

**Daniel M. Suter****Curriculum Vitae**

Department of Biological Sciences  
 Purdue University  
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 West Lafayette, IN 47907-2054, USA

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**Education and Training**

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1995-2000 Postdoctoral Fellow in Cellular Neurobiology, Yale University; advisor: Dr. Paul Forscher  
 1995 PhD in Biochemistry, University of Zurich, Switzerland; thesis advisor: Dr. P. Sonderegger  
 1993 MS in Biology Education, ETH Zurich, Switzerland  
 1992 MS in Chemistry Education, ETH Zurich, Switzerland  
 1988 MS in Natural Sciences, Focus Biology, ETH Zurich, Switzerland

**Professional Experience**

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2017- Professor, Department of Biological Sciences, Purdue University  
 2009-2017 Associate Professor, Department of Biological Sciences, Purdue University  
 2003-2009 Assistant Professor, Department of Biological Sciences, Purdue University  
 2000-2002 Associate Research Scientist, Department of Molecular, Cellular and Developmental Biology, Yale University  
 1995-2000 Postdoctoral Fellow, Department of Molecular, Cellular and Developmental Biology, Yale University  
 1990-1995 Graduate Research Assistant, Department of Biochemistry, University of Zurich, Switzerland  
 1989-1990 Instructor in Chemistry, Academic High School Büelrain, Winterthur, Switzerland

**Awards**

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2017 Graduate Student Mentoring Award, Department of Biological Sciences  
 2016 J. Alfred and Martha Chiscon Award for Outstanding Undergraduate Teaching  
 2016 Purdue Research Foundation International Travel Award  
 2013 Seed for Success Award, Purdue University  
 2012 Purdue Research Foundation International Travel Award  
 2011 Outstanding Faculty Mentor Award, LSAMP Indiana  
 2005 Seed for Success Award, Purdue University  
 2003 Purdue Research Foundation International Travel Award  
 1998-1999 Swiss National Science Foundation Advanced Researcher Postdoctoral Fellowship  
 1997-1998 Roche Research Foundation Postdoctoral Fellowship,  
 1995-1997 Swiss National Science Foundation Postdoctoral Fellowship

**Professional Associations**

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2014-present Biophysical Society  
 2007-present Society for Neuroscience  
 1994-present American Society for Cell Biology  
 1993-present Swiss Society for Biochemistry

**Areas of expertise**

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- Cell biology: cell adhesion, cytoskeletal dynamics, signal transduction, cell motility, advanced live cell imaging and biophysical approaches
- Neurobiology: neuronal development, axonal growth and guidance, neuronal mechanics

**Teaching and Supervisory Experience**

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2016	Instructor of BIOL 696 "Seminar in Neuroscience: Spinal cord and traumatic brain injury: Mechanisms and Treatments" (graduate level seminar course, enrollment: 20)
2015-present	Instructor of BIOL 695 "Microscopy for Life Scientists" (graduate level lecture course, enrollment: 9)
2012	Instructor of BIOL 231 "Cell Structure and Function" (undergraduate level lecture course, enrollment: 43)
2009	Instructor of BIOL 695S/696N "Special Lectures in Neuroscience: Neuronal Migration and Axonal Guidance in Neural Development" (graduate level seminar course, enrollment: 10)
2006-2015	Instructor of BIOL 44212 lab module "Light Microscopy and Cell Biology" (undergraduate level lab course, enrollment: 8)
2003-present	Instructor of BIOL 436 "Neurobiology" (undergraduate level lecture course, enrollment: 73)
2003-present	Supervision of 3 postdoctoral researchers, 9 graduate students, 33 rotation students and 25 undergraduate researchers, Department of Biological Sciences, Purdue University
1995-2002	Supervision of research assistants, undergraduate and graduate students in the Forscher lab, Department of Molecular, Cellular and Developmental Biology, Yale University
1990-1995	Teaching assistant, Biochemistry courses for biology and medical students, Department of Biochemistry, University of Zurich
1989-1990	Instructor in Chemistry, Academic High School Bülrain, Winterthur, Switzerland

## Current Postdocs:

Dr. Yuri Efremov (2015-), PhD in Biological Sciences, Biophysics. Moscow State University; co-supervised by Dr. Arvind Raman and Dr. Daniel Suter

## Former Postdocs:

Dr. Ahmad Athamneh (2013-2016), Visiting Lecturer, Department of Biological Sciences, Purdue University

Dr. Boris Decourt (2005-2009), Assistant Research Professor, Arizona State University, Tempe, AZ

