

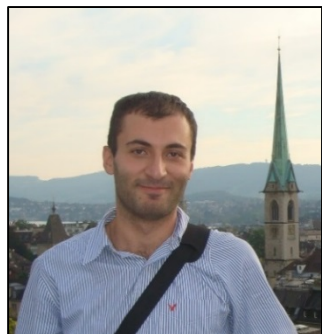


## STEM Faculty Launch Program Participants



**Angelynn Alvarez**, Department of Mathematics, University of Houston, BS Mathematics, University of Houston, 2011, MS Mathematics, University of Houston, 2013, PhD Mathematics, University of Houston, 2016 (expected)

*Research Interests:* Hermitian and Kähler geometry; Holomorphic Sectional Curvature, Ricci Curvature, Scalar Curvature on Complex Manifolds; Positivity in Algebraic Geometry



**Vahan Hovhannisyan**, PhD student, Computational Optimisation Group Department of Computing, Imperial College London  
BS, State Engineering University of Armenia, 2009  
MS, ETH Zurich Switzerland, 2013

*Research Interests:* Convex optimization, multi-level algorithms, first order methods, computer vision, and pattern recognition.



**Derrick J. Morton**, Department of Biological Sciences, Center for Cancer Research and Therapeutic Development, Clark Atlanta University  
BS, Eastern Kentucky University, 2009  
PhD, Clark Atlanta University, May 2016

*Research Interests:* My overall research interest is to understand the molecular mechanisms involved in initiation and progression of cancers in general and that of the prostate in particular. We use a global systems approach using diverse data sets to understand the fundamental biological processes involved in cancer. These biological processes, primarily involve regulatory relationships between genes, proteins and the environment. Collectively, our systems approach provides the role transcriptional control mechanisms, cell fate decisions, signal transduction and metabolic pathways in cancer development.



**Yenny Cardona Quintero**

B.S., National University of Colombia, 2006

M.Sc., University of Puerto Rico, 2009

Ph.D., University of Connecticut, 2014

*Research Interest:* Modeling and design of nano-structures. Calculation of electronic, mechanical and thermal properties using density functional theory and beyond methods. Model of metal and oxide surfaces and metal-metal oxide interfaces. Determine the effect of self-assembled monolayers on the properties of surfaces and interfaces. Modeling of molecular crystals and calculation of their electronic properties.



**Tiffany A. Butler**, Postdoctoral Research Fellow

Department of Biomedical Engineering, WPI

BS, Eastern University, 2007

MS, Temple University, 2009

PhD, Temple University, 2014

*Research Interests:* How intramedullary fat relates to bone biomechanical variables, specifically in the spinal cord injured; Exercise and Bone; Nutrition and Bone Biomechanics



**Alex D. Austin**, Department of Mathematics, UIC

MMATH, University of Warwick, 2010

PhD, University of Illinois at Chicago, 2016 (expected)

*Research Interests:* Quasiconformal mappings, sub-Riemannian geometry, analysis in metric spaces, geometric measure theory.



**Huanhuan (Sophie) Zhu**, Department of Mathematical science, MTU

BS, Qufu Normal University, China, 2009-2013

PhD, Michigan Technological University, 2013-Now

*Research Interests:* Statistical Genetics, data analysis

**Yougan Cheng**, School of Mathematics, UMN (NO PICTURE)

BS, East China Normal University, 2009

PhD, Case Western Reserve University, 2014

*Research Interests:* Mathematical Biology, Mathematical modeling of complex systems, Dynamics systems



**Snigdha Chaturvedi**, Computer Science, University of Maryland, College Park  
PhD, Computer Science, University of Maryland, College Park, Ongoing  
MS, Computer Science, University of Maryland, College Park, 2014  
B.Tech, Computer Science and Engineering, Indian Institute of Technology (IIT), Kanpur, 2009

*Research Interests:* Natural Language Understanding, Machine Learning, Social Computing, Latent Variable Models



