074/mcp.TIR118.000947](https://doi.org/10.1074/mcp.TIR118.000947)

2018

2018


- ✓ Budnik B., Levy E., Harmange G. & Slavov N. ✉  
SCoPE-MS: mass-spectrometry of single mammalian cells quantifies proteome heterogeneity during cell differentiation  
*Genome Biology*, DOI: [10.1186/s13059-018-1547-5](https://doi.org/10.1186/s13059-018-1547-5) [OA]  
↔ [SCoPE-MS – We can finally do single cell proteomics!!!](#), highlight by *Proteomics News*  
↔ [Researchers Apply Mass Spec to Single-Cell Proteomics](#), highlight by *GenomeWeb*  
↔ [Interview](#), highlight by *Front Line Genomics*  
↔ [Single-cell proteomics](#) highlight by *the NIH Director's office*  
↔ [Technology feature](#) highlight by *Nature Methods*
- ✓ Levy E. & Slavov N. ✉  
Single cell protein analysis for systems biology  
*Essays in Biochemistry*, DOI: [10.1042/EBC20180014](https://doi.org/10.1042/EBC20180014)

- ✓ Specht H. & Slavov N. 

Transformative opportunities for single cell proteomics  
*Journal of Proteome Research*, 17 (8), 2565 - 2571 , DOI: [10.1021/acs.jproteome.8b00257](https://doi.org/10.1021/acs.jproteome.8b00257)  
 ⇔ [Innovations in Proteomics: The Drive to Single Cells](#), editorial highlight  
 ⇔ [Through the Looking Glass of Single Cell Proteomics](#), highlight by *Technology Networks*

2017

2017

- ✓ Franks A., Airoidi E.M., Slavov N. 

Post-transcriptional regulation across human tissues  
*PLoS Computational Biology*, 13(5): e1005535, DOI: [110.1371/journal.pcbi.1005535](https://doi.org/10.1371/journal.pcbi.1005535) [OA]  
 ⇔ [How Statistics Weakened mRNAs Predictive Power](#) highlight by *The Scientist*
- ✓ Saleh D, Najjar M, Zelic M, Shah S, Nogusa S, Polykratis A, Paczosa MK, Gough PJ, Bertin J, Whalen M, Fitzgerald KA, Slavov N., Pasparakis M, Balachandran S, Kelliher M, Meccas J, Degterev A.  
 Kinase Activities of RIPK1 and RIPK3 Can Direct IFN- Synthesis Induced by Lipopolysaccharide.  
*The Journal of Immunology*, 198(11):4435-4447, DOI: [10.4049/jimmunol.1601717](https://doi.org/10.4049/jimmunol.1601717)

2016

2016

- ✓ Klionsky, *et al.*, Slavov N., *et al.*  
 Guidelines for the use and interpretation of assays for monitoring autophagy  
*Autophagy*, vol. 12, issue 1, 1–222, DOI: [10.1080/15548627.2015.1100356](https://doi.org/10.1080/15548627.2015.1100356)
- ✓ Di Luca A, Hamill RM, Mullen AM, Slavov N., Elia G.  
 Comparative Proteomic Profiling of Divergent Phenotypes for Water Holding Capacity across the Post Mortem Ageing Period in Porcine Muscle Exudate  
*PLoS One*, 11(3): e0150605, DOI: [10.1371/journal.pone.0150605](https://doi.org/10.1371/journal.pone.0150605) [OA]

2015

2015





- ✓ Slavov N. 

