

William James Richardson, Ph.D.

Assistant Professor | Department of Bioengineering
Faculty Member | Institute for Biological Interfaces of Engineering
Faculty Scholar | School of Health Research
Clemson University
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RESEARCH INTERESTS

Matrix systems mechanobiology
Fibroblast mechanotransduction
Computational modeling of cell-matrix interactions
Global health applications of bioengineering

TEACHING INTERESTS

Computational modeling
Biomechanics & mechanobiology
Bioengineering design

POSITIONS

Assistant Professor Clemson University Department of Bioengineering Faculty Member, Institute for Biological Interfaces of Engineering Faculty Scholar, School of Health Research	2016 - present
Postdoctoral Research Fellow University of Virginia Cardiac Biomechanics Group, Dr. Jeff Holmes, & Cardiac Systems Biology Lab, Dr. Jeff Saucerman Robert M. Berne Cardiovascular Research Center	2012 - 2015
Graduate Research Assistant Texas A&M University Vascular & Lymphatic Mechanics Lab, Dr. Jimmy Moore	2007 - 2012
Consultant & Contractor Activity Boston Scientific Corp. (2008); TissueGen, Inc. (2007)	

EDUCATION

Postdoctoral Training, Biomedical Engineering University of Virginia Mentors: Jeff Holmes, M.D., Ph.D., & Jeff Saucerman, Ph.D.	2012 - 2015
Ph.D., Biomedical Engineering Texas A&M University Mentor: Jimmy Moore., Ph.D. Thesis: <i>Vascular Smooth Muscle Precursor Cell Behavior in Non-uniform Stretch Environments</i>	2007 - 2012
B.S., Biological Engineering University of Arkansas Minor in Mathematics Semester Abroad at University of Newcastle, NSW Australia	2003 - 2007

HONORS

American Heart Association Scientist Development Grant	2017
Early Career Alumni Award, University of Arkansas College of Engineering	2015
American Heart Association Postdoctoral Fellowship	2014 - 2015
NIH Ruth L. Kirschstein NRSA Postdoctoral Fellowship (awarded & declined)	2014
Richard Skalak Best Paper Award, <i>ASME Journal of Biomechanical Engineering</i>	2012
Magna Cum Laude, University of Arkansas	2007
Tau Beta Pi Honors Engineering Society Inductee	2006

TRAINEES**Current**

Ph.D. Students:

Brendyn Miller, M.S.	2018 - present
Kelsey Watts, B.S.	2017 - present
Michael (Jake) Potter, B.S.	2017 - present
Jesse Rogers, B.S.	2016 - present
Amirreza Yeganegi, M.S.	2016 - present

M.S. Students:

Sam Coeyman, B.S.	2018 - present
Jonathan Heywood, B.S.	2018 - present

Post-bac Researchers:

Karla Robles, B.S.	2018 - present
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Undergraduate Students:

Bailey Pritchard (2017 - present), Zoey Morton (2017 - present), Kaleigh Neely (2017 - present), Kyle Cannon (2017 - present)

Former

M.S. Students:

Jess Batista (2017 - 2018), "Computational Modeling of a Pulmonary Fibroblast Signaling Network"

Undergraduate Students:

David Evans (2017 - 2018), Sam Insignares (2017), Tiffany Yu (2016 - 2017), Aniq Chowdhury (2016), Daniel LaShoto (2016)

Graduate Student Committees

Aseem Pradhan (M.S. Student)	PI: Ethan Kung, Ph.D.	2017 - present
Ziyang Zhang (Ph.D. Student)	PI: Joseph Singapogu, Ph.D.	2017 - present
Nathan Carrington (Ph.D. Student)	PI: John Desjardins, Ph.D.	2017 - present
Tiffany Yu (M.S. Student)	PI: Zhi Gao, Ph.D.	2017 - present
Meredith Owen (Ph.D. Student)	PI: John Desjardins, Ph.D.	2017 - present
Justin Bacaoat (M.S. Student)	PI: Jiro Nagatomi, Ph.D.	2017 - present
Cody Dunton (Ph.D. Student)	PI: Jiro Nagatomi, Ph.D.	2016 - present
Tyler Harvey, Ph.D.	PI: Delphine Dean, Ph.D.	2016 - 2018
John Scaringi, M.S.	PI: Ethan Kung, Ph.D.	2017 - 2018
Suzanne Bradley, M.S.	PI: Delphine Dean, Ph.D.	2017 - 2018
Jared Tallo, M.S.	PI: Jiro Nagatomi, Ph.D.	2017 - 2018
Brittney Cotton, M.S.	PI: Melinda Harman, Ph.D.	2017 - 2018
Jennifer Anderson, M.S.	PI: John Desjardins, Ph.D.	2016

