

THOMAS E. SCHAUS

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Department of Systems Biology, Harvard Medical School
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EDUCATION

Northwestern University	M.D.	2009
Northwestern University	Ph.D., cell biology	2007
University of Illinois at Urbana/Champaign	M.S., mechanical engineering	1996
University of Illinois at Urbana/Champaign	B.S., mechanical engineering	1993

SCIENTIFIC EXPERIENCE

Post-Doctoral Fellow, Peng Yin Laboratory 2010-present

Wyss Institute and Department of Systems Biology, Harvard University, Boston, MA
Investigating the enabling characteristics of DNA that allow for exquisite self-assembly. Applying DNA nanotechnology to medical diagnostic and therapeutic needs, including highly-specific drug targeting in vivo

Graduate Student, Gary Borisy Laboratory 2003-2007

Cell and Molecular Biology, Northwestern University, Chicago, IL
Designed and programmed novel, numerical, biophysical models of cellular protrusion by populations of actin filaments. Identified and explained emergent properties important to understanding cell motility

Research Engineer, Ger van den Engh Laboratory 1999-2001

Institute for Systems Biology, Seattle, WA
Developed and constructed flow cytometry, sample packaging, and (PCR) thermal cycling instrumentation capable of processing 25k samples simultaneously, for high-throughput DNA sequencing

Research Engineer, Scientific Research Laboratories and Product Development 1996-1999

Ford Motor Company, Dearborn, MI

Graduate Student, James Peters Laboratory 1994-1996

Mechanical Engineering, University of Illinois, Urbana/Champaign, IL

SELECTED AWARDS AND HONORS

Fellow, Jane Coffin Childs Memorial Fund for Medical Research	2011-2014
Fellow, Medical Scientist Training Program, Northwestern University	2001-2009
Fellow, Pulmonary Division T32 Pre-Doctoral Training Grant, Northwestern University	2004-2006
Best Basic Science Poster, Lewis Landsberg Research Day, Northwestern University	2005
Integrated Graduate Program Finalist, Northwestern University Presidential Fellowship	2004
Best Scientific Poster, Medical Scientist Training Program Annual Retreat, Northwestern University	2004

SELECTED RESEARCH SEMINARS

Wyss Institute for Biologically Inspired Engineering, Harvard University, Boston, MA	2010
Department of Bioengineering, Stanford University, Palo Alto, CA	2010
Department of Cellular and Molecular Pharmacology, University of California, San Francisco, CA	2010
Department of Systems Biology, Harvard Medical School, Boston, MA	2009
Medical Scientist Training Program, Grand Rounds, Northwestern University, Chicago, IL	2008
Department of Cell and Molecular Biology, Northwestern University, Chicago, IL	2006
The American Society for Cell Biology annual meeting, San Francisco, CA	2005
Center for Cell Dynamics, University of Washington, Seattle, WA	2005
Chicago Cytoskeleton regional meeting, Chicago, IL	2005

Biophysics of Actin-Based Motility meeting, Aspen, CO 2004
Medical Scientist Training Program, Grand Rounds, Northwestern University, Chicago, IL 2004

INTERNATIONAL SCIENTIFIC MEETINGS AND COURSES

Workshop on Hands-on Experiments, Scientific Discovery Games, and Citizen Science, Paris, France 2011
Gene Regulatory Networks, 10-day special course, Marine Biological Laboratory, Woods Hole, MA 2009
Northwestern University NUvention biotechnology start-up business course, Chicago, IL 2008-2009
Twenty-Second Annual MD/PhD Student Conference, Keystone, CO 2007
The American Society for Cell Biology, annual meeting, San Diego, CA 2006
The American Society for Cell Biology, annual meeting, San Francisco, CA 2005
Third International Symposium on Computational Cell Biology, Lenox, MA 2005
Institute for Complex Adaptive Matter: Biophysics of Actin-Based Motility Workshop, Aspen, CO 2004
Fifth Annual Virtual Cell Workshop, Farmington, CT 2004
Second International Symposium on Computational Cell Biology, Lenox, MA 2003
DOE Human Genome Program Contractor-Grantee Workshop VIII, Santa Fe, NM 2000

TEACHING EXPERIENCE

Teaching Assistant, Medical School Microbiology Laboratory, Feinberg School of Medicine 2005 & 2006
Teaching Assistant, Medical School Histology, Northwestern Feinberg School of Medicine 2004 & 2005
Teaching Assistant, Theory of Internal Combustion Engines, U. of Illinois at Urbana/Champaign 1996
Teaching Assistant, Thermal Science Laboratory, University of Illinois at Urbana/Champaign 1995

THESES AND UNIVERSITY PUBLICATIONS

Ph.D. Dissertation, Modeling Cell Protrusion by a Population of Actin Filaments, Northwestern University, Evanston, IL 2007
M.S. Thesis, Fuel and Air Distribution Effects on Emissions from a Small V-Twin Engine, University of Illinois, Urbana/Champaign, IL 1996

PATENT APPLICATIONS

Schaus, T., W. Sun, D. Zhang, and P. Yin, "Compositions and Methods for Self-Assembly of Polymers with Complementary Macroscopic and Microscopic Scale Units," Provisional Patent

Schaus, T., D. Zhang, W. Sun, and P. Yin, "Spatial Sequestration of Dynamic Nucleic Acid Circuits," Provisional Patent

Chung, E., J. Ionita, R. Kapadia, S. Katz, E. Meagher, N. Mutyal, **T. Schaus**, and V. Siddiah, "An Optically-Accessible Central Catheter for the Evaluation of Biofilm Growth," Provisional Patent

Evans, J. and **T. Schaus**, "A Method for Determining the Personal Compatibility between a Patient and a Health Care Provider," Provisional Patent

PEER-REVIEWED JOURNAL ARTICLES

Schaus, T., and G. Borisy. 2008. Protrusion of lamellipodia by populations of actin filaments. *Biophys. J* 95:1393-1411

Aratyn, Y., **T. Schaus**, E. Taylor, and G. Borisy. 2007. Intrinsic dynamic behavior of fascin in filopodia. *Mol. Biol. Cell* 18:3928-3940

Schaus, T., E. Taylor, and G. Borisy. 2007. Self-organization of filament orientation in the dendritic nucleation / array treadmill model. *Proc. Natl. Acad. Sci. USA* 104:7086-7091