## Current Graduate Students:

Yuan Ren

Aslihan Terzi

Kristi McElmurry

## Graduated Students:

Bingbing Wu, PhD 2009, Associate Director, WuXi Biologics Co. Ltd, Shanghai, China

Aih Chen Lee, PhD 2009, Senior Scientist, WuXi Biologics Co. Ltd, Shanghai, China

Vidhya Munnamalai, PhD 2009, Postdoctoral Associate, Purdue University, West Lafayette, IN

Yingpei He, PhD 2015, Applied Statistician, Monsanto, St. Louis, MO

Cory J. Weaver, PhD 2016, Postdoctoral Associate, University of South Carolina, Columbia SC

Garland, Elisabeth, MS 2010, Research Assistant, Purdue University

Haley Roeder, MS 2017, Research Scientist, Bioanalytical Systems Inc., West Lafayette, IN

## Undergraduate Students:

Past: Jeff Fitzgerald, Keira MacIsaac, Goldie Peabody-Dowling, Mamduh Zabidi, Levi Wuethrich, William Kim, Aditi Trehan, Lauren Sanchez, Corinne Weisheit, Desmond Grimm, James Hamilton, Lauren Payne, Christina Atallah, Kristi Jo Streeter, Monique Nichols, Autumn Beachy, Erica Wimer, Rodolfo, Amezcua,

Amy Seifert, Dayoon Kwon, Melissa Casella, Hanna House, Tenaizus Woods, Amber Lee  
Current: Roshini Mudunuru, Kenny Nguyen, Leah Biasi

Chairperson PhD Examining Committee:

Cong Wei, Mandana Amiri, Jessica Verburg, Andrea Campero-Battisti, Kristen Fantetti, Anju Karki,  
Swathi Devireddy, Basudev Chowdhury

Member PhD Examining Committee:

Sashi Marella, Vidya Rajagopalan, Ling Huang, Chikka Maddhu, Ying Xiong, Divya Pathak, Nnadozie  
Onunkwo, Ryan Spaulding, Andrew Huh, Bingbing Wu, Aih Chen Lee, Vidhya Munnamalai, Yingpei He,  
Cory Weaver, Kayalvizhi Madhivanan, Daniel Minner, Hyun Sung, Janak Gaire, Glen Acosta, Yuan Ren,  
Mary Katherine Scott, Ninghai Gan, Pin-Chao Liao, Logan Ganzen, Aslihan Terzi, Wonyeong Jung, Roy  
Licke, Kristi McElmurry

### **Editorial Board Member**

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2013-present Scientific Reports, Neuroscience

2014-present Frontiers in Cellular Neuroscience, Associate Editor for Research Topic “*Neuronal  
Mechanics and Transport*”

### **Manuscript Reviewer**

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1995-present *ACS Appl. Mater. Interfaces, ASN Neuro, Dev. Neurobiol., EMBO J., FASEB J., FEBS  
letters, J. Biol. Chem., J. Cell Biol., J. Cell Sci., J. Nanosci. Nanotech., J. Neurobiol., J.  
Neurochem., J. Neurosci., J. Neurosci. Meth., J. Vis. Exp., Mol. Cell. Neurosci., Mol. Biol.  
Cell, Nature Cell Biology, Nature Reviews Neurosci., Neuron, Neural Development, PLoS  
ONE, PLoS Computational Biology, PNAS, Scientific Reports*

### **Grant Reviewer**

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2015-present EVPRP, Purdue University, New R01 grant program reviewer

2014 Ad hoc reviewer for the Vienna Science and Technology Fund

2014 Ad hoc reviewer for NSF

2013 Ad hoc reviewer for NIH Neurodevelopment, Synaptic Plasticity, and Neurodegeneration  
Fellowship Review Panel

2011 Ad hoc reviewer for British Council

2010 Ad hoc reviewer for Canada Foundation for Innovation (CFI)

2009 Ad hoc reviewer for NIH study section group “Neuronal Differentiation, Plasticity and  
Regeneration” (NDPR)

2008 Ad hoc reviewer for NSF

2006 Ad hoc reviewer for NIH study section group “Synapses, Cytoskeleton and Trafficking”  
(SYN)

2006 Oncological Sciences Center, Purdue University, grant reviewer

2005 Ad hoc reviewer for NIH study section group “Neuronal Differentiation, Plasticity and  
Regeneration” (NDPR)

2005 Purdue Research Foundation grant reviewer

### **Publications**

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#### **Peer Reviewed**

1. Weaver, C. J., H. S. Roeder, A. Terzi, T. Gurol, Q. Deng, Y. F. Leung, and **D. M. Suter**.  
*nox2/cybb* deficiency affects zebrafish retinal ganglion cell differentiation. In revision for *J.  
Neurosci*.
2. Athamneh, A. I. M., Y. He, P. Lamoureux, L. Fix, **D. M. Suter**, and K. E. Miller. Neurite elongation  
is highly correlated with bulk forward translocation of microtubules. In revision for *Sci. Rep*.

