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University of Peradeniya, SRI LANKA

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NATIONAL CONFERENCE ON ADVANCED MATERIALS FOR EMERGING TECHNOLOGIES (NCAMET)



Group Photograph of Conference Participants

The NCAMET-2007 was held from 21st to 22nd July 2007 at the Postgraduate Institute of Science (PGIS), University of Peradeniya. The conference was organized jointly by the PGIS and the Faculty of Science, University of Peradeniya and the National Science Foundation of Sri Lanka. The aim of the conference was to provide a forum for Materials Scientists to interact, to create an awareness of new developments and to encourage research activities in advanced materials, among the Sri Lankan researchers.

Prof. Eric Karunanayake, Chairman, National Research Council was the Chief Guest at the inauguration ceremony held on 21st July 2007 at the PGIS auditorium. In all, 74 researchers including 04 foreign scientists participated in the conference. Of the Sri Lankan participants, 64 were from 08 universities, 04 others from a research organization and 02 from industries. Over the two days of deliberation, a total of 60 research papers including 14 invited talks were presented under four themes: Theme A - Advanced materials and Applications; Theme B - Nanomaterials and Nanotechnology; Theme C - Engineering Materials; Theme D - Materials for Energy Conservation and Storage.

The papers under the first two themes were presented in common sessions, and the papers under the last two themes were presented in separate parallel sessions. In addition, 15 papers were presented as

posters in order to accommodate the large number of papers received. The abstracts of papers presented were included in the conference proceedings and distributed to all the participants. It has been planned to publish full papers in a special volume of the Ceylon Journal of Science (Physical Sciences) after peer review.

During the discussion sessions held at the end of the conference, participants were of the view that the conference was a success and unanimously proposed the following recommendations: (i) Organization of similar conferences on a regular basis, preferably every other year and (ii) Formation of a society named 'Materials Research Society of Sri Lanka' to foster interaction among the researchers involved in materials related research.

The organizing committee consisted of Prof. M A K L Dissanayake and Prof. M A Careem (Co-Chairmen), Prof. A D L C Perera (Coordinator), Dr. P Ekanayake (Secretary) and several other senior academics from Peradeniya and other Universities. The organizing committee wishes to thank the following principal sponsors of the conference: National Science Foundation, University Grants Commission and Postgraduate Institute of Science, University of Peradeniya.

*Prof. M A Careem and
Prof. M A K L Dissanayake,
Co-Chairmen, Organizing Committee*



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PGIS News

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We shall be pleased to receive your comments, suggestions and contributions with a view to improving the quality of this newsletter. Address correspondence and requests for copies of **PGIS News** to Dr. N C Bandara (Editor).

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**M.Sc. DEGREE PROGRAMMES AND
POSTGRADUATE DIPLOMA PROGRAMMES
(July 2006 - Dec. 2007)**

M.Sc. Programme (Date of Commencement)	Board of Study	Coordinator(s)	No. of Students
Analytical Chemistry (August 25, 2006)	Chemical Sciences	Prof. H M D N Priyantha (Dept. of Chemistry, UPDN)	13
Clinical Biochemistry (August 25, 2006)	Biochemistry & Mol. Biology	Prof. R Sivakanesan (Dept. of Biochemistry, UPDN) Dr. S B P Athauda (Dept. of Biochemistry, UPDN) Dr. P H P Fernando (Dept. of Biochemistry, UPDN)	10
Science Education (August 25, 2006)	Science Education	Dr. S Karunaratne (Science Ed. Unit, UPDN) Dr. P Saravanakumar (Dept. of Botany, UPDN) Dr. C Vithana (Dept. of Chemistry, UPDN) Prof. U N B Dissanyake (Dept. of Mathematics, UPDN) Dr. V Seneviratne (Dept. of Physics, UPDN)	26
Experimental Biotechnology (August 25, 2006)	Biochemistry & Mol. Biology	Dr. S Ranasinghe (Dept. of Biochemistry, UPDN) Dr. D Yakandawala (Dept. of Botany, UPDN) Dr. K Fernando (Dept. of Agriculture, Gannoruwa)	21
Gemmology & Industrial Minerals (August 25, 2006)	Earth Sciences	Dr. S W Nawaratne (Dept. of Geology, UPDN) Dr. C Udawatta (Sri Lanka Foundation)	9
GIS and Remote Sensing (August 25, 2006)	Earth Sciences	Dr. A A J K Gunatilake (Dept. of Geology, UPDN)	51
Industrial Chemistry (August 25, 2006)	Chemical Sciences	Dr. N Karunaratne (Dept. of Chemistry, UPDN) Dr. P Karunaratne (Dept. of Chem. Engineering, UPDN)	11
Applied Statistics (August 28, 2006)	Statistics & Computer Sc.	Prof. P Wijekoon (Dept. of Statistics & Computer Science, UPDN)	30
Environmental Science (August 28, 2006)	Environmental Science	Prof. K H G M de Silva (Dept. of Zoology, UPDN) Dr. R Fernando (Dept. Physics, Open University, Nawala)	21
Computer Science (August 28, 2006)	Statistics & Computer Sc.	Dr. A A I Perera (Dept. of Mathematics, UPDN)	55
Medical Physics (August 28, 2006)	Physics	Dr. V Sivakumar (Dept. of Physics, UPDN) Mr. H M S B Herath (General Hospital, Kandy) Dr. B Hewawitharana (Dept. of Medicine, UPDN) Dr. S Wattedgama (General Hospital, Kandy)	13
Physics of Materials (August 28, 2006)	Physics	Prof. B S B Karunaratne (Dept. of Physics, UPDN)	13