Making the most of peer review  
*eLife*, 4:e12708, DOI: [10.7554/eLife.12708](https://doi.org/10.7554/eLife.12708) [OA]
- ✓ Slavov N. , Semrau S., Airoidi E.M., Budnik B., van Oudenaarden A.  
 Differential stoichiometry among core ribosomal proteins  
*Cell Reports*, vol. 13, issue 5, 865–873, DOI: [10.1016/j.celrep.2015.09.056](https://doi.org/10.1016/j.celrep.2015.09.056) [OA]  
 ⇔ [All Ribosomes Are Created Equal. Really?](#), highlight by *Trends in Biochemical Sciences*  
 ⇔ [New direction for tissue engineering and cancer therapeutics](#), highlight by *Science X*
- ✓ Alvarez JR, Zhiqiang B, Xu D, Yuan B, Lo KA, Yoon MJ, Lim YC, Knoll M, Slavov N., *et al.*  
 De-Novo Reconstruction of Adipose Tissue Transcriptomes Reveals Long Non-coding RNA Regulators of Brown Adipocyte Development  
*Cell Metabolism*, vol. 21, issue 5, 764–776, DOI: [10.1016/j.cmet.2015.04.003](https://doi.org/10.1016/j.cmet.2015.04.003)

Started Slavov Lab at Northeastern University, August 2015





2014

2014

- ✓ Malioutov D. , Slavov N.   
Convex Total Least Squares  
*Journal of Machine Learning Research, W&CP*, vol. 32, issue 1, 109–117 [OA]
- ✓ Slavov N. , Budnik B., Schwab D., Airoidi E., van Oudenaarden A.   
Constant Growth Rate Can Be Supported by Decreasing Energy Flux and Increasing Aerobic Glycolysis  
*Cell Reports* vol. 7, issue 3, 705–714 [OA]





2013

2013

- ✓ Slavov N. , Carey, J., Linse, S.   
Calmodulin transduces  $Ca^{+2}$  oscillations into differential regulation of its target proteins  
*ACS Chemical Neuroscience*, vol. 4, 601–612 [OA]
- ✓ Slavov N. , Botstein D.   
Decoupling Nutrient Signaling from Growth Rate Causes Aerobic Glycolysis and Dereglulation of Cell Size and Gene Expression  
*Molecular Biology of the Cell*, vol. 24, issue 2, 157–168 [OA]





2012

2012

- ✓ Slavov N. , van Oudenaarden A.   
How to Regulate a Gene: To Repress or to Activate?  
*Molecular Cell*, vol. 46, issue 5, 551–552 [OA]
- ✓ Slavov N. , Airoidi E.M., van Oudenaarden A., Botstein D.   
A Conserved Cell Growth Cycle Can Account for the Environmental Stress Responses of Divergent Eukaryotes  
*Molecular Biology of the Cell*, vol. 23, no. 10, 1986–1997 [OA]


2011


2011


- ✓ Slavov N. , Macinskas J., Caudy A., Botstein D.   
Metabolic Cycling without Cell Division Cycling in Respiring Yeast  
*PNAS*, vol. 108, no. 47, 19090–19095 [OA]
- ✓ Slavov N. , Botstein D.   
Coupling among Growth Rate Response, Metabolic Cycle and Cell Division Cycle in Yeast  
*Molecular Biology of the Cell*, vol. 22, no. 12, 1997–2009 [OA]

2010

2010

- ✓ **Slavov N.** 


Inference of Sparse networks with Unobserved Variables. Application to Gene Regulatory Networks  
*Journal of Machine Learning Research, W&CP*, vol. 9, 757–764 [OA]
- ✓ **Slavov N.** , Botstein, D.




Universality, Specificity and Regulation of *S. cerevisiae* Growth Rate Response in Different Carbon Sources and Nutrient Limitations  
*Dissertation*, Princeton University [OA]
- ✓ Silverman SJ., **Slavov N.**, Petti A., Parsons L., Briehof R., Thiberge S., Zenklusen D., Gandhi SJ., Larson D., Singer R., Botstein D. 

Metabolic cycling in single yeast cells from unsynchronized steady-state populations limited on glucose or phosphate  
*PNAS*, vol. 107, no. 15, 6946–6951 [OA]

## 2009 and before


## 2009 and before

- ✓ **Slavov N.** , Dawson KA. (2009)

Correlation Signature of the Macroscopic States of the Gene Regulatory Network in Cancer  
*PNAS*, vol. 106, no. 11, 4079-4084 (“In This Issue” article) [OA]
- ✓ Tagkopoulos I. , **Slavov N.** , Kung S.  (2005)

Multi-Class Biclustering and Classification Based on Modeling of Gene Regulatory Networks  
5<sup>th</sup> IEEE Symposium on Bioinformatics and Bioengineering (BIBE’05).