TEACHING**Clemson University**

Introduction to Biomechanics (BIOE 3200)	Spring 2019 - present
Computational Modeling in Bioengineering (BIOE 4350/6350)	Spring 2018 - present
Applied Bioengineering Design (BIOE4030)	Fall 2017
Bioengineering Design Theory (BIOE4010)	Spring 2017
Medical Technology for the Developing World (BIOE4510, Co-instructor)	Spring & Fall 2016 - present
Cardiovascular Eng. & Pathology (BIOE4230/6230, Guest-lecturer)	Spring 2016 - 2018

University of Virginia

Cardiovascular Research Career Development Seminar (BIMS8064, Organizer)	Spring 2014 - 2015
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Texas A&M University

Orthopedic Biomechanics (BMEN689, Co-instructor)

Spring 2012

PUBLICATIONSPubmed Bibliography: <http://www.ncbi.nlm.nih.gov/myncbi/browse/collection/44272318/>Google Scholar Profile: <https://scholar.google.com/citations?user=ROIHQKkAAAAJ&hl=en>

*Richardson lab member

Book Chapters

- 1) JD Rogers*, A Yeganegi*, and **WJ Richardson**. "Mechano-Regulation of Fibrillar Collagen Turnover by Fibroblasts." in *Mechanobiology Handbook, 2nd Edition*. CRC Press, Ed. J Nagatomi and E Ebong (2018).

Journal Papers

- 11) **WJ Richardson**, B Kegerreis, S Thomopoulos, and JW Holmes. "Potential Strain-Dependent Mechanisms Defining Matrix Alignment in Healing Tendons." *Biomechanics and Modeling in Mechanobiology* 17(6), 1569-1580 (2018).
- 10) **WJ Richardson** and JW Holmes. "Emergence of Collagen Orientation Heterogeneity in Healing Infarcts and an Agent-Based Model." *Biophysical Journal* 110(10), 2266-2277 (2016).
- 9) AC Ziegler, **WJ Richardson**, JW Holmes, and J Saucerman. "A Computational Model of Cardiac Fibroblast Signaling Predicts Context-Dependent Drivers of Myofibroblast Differentiation." *Journal of Molecular and Cellular Cardiology* 94, 72-81 (2016).
- 8) SA Clarke, **WJ Richardson** and JW Holmes. "Modifying the Mechanics of Healing Infarcts: Is Better the Enemy of Good?" *Journal of Molecular and Cellular Cardiology* 93, 115-124 (2016).
- invited review
- 7) AC Ziegler, **WJ Richardson**, JW Holmes, and J Saucerman. "Computational Modeling of Cardiac Fibroblasts and Fibrosis." *Journal of Molecular and Cellular Cardiology* 93, 73-83 (2016).
- invited review
- 6) **WJ Richardson** and JW Holmes. "Why is Infarct Expansion Such an Elusive Therapeutic Target?" *Journal of Cardiovascular Translational Research* 8(7), 421-430 (2015).
- 5) **WJ Richardson**, SA Clarke, TA Quinn, and JW Holmes. "Physiological Implications of Myocardial Scar Structure." *Comprehensive Physiology* 5(4), 1877-1909 (2015).
- invited review
- 4) S Jamalian, CD Bertram, **WJ Richardson**, and JE Moore Jr. "Parameter Sensitivity Analysis of a Lumped-parameter Model of a Chain of Lymphangions in Series." *American Journal of Physiology - Heart & Circulatory Physiology* 305(12), H1709-H1717 (2013).
- 3) **WJ Richardson**, DD van der Voort, and JE Moore Jr. "Differential Orientation of 10T1/2 Mesenchymal Cells on Non-uniform Stretch Environments." *Molecular & Cellular Biomechanics* 10(3), 245-265 (2013).
- 2) **WJ Richardson**, E Wilson, and JE Moore Jr. "Altered Phenotypic Gene Expression of 10T1/2 Mesenchymal Cells in Non-uniformly Stretched PEGDA Hydrogels." *American Journal of Physiology - Cell Physiology* 305(1), C100-10 (2013).
- 1) **WJ Richardson**, R Metz, M Moreno, E Wilson, and JE Moore Jr. "A Device to Study the Effects of Stretch Gradients on Cell Behavior." *Journal of Biomechanical Engineering* 133(10), 101008.1-9 (2011).
- **Richard Skalak Best Paper Award**, selected as #1 paper in *JBME* in 2011

