

MUHAMMAD SAAD SHAMIM

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EDUCATION

- Rice University, Houston, TX** Expected Graduation: **May 2014**
- Computer Science B.S.
 - Computational and Applied Mathematics B.A.
 - Cognitive Sciences B.A.
 - Biochemistry and Cell Biology Minor
 - Current GPA 3.46
 - MCAT (8/2011) 37
- Science Academy of South Texas, Mercedes, TX** Graduated: **June 2010**
- Salutatorian
 - GPA 4.0

RESEARCH EXPERIENCE

- Virtual Reconstruction of Historical Cities – Digital Humanities Initiative** Jan. 2014 – Present
Working with researchers in the Rice University Humanities Department to reconstruct ancient urban landscapes in a virtual and interactive setting with a focus on historical accuracy.
- Texas Children’s Hospital – Rice University CAAM** Oct. 2013 – Present
Working with researchers at Texas Children's Hospital to develop and improve software to derive cardiac pressure gradient data from echocardiograms.
- Baylor College of Medicine** Dec. 2012 – Feb. 2013
Helped with a project aiming to identify colored alphabet patterns in synesthete populations using various clustering techniques. Created M-Tree database and assisted in preliminary big data analysis.
- Rice University BIOE** Nov. 2012 – Jan. 2013
Modeled the increased sensitivity of prostate cancer cells to secondary micro-environmental challenges using the genetic algorithm.
- Department of Energy - Oak Ridge National Laboratory** June 2012 – Aug. 2012
Designed a first order implicit-explicit scheme for M_1 model of radiative transfer using discontinuous Galerkin methods. Summary report submitted to the US Department of Energy, Office of Science.
- Rice University VIGRE-CAAM** June 2011 – Feb. 2013
Developed a mathematical model integrating the mechanical and biochemical interactions of GI smooth muscle cells during peristalsis, and simulated muscle cell behavior in patients with intestinal edema.

POSTER PRESENTATIONS

- "A Comprehensive Mathematical Framework for Modeling Intestinal Smooth Muscle Cell Contraction with Applications to Intestinal Edema"**
- Rice University Poster Session of the Century, 10/2012 **Houston, TX**
Society for Mathematical Biology Poster Session, 7/2012 **Knoxville, TN**
- "A Discontinuous Galerkin Method for the M_1 Model of Radiative Transfer"**
- Oak Ridge National Laboratory Poster Session 8/2012 **Oak Ridge, TN**

PROFESSIONAL CERTIFICATIONS

- BLS Training Center Faculty, UTHSC – American Heart Association** 2013 – Present
- EMT-Intermediate – Texas Department of State Health Services** 2012 – Present
- Advanced EMT – National Registry of EMTs** 2012 – Present

AWARDS AND HONORS

Rice University Outstanding Senior Award	2014
Rise University Spirit of Service Award	2014
Baker College Service Award	2014
NCEMSF EMS Website of the Year	2014
Hamner Engineering Scholarship	2013
Rice Senior Interviewer	2013 – Present
Baker College Outstanding Service Award	2013
EMT Delegate, Texas Medical Association First Tuesday Event	2013
Baker College Society of Academic Mentors	2012 – Present
Rice University EMS Education Advisory Committee	2012 – Present
Rice University VIGRE Ambassador	2012 – 2013
National Merit Scholar	2010
National AP Scholar	2010

TEACHING EXPERIENCE

Field Training Officer, Rice EMS	2013 – Present
Baker College Academic Mentor, Rice University	2012 – Present
Volunteer, Rice University, NSCI 281/282	2012 – Present
Basic Life Support Instructor (CPR, First Aid), Rice EMS	2012 – Present
Grader, Rice University, CAAM 335	2012
Assistant, Rice University, CAAM 210	2011 – Present

MEMBERSHIPS AND ADDITIONAL EXPERIENCE

Sway – RPG/RTS Game Development	2014 – Present
NASA Space Medicine Hackathon (SMMID)	2014
Hack.Rice (Hitch-Hike)	2014
National Collegiate EMS Foundation	2013 – Present
Rice Emergency Medical Services (Lieutenant, InCharge)	2012 – Present
Rice University Muslim Alumni Group (Co-Founder)	2012 – Present
Harris County Emergency Corps (Reserve EMT)	2012 – Present
Society for Mathematical Biology	2012 – Present
Rice Computer Science Club	2011 – Present
Rice Euler Math Club	2011 – 2012
Aurora – Top/Down Shooter Game Development	2011
Rice Muslim Student Association	2010 – Present
Building Rice Academics in Neuroscience	2010 – 2012
Rice Pre-Medical Society	2010 – 2012
Memorial Hermann – Texas Medical Center (Volunteer)	2010 – 2011
South Texas Educational Technologies (Temporary Employee)	2010

Experience programming in MATLAB, C, C#, JAVA, FORTRAN, Python, Mathematica, Javascript, and HTML

Experience with technical software: AMPL, Subversion, LaTeX, AutoCAD, Autodesk Inventor, Autodesk Revit, NI Multisim, Blender, and Unity

Fluent in Urdu (Hindi) and elementary proficiency in Arabic and Spanish