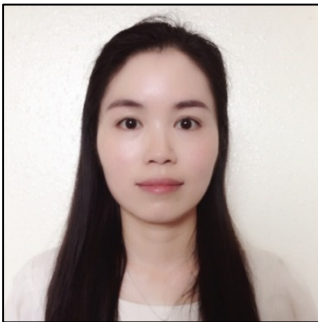
**Christina Hamlet**, Department of Mathematics, Tulane University

BS, University of South Florida, 2003

MS, University of South Florida, 2005

PhD, University of North Carolina at Chapel Hill, 2011

*Research Interests:* Multiscale modeling of biological systems and fluid structure interaction problems. Fluid dynamics and mechanical properties of marine organisms. Immersed boundary methods, biologically-inspired designs, mathematical modeling.



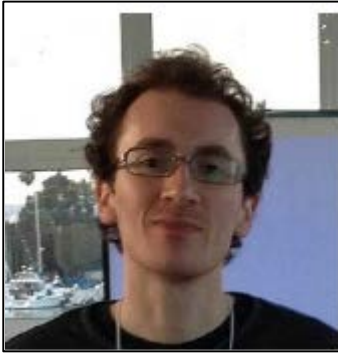
**Yanfang Yang**, Department of Mathematics, TAMU

BS, Hunan Normal University, China, 2008

MS, Xi'an Jiaotong University, 2011

PhD, Texas A&M University, in progress

*Research Interests:* Local-Global model reduction for flows in heterogeneous porous media; Global adaptivity; Stable Newton-like method for the transport equation with big time-stepping; Weak gradient generalized multi-scale finite element method



**Kyle G. Schomp**

BS, Case Western Reserve University, 2006  
MS, Case Western Reserve University, 2010  
PhD, Case Western Reserve University, 2015

*Research Interests:* Computer Network and Distributed Systems; Internet Measurement; Privacy and Security



**Jing Tian**, Department of Mathematics, Texas A&M University

BS, China University of Mining and Technology, 2010  
MS, University of Texas Pan-American, 2012  
PhD, Texas A&M University, 2016 (expected)

*Research Interests:* Navier-Stokes Equations, Wave Equations, Nonlinear PDEs, Computational Fluid Dynamics and Chaos Theory



**Shreya Kumar**, Computer Science Department, Michigan Technological University

BE, University of Pune, India, 2007  
MS, Michigan Technological University, 2013

*Research Interests:* Software Engineering, Software Process, Computer Science Education, HCI and Usability, Gerontechnology, Senior Citizens and Computing



**Hoang-Ngan Nguyen**

Applied Mathematics Unit  
University of California, Merced  
BS, Hanoi University of Technology, 2005  
PhD, Tulane University, 2012

*Research Interests:* Computational Fluid Dynamics, Numerical Analysis, and Scientific Computing



**Cibele Freire**, College of Information and Computer Sciences, Umass  
BS, Federal University of Ceara, 2007  
MS, Federal University of Ceara, 2010  
MS, Umass Amherst, 2014  
PhD, Umass Amherst, (expected) 2016

*Research Interests:* Theoretical computer science, more specifically Computational Complexity, Descriptive Complexity and Logic; Database theory.



**Hillary L. Smith**, Postdoc

Department of Applied Physics & Materials Science, Caltech  
BS, Bryn Mawr College, 2006  
PhD, California Institute of Technology, 2014

*Research Interests:* Materials physics and chemistry; Energy storage materials for lithium-ion batteries and hydrogen storage; Entropy of phase transitions in metal alloys and bulk metallic glasses; Neutron and x-ray scattering, Mossbauer spectroscopy, and Monte Carlo simulations



**Emma Tosch**, College of Information and Computer Science, University of Massachusetts Amherst

BA, Wellesley College, 2008  
MA, Brandeis University, 2011  
PhD, University of Massachusetts Amherst, 2017

*Research Interests:* Programming Languages, Software Systems, Usability, Experimental Design, Statistics