CONFERENCE ABSTRACTS

*Richardson lab member

- 31) JD Rogers* and **WJ Richardson**. "Effect of Biochemical and Mechanical Stimuli on the Fibrotic Behavior of Cardiac Fibroblasts." *Biomaterials Day*, Clemson, SC (November 2018).
- 30) B Banaszak, M Cattell, J Hadley, R Moen, Z Hargett, MA McCullough, **WJ Richardson**, JD DesJardins, and D Dean. "Low Cost Neonatal Infant Insulating and Monitoring System for Remote Rural Areas." *BMES Annual Meeting*, Atlanta, GA (October 2018).
- 29) D Nigoa, S Mandilwar, R Fenner, MA McCullough, JD DesJardins, **WJ Richardson**, and D Dean. "Demonstrating the Viability of Using Zinc-Air Batteries in Oxygen Sensors for Low-Resource Settings." *BMES Annual Meeting*, Atlanta, GA (October 2018).
- 28) J Boulos, E Gaston, M Grahne, H Nguyen, MA McCullough, **WJ Richardson**, JD DesJardins, and D Dean. "Development of Mobility Device for the Visually Impaired in Developing Countries." *BMES Annual Meeting*, Atlanta, GA (October 2018).
- 27) M Elpers, A Harrison, M Downing, OT Mefford, MA McCullough, JD DesJardins, WJ Richardson, and D Dean. "Kifua Pampu: A Robust Breast-Pump for the Prevention of Mother to Child Transmission of HIV." *BMES Annual Meeting*, Atlanta, GA (October 2018).
- 26) **WJ Richardson**, H Tam, H Cash, MK Owen, JC Kohn, BT Przestrzelski, BW Booth, MA McCullough, KG Mkongwa, U Melkior, NMJ Mbwambo, JD DesJardins, and D Dean. "International Academic Partnership for Diverse Bioengineering Design Education." *World Congress of Biomechanics*, Dublin, Ireland (July 2018).
- 25) A Yeganegi* and **WJ Richardson**. "A Matrix-Protease Network Model for Computational Predictions of Matrix Turnover." *National IDeA Symposium of Biomedical Research Excellence (NISBRE)*, Bethesda, MD (June 2018).
- 24) JF Eberth, **WJ Richardson**, MM Stern, DJ Swinton, and W Carver. "Data-driven optimization of bioengineered vascular scaffolds for small-diameter blood vessel replacement." *South Carolina EPSCoR/IDeA Annual Conference*, Columbia, SC (April 2018).
- 23) JD Rogers*, AC Zeigler, Jeffrey J Saucerman, JW Holmes, and **WJ Richardson**. "Fibroblast Systems Mechanobiology Model Predicts Mechano-Adaptive Infarct Therapies." *Cell and Molecular Bioengineering Annual Meeting*, Key Largo, FL (January 2018).
- 22) B Cotton, A Tarasidis, S Stafford, X Lu, T Sanders, **WJ Richardson**, and M Harman. "Characterizing the Effects of Tension on Connective Tissue Formation Surrounding Polymeric Hernia Mesh: a Multi-Scale Approach." *Biomaterials Day*, Nashville, TN (August 2017).
- 21) M Stanford, X Lu, B Cotton, W Cobb, A Carbonell, B Heniford, V Augenstein, **WJ Richardson**, J Mercuri, and M Harman. "Influence of Mesh Mechanics on In Vivo Mesh Performance: a Multi-scale Approach." *Greenville Health System Research Symposium*, Greenville, SC (March 2017).
- 20) A Zeigler, **WJ Richardson**, JW Holmes, and JJ Saucerman. "Using a Computational Model of Cardiac Fibroblast Signaling to Predict Drugs Against Pathologic Remodeling." *ASMB Biennial Meeting*, St. Petersburg, FL (November 2016).
- 19) B Kegerreis, JW Holmes, and **WJ Richardson**. "Modeling the Effect of Strain-induced Collagen Damage on Tendon Scar Structure." *BMES Annual Meeting*, Tampa, FL (October 2015).
- 18) **WJ Richardson**, S Thomopoulos, and JW Holmes. "Strain-dependent Degradation as a Mechanism for the Paradoxical Effects of Mechanical Loading on Collagen Fiber Alignment in Healing Tendon." *Summer Biomechanics, Bioengineering, and Biotransport Conference*, Snowbird, UT (June 2015).

