Matthew E. Berginski
Curriculum Vitae
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Personal Information:

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Education:

2006-2013	Ph.D. in Biomedical Engineering with a Certificate in Bioinformatics and Computational Biology, University of North Carolina at Chapel Hill and North Carolina State University
2002-2006	B.S. in Biomedical Engineering, Georgia Institute of Technology

Publications (*indicates co-first-authorship):

See http://scholar.google.com/citations?user=-n9FUI0AAAAJ for Citation Information

1. **Berginski ME**, Gomez SM. The Focal Adhesion Analysis Server: a web tool for analyzing focal adhesion dynamics. *F1000Research*, 2013 (HTML|PDF)
2. Sankar CP, Barhoumi R, **Berginski ME**, Sreenivasappa H, Tranche A, Gomez SM, Rivera GM. Nck enables directional cell migration through the coordination of polarized membrane protrusion with adhesion dynamics. *Journal of Cell Science*, 2013 (HTML|PDF)
3. Chen Z, Lessey E, **Berginski ME**, Cao L, Li J, Trepat X, Itano M, Gomez SM, Kapustina M, Huang C, Burridge K, Truskey G, and Jacobson K. Gleevec, an abl family inhibitor, produces a profound change in cell shape and migration. *PLoS ONE*, 2013. Doi: (HTML|PDF)
4. Wu C*, Asokan SB*, **Berginski ME**, Haynes EM, Sharpless NE, Griffith JD, Gomez SM, Bear JE. Arp2/3 Is Critical for Lamellipodia and Response to Extracellular Matrix Cues but Is Dispensable for Chemotaxis. *Cell*, 2012 (HTML|PDF)
5. Shen K, Tolbert CE, Guilluy C, Swaminathan VS, **Berginski ME**, Burridge K, Superfine R, Campbell SL. The vinculin C-terminal hairpin mediates F-actin bundle formation, focal adhesion, and cell mechanical properties. *J Biol Chem*, 2011 (HTML|PDF)
6. **Berginski ME***, Vitriol EA*, Hahn KM, Gomez SM. High-Resolution Quantification of Focal Adhesion Spatiotemporal Dynamics in Living Cells. *PLoS ONE*, 2011 (HTML|PDF)

Publications in Preparation:

- **Berginski ME**, Creed S, Roadcap D, Cochran S, Bear J and Gomez SM. Computer Vision Based Methods for Analysis of Invadopodia in Time-lapse Microscopy. In Preparation
- Vitriol EA, Wise AL, **Berginski ME**, Bamburg JR, and Zheng JQ. Instantaneous Inactivation of Cofilin1 Demonstrates Its Functions of Filament Severing and Depolymerization in Regulating F-actin Networks. In Preparation
- Karginov AV, Tsygangov D, **Berginski ME**, Trudeau ED, Chu P, Yi JJ, Gomez SM, Elston TC, Hahn KM. Engineered Manipulation of Signaling Networks: Control of Kinase Activation and Interactions Dissects Parallel Src Pathways. Out for Review at Science
- Lin LK, **Berginski ME**, West ML, Fulton LM, Moran TP, Coghill JM, Blazer BR, Bear JE, Serody JS. Intravital Imaging Reveals Novel Aspects of Allogeneic Effector and Regulatory Cell Function During GVHD, In Preparation

Presentations and Posters:

1. Comprehensive Spatiotemporal Analysis of Focal Adhesion Dynamics in Living Cells, BMES Meeting, Pittsburgh, PA. October 2009
2. Quantitative Analysis of Focal Adhesions in TIRF Microscopy Images, Bioengineering and Bioinformatics Summer Institute, Richmond, VA, Keynote Seminar. August 2009
3. Focal Adhesion Dynamics Analysis Through Quantitative Image Processing, RECOMB Systems Biology, Boston, MA. October 2008
4. Automatic Characterization of Focal Adhesions in TIRF Microscopy Images, Institute for Biological Engineering Conference, Chapel Hill, NC. March 2008, Received 3rd place in poster competition

Honors:

2006-2009	NSF Graduate Research Fellowship
2006-2008	North Carolina State Dean's Fellowship
2002-2006	Graduated Summa Cum Laude from Georgia Institute of Technology

Other Experience:

2006-	Tutor with the Learning Center at the University of North Carolina at Chapel Hill
2008-2009	Intern at the Office of Technology Development at the University of North Carolina at Chapel Hill
2005-2006	Teaching Assistant in BMED 2300 at the Georgia Institute of Technology