Dr. M. T. M. Dewasurendra

Ph. D., M. Sc.(Central Florida, USA), M. Sc. (North Florida, USA)

Senior Lecturer

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About Me

Tharindu Dewasurendra is a Senior Lecturer attached to the Department of Mathematics at the University of Peradeniya. Dewasurendra graduated with a Ph.D. from the Mathematics Department at UCF in the Summer of 2019. He received a B.Sc.(Hons.) Degree in Mathematics from the University of Peradeniya in 2009. During grad school, Dewasurendra worked as a GTA in the EXCEL/COMPASS programs for two years and four years for the Department of Mathematics. He has mentioned for Professor Lee H. Armstrong GTA Award for Distinguished Teachers and received Graduate Research Excellence Award during this time. He also received an M.Sc. Degree in Mathematics from the University of North Florida in 2013 and the University awarded him the International Student Merit Academic Award and the Outstanding Graduate Math Student Award. Dewasurendra has published more than10 papers in refereed International Mathematical Journals, few of them are Q1 SJR ranking journals. His research interests lay predominantly in the fields of nonlinear dynamics and computational mathematics. Dewasurendra's most recent publication is "*Semi-analytical method for propagation of harmonic waves in nonlinear magneto-thermo-elasticity*".

Higher Education Qualifications

🎓 PhD	🎓 MSc	🎓 BSc
University of Central Florida USA (2019)	University of North Florida USA (2013)	University of Peradeniya Sri Lanka (2009)

Awards, Scholarships, Memberships & Fellowships

🏅 The Award of Excellence in Research, Faculty of Science, University of Peradeniya 2023

🏅 The Award of Excellence in Teaching, Faculty of Science, University of Peradeniya 2022

🏅 The Award of Excellence in Research, Faculty of Science, University of Peradeniya 2021

🏅 The Award of Excellence in Teaching, Faculty of Science, University of Peradeniya 2021

🏅 Honorary mention for "Armstrong GTA Award for distinguished teaching 2019(Department of Mathematics, University of Central Florida)

🏅 Graduate Research Excellence Award in Mathematics 2018 (Department of Mathematics, University of Central Florida)

🏅 Outstanding Graduate Math Student Award 2013(University of North Florida)

🏅 International Student Merit Academic Award 2013(University of North Florida)

wellcome Graduate Presentation Fellowship 2019 (University of Central Florida)

Travel Grant for Joint Mathematics Meetings 2019 (American Mathematical Society)

👥 American Mathematical Society, 2013

👥 Pi Mu Epsilon, 2011

👥 University of Peradeniya Science Alumni Association, 2020

Positions Held

- Senior Lecturer(Grade II), Department of Mathematics, University of Peradeniya- (July 2021 - Present)

- President, University of Peradeniya Science Teachers Association UPSTA- (2024 - Present)

- Wardan, Arunachalam Hall- (2022 - Present)

- Coordinator Training, Centre for Distance and Continuing Education, UoP- (November 2023 - Present)

- Coordinator IQAC, Center for Distance and Cotinuing Education CDCE, UoP- (2024 - Present)

- Senior Treasurer Young Researchers' Forum, Postgraduate Institute of Science, University of Peradeniya- (April 2022 - Present)

- Secretary, University of Peradeniya Science Alumni Association(UPSAA)- (February 2020 - December 2021)

- Fundraising committee chair, University of Peradeniya Science Alumni Association(UPSAA)- (2021- Present)

- Senior Treasurer Science Student Union- (February 2022 - July 2023)

- Volunteer Senior Student Counselor- (February 2022 - 2023)

- Chief Examiner for G.C.E. (A/L) Examination- (2020/21, 2021/22, 2023/24)

- Visiting Lecturer, Post Graduate Institute of Science (PGIS), University of Peradeniya- (2020 - Present)

- Graduate Teaching Associate, Department of Mathematics, University of Central Florida- (January 2017- August 2019)

- Graduate Teaching Assistant, Department of Mathematics, University of Central Florida- (August 2013- December 2016)

- Graduate Teaching Assistant, Department of Mathematics and Statistics, University of North Florida- (August 2011- May 2013)

My Teachings

- 🖥 MAT3053: Fluid Mechanics I
- 🖥 MAT4053: Fluid Mechanics II
- 🖥 MT1042: Vector Methods
- 🖥 MT106: Classical Mechanics I
- 🖥 MT203: Differential Equations
- 🖥 MT205: Classical Mechanics II
- 🖥 MT314: Network Optimization Theory

Research Interests (Research Fields/ Projects)

Fluid Dynamics, Dynamical Systems, Mathematical Modeling, Computational Mathematics

Ongoing Research and Projects

- **Method of Directly Defining the inverse Mapping for Partial Differential Equations**
- **Directly Defining the inverse Mapping Method for the Propagation of Harmonic Waves in a Nonlinear Generalized Magneto-thermo-elasticity**
- **Fuzzy Differential Equations and Applications**
- **Slip Conditions on Nanofluids when traveling through parallel Plates**

Key Publications

⭐ International Journal of Modelling and Simulation(Taylor and Francis) - (2023)

[Modeling and semi-analytical solution for immiscible and miscible fingers formation during enhanced oil recovery](#)

⭐ Computational and Applied Mathematics (Springer Link) - (2021)

A Method of Directly Defining the inverse Mapping for a nonlinear partial differential equation and for systems of nonlinear partial differential equations

⭐ Computers & Mathematics with Applications (ELSEVIER) - (2021)

Semi-analytical method for propagation of harmonic waves in nonlinear magneto-thermo-elasticity

Conferences

🏢 **Proceedings of the Ruhuna International Science and Technology Conference**

HELD AT : Ruhuna University - (2021)
TOPIC : *Application of the Method of Directly Defining the Inverse Mapping to Fingering Phenomenon in Oil Industry*

🏢 **Proceedings of the PGIS Research Congress**

HELD AT : University of Peradeniya - (2020)
TOPIC : *Non-linear Dispersion of a chemical pollutant into a river with non-linear initial flow*

🏢 **Joint Mathematical Meetings 1145**

HELD AT : Baltimore, MD - (2019)
TOPIC : *Optimal Semi-analytical Method to solve Coupled Nonlinear Differential Equations Arising in Epidemiology*

🏢 **American Mathematical Society meeting 1133**

HELD AT : Orlando, FL - (2017)
TOPIC : *A method of directly defining the inverse mapping for solutions of coupled systems of nonlinear differential equations*

🏢 **Joint Mathematical Meetings 1125**

HELD AT : Atlanta, GA - (2017)
TOPIC : *A Method of Directly Defining the Inverse Mapping for Solutions of Coupled Systems of Nonlinear Differential Equations*

My Publications

Please goto the website.

https://sci.pdn.ac.lk/maths/staff/Mangalagama-Dewasurendra