- 17) V Lanka, JW Holmes, and **WJ Richardson**. "A Computational Model of Collagen Fibrillogenesis." *BMES Annual Meeting*, San Antonio, TX (October 2014).
- 16) W Pilcher, JW Holmes, and **WJ Richardson**. "Modeling Temporal Dynamics of Infarct Collagen Turnover." *BMES Annual Meeting*, San Antonio, TX (October 2014).
- 15) A Zeigler, **WJ Richardson**, JW Holmes, and JJ Saucerman. "A Logic-Based Model of Cardiac Fibroblast Signaling Predicts Switch-Like Behavior." *BMES Annual Meeting*, San Antonio, TX (October 2014).
- 14) **WJ Richardson**, AD Rouillard, and JW Holmes. "Heterogeneity of Infarct Collagen Orientation Emerges In Silico Based on Long-range Cell Interaction." *BMES Annual Meeting*, San Antonio, TX (October 2014).
- 13) **WJ Richardson** and JW Holmes. "Do Infarcts Really Expand or Compact? Implications for Design of Novel Therapies." *World Congress of Biomechanics*, Boston, MA (July 2014).
- 12) **WJ Richardson** and JW Holmes. "Do Infarcts Really Expand or Compact? Relationship between Changing Material Properties and Apparent Infarct Remodeling." *ASME Summer Bioengineering Conference*, Sunriver, OR (June 2013).
- 11) S Jamalian, JE Moore Jr., CD Bertram, and **WJ Richardson**. "Mathematical Modeling of Lymphatic Vessels Using Lumped Parameter Approach." *BMES Annual Meeting*, Atlanta, GA (October 2012).
- 10) **WJ Richardson**, DD van der Voort, and JE Moore Jr. "A Device to Subject Cells to Longitudinal Stretch Gradients on a Tube In Vitro." *ASME Summer Bioengineering Conference*, Fajardo, Puerto Rico (June 2012).
- 9) S Jamalian, JE Moore Jr., CD Bertram, and **WJ Richardson**. "Parameter Sensitivity Analysis of a Lumped-parameter Model of Lymphangions in Series." *ASME Summer Bioengineering Conference*, Fajardo, Puerto Rico (June 2012).
- 8) JE Weimer, JE Moore Jr., CD Bertram, **WJ Richardson**, and BA Placette. "Development of a Computational Model of Lymphangions in Series - A Parameter Sensitivity Analysis." *ASME Summer Bioengineering Conference*, Farmington, PA (June 2011).
- 7) **WJ Richardson** and JE Moore Jr. "Smooth Muscle Cell Orientation on Non-uniform Stretch Environments." *ASME Summer Bioengineering Conference*, Farmington, PA (June 2011).
- 6) **WJ Richardson**, R Metz, E Wilson, and JE Moore Jr. "Smooth Muscle Cell Behavior in Non-uniform Stretch Environments." *BMES Annual Meeting*, Austin, TX (October 2010).
- 5) E Rahbar, B Placette, **WJ Richardson**, and JE Moore Jr. "Modeling Lymphatic Contractility." *ASME Summer Bioengineering Conference*, Naples, FL (June 2010).
- 4) M Kavdia and **WJ Richardson**. "A Computational Model of Biochemical Interaction of NO and Reactive Oxygen Species in the Microcirculation." *Proceedings of 8th World Congress for Microcirculation*, Bologna, Italy (August 2007).
- 3) N Lakshmanan, **WJ Richardson**, and M Kavdia. "Leukocyte adhesion and migration in a blood vessel- Effect on nitric oxide and ROS levels." *Experimental Biology (FASEB)*, Washington, DC (May 2007).
- 2) N Bhise, R Carlisle, SE Huber, and **WJ Richardson**. "Design to Add Body-Powered Functionality to the International Red Cross Above-Elbow Prosthesis." *Rehabilitation Engineering & Assistive Technology Society of North America National Conference*, Phoenix, AZ (June 2007).
- 1) M Kavdia, MD Chávez, SS Potdar, and **WJ Richardson**. "In silico and in vitro models of NO, ROS and RNS biotransport: towards understanding of endothelial cell dysfunction." *Arkansas Biosciences Institute (ABI) Research Symposium*, Little Rock, AR (October 2006).