3. Ren, Y., and **D. M. Suter**. 2016. Increase in growth cone size correlates with decrease in neurite growth rate. *Neural Plast.* <http://dx.doi.org/10.1155/2016/3497901>
4. Miller, K. E., and **D. M. Suter**. 2016. Editorial: Neuronal Mechanics and Transport. *Front. Cell. Neurosci.* 10:1. doi: 10.3389/fncel.2016.00001.
5. Weaver, C. J., Y. F. Leung, and **D. M. Suter**. 2016. Expression dynamics of NADPH oxidases during early zebrafish development. *J. Comp. Neurol.* 524(10):2130-41. doi: 10.1002/cne.23938.
6. Athamneh, A. I. M., A. X. Cartagena-Rivera, A. Raman, and **D. M. Suter**. 2015. Substrate deformation predicts neuronal growth cone advance. *Biophys. J.* 109(7):1358-71.
7. Athamneh, A. I. M., and **D. M. Suter**. 2015. Quantifying mechanical force in axonal growth and guidance. *Front. Cell. Neurosci.* 9:359. doi: 10.3389/fncel.2015.00359
8. He, Y., Y. Ren, B. Wu, B. Decourt, A.C. Lee, A. Taylor, and **D. M. Suter**. 2015. Src and cortactin promote lamellipodia protrusion and filopodia formation and stability in growth cones. *Mol. Biol. Cell* 26(18):3229-44.
9. Munnamalai, V., C. J. Weaver, C. E. Weisheit, P. Venkatraman, Z. S. Agim, M. T. Quinn, and **D. M. Suter**. 2014. Bidirectional interactions between NOX2-type NADPH oxidase and the F-actin cytoskeleton in neuronal growth cones. *J. Neurochem.* 130(4):526-40.  
Cover article
10. Kilinc, D., A. Blasiak, J. J. O'Mahony, **D. M. Suter**, and G. U. Lee. 2012. Magnetic tweezers-based force clamp reveals mechanically distinct apCAM domain interactions. *Biophys. J.* 103(6):1120-9.
11. Martines, E., J. Zhong, J. Muzard, A.C. Lee, B. B. Akhremitchev, **D. M. Suter**, and G. U Lee. 2012. Single molecule force spectroscopy of the *Aplysia* cell adhesion molecule apCAM reveals two homophilic bonds. *Biophys. J.* 103(4):649-57.
12. **Suter, D. M.**, and K. E. Miller. 2011. The emerging role of forces in axonal elongation. *Prog. Neurobiol.* 94(2):91-101.
13. Snyder, J. E., O. Azizgolshani, B. Wu, Y. He, A. C. Lee, J. Jose, **D. M. Suter**, C. M. Knobler, W. M. Gelbart, and R. J. Kuhn. 2011. Rescue of infectious particles from pre-assembled alphavirus nucleocapsids cores. *J. Virol.* 85(12):5773-81.
14. Xiong, Y., A. C. Lee, **D. M. Suter**, and G. U. Lee. 2009. Topography and nanomechanics of live neuronal growth cones analyzed by atomic force microscopy. *Biophys. J.* 96 (12):5060-5072.
15. Munnamalai, V., and **D. M. Suter**. 2009. Reactive oxygen species regulate F-actin dynamics in neuronal growth cones and neurite outgrowth. *J. Neurochem.* 108 (3):644-661.
16. Decourt, B., V. Munnamalai, A. C. Lee, L. Sanchez, and **D. M. Suter**. 2009. Cortactin colocalizes with filopodial actin and accumulates at IgCAM adhesion sites in *Aplysia* growth cones. *J. Neurosci. Res.* 87(5):1057-1068.  
Cover article
17. Wu, B., B. Decourt, M. A. Zabidi, L. T. Wuethrich, W. H. Kim, Z. Zhou, K. MacIsaac, and **D. M. Suter**. 2008. Microtubule-mediated Src tyrosine kinase trafficking in neuronal growth cones. *Mol. Biol. Cell.* 19 (11): 4611-4627.  
Cover article and highlighted in InCytes from Molecular Biology of the Cell
18. Lee, A. C., and **D. M. Suter**. 2008. Quantitative analysis of microtubule dynamics during adhesion-mediated growth cone guidance. *Dev. Neurobiol.* 68 (12):1363-1377.  
Cover article
19. Lee, A. C., B. Decourt, and **D. M. Suter**. 2008. Neuronal cell cultures from *Aplysia californica* for high-resolution imaging of growth cones. *J. Vis. Experim. (JoVE)* 12, <http://www.jove.com>
20. Grzywa, E. L., A. C. Lee, G. U. Lee, and **D. M. Suter**. 2006. High-Resolution Analysis of Neuronal Growth Cone Morphology by Comparative Atomic Force and Optical Microscopy. *J. Neurobiol.* 66