## PATENTS


- **Slavov N.** , Budnik B., Specht H., Levy E. Mass spectrometry technique for single cell proteomics, 16/251,039 (2019)


## PUBLISHED

## PREPRINTS

## GOOGLE SCHOLAR


- ▷ Specht H, Emmott E, Petelski A, Huffman RG, Perlman D, *et al.* & **Slavov N.**  (2019)

Single-cell mass-spectrometry quantifies the emergence of macrophage heterogeneity *bioRxiv (invited revision at Nature Methods)*, DOI: [10.1101/665307](https://doi.org/10.1101/665307) [OA]  
↔ [Over 1,000 SINGLE CELL PROTEOMES!](#), highlight by *Proteomics News*  
↔ [Technology feature](#) highlight by *Nature Methods*
- ▷ Specht H, Emmott E, Koller A, **Slavov N.**  (2019)

High-throughput single-cell proteomics quantifies the emergence of macrophage heterogeneity  
*bioRxiv*, DOI: [10.1101/665307](https://doi.org/10.1101/665307) [OA]
- ▷ Huffman G, Specht H, Chen AT, **Slavov N.**  (2019)

DO-MS: Data-Driven Optimization of Mass Spectrometry Methods  
*bioRxiv*, DOI: [10.1101/512152](https://doi.org/10.1101/512152) [OA]

- ▷ Specht H, Harmange G, Perlman DH, Emmott E, Niziolek Z, Budnik B, **Slavov N.** (2018)  
Automated sample preparation for high-throughput single-cell proteomics  
*bioRxiv*, DOI: [10.1101/399774](https://doi.org/10.1101/399774) [OA]
- ▷ Chen A, Franks A, **Slavov N.** (2018)  
DART-ID increases single-cell proteome coverage  
*bioRxiv*, DOI: [10.1101/399121](https://doi.org/10.1101/399121) [OA]
- ▷ Levy E. & **Slavov N.** (2018)  
Single cell protein analysis for systems biology  
*PeerJ Preprint*, DOI: [10.7287/peerj.preprints.26965v1](https://doi.org/10.7287/peerj.preprints.26965v1) [OA]
- ▷ Emmott EP, Jovanovic M & **Slavov N.** (2018)  
Ribosome stoichiometry: from form to function  
*PeerJ Preprint*, DOI: [10.7287/peerj.preprints.26991v1](https://doi.org/10.7287/peerj.preprints.26991v1) [OA]
- ▷ Specht H. & **Slavov N.** (2018)  
Routinely quantifying single cell proteomes: A new age in quantitative biology and medicine  
*PeerJ Preprint*, DOI: [10.7287/peerj.preprints.26821v1](https://doi.org/10.7287/peerj.preprints.26821v1) [OA]
- ▷ Malioutov D., Chen T., Jaffe J., Airoidi E., Carr S., Budnik B., **Slavov N.** (2017)  
Quantifying homologous proteins and proteoforms  
*bioRxiv*, DOI: [10.1101/168765](https://doi.org/10.1101/168765) [OA]
- ▷ Berg P., Budnik B., **Slavov N.**, Semrau S. (2017)  
Dynamic post-transcriptional regulation during embryonic stem cell differentiation  
*bioRxiv*, DOI: [10.1101/123497](https://doi.org/10.1101/123497) [OA]
- ▷ Budnik B., Levy E., **Slavov N.** (2017)  
Mass-spectrometry of single mammalian cells quantifies proteome heterogeneity during cell differentiation  
*bioRxiv*, DOI: [10.1101/102681](https://doi.org/10.1101/102681) [OA]  
↔ [SCoPE-MS – We can finally do single cell proteomics!!!](#), highlight by *Proteomics News*  
↔ [Researchers Apply Mass Spec to Single-Cell Proteomics](#), highlight by *GenomeWeb*  
↔ [Interview](#), highlight by *Front Line Genomics*
- ▷ **Slavov N.** (2015)  
From differential transcription of ribosomal proteins to differential structure of ribosomes  
*PeerJ Preprint*, DOI: [10.7287/peerj.preprints.1504v1](https://doi.org/10.7287/peerj.preprints.1504v1) [OA]
- ▷ Franks A., Airoidi E.M., **Slavov N.** (2015)  
Post-transcriptional regulation across human tissues  
*bioRxiv*, DOI: [10.1101/020206](https://doi.org/10.1101/020206) [OA]
- ▷ **Slavov N.**, Botstein, D., Caudy A. (2014)  
Extensive regulation of metabolism and growth during the cell division cycle  
*bioRxiv*, DOI: [10.1101/005629](https://doi.org/10.1101/005629) [OA]