FUNDING

Total direct funds to WJR's group: \$1,889,677

Current

- NIH (NHLBI) R01 HL144927 1/2019 - 12/2023
 Title: "Systems Mechanobiology Modeling for Patient-Specific Cardiac Fibrosis Predictions"
 Role: PI
 Total Award Funds: \$1,846,994 Direct Funds to WJR: \$941,502
- NIH (NIGMS) COBRE P20 GM121342 8/2018 - 7/2023
 Center Title: "South Carolina COBRE for Translational Research Improving Musculoskeletal Health"
 Project Title: "Predicting Collagen Turnover for Tendon Repair across Diverse Loading Environments"
 Role: Pilot-project PI (Center PI: Hai Yao)
 Total Award Funds: \$11,088,275 Direct Funds to WJR: \$138,893
- NSF REU Program 1/2019 - 12/2021
 Title: "Nature's Machinery through the Prism of Physics, Biology, Chemistry and Engineering"
 Role: Co-I (PI: Josh Alper)
 Total Award Funds: \$419,295 Direct Funds to WJR: \$0
- South Carolina EPSCoR/IDEA Stimulus Research Program Grant 4/2018 - 3/2020
 Title: "Data-Driven Optimization of Bioengineering Vascular Scaffolds as an Advanced Material for Small Diameter Blood Vessel Replacement"
 Role: Co-I (PI: Wayne Carver)
 Total Award Funds: \$300,000 Direct Funds to WJR: \$75,000
- AHA Scientist Development Grant 17SDG33410658 1/2017 - 12/2019
 Title: "Mechano-adaptive Fibrosis Signaling for Post-Infarct Therapy"
 Role: PI
 Total Award Funds: \$231,000 Direct Funds to WJR: \$210,000

Completed

- NIH (NIGMS) COBRE P20 GM103444 10/2016 - 11/2018
 Center Title: "South Carolina Bioengineering Center of Regeneration and Formation of Tissues"
 Project Title: "Modeling Chemo-Mechano-Signaling Interactions in Cardiac Fibroblasts"
 Role: Pilot-project PI (Center PI: Naren Vyavahare)
 Total Award Funds: \$11,067,682 Direct Funds to WJR: \$200,000
- NSF EPSCoR RII Track-1 EPS-0903795 3/2016 - 6/2016
 Title: "The South Carolina Project for Organ Biofabrication"
 Role: Co-I
 Total Award Funds: \$9,029,853 Direct Funds to WJR: \$100,000
- AHA Mid-Atlantic Affiliate Postdoctoral Fellowship 14POST20460271 7/2014 - 12/2015
 Title: "Multi-scale Modeling of Cardiac Fibroblast Mechanobiology"
 Role: PI
 Total Award Funds: \$86,000 Direct Funds to WJR: \$86,000
- NIH (NHLBI) NRSA Postdoctoral Fellowship 1F32HL126281-01 Awarded & Declined 2014
 Title: "Multi-scale Modeling of Cardiac Fibroblast Mechanobiology"
 Role: PI
 Total Award Funds: \$53,282 Direct Funds to WJR: \$53,282

NIH (NHLBI) Training Grant T32HL007284

9/2012 - 7/2014

Title: "Basic Cardiovascular Research Training Grant"

Role: Postdoctoral Trainee (Training Center PI: Gary Owens)