(14):1529-43

Cover article

21. **Suter, D. M.**, A. W. Schaefer, and P. Forscher. 2004. Microtubule dynamics are necessary for Src family kinase dependent growth cone steering. *Curr. Biol.* 14:1194-1199
22. **Suter, D. M.**, and P. Forscher. 2001. Transmission of growth cone traction force through apCAM-cytoskeletal linkages is regulated by Src family tyrosine kinase activity. *J. Cell Biol.* 155 (3):427-438  
Comment to Suter and Forscher, *J. Cell Biol.* 155 (3):427-438 (2001) by Jay, D. G. 2001. A Src-astatic response to mounting tension. *J. Cell Biol.* 155 (3): 327-330
23. Espindola, F. S., **D. M. Suter**, L. B.E. Partata, T. Cao, J. S. Wolenski, R. E. Cheney, S. M. King, and M. S. Mooseker. 2000. The light chain composition of chick brain myosin-Va: calmodulin, myosin-II essential light chains, and 8 kDa dynein light chain/PIN. *Cell Motil. Cytoskeleton* 47(4): 269-281
24. **Suter, D. M.**, and P. Forscher. 2000. Substrate-cytoskeletal coupling as a mechanism for the regulation of growth cone motility and guidance. *J. Neurobiol.* 44 (2): 97-113
25. Fitzli, D., E. T. Stoeckli, S. Kunz, K. Siribour, C. Rader, B. Kunz, S. V. Kozlov, A. Buchstaller, R. P. Lane, **D. M. Suter**, W. J. Dreyer, and P. Sonderegger. 2000. A direct interaction of axonin-1 and NrCAM results in guidance, but not growth of commissural axons. *J. Cell Biol.* 149 (4): 951-968
26. **Suter, D. M.**, F. S. Espindola, C.-H. Lin, P. Forscher, and M. S. Mooseker. 2000. Localization of unconventional myosins V and VI in neuronal growth cones. *J. Neurobiol.* 42 (3): 370-382
27. **Suter, D. M.**, L. D. Errante, V. Belotserkovsky, and P. Forscher. 1998. The Ig superfamily cell adhesion molecule, apCAM, mediates growth cone steering by substrate-cytoskeletal coupling. *J. Cell Biol.* 141 (1): 227-240  
Comment to Suter et al., *J. Cell Biol.* 141 (1): 227-240 (1998) by Heidemann, S., and R. E. Buxbaum. 1998. Cell crawling: First the motor, now the transmission. *J. Cell Biol.* 141 (1): 1-4
28. **Suter, D. M.**, and P. Forscher. 1998. An emerging link between cytoskeletal dynamics and cell adhesion molecules in growth cone guidance. *Curr. Opin. Neurobiol.* 8 (1): 106-116
29. **Suter, D. M.**, G. E. Pollerberg, A. Buchstaller, R. J. Giger, W. J. Dreyer, and P. Sonderegger. 1995. Binding between the neural cell adhesion molecules axonin-1 and Nr-CAM/Bravo is involved in neuron-glia interaction. *J. Cell Biol.* 131 (4): 1067-1081
30. **Suter, D. M.**, and P. Sonderegger. 1994. Evidence for a nonneuronal receptor for axonin-1 and Ng-CAM. *Swiss. Arch. Neurol. Psychiatr.* 145 (3): 37-40
31. **Suter, D. M.**, E. T. Stoeckli, and P. Sonderegger. 1993. Inhibitory effects of the immunoglobulin superfamily molecule axonin-1 on Schwann cells and astrocytes. *Swiss. Arch. Neurol. Psychiatr.* 144 (3): 221-224

#### Invited Book Chapters, News and Views Articles

1. Stoeckli, E. T., D. Kilinc, B. Kunz, S. Kunz, G. U. Lee E., Martines, C. Rader, and **D. M. Suter**. 2013. Analysis of cell-cell contact mediated by Ig superfamily cell adhesion molecules. In *Current Protocols in Cell Biology*. John Wiley & Sons, Inc, New York. Unit 9.5
2. Hollenbeck, P. J., and **Suter, D. M.** 2013. Axon outgrowth: motor protein moonlights in microtubule sliding. *Curr. Biol.* 23(13):R575-6.
3. **Suter, D. M.**, and P. J. Hollenbeck. 2012. How to get on the right track. *Nat. Neurosci.* 15(1):7-8.
4. **Suter, D. M.** 2011. Live cell imaging of neuronal growth cone motility and guidance *in vitro*. Chapter 6 In *Cell Migration: Methods and Protocols*, 65-86, Second Edition, Claire Wells and Dr. Maddy Parsons (eds.), *Methods in Molecular Biology*.

