

Nithya Kasireddy

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EDUCATION

PhD Candidate – Biomedical Engineering *Aug 2015 - Present*
Tulane University, New Orleans, USA

Bachelor of Engineering – Biomedical Engineering (GPA 8.9/10) *Oct 2010 - Jun 2014*
University College of Engineering, Osmania University, Hyderabad, India

EXPERIENCE

Research Assistant *Aug 2015 - Present*
Cellular Biomechanics and Biotransport/Biomedical Acoustics Laboratory
Department of Biomedical Engineering, Tulane University, New Orleans, USA
PI: Dr. Damir Khismatullin

Teaching Assistant *Jan 2018 - Present*
Course: Biomechanics and Biotransport
Department of Biomedical Engineering, Tulane University, New Orleans, USA

President *Aug 2017 - Present*
International Student Advisory Board, Tulane University

Business Technology Analyst (Technology Risk) *Jul 2014 – Jul 2015*
Governance, Regulatory & Risk Strategies - Life Sciences & Healthcare Industry
Deloitte & Touché LLP Audit and Enterprise Risk Services

Summer research fellow *Feb 2014 - Mar 2014 & May 2013 - Jul 2013*
Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India
Advisor: Dr.Santosh Ansumali

CERTIFICATIONS

TRIZ Associate (Theory of Inventive problem solving)
Altshuller Institute TRIZ, License 2015-A-081

SKILLS

- C, C++, MATLAB, LabView, Mathematica, Latex, Microsoft Office
- Experimental design, Theoretical modeling, Biomechanics, Acoustics, Image processing
- Computer system validation for Healthcare Industry, Risk Analytics, Control Testing

HONORS AND AWARDS

- Biomedical Instrumentation Centre Gold Medal - 2014
- Best outgoing student of Biomedical Engineering class of 2014
- Best Undergraduate Project Award in B.E Biomedical Engineering - 2014
- Gold Medal from High School for excellence in academics - 2008

PROJECTS

Acoustic Tweezing Rheometry for Biological fluids

Aug 2015 - Present

This project focuses on the development of theoretical and computational models to understand the rheological properties of different biological materials including blood plasma and whole blood during acoustic levitation. The models are validated with experimental data from Acoustic tweezing experiments and applied to whole blood and blood plasma to determine the coagulation parameters.

Drag on Red Blood Cell using Lattice Boltzmann Method

B.E Project, 2014

The red blood cell model with realistic geometry is simulated using Lattice Boltzmann method to calculate the Drag force associated with its geometry and compared with the drag forces on various other comparable shapes.

Summer Research Fellowship

2014,2013

Developed a computational model that describes the realistic 3-D geometry of a red blood cell using C++. The 3-D shape model of realistic geometry of red blood cell has been simulated under various flow conditions using Lattice Boltzmann Method.

PUBLICATIONS

1. Kasireddy, Nithya, et al. "Dynamic measurement of blood viscoelasticity by an oscillatory acoustic tweezing technique." *The Journal of the Acoustical Society of America* 142.4 (2017): 2609-2609.
2. Kasireddy, Nithya, et al. "Theoretical Modeling of Biological Fluid Deformation during Dynamic Acoustic Tweezing." *Biophysical Journal* 112.3 (2017): 306a.
3. Kasireddy, Nithya, et al. "Dynamic Measurement of Blood Viscoelasticity using Acoustic Tweezing" *BMES annual meeting* (2017)

CONFERENCES AND WORKSHOPS

- Deloitte Data Analytics summit – Hyderabad, 2015
- Application Development on Medical Imaging using Open Source Platform: ITK and VTK – MSRIT, Bangalore, 2014
- National workshop on Cognitive Sciences & Neuro Signal Processing – OU, Hyderabad, 2013
- National workshop on Virtual Instrumentation – OU, Hyderabad, 2013
- BIOYANTRA national symposium on Medical Devices – Chennai, 2013
- Hands on training on MATLAB for Engineers – OU, Hyderabad, 2013
- Model presentation of Davinci Surgical System at Meditech national level technical symposium, 2012

OTHER ACTIVITIES

- Member - International Student Advisory Board, Tulane University (Aug 2016 – Present)
- Member - Biophysical Society
- Member - Biomedical Engineering Society
- Member - Acoustical Society of America

Linkedin: <https://www.linkedin.com/in/nkasireddy/>