Total Award Funds: \$17,373,900

Direct Funds to WJR: \$85,000

MEMBERSHIPS & SERVICE

Journal Reviewer	2015 - present
<i>PLOS Computational Biology</i>	<i>Journal of Biomechanical Engineering</i>
<i>Journal of Molecular & Cellular Cardiology</i>	<i>Mathematical Medicine & Biology</i>
<i>American Journal of Physiology - Heart and Circulatory Physiology</i>	<i>Acta Biomaterialia</i>
<i>Journal of Biomedical Materials Research: Part B - Applied Biomaterials</i>	<i>Integrative Biology</i>
American Society of Mechanical Engineers (ASME) - Bioengineering Division	2009 - present
Tissue and Cellular Engineering Committee	2013 - present
Education Committee	2013 - present
Abstract reviewer, Summer Bioengineering Conference (now SB ³ C)	2013 - present
B.S./M.S. poster judge, Summer Bioengineering Conference (now SB ³ C)	2013 - 2017
Session co-chair, SB ³ C	2016
Session co-chair, World Congress of Biomechanics	2014
Trainees Advisory Committee, Bioengineering Division	2009
Biomedical Engineering Society (BMES)	2010 - present
Abstract reviewer, Annual Meeting	2014 - present
Session chair, Annual Meeting	2017 - present
American Heart Association	2016 - present
AIREA peer review panelist	2017 - present
Bioengineering-Basic Science (BSc3) peer review panelist	2016 - 2017
National Science Foundation (NSF)	
Peer review panelist	2017
American Society for Engineering Education	2016 - present
Tau Beta Pi Honors Engineering Society	2006 - present
Faculty mentor, Clemson University chapter	2016 - present
Engineering World Health (EWH)	2010 - 2012
Founding member, TAMU chapter	2010
Engineers Without Borders (EWB)	2008 - 2010
Costa Rica Construction Project Committee, TAMU chapter	2010
Fundraising Committee, TAMU chapter	2009 - 2010
Clemson University Service	2016 - present
<u>Department of Bioengineering</u>	
Diversity & Inclusion Task Force	Fall 2018 - present
Graduate Program Committee	Fall 2016 - present
Design Executive Leadership Team	Fall 2016 - Spring 2018
<u>Systems Biology Working Group</u>	
Co-Founder & Executive Committee	Fall 2018 - present
<u>Biophysics Research Experience for Undergraduates (NSF REU)</u>	
Executive Committee & Student Mentor	Spring 2018 - present

INVITED TALKS

Virginia Commonwealth University , Mechanical Engineering Seminar Series "Multi-Scale Biomechanics and Mechanobiology of Cardiac Scar Tissue"	March 2019
Medical University of South Carolina , Regenerative Medicine & Cell Biology Seminar Series "Signaling Network Models for Cardiac Fibrosis Prediction and Intervention"	March 2019
Virginia Tech - Wake Forest University , School of Biomedical Engineering Seminar Series "Fibroblast Mechano-Signaling Models for Cardiac Fibrosis Prediction and Therapy"	January 2019
University of Mississippi Medical Center , Center for Heart Research Seminar Series "Mechano-Adaptive Fibrosis Signaling for Post-Infarct Therapy Design"	April 2018
University of South Carolina , Biomedical Sciences Seminar Series "Mechano-Adaptive Fibrotic Signaling & Computational Drug Screens"	April 2017
Imperial College London , Bioengineering Seminar Series "Mechano-Adaptive Fibrotic Signaling & Computational Drug Screens"	February 2017
Medical University of South Carolina , Global & Public Health Symposium Panelist, "Harnessing Technology & Public-Private Partnerships to Address Global Health Challenges"	November 2016
Medical University of South Carolina , Fibrosis Seminar Series "Mechano-Adaptive Fibrotic Signaling & Computational Drug Screens"	September 2016
Clemson University:	
Faculty Commons Group "Integrating Faith & Research"	March 2019
International Biomaterials Symposium "Fibroblast Signaling Network Model for Post-Infarct Therapy Screens"	April 2018
Eukaryotic Pathogens Innovation Center (EPIC) Seminar Series "Systems Modeling of Chagas-Related Cardiac Fibrosis"	November 2017
Science on Tap Community Engagement Series "Computers & Medicine & You"	November 2017
Professor/Undergrad Lunch Series for Education (PULSE) "Types of Academic Positions"	March 2017

PROFESSIONAL OUTREACH

Workshop Instructor for "Design Thinking", Arusha Technical College, Arusha, Tanzania	2017 - 2018
ExxonMobil Bernard Harris Summer Science Camp, University of Virginia	2015
Student mentor and tutor, Milam Elementary School, Bryan, TX	2008 - 2010
Science fair judge, Harmony Science Academy, Bryan, TX	2009