- ▷ **Slavov N.** , Semrau S., Airoidi E.M., Budnik B., van Oudenaarden A. (2014) Differential stoichiometry among core ribosomal proteins *bioRxiv*, DOI: [10.1101/005553](https://doi.org/10.1101/005553) **[OA]**

OPINIONS &  
POPULAR SCIENCE  
PUBLICATIONS

- ▷ **Slavov N.**  (2018) We Must Demand Evidence of Peer Review *The Scientist*, [Link](#)
- ▷ **Slavov N.**  (2017) What was rate limiting was the idea, not the technology *Front Line Genomics*, [Link](#)
- ▷ **Slavov N.**  (2015) Making the most of peer review *eLife*, [Link](#)
- ▷ **Slavov N.**  (2014) Accomplishments Over Accolades! *The Scientist*, [Link](#)
- ▷ **Slavov N.**  (2014) Discoveries lie hidden behind the façade of popular assumptions *Cell Reporter*, [Link](#)
- ▷ **Slavov N.**  (2013) The Best Projects Are Least Obvious *The Scientist*, [Link](#)
- ▷ **Slavov N.**  (2013) A Wonderful Christmas with Mysterious Oscillations *PubChase*, [Link](#)
- ▷ **Slavov N.**  (2012) The Mission of MIT *The MIT Tech*, [Link](#)

SCIENTIFIC  
LEADERSHIP

- Organizing the third [Single-Cell Proteomics Conference \(SCP2020\)](#) **June 8–10 2020**
- Co-organized [Learning Meaningful Representations of Life](#) workshop at NeurIPS **Dec 13 2019**
- Organized the second [Single-Cell Proteomics Conference \(SCP2019\)](#) **June 10–12 2019**
- Chair for the fifth [Annual Single Cell Analysis USA Congress](#) **May 14 2019**
- Chair for the [Single Cell Proteomics session](#), HUPO **Oct 1–3 2018**
- Organized the first [Single-Cell Proteomics Conference \(SCP2018\)](#) **June 9–10 2018**

INVITED RESEARCH  
TALKS

- Coordination among metabolism and cell division *Harvard Medical School* **Nov.14.2019**

