

## CURRICULUM VITAE

# Thilantha Lakmal Dammalage (PhD)

### **Office Address:**

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## **Education**

**Doctor of Engineering** (Jan. 2007 to Dec. 2009), Remote Sensing and Geographic Information Systems, School of Engineering and Technology, Asian Institute of Technology, Thailand.

- **Main Courses Followed:** Advanced Aerospace Technology & Global Positioning and Navigation, Integration of Remote Sensing and Modeling, Spatial Information Systems in Natural Resources Management, Agricultural Environments (**GPA 3.83 out of 4.0**)
- **Dissertation Title:** Wavelet Transform Application to C/A Code Multipath Mitigation at GPS Reference Stations for Accuracy Improved Differential GPS Corrections  
*“The study evaluates the potential of applying wavelets transform to perform accuracy enhanced differential GPS positioning through C/A code multipath mitigation. Further, the study discussed the application of multipath free DGPS correction generation at permanent reference stations towards the state of the art technology development to a growing number of high precision GPS applications”*
- **Supervisor and Committee:** Prof. Seishiro Kibe (Supervisor), Dr. Lal Samarakoon, Prof. Rajendra Prasad Shrestha, Prof. Chalermchon Satirapod
- **External Examiner:** Prof. Akio Yasuda, Tokyo University of Marine Science and Technology, Japan.

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**Master of Science** (Jan. 2005 to Dec. 2006), Remote Sensing and Geographic Information Systems, School of Engineering and Technology, Asian Institute of Technology, Thailand.

- **Main Courses Followed:** Remote Sensing, Geographic Information Systems, Aerospace Technology, Advanced Mapping Technology, Digital Photogrammetry, Global Positioning System (**GPA 3.88 out of 4.0**)
- **Dissertation Title:** Development of a system to enhance the accuracy of GPS observations via Internet.  
*“This research examines the viability of the NTRIP, Networked Transport of RTCM via Internet protocol, in real-time DGPS and RTK corrections. This study compares the accuracy results obtain with the conventional and NTRIP technique of real-time DGPS and RTK corrections”*
- **Supervisor and Committee:** Prof. Junichi Susaki (Supervisor), Dr. Lal Samarakoon, Prof. Xiaoyong Chen

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**Bachelor of Science** (Sep. 1998 to Mar. 2003), Surveying Sciences, Department of Surveying Science (Present, Faculty of Geomatics), Sabaragamuwa University Belihuloya, Sri Lanka

- **Main Courses Followed:** Remote Sensing, Geographic Information Systems, Land Surveying, Hydrographic Surveying, Astronomical and Physical Geodesy, Photogrammetry, Cartography, Land Law, Land Administration, Computer Applications, Mathematics and Physics (*Second Class Upper Division, class rank 4 out of 50*)

### Awards and Fellowships:

- **Japan Government Scholarship** is awarded for three years (Jan. 2007 to Dec. 2009) for the completion of Doctor of Engineering degree at Asian Institute of Technology, Thailand.
- **Asian Institute of Technology Fellowship** is awarded for two years (Jan. 2005 to Dec. 2006) for the completion of Master of Science degree at Asian Institute of Technology, Thailand.
- Won the **Gold Medal for the best presentation** on GPS & Hydrography session at 2nd International Symposium 2008, Sabaragamuwa University of Sri Lanka, 8<sup>th</sup> to 12th Jul 2008, Belihuloy, SRI LANKA.

### Professional Training:

1. **Certificate Course in Teaching in Higher Education-2008** (six months) conducted by the Staff Development Center of the Sabaragamuwa University of Sri Lanka.
2. **International training course on “Global Navigation Satellite System”** under ProGENY project. November 21-22, 2008, Asian Institute of Technology.
3. **Training program on “Remote Sensing and GIS for Disaster Risk Assessment”**. April, 2004 GIS Application Center, Asian Institute of Technology, Thailand. Duration: 2 weeks
4. **Training program on “Application of GPS for Positioning and Navigation”**. March 2004 GIS Application Center, Asian Institute of Technology, Thailand. Duration: 2 weeks
5. **International training course on “Mapping from Space: Utilization of High Resolution Satellite Data”**. March 2004 GIS Application Center, Asian Institute of Technology, Thailand. Duration: 2 weeks

### Selected Publications:

#### Journal Publication

- Dammalage T.L., Satirapod C, Kibe S. and Ogaja C. (2010). Wavelet transform application to C/A Code multipath mitigation at GPS reference stations for improved differential GPS corrections, Survey Review ,Volume 42, Number 317, July 2010 , pp. 240-255(16)