5. **Suter, D.M.** 2010. Functions of myosin motor proteins in the nervous system. In *The Neurobiology of Actin: From Neurulation to Synaptic Function*, Gianluca Gallo and Lorene Lanier (eds.), *Advances in Neurobiology* 5:45-72.
6. Sonderegger, P., S. Kunz, C. Rader, **D. M. Suter**, and E. T. Stoeckli. 2001. Analysis of cell-cell contact mediated by Ig superfamily cell adhesion molecules. In *Current Protocols in Cell Biology*. J. S. Bonifacino, M. Dasso, J. Lippincott-Schwartz, J. B. Harford, and K. M. Yamada, editors. John Wiley & Sons, Inc, New York. Unit 9.5

### **Invited Meeting Talks**

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- 2016 "Micrometer-scale elastic adhesions are involved in rigidity sensing of growth cones". Invited talk for the Special Interest Subgroup Meeting "*Neuronal Cell Biology: Cytoskeleton and Trafficking*" at the 56<sup>th</sup> Annual Meeting of the American Society for Cell Biology, San Francisco, CA, 03/12/16.
- 2016 "NOX2-derived ROS regulates retinotectal development". Invited talk for the Special Interest Subgroup Meeting "*Emerging roles of ROS-related redox signaling in cell biology*" at the 56<sup>th</sup> Annual Meeting of the American Society for Cell Biology, San Francisco, CA, 03/12/16.
- 2016 "Traction force and substrate deformation in adhesion-mediated neuronal growth cone advance". Invited talk at Heraeus-funded workshop on "*Neuronal Mechanics*" at Bad Honnef, Germany, 08/18/16.
- 2016 "Nox2/cybb is Required for Retinotectal Development in Zebrafish". Invited talk at the Gordon Research Conference on Nox Family NADPH Oxidases, Waterville Valley, NH, 06/06/16
- 2016 "Modeling mechanically-induced growth cone advance reveals the importance of micrometer-scale elastic adhesion structures in rigidity sensing." Invited talk given by Postdoctoral Associate Dr. Ahmad Athamneh at *Chicago Cytoskeleton Meeting*, Northwestern University, Chicago, IL, 04/22/16.
- 2014 "The level of Substrate Deformation and not Traction Force Regulates Adhesion-mediated Neuronal Growth Cone Advance. Invited talk given by Postdoctoral Associate Dr. Ahmad Athamneh at Workshop on Axonal Transport & Neuronal Mechanics, Mathematical Biosciences Institute at Ohio State University, Columbus, OH. 11/06/14.
- 2014 "Src Regulation of Lamellipodia, Filopodia, and Substrate-Cytoskeletal Coupling in Neuronal Growth Cones". Invited talk at on-line Neuroscience BioConference Live, 03/19/14.
- 2014 "Src Regulation of Lamellipodia and Filopodia in Neuronal Growth Cones". Invited talk at Chicago Cytoskeleton meeting, Northwestern University, Chicago, 03/14/14.
- 2013 "Src Regulation of Lamellipodia, Filopodia, and Substrate-Cytoskeletal Coupling in Neuronal Growth Cones". Invited talk at the 2<sup>nd</sup> Meeting on Emerging Concepts on *Neuronal Cytoskeleton*. Marbella Resort, Maitencillo, Chile, 05/28/13.
- 2012 "A Novel Role for ROS in Neuronal Growth Cone Migration". Invited talk at on-line BioConference Live Life Sciences, 09/13/12
- 2010 "A Novel Role for NOX-derived ROS in the Regulation of Neuronal Growth Cone Motility" Invited talk at the Gordon Research Conference on Nox Family NADPH Oxidases, Les Diablerets, Switzerland, 06/09/10
- 2007 "Microtubule dynamics in neuronal growth cones during adhesion-mediated guidance". Invited Minisymposium talk at 47<sup>th</sup> Annual Meeting of the American Society for Cell Biology, Washington, DC, 12/03/07