- Single-cell proteomics quantifies the emergence of macrophage heterogeneity  
*John Hopkins University* **Nov.6.2019**
- **Keynote:** Quantifying proteins in single cells at high-throughput  
*Single-cell Omics* **Oct.20.2019**
- **Keynote:** Transformative opportunities for single-cell proteomics  
*National Institutes of Health (NIH)* **Oct.17.2019**
- Single-cell proteomics for studying regeneration and aging  
*MDI Biological Symposium for Regeneration and Aging* **Oct.9.2019**
- **Keynote:** High-throughput single-cell proteomics quantifies the emergence of macrophage heterogeneity  
*European Single Cell Proteomics Conference* **Aug.27.2019**
- Mapping the Transcriptome and Proteome of Human Testis in 3D  
*CZI Human Cell Atlas Seed Networks Meeting* **Jul.30.2019**
- **Keynote:** DO-MS: Data-Driven Optimization of Mass Spectrometry Methods  
*MaxQuant Summer School, [Video](#)* **Jul.25.2019**
- Welcome to the Single Cell Proteomics Conference  
*Single Cell Proteomics Conference (SCP2019)* **Jun.10-12.2019**
- Mass-spectrometry of single cells quantifies proteome heterogeneity during cell differentiation  
*Winter Q-bio* **Feb.20.2019**
- Transformative opportunities for single cell proteomics  
*The Greater Boston Mass Spectrometry Discussion Group* **Dec.13.2018**
- Understanding and controlling cell differentiation based on comprehensive mass-spec quantification of proteins and signaling in single cells  
*UPENN Single Cell Biology Symposium, [Video](#)* **Nov.13.2018**
- Chair for the Single Cell Proteomics session of HUPO  
*Automated sample preparation for high-throughput single-cell proteomics* **Oct.3.2018**
- Using single-cell proteomics to engineer directed cell differentiation  
*Bioengineering & Translational Medicine Conference* **Sept.27.2018**
- Analyzing single cell proteomics data  
*ETH, Biognosys Discovery Proteomics Seminar* **Jul.7.2018**
- Progress, challenges and standards for single cell proteomics  
*Single-cell proteomics conference, [Video](#)* **June.9.2018**
- Understanding and controlling cell differentiation using single-cell mass-spectrometry  
*HMS Theory Lunch* **May.18.2018**



- Mass-spectrometry of single mammalian cells quantifies proteome heterogeneity during cell differentiation  
*CSHL Meeting: Single Cell Analyses* **Nov.10.2017**
- Single cell proteomics quantifies proteome heterogeneity during cell differentiation  
*Annual Single Cell Analysis USA Congress, Boston* **Oct.23.2017**
- Quantifying protein heterogeneity during the differentiation of single stem cells  
*Global CESI-MS Symposium* **Oct.06.2017**
- Single cell proteomics quantifies proteome heterogeneity during cell differentiation  
*Festival of Genomics, Boston* **Oct.04.2017**
- Exploring and characterizing system-level proteome heterogeneity during cell differentiation by single cell mass spectrometry  
*HUPO, Dublin* **Sept.18.2017**
- From differential transcription of ribosomal proteins to differential structure of ribosomes  
*Genetics, Genomics and Beyond, Calico* **Sept.16.2017**
- Mass-spectrometry of single mammalian cells quantifies proteome heterogeneity during cell differentiation  
*American Society for Mass Spectrometry Meeting* **June.05.2017**
- Principles of ribosome-mediated translational regulation  
*The Center for Engineering in Medicine, Massachusetts General Hospital* **Mar.17.2017**
- Principles of ribosome-mediated translational regulation  
*Systems Biology Seminar, Boston University* **Oct.13.2016**
- Differential stoichiometry among core ribosomal proteins  
*CSHL Translational Control, Cold Spring Harbor Laboratory* **Sept.08.2016**
- Ribosome-mediated translational regulation: Direct methods for quantifying the ribosome code  
*Center for Systems Biology, Columbia University* **Apr.20.2016**
- Coordinating metabolism and ribosome-mediated translational regulation  
*Department of Biology, New York University* **Apr.19.2016**
- Principles of ribosome-mediated translational regulation  
*Center for Interdisciplinary Research on Complex Systems* **Apr.12.2016**
- Quantifying homologous proteins and proteoforms  
*US HUPO Conference* **Mar.14.2016**
- Coordination among cell growth, cell division and gene expression  
*Broad Institute of MIT and Harvard, YSB* **Dec.9.2015**