## Conference Proceedings

- R. G. C. J. Kapilaratne, H. M. A. Kavinda, A. A. D. C. M. Amarasekara and T. L. Dammalage (2013). Impacts Of Land Use Change And Strategic Approaches In The Context Of Mitigate Storm Water Floods In Sub Urban Conditions; A Case Study In Colombo. Fourth International Symposium, Sabaragamuwa University of Sri Lanka, 11th -12th January 2013.
  - R. G. C. J. Kapilaratne, H. M. A. Kavinda, A. A. D. C. M. Amarasekara and T. L. Dammalage (2012) Impact of Land Use Change for Storm Water Flood in Sub-Urban Conditions: A Case Study in Colombo, International Conference on Environment and Humanities ECO REVOLUTION 2012, Colombo Sri lanka, 18<sup>th</sup> to 20<sup>th</sup> August 2012.
  - Dammalage T. L. and Satirapod C. (2008). Analysing the Effectiveness of Wavelet Transform for Mitigating C/A Code Multipath at GPS Reference Stations. GPS/GNSS 2008 International Conference, 11th to 14th November 2008, Tokyo, JAPAN. (Presented and full paper submitted)
  - Dammalage T. L. (2008). C/A Code Based DGPS Correction Data Accuracy Analyses. 2nd International Symposium 2008, Sabaragamuwa University of Sri Lanka, 8th to 12th Jul 2008, Belihuloy, SRI LANKA. (Won the Gold Medal for the best presentation, GPS & Hydrography session)
  - Dammalage T. L. and Lal Samarakoon (2008). Test Results of RTK and real-time DGPS Corrected Observations Based on NTRIP Protocol, XXI Congress of the ISPRS, Beijing, China, 3-11 July 2008. (Presented and full paper submitted)
  - Dammalage T. L., Lal Samarakoon and Junichi Susaki (2006). Accuracy Enhancement of Low-Cost GPS Receiver Observations via Internet DGPS, 5th International Symposium on New Technologies for Urban Safety of Mega Cities in Asia, Phuket, Thailand, 16-17 November, 2006. (Presented and full paper submitted)
  - Dammalage T. L., Lal Samarakoon, Junichi Susaki, Panithan Srinuandee and Teerasak Srisahakit (2006). Potential Accuracy and Practical Benefits of NTRIP Protocol over Conventional RTK and DGPS Observation Methods, 5th Annual International Conference, Map Asia 2006, Bangkok, Thailand, 29th August to 1st September 2006. (Presented and full paper submitted)
  - Dammalage T. L., Lal Samarakoon and Junichi Susaki (2006). Application and Benefits of Internet GNSS Data Streaming Base on NTRIP Protocol in Modern GPS Surveying Systems, First International Symposium, Sabaragamuwa University, Sri Lanka, 4 - 8 July 2006. (Presented and full paper submitted)
  - Dammalage T. L., Lal Samarakoon and Junichi Susaki (2005). Geometric Correction of High Resolution Satellite Data -Effect of the Distribution, Accuracy and Number of GCP, 26th Asian Conference on Remote Sensing, Hanoi, Vietnam, 7- 11 November 2005. (Presented and full paper submitted)
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## Poster Presentation

- Dammalage T. L., Lal Samarakoon and Junichi Susaki (2006). Real-Time GPS Data (DGPS/ROW) Distribution System Via Internet to Enhance the Accuracy of Hand-Held GPS Receiver Observations, Institute of Industrial Science Open House, The Tokyo University, Japan, 1-3 June, 2006. (Presented)

- Dammalage T. L., Lal Samarakoon and Junichi Susaki (2007). Real-Time GPS data distribution in Asian Institute of Technology, The MODIS workshop on Monitoring and Modeling of Environment and Disaster in Asia, Rama Gardens Hotel, Bangkok, Thailand, 15-16 January, 2007. *(Presented)*

## Research Experience:

1. **Student Assistant and Researcher (part-time)**, Geoinformatics Center (former GIS Application Center), Asian Institute of Technology, Thailand. From 1<sup>st</sup> February 2005 to 15<sup>th</sup> May 2006.
2. **Project Researcher (full-time)**, GIS Application Center, Asian Institute of Technology, Thailand. 01<sup>st</sup> June 2004 to 30<sup>th</sup> December 2004

**Personal Responsibilities:** The Center is devoted for Research and Training on the application areas of Remote Sensing, GIS and GPS. With an aim of creating training opportunities for the organizations working in the Asia-Pacific region and to assist them in capacity building, the Center offers short term training courses. As a Project Researcher, I have served as a resource person and conducted lectures on Global Positioning Systems, map projections and coordinate systems and fundamentals of surveying and cartography in various international capacity building training programs conduct by Geoinformatics Center and JAXA (Japan Aerospace Exploration Agency). Also responsible for planning and executing Mini-Projects undertaken by the Center particularly in the area of landslide and floods in Asia Pacific countries as a fulltime researcher.

I have established the permanent GPS reference station at the center as part of my Masters (MSc) Research work and connected it to the “Global Network of Real-Time GNSS Reference Stations”. It has become the first real-time GPS reference station in Thailand, which streams raw and Differential corrections through Internet.

## Consultancy

1. **Collaborative Scientist - GIS (2012):** of the program for uplifting kithul industry conducted by the Ministry of Traditional Industries and Small Enterprise Development, Sri Lanka.
2. **GIS Specialist (2011- 2012):** of the consultancy service for improving agriculture statistics of Sri Lanka conducted by the Ministry of Finance and Planning, Sri Lanka.