- 2006 "The role of Src tyrosine kinase in neuronal growth cone guidance". Invited talk at Chicago Cytoskeleton meeting, Northwestern University, Chicago, 04/21/06
- 2003 "Substrate-cytoskeletal coupling and force transduction in neuronal growth cone steering". Invited talk at INSERM workshop "Role of mechanical constraints in cell biology: nanomanipulations by optical and magnetic tweezers", Montpellier, France, 11/06/03
- 2003 "Analysis of microtubule extension during growth cone steering". Invited talk at Chicago Cytoskeleton Meeting, Northwestern University, Chicago, 02/21/03
- 2002 "Neuronal Growth Cone Steering: A Complex Cellular Process Studied Using Advanced Light Microscopy Techniques". Invited talk at Genomics Symposium, Purdue University, West Lafayette, IN, 10/13/02
- 1998 "Neuronal growth cone steering mediated by IgCAM-cytoskeletal coupling". Invited talk at Symposium on Molecular Medicine, Max Delbrueck Center for Molecular Medicine, Berlin, Germany, 12/18/98
- 1998 "Neuronal growth cone steering mediated by IgCAM-cytoskeletal coupling". Invited talk at Gordon Research Conference on Developmental Physiology, Plymouth, NH, 08/04/98

### ***Meeting Organizer***

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- 2016 Special Interest Subgroup Meeting "*Emerging roles of ROS-related redox signaling in cell biology*" at the *56<sup>th</sup> Annual Meeting of the American Society for Cell Biology*, San Francisco, CA, December 3-7, 2016.
- 2016 Heraeus-funded workshop on "*Neuronal Mechanics*" at Bad Honnef, Germany, on August 17-19, 2016
- 2014 Mathematical Bioscience Institute (MBI) workshop on "Axonal Transport and Neuronal Mechanics", Ohio State University, Columbus OH, November 3-7, 2014

### ***Invited Seminars***

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- 2017 Purdue Institute for Integrative Neuroscience Retreat, St. Joseph, MI, 05/18/17
- 2016 Department of Biological Sciences, Purdue University, West Lafayette, IN, 10/19/16
- 2016 Department of Biology, IUPUI, Indianapolis, IN, 09/23/16
- 2016 Department of Cell and Developmental Biology, University of Illinois, Urbana-Champaign, IL, 03/16/16
- 2016 Weldon School of Biomedical Engineering, Purdue University, West Lafayette, IN, 02/17/16
- 2016 Department of Microbiology and Immunology, Montana State University, Bozeman, MT, 01/19/16
- 2015 Institute of Molecular Life Sciences, University of Zurich, Zurich Switzerland, 07/21/15
- 2015 Department of Molecular, Cellular and Developmental Biology, Yale University, New Haven, CT, 04/29/15
- 2013 Department of Chemistry, Purdue University, West Lafayette, IN, 09/20/13
- 2013 Department of Fundamental Neuroscience, University of Lausanne, Lausanne, Switzerland, 06/17/13
- 2012 Indiana Spinal Cord and Brain Injury Research Forum, Indiana University School of Medicine, Indianapolis, IN, 11/14/12
- 2011 Department of Biological Sciences, Purdue University, West Lafayette, IN, 11/05/11
- 2011 Conway Institute of Biomolecular and Biomedical research, University College Dublin, Dublin, Ireland, 05/06/11
- 2010 NSF-funded Research Experiences for Undergraduates program, Physics Department, Purdue University, 06/30/10

