Department of Physics

Faculty of Science / University of Peradeniya



Dr. Nilushi L. Dasanayake

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About Me

I graduated from the University of Peradeniya in 2006 with a B.Sc. with honors in Physics. Upon graduation, I worked as a temporary demonstrator in the Physics department for a year.
In 2007, I entered the Washington University in St. Louis and obtained my PhD in physics in 2013, where I specialized in biophysics of cell mechanics. Investigated the effects of the network structure on intracellular force generation via simulation of myosin mini-filament motion through a random actin network and demonstrated the generality of actomyosin contractility for the first time.
My main research interests are in the field of computational biophysics.

Higher Education Qualifications

PhD	MSc	BSc
Washington University in St. Louis United States (2013)	Washington University in St. Louis United States (2009)	University of Peradeniya Sri Lanka (2006)

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Awards, Scholarships, Memberships & Fellowships

- University Awards for Academic Excellence 2006
- University Fellow Washington University in St. Louis 2007/2008
- Member of the Biophysical Society 2009-2013

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Positions Held

- Teaching Assistant - Washington University in St. Louis- (2009-2013)
- Visiting Scholar - University of California Santa Barbara- (2014-2015)
- Adjunct Assistant Professor - University of Portland- (2017-2020)
- Coordinator in MSc in Medical Physics- (Since 2022)

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My Teachings

- PH304: Relativity
- PH313: Physical optics and Optical Instrumentation
- PH414: Lasers
- PH440: Solid State Physics

Research Interests (Research Fields/ Projects)

Nothing to show under this subheading !!!

Ongoing Research and Projects

Nothing to show under this subheading !!!

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Key Publications

Physical Biology - (2013)

Stress Generation by Myosin Mini-filaments in Actin Bundles.

Physical Review Letters - (2011)

General Mechanism of Actomyosin Contraction

Conferences

54th Annual Biophysical Society Meeting

HELD AT : San Francisco, USA - (Feb, 2010)
TOPIC : *Stress generation by myosin minifilaments in isotropic actin networks*

Frontiers in Mathematical Biology NSF-NIH PIs Meeting at University of Maryland, College Park, Maryland.

HELD AT : Maryland, USA - (April, 2010)
TOPIC : *Control of Actin Assembly and Cell Migration by Actin-Regulating Proteins"},*

Graduate Research Symposium, Washington University in St. Louis, St. Louis, Missouri.

HELD AT : St. Louis, USA - (Feb, 2011)
TOPIC : *Stress generation by acto-myosin networks.*

My Publications

Please goto the website.

https://sci.pdn.ac.lk/physics/staff/Nilushi-Dasanayake

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