Thilanka Munasinghe

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Residency Status: Permanent Resident of USA

Education

Master of Science in Mechanical Engineering
West Virginia University, WV, USA.
Advisor: Dr. John Kuhlman.
Thesis: Characteristics of Bubble Behavior in Microgravity Conditions.

Bachelor of Science in Aerospace Engineering
West Virginia University, WV, USA.
Advisor: Dr. John Loth.

Work Experience

2014 August - Present: **CodeLab Instructor: Android App Development and Internet of Things,** at WVU Office of Innovation, Entrepreneurship and Commercialization (WVU LaunchLab).

Summer 2016 and 2017: **Google Summer of Code Developer, Center for Mobile Learning, MIT Media Lab.** Integrated Android Things and Raspberry Pi to MIT App Inventor. Developed the Internet of Things Component Extension.

2016 Jan – 2016 Feb: **App Development Consultant**, at MyLingoApp.com.

2011 May – 2013 Jul: **Research Assistant at Mathematics Department, WVU.** Developed Genetic Algorithms (GA) and undertook Genetic Programming for Cooperative Control Systems, Task Management, and Multi-Agent Systems.

2012 Jan – 2012 Aug: **Research Intern at Information Research Corporation, Fairmont, WV.** Integrated Genetic Algorithm software systems to a ground control station, and tested them with Unmanned Aerial Vehicles (UAVs).

2010 Jan– 2011 May: **Research Assistant at Mechanical and Aerospace Engineering.** Conducted microgravity experiments to study the Kelvin Force

	Effect on Bubbles in paramagnetic liquids under microgravity conditions.
2005 Aug– 2009 May:	**Resident Assistant.** Student mentor and staff member at the Dadisman Hall.
2003 Jun – 2004 Aug:	**Intern at Arthur C. Clarke Institute for Modern Technology, Moratuwa, Sri Lanka.** Conducted meteorite testing and analyzed the characteristics and composition of meteorites found in Sri Lanka.

TEACHING EXPERIENCE

Fall 2014- Present:	CodeLab Instructor, WVU LaunchLab
Fall 2011:	Tutor at Mathematics Learning Center, WVU
Aug 2005 – May 2010:	Math and Physics Tutor at WVU Engineering Learning Center
Summer & Fall 2009:	Instructor for Engineering 102
Spring 2009:	Instructor for Engineering 101
Fall 2008:	Teaching Assistant University 101

PROGRAMMING SKILLS

- Proficient in Object Oriented Programing using **JAVA** and **Python**
- Proficient in Scientific Computing using **Matlab** and **R**
- Proficient in Mobile Application Development using the Android Platform
- Proficient in Autodesk Fusion360 (CAD design)

AWARDS

- **Best Business/Project Idea and Most Technically Interesting** Project Award at the Big Travel Data Hackathon 2013, organized by Hack Reduce for ***FlightR***.
- **Resident Assistant (RA) of the Year** Award of West Virginia University Dadisman Hall, 2008-2009 Academic Year.
- **Recognition Award from Sir Arthur. C. Clarke** for the meteorite and planetary science research, 2003.

INVITED TALKS

- Space Enabled Solution for Dengue Outbreak in Sri Lanka: Dengue Early Warning System (DEWS) at University of Moratuwa, University of Colombo, University of Jaffna, Arthur C. Clarke Institute for Modern Technologies; January 2018.
- “Android Things + MIT App Inventor” at Google New York Office; Nov 2017.

- "How to Teach High School Students Effectively" at S. Thomas' College, Sri Lanka; Jan 2014.
- "Fluids and Bubble Motion Behavior in Microgravity Conditions" at Arthur C. Clarke Institute for Modern Technology, Sri Lanka; May 2010.
- "High Altitude Balloon Satellites" at American National College, Sri Lanka; June 2007.

PEER REVIEWED PUBLICATIONS

JOURNAL PUBLICATIONS

- A Flexible Genetic Algorithm System for Multi UAV Surveillance: Algorithm and Flight Testing. Journal of Unmanned Systems. *Marjorie Darrah, Jay Wilhelm, Thilanka Munasinghe, Mitch Wathen, Steve Yokum, Eric Sorton*, Volume 03, Issue 01, pages: 49-62, January 2015.
- Using Genetic Algorithms for Tasking Teams of Raven UAVs. Journal of Intelligent and Robotics Systems, *Marjorie Darrah, Edgar Fuller, Thilanka Munasinghe, Kristin Duling, Mridul Gautam, Mitchell Wathen.*Volume 70, Issue 1-4, pages: 361-371, April 2013.

CONFERENCE PUBLICATIONS

- Dynamic and Kinematic Characteristics of Bubble Flow Motion in Paramagnetic Liquid under Microgravity Conditions. International Conference on Fluid Flow Dynamics (ICFD), Sendai, Japan, *Thilanka Munasinghe,* November 2009.
- Investigating Bubble Expansion in Pool Boiling Under Influence of Magnetic Field in Microgravity Conditions. World Scientific and Engineering Academy and Society, (WSEAS), Moscow, Russia, *Thilanka Munasinghe, Sanket Joshi.* August 2009.
- Studying the Characteristics of Bubble Motion in Pool Boiling in Microgravity Conditions Under the Influence of a Magnetic Field. Recent Advances on Space Technology (RAST), IEEE – AIAA Joint Conference, Istanbul, Turkey. *Thilanka Munasinghe*. June 2009.
- Investigating Bubble Behavior in Pool Boiling in Microgravity Conditions, World Congress on Engineering (WCE), International Association of Engineers (IAENG), Imperial College, London, UK, *Thilanka Munasinghe*, July 2008.

POSTER PRESENTATIONS

- Efficient Path Planning Algorithms for Autonomous Underwater Vehicles; Google Research Labs Conference; June 2014.
- Transformation Mapping of Bubbles' 2-D Circular Shape to an Elliptical Shape Under Influence of a Magnetic Field in Pool Boiling in Microgravity Conditions; 5th MIT Conference on Computational Fluid and Solid Mechanics, Massachusetts Institute of Technology (MIT), Cambridge, MA, *Thilanka Munasinghe*; June 2009. (Abstract Only)
- Laminar to Turbulent Transition in Fluid Flow in Boiling; AIAA Young Professional and Student Education Conference, John Hopkins University, Baltimore, Maryland; November 2008.
- Pool Boling in Microgravity; AIAA Student Conference, University of Maryland, College Park; April 2008.
- Boiling Heat Transfer; Research Day at WV-Capitol; Charleston, West Virginia; January 2008.

VOLUNTEER SERVICE

Aug 2005 – May 2008:	Senior Mentor at Office of International Students and Scholars
July – December 2008:	Member of the Student Conduct Board of WVU
2007 – 2008:	Vice President, International Student Association WVU
2007 – 2009:	Member of the WVU Cricket Club
2007 – 2008:	Member of Multi-Cultural Leadership Club WVU
Aug 2005 – Dec 2008:	Member of Hall Council, Dadisman & Stalnaker Hall
2000 – 2004:	Member of Sri Lanka Student Red Cross Society

REFERENCES

Available Upon Request.