2009 Purdue Chapter of Biomedical Engineering Society, Purdue University, West Lafayette, IN, 12/02/09

2009 Neuroscience Program, Michigan State University, East Lansing, MI, 03/19/09

2008 Department of Cell and Developmental Biology, University of Michigan, Ann Arbor, MI, 10/29/08

2008 Department of Biological Sciences, Purdue University, West Lafayette, IN, 10/22/08

2008 Brain Research Institute, University of Zurich, Zurich Switzerland, 08/04/08

2008 Stark Neurosciences Research Institute, Indiana University School of Medicine, Indianapolis, IN, 03/07/08

2008 Department of Biological Sciences, Purdue University Calumet, Hammond, IN, 02/22/08

2007 Department of Anatomy, University of Wisconsin Medical School, Madison, WI, 09/13/07

2007 Department of Neurobiology and Anatomy, Drexel University, Philadelphia, PA, 03/14/07

2005 Department of Biochemistry, University of Zurich, Zurich, Switzerland, 08/12/05

2005 Nano Center for Learning and Teaching (NCLT) workshop for K-12 teachers, Purdue University, 07/20/05

2005 Department of Biological Sciences, Purdue University Calumet, Hammond, IN, 03/25/05

2004 Department of Chemistry, Purdue University, West Lafayette, IN, 04/30/04

2003 Department of Physics, Purdue University, West Lafayette, IN, 12/12/03

2002 Department of Animal Biology, University of Pennsylvania, Philadelphia, PA, 05/29/02

2002 Hospital St. Gallen, St. Gallen, Switzerland, 03/13/02

2002 Department of Biochemistry, University of Zurich, Zurich, Switzerland, 03/11/02

2002 Department of Biological Sciences, Purdue University, West Lafayette, IN, 02/16/02

2002 Department of Biological Sciences, Carnegie Mellon University, Pittsburgh, PA, 01/23/02

2002 Department of Physiology, Tufts University, Boston, MA, 01/07/02

2001 Department of Biology, University of Massachusetts, Amherst, MA, 11/14/01

2001 European Molecular Biology Laboratory (EMBL), Heidelberg, Germany, 02/12/01

2000 Department of Zoology, University of Zurich, Zurich, Switzerland, 07/10/00

2000 Institute of Molecular Pathology (IMP), Vienna, Austria, 05/23/00

2000 Swiss Institute for Experimental Cancer Research, Lausanne, Switzerland, 04/13/00

2000 Friedrich Miescher Institute, Basel, Switzerland, 04/10/00

1999 Center for Molecular Biology, University of Heidelberg, Heidelberg, Germany, 10/04/99

1997 Department of Biochemistry, University of Zurich, Zurich, Switzerland, 01/06/97

1997 Brain Research Institute, University of Zurich, Zurich, Switzerland, 01/08/97

1995 Department of Biochemistry, University of Zurich, Zurich, Switzerland, 07/13/95

1994 Department of Biology, Yale University, New Haven, CT, 12/18/94

1994 Department of Biology, MIT, Boston, MA, 12/17/94

1994 Department of Neurosciences, Case Western Reserve University, Cleveland, OH, 12/15/94

1994 Department of Physiology, University of California, San Francisco, CA, 12/09/94

1994 The Burnham Institute, La Jolla, CA, 12/06/94

### ***Research Funding***

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#### Current

NSF IOS-1146944

09/01/12 - 08/31/18

"Nanomechanics of Src signaling in neuronal growth cones"

Role: PI



Purdue Research Foundation 06/01/17 - 05/31/18  
 "Regulation of growth cone filopodia by cortactin phosphorylation"  
 Role: PI

Purdue University Major Scientific Equipment Award 07/01/16 - 06/30/17  
 "High-resolution, high-sensitivity digital camera for quantitative live cell imaging"  
 Role: PI

Showalter Trust 07/01/16 - 06/30/17  
 "Mitochondrial Reactive Oxygen Species Regulate Neutrophil Migration in Vivo"  
 Role: co-PI

### Past

Purdue University, EVPRP New NIH R01 program 05/01/15 - 12/31/16  
 "NADPH oxidase-derived reactive oxygen species regulate axonal growth and guidance"  
 Role: PI

Purdue Research Foundation 08/01/14 - 07/31/16  
 "NADPH oxidase-derived ROS in axonal growth and guidance"  
 Role: PI

Purdue University, OVPR Incentive Grant Program 08/01/13 - 05/31/16  
 "An integrated AFM platform for cellular dynamics and mechanics"  
 Role: PI; Dr. Arvind Raman Co-PI

Indiana CTSI 08/17/12 - 05/01/15  
 "High-resolution electron microscopy of growth cone actin organization regulated by Src tyrosine kinase"  
 Role: PI

Purdue Research Foundation 08/01/12 - 07/31/14  
 "Src Tyrosine Kinase Regulation Of Growth Cone Motility And Guidance"  
 Role: PI

Sigma Xi Grants-in-Aid of Research (Cory Weaver) 06/01/12 -05/31/13  
 "The Role Of NADPH-oxidase Derived Reactive Oxygen Species In Zebrafish Axonal Growth And Guidance"  
 Role: PI

NIH R01 NS49233 02/15/05 - 01/31/13  
 "Regulation of Neuronal Growth Cone Guidance"  
 Role: PI

NSF 102533 01/01/11-01/01/12  
 Louis Stokes Alliance for Minority Participation Indiana (Monique Nichols)  
 Role: co-PI

Bindley Bioscience Center 08/01/02 – 08/31/05  
 Startup Funds for Imaging Instrumentation  
 Role: PI

