



Department of Physics Faculty of Science / University of Peradeniya



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About Me

I conducted my research work of semiconductor particles doped with salts under supervision of professor K. Tennakone from 1986 to 1988. Then I got involved in research of magnetic thin film preparation and characterization in CUNY in USA from 1990 to 1995 for my Ph. D. From 1995 to 1996, I continued my Ph. D research in MARTECH in FSU in USA. Thereafter, I returned to University of Ruhuna as a senior lecturer and got involved in research of preparation and characterization of semiconductor films. Meantime, I initiated a research on theoretical study of magnetic thin films. Then I joined University of Peradeniya in 2008, and conducted research in theoretical Physics and spin coated semiconductor thin films. I have supervised several M. Sc. M. Phil and Ph. D degrees.

I have taught all kind of undergraduate level Physics courses and some graduate level courses in universities in past 31 years. I had some Post doc research experiences in the department of mechanical, industrial, manufacturing engineering department in the University of Toledo in 2007.

Higher Education Qualifications

🎓 **PhD**

City University of New York (CUNY)
(1996)

🎓 **BSc**

University of Kelaniya
(1985)

Awards, Scholarships, Memberships & Fellowships



I was rewarded by presidential awards in 2001, 2002, 2003, 2006, 2007 and 2009 for my research articles published in these years



Marquis Who's Who in Asia-2007







Marquis Who's who world-2008

Positions Held

-  Probationary lecturer in Ruhunu University- (1986 to 1989)
-  Teaching and research assistant in Queens college- (1990 to 1995)
-  Senior lecturer in Ruhunu University- (1996 to 2008)
-  Senior lecturer in University of Peradeniya - (2009 to 2013)
-  Professor in Physics in University Peradeniya- (since 2013)
-  Senior Professor- (since 21/10/2021)

My Teachings

-  AS463: Energy; Sources, use and conservation
-  PH373: Computational Physics
-  PH380: General Physics Laboratory III
-  PH422: Magnetic materials

Research Interests (Research Fields/ Projects)

Condensed matter theoretical and experimental Physics

Ongoing Research and Projects



Theoretical research on magnetic thin films



Synthesis of thin films semiconductors such as CuO, ZnO, CdS,-----etc using spin coating. Optical, electrical and structural characterization of thin films.

Key Publications



J. Appl. Phys. - (1996)

“Variable texture NiOFe₂O₃ ferrite films prepared by pulsed laser deposition”



J. Phys. Condens. Matter - (2006)

“Sputtered Copper Oxide (CuO) thin films for Gas Sensor Devices”

Conferences



PGIS Research Congress

HELD AT : University of Peradeniya, SL - (2016)

TOPIC : “*Study of non-oriented ultra thin ferromagnetic films*”



APS March meeting 2016

- (2016)

TOPIC : “*Micro-structure of iron in Petroselinum crispum and its dependence with the chemical nature of the soil*”



iPURSE

HELD AT : University of Peradeniya - (2015)

TOPIC : “*Characterization of sol-gel spin coated nanocrystalline cadmium sulphide thin films*”



SPIE Photonics west 2015

- (2015)

TOPIC : “*Characterization of nano-sized iron particle layers spin coated on glass substrate*”



Nanoscience, Multidisciplinary Conference

HELD AT : NewYork - (2015)

TOPIC : “*Characterization of Iron Nano Particles using Synchrotron X-rays*”

My Publications

Please goto the website.

<https://sci.pdn.ac.lk/physics/staff/Pubudu-Samarasekara>