## Undergraduate Teaching:

1. **Senior Lecturer**, Special Degree in Surveying Science, Faculty of Geomatics, Sabaragamuwa University of Sri Lanka. From 01st March 2007 to Present I have been conducting Lecturers, Practical Classes and Lab Classes on Global Positioning Systems, Remote Sensing, Geographic Information Systems and Space and Satellite Technology and supervision of undergraduate research projects of the Faculty.

2. **Visiting Lecturer in Remote Sensing & GIS**, Special Degree in Agri-business Management, Faculty of Agriculture Science, Sabaragamuwa University of Sri Lanka. (From December 2010 to Present)
3. **Visiting Lecturer in Remote Sensing**, B.Sc. Special Degree in Applied Physics, Faculty of Applied Science, Sabaragamuwa University of Sri Lanka. (Academic Year 2008/2009 and 2010/2011)
4. **Visiting Lecturer in Remote Sensing & GIS**, Faculty of Management Studies, Sabaragamuwa University of Sri Lanka. (Academic Year 2005/2006 )
5. **Visiting Lecturer in Land Surveying**, Faculty of Architecture, University of Moratuwa. (Academic Year 2010/2011 )

### Postgraduate Teaching Expertise:

1. **Visiting Lecturer in Global Positioning Systems (GPS)**, MSc in Geoinformatics and & PG Diploma in Geoinformatics, Institute of Human Resource Advancement, **University of Colombo**. (From August 2010 to Present )
2. **Visiting Lecturer in Global Positioning Systems (GPS)**, MSc in Remote sensing and GIS, Postgraduate Institute of Science, **University of Peradeniya**. (From 05th January 2008 to Present )
3. **Visiting Lecturer in Global Positioning Systems (GPS)**, MSc in Geoinformatics, Postgraduate Institute of Agriculture, **University of Peradeniya**. (From May 2012 to September 2012)
4. **Visiting Lecturer in Global Positioning Systems (GPS)**, MSc in GIS and Remote sensing Department of Geography, **University of Sri Jayawardanapura**. (From 24.03.2012 to 31.12.2012)
5. **Visiting Lecturer in Global Positioning Systems (GPS)**, Diploma in GIS and Remote sensing Department of Geography, **University of Sri Jayawardanapura**. (From 25.03.2012 to 30.12.2012)

### Administrative Expertise:

1. **Head of Department**, Department of Remote Sensing and GIS (CPRSG), Faculty of Geomatics, Sabaragamuwa University of Sri Lanka. (From 08th August 2010 to Present)
2. **Consultant**, Geomatics Solutions (Pvt.) Ltd. Sri Lanka. (From January 2011 to Present)
3. **Director**, Staff Development Center (SDC), Sabaragamuwa University of Sri Lanka. (From September 2011 to Present). During the tenure at office, I have obtained a 8 million rupees grant for the uplifting of the SDC facilities.

4. **Acting Head of Department**, Department of Remote Sensing and GIS (CPRSG), Faculty of Geomatics, Sabaragamuwa University of Sri Lanka. (From 08th February 2010 to 07th August 2010)
5. **Acting Dean**, Faculty of Geomatics, Sabaragamuwa University of Sri Lanka. (From 02<sup>nd</sup> July 2011 to 10<sup>th</sup> July 2011)
6. **Workshop Coordinator**, “ Geomatics for National Development” organized by the Faculty of Geomatics on 18<sup>th</sup> October 2011
7. **Member of Organizing Committee**, 3rd International Symposium, Sabaragamuwa University of Sri Lanka, 2010
8. **Member of Organizing Committee**, 4th International Symposium, Sabaragamuwa University of Sri Lanka, 2012
9. **Member of Sports Advisory Board**, Sabaragamuwa University of Sri Lanka, for the academic years 2010/2011 and 2011/2012
10. **Student Counselor**, Sabaragamuwa University of Sri Lanka, for the academic years 2010/2011

### **Professional Memberships:**

2009- Member, International GNSS Society.  
2009- Member, Geo-Informatics Society of Sri Lanka.

### **Areas of Expertise:**

Global Positioning System (GPS).  
GPS applications.  
Geomatics Engineering.  
Remote Sensing Applications and Image processing.  
Geographic Information System Applications  
Space and Satellite Technology  
Surveying and Mapping

### **Language Proficiency:**

English Language : Excellent ; Speaking, Reading and Writing  
Native Language : Sinhala

**Biographic Data:**

Nationality:	Sri Lankan
Date of Birth:	09th December 1977
Birth Place:	Mathara / Sri Lanka
Gender:	Male
Marital Status:	Single
Passport No:	N1245812

**Non Related Referees:****Prof. Seishiro Kibe,**

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**Declaration :**

I, the undersigned, declare that to the best of my knowledge and belief, these data correctly describe me, my qualification and my experience.

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Signature

Thilantha Lakmal Dammalage