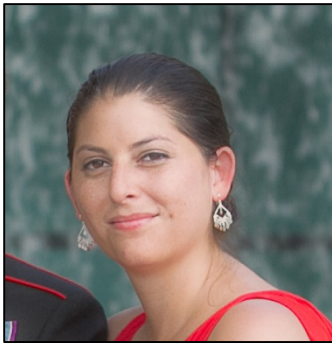
**Carli D. Flynn**, Department of Civil and Environmental Engineering, Syracuse University  
BS, Cornell University, 2009  
MS, Carnegie Mellon University, 2010  
PhD, Syracuse University, 2016 (expected)

*Research Interests:* Design of sustainable urban infrastructure systems; Social-ecological systems studies; Sustainable technology adoption and diffusion; Use of field data to enhance STEM education



**Sarah A. Nelson**, Department of Mathematics, UKY  
BS, University of Tennessee at Chattanooga, 2011  
Applied Mathematics and Secondary Mathematics  
BA, University of Tennessee at Chattanooga, 2011  
Humanities  
MA, University of Kentucky, 2013  
PhD, University of Kentucky, expected 2016

*Research Interests:* Algebraic and geometric combinatorics, especially problems in enumerative combinatorics related to polytopes and winding numbers.



**Denise A. Rangel Tracy**  
Department of Mathematics, Syracuse University  
BS, University of North Carolina- Greensboro, 2008  
MA, University of North Carolina- Greensboro, 2010 -Advisor: Paul Duvall  
PhD, University of Texas- Arlington, 2014 - Advisor: David Jorgensen

*Research Interests:* Commutative and homology algebra, representation theory.



**Liz Wayne**, Department of Biomedical Engineering, Cornell University  
BS, University of Pennsylvania, 2009  
MS, Cornell University, 2013  
PhD, Cornell University, 2015

*Research Interests:* cancer metastasis; cell mediated drug delivery; immunotherapy; optical imaging; circulating tumor cells; liposomes; leukocytes; tumor microenvironment; extravasation



**Dominique Ebony Williams**, Postdoctoral Scholar, Department of Chemistry, Stony Brook University  
BS, Virginia Commonwealth University, 2009  
PhD, Georgia State University, 2014

*Research Interests:* Biocatalysis and biomimetic catalysis, Nitric-Oxide regulation of bacterial biofilms, C-di-GMP metabolic enzymes: Phosphodiesterase and diguanylate cyclase, Metal-based photocleavage and hydrolytic agents



**Sandra V. Vergara**, UMass Medical School

RNA Therapeutics Institute  
Worcester, MA  
BS, University of Florida, 2003  
PhD, Duke University, 2010  
Post-doc, UMass Medical School, since 2011

*Research Interests:* Germline development; post-transcriptional mechanisms of gene expression control; chemical modifications of RNA; mRNA processing; AU-rich Element mediated regulation of mRNA stability.



**Huan Gu**, Department of Biomedical and Chemical Engineering, SU  
BS, China University of Mining & Technology, Beijing, CHINA, 2002  
MS, China University of Mining & Technology, Beijing, CHINA, 2006  
Ph.D., Syracuse University, 2009

*Research Interests:* Understanding the mechanisms of biofilm formation and biofilm related high antibiotic resistance using chemical and physical surface engineering; developing antifouling surfaces via surface engineering; investigating the competition and cooperation between pathogenic strains in multispecies biofilm; bacteria-host interaction.



**Mojdeh A. Pajouh**, Department of Civil Engineering  
Texas A&M University  
BS, KNT University of Technology, 2002  
MS, Tehran Polytechnic, 2006  
PhD, Texas A&M University, 2015

*Research Interests:* Computational geomechanics, Numerical Simulation of Extreme Events, Geo-seismic Engineering, Soil-Structure Interaction, Crashworthy Analysis, Roadside Safety, Deep Foundations, LS-DYNA



**Danielle McShan**, Department of Chemistry, Jackson State University  
BS, Talladega College, 2004  
MS, Jackson State University, 2009  
PhD, Jackson State University, 2014

*Research Interests:* Bio-nanotechnology, with an emphasis on the development of methods with nanomaterials to destroy toxins and their toxicity when exposed. Enzyme inhibitions in drug discovery. Bioanalytical methods development associated with drug discovery and compatibility with nanomaterials.