- Coordinating cell growth and metabolism with ribosome-mediated translational regulation  
*Northeastern University, Biology Department Colloquium* **Oct.19.2015**
- Quantifying protein isoforms  
*Broad Institute of MIT and Harvard* **Sep.14.2015**
- Variable stoichiometry among core ribosomal proteins  
*2014 ASCB/IFCB Annual Meeting* **Dec.8.2014**
- Direct quantification of highly homologous proteins by mass-spectrometry indicates physiological changes in the protein composition of the ribosome  
*Broad Institute of MIT and Harvard, CBBO* **Jun.25.2014**
- Variable stoichiometry among core ribosomal proteins  
*Broad Institute of MIT and Harvard* **Jun.19.2014**
- Quantification of translational regulation of homologous proteins with unprecedented accuracy  
*Harvard HMS Systems Biology Theory Lunch* **Mar.21.2014**
- Exponentially growing cells can support a constant growth rate by very different metabolic strategies  
*Fourth Annual Physical Sciences in Oncology Meeting, NCI* **Apr.18.2013**
- Experimentally identified trade-offs of aerobic glycolysis  
*Center of Cancer Systems Biology at Tufts* **Dec.18.2012**
- Trade-offs of aerobic glycolysis  
*Harvard HMS Systems Biology Theory Lunch* **Sep.12.2012**
- The dynamics of exponential growth  
*GSA Yeast Meeting, Princeton University* **Aug.5.2012**
- The dynamics of exponential cell growth at constant growth rate  
*MIT Physical Sciences-Oncology Center* **Jun.11.2012**
- The dynamics of exponential growth  
*Broad Institute of Harvard and MIT* **Apr.17.2012**
- Metabolic cycling without cell division cycling  
*Bauer Forum at Harvard FAS Systems Biology* **Apr.15.2011**
- Inference of Sparse Networks with Unobserved Variables. Application to Gene Regulatory Networks  
*International Conference on Artificial Intelligence and Statistics* **May.14.2010**
- Dynamics in the calcium-calmodulin signaling network  
*International Conference on Chaos and Nonlinear Dynamics* **Jan.8.2006**

PROFESSIONAL  
ACTIVITIES

- **Peer-review:** PNAS, Nature Molecular and Structural Biology, Molecular Biology of the Cell, PLoS, Nucleic Acids Research, Bioinformatics, Annals of Applied Statistics, Cell Reports, eLife, Nature Communications || [Publons Profile](#)
- **Editorial roles:** Editor for PeerJ, bioRxiv Affiliate, Member of the editorial board of Journal of Proteome Research

TEACHING &  
RESIDENTIAL  
ADVISING

- Method and Logic in Systems Biology and Bioengineering**, Northeastern University **2019 – 2019**  
Discussion of seminal papers
- Mathematical Methods for Engineers**, Northeastern University **2016 – 2018**  
Introduction to major concepts and methods in linear algebra differential equations
- Method and Logic in Quantitative Biology**, Princeton University **2009 – 2010**  
Introduction to major ideas and concepts in quantitative biology based on primary literature
- Residential Graduate Student at Forbes College**, Princeton University **2009 – 2010**  
Advised students; organized language tables, sport events and trips
- Integrated Quantitative Introduction to Natural Sciences**, Princeton University **2006 – 2010**  
Interdisciplinary curriculum including physics, computer science, biochemistry, genetics, physiology and emphasizing quantitative problem solving and the connections among these disciplines
- Terrascope**, MIT **2002 – 2003**  
Selected for two subsequent years to lead undergraduate student groups working on complex real-world problems
- Biochemistry**, MIT **2003 – 2004**  
Taught precepts and helped undergraduate students prepare for examinations

CURRENT FUNDING

- ✓ NIH Director’s New Innovator Award (\$ 2, 352, 750) **2016-2021**
- ✓ Sanofi iAward (\$ 125, 000) **2018**
- ✓ CZI Seed Networks (\$ 400, 000) **2019**
- ✓ Merck Award (\$ 242, 827) **2019**

COMPLETED  
FUNDING

- ✓ NEU Tier I Award (\$ 50, 000) **2016**
- ✓ Broad Institute of Harvard and MIT SPARC Award (\$ 100, 000) **2014**
- ✓ IRCSET Postgraduate Research Fellowship (72, 000 €) **2007**