**Collaborators:**

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Current

Claudio Aguilar, Purdue University, West Lafayette, IN  
 Qing Deng, Purdue University, West Lafayette, IN  
 Fang Huang, Purdue University, West Lafayette, IN  
 Taeyoon Kim, Purdue University, West Lafayette, IN  
 Yuk Fai Leung, Purdue University, West Lafayette, IN  
 Kyle Miller, Michigan State University, East Lansing, MI  
 Mark T. Quinn, Montana State University, Bozeman, MT  
 Arvind Raman, Purdue University, West Lafayette, IN  
 Jeff Urbach, Georgetown University, Washington, DC

Past

Gaudenz Danuser, Harvard Medical School, Boston, MA  
 Richard J. Kuhn, Purdue University, West Lafayette, IN  
 Gil U. Lee, University College, Dublin, Ireland  
 Val Watts, Purdue University, West Lafayette, IN

**Membership In University Centers and Interdisciplinary Programs**

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Purdue Institute for Integrative Neuroscience  
 Bindley Bioscience Center  
 Birck Nanotechnology Center  
 Interdisciplinary Life Science Graduate Program PULSe, Integrative Neuroscience and Membrane Biology training groups  
 Purdue University Center for Basic and Applied Membrane Sciences (PUBAMS)  
 Purdue Cytoskeleton Group

**University and Public Service**

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**Department**

2017-present Convener of the Graduate and Advanced Studies Committee  
 2016-present Convener of Neuroscience and Physiology Area  
 2015-2016 Chair of Departmental Faculty Search Committee "Neurobiology"  
 2015-2016 Convener of Development and Disease Cluster  
 2015-present Departmental Honors Committee  
 2013-present Graduate and Advanced Studies Committee  
 2012-2013 Departmental Faculty Search Committee "Molecular Pathogenesis"  
 2010-2014 Departmental Safety Committee  
 2010-2012 Departmental Faculty Teaching Load Committee  
 2005-2008 Graduate and Advanced Studies Committee  
 2004-2007 Departmental Seminar Organizer  
 2005-2006 Departmental Faculty Search Committee "Animal Development"  
 2004-2005 Departmental Faculty Search Committee COALESCE "Membrane"  
 2004-2005 Purdue Cytoskeletal Group Research Seminar Organizer  
 2003-2016 Neurobiology Qualifier Committee  
 2003-2004 Graduate Studies Admission Committee  
 2003-present Member of 34 graduate student committees, chair of 9 committees

**College of Science**

2015-2016 Strategic Hiring Committee  
 2015-2016 Grade Appeals Committee  
 2009-2012 College of Science Graduate Curriculum and Academic Policy Committee (GCAP)

- 2009-2012 College of Science Faculty Council, Secretary, 2011-2012  
 2007 College of Science White Paper Presentation: "Biology and Physics of the Cytoskeleton"  
 COS faculty retreat May 9, 2007  
 2003 Strategic Planning Focus Groups: Membrane Biology and Nanoscience  
 2003 COALESCE Search Committee "Nanoscience"

### University

- 2016 Poster judge at Purdue University Sigma Xi Poster competition, 03/02/16  
 2015-present EVPRP New R01 Program grant reviewer  
 2015 Co-leader Pillars of Excellence "Cell Biology"  
 2012-2015 Chair of PULSe Graduate Program Admissions Committee  
 2009-2015 PULSe Graduate Program Admissions Committee, Co-Chair 2011-2012  
 2014 Poster Judge at Discovery U Undergraduate Research Symposium at Purdue University,  
 West Lafayette, 04/08/14  
 2008-2010 Campus Grievance Appeals Committee  
 2006 Oncological Sciences Center, Purdue University, grant proposal reviewer  
 2005 PRF grant proposal reviewer

### Public

- 2003-present Demonstration of *Aplysia californica* as model system to study neuronal growth at the  
 Purdue Spring Fest, April 12-13, 2003, April 12-13, 2008, April 18-19, 2009, April 14-15,  
 2012, April 13-14, 2013, April 12-13, 2014, April 18-19, 2015, April 16-17, 2016, April 8-9,  
 2017  
 2012-present Exhibit about microscopy at Purdue NanoDays, April 26-27, 2012, April 25, 2013, April 10-  
 11, 2014, April 16-17, 2015, April 14-15, 2016, April 6-7, 2017  
 2016 Judge for the Lafayette Regional Science and Engineering, Purdue University, West  
 Lafayette, IN, March 4, 2016  
 2013 Lecture about axon guidance to High School Students competing in BioOlympiad, Purdue  
 University, June 4, 2013  
 2012 Judge for the Lafayette Regional Science and Engineering, Purdue University, West  
 Lafayette, IN, March 2, 2012