M.Sc. Programme (Date of Commencement)	Board of Study	Coordinator(s)	No. of Students
Industrial Mathematics (August 28, 2006)	Mathematics	Dr. W B Daundasekera (Dept. of Mathematics, UPDN)	16
Postharvest Technology of Fruits & Vegetables (September 25, 2006)	Plant Sciences	Dr. M Daundasekara (Dept. of Botany, UPDN)	9
Plant Sciences (June 14, 2007)	Plant Sciences	Dr. P Saravanakumar (Dept. of Botany, UPDN)	16
Analytical Chemistry (October 5, 2007)	Chemical Sciences	Prof. H M D N Priyantha (Dept. of Chemistry, UPDN)	33
Applied Statistics (October 5, 2007)	Statistics & Computer Sc.	Prof. P Wijekoon (Dept. of Statistics & Computer Science, UPDN)	41
Computer Science (October 5, 2007)	Statistics & Computer Sc.	Dr. A A I Perera (Dept. of Mathematics, UPDN)	57
Disaster Management (October 5, 2007)	Earth Sciences	Prof. K G A Dahanayake (Dept. of Geology, UPDN) Prof. M A K L Dissanayake (PGIS & Dept. of Physics, UPDN) Dr. A P N Somaratne (Dept. of Civil Engineering, UPDN) Dr. K D W Nandalal (Dept. of Civil Engineering, UPDN)	46
GIS & Remote Sensing (October 5, 2007)	Earth Sciences	Dr. A A J K Gunatilake (Dept. of Geology, UPDN)	51
Environmental Science (October 5, 2007)	Environmental Science	Prof. K H G M de Silva (Dept. of Zoology, UPDN) Dr. R Fernando (Dept. of Physics, Open University, Nawala)	21
Science Education (October 5, 2007)	Science Education	Dr. S Karunaratne (Science Ed. Unit, UPDN) / Prof. A D L C Perera (Dept. of Chemistry, UPDN) Dr. P Saravanakumar (Dept. of Botany, UPDN) Dr. C Vithana (Dept. of Chemistry, UPDN) Prof. U N B Dissanyake (Dept. of Mathematics, UPDN) Dr. V Seneviratne (Dept. of Physics, UPDN)	41

POSTGRADUATE DIPLOMA PROGRAMMES

Science Education (August 28, 2006)	Science Education	Dr. S Karunaratne (Science Ed. Unit, UPDN)	52
IT (August 28, 2006)	Statistics & Computer Sc.	Dr. S Kodituwakku (Dept. of Statistics & Computer Science., UPDN)	22
Science Education (October 5, 2007)	Science Education	Dr. S Karunaratne (Science Ed. Unit, UPDN) / Dr. C Vithana (Dept. of Chemistry, UPDN) Dr. V Seneviratne (Dept. of Physics, UPDN)	44

UPDN ≡ University of Peradeniya

M.Sc. AND DIPLOMA PROGRAMMES



Prof. H Abeygunawardena (Vice-Chancellor, University of Peradeniya) addressing the audience at the Inaugural Ceremony of 8 MSc Programmes on August 25, 2006. Seated L to R: Dr. N C Bandara (Programme Coordinator, PGIS), Prof. R Sivakanesan (Chairman, Board of Study in Biochemistry & Mol. Biology), Prof. M A K L Dissanayake (Director, PGIS), Prof. O A Ileperuma (Dean, Faculty of Science), Prof. B M R Bandara (Chairman, Board of Study in Chemical Sciences) and Mr. L R K Perera (Chairman, Board of Study in Earth Sciences).



Prof. M A K L Dissanayake (Director, PGIS) addressing the Inaugural Session of the 7 MSc Programmes on August 28, 2006. Seated L to R: Dr. N C Bandara (Programme Coordinator, PGIS), Prof. B S B Karunaratne (Chairman, Board of Study in Physics), Prof. K H G M de Silva (Chairman, Board of Study in Environmental Sciences), Prof. K Tennakone (Director, Institute of Fundamental Studies), Prof. O A Ileperuma (Dean, Faculty of Science), Prof. U N B Dissanayake (Chairman, Board of Study in Mathematics) and Dr. K M Liyanage (Chairman, Board of Study in Statistics & Computer Science).

The group of M.Sc. / M.Sc. Engineering Students who followed part of their academic programme at the Polytechnic University of Marche in Italy from February to May 2007. These students followed the M.Sc./M.Sc. Eng. Programmes in Disaster Management conducted by the PGIS and Faculty of Engineering, University of Peradeniya.



M.Sc. AND DIPLOMA PROGRAMMES (continued)



Prof. M A K L Dissanayake (Director, PGIS) addressing the audience at the Inauguration Ceremony of 6 MSc Programmes on October 5, 2007. Seated L to R are: Dr. N C Bandara (Programme Coordinator, PGIS), Prof. Gamini Samaranyake (Chairman, University Grants Commission), Prof. H Abeygunawardena (Vice-Chancellor, University of Peradeniya) and Prof. S H P P Karunaratne (Dean, Faculty of Science).



Prof. M A K L Dissanayake, Director, PGIS addressing the audience at the Certificate Awarding Ceremony of Diploma in IT for Education (2004/2005 batch) held on 12th February 2007 at the PGIS Auditorium. Seated (L to R): Dr. Saluka Kodituwakku (Co-coordinator, Diploma in IT for Education), Hon. Tikiri Kobbakaduwa, Governor of the Central Province, Prof. H Abeygunawardane (Vice-Chancellor, University of Peradeniya), Prof. O A Ileperuma (Dean, Faculty of Science, University of Peradeniya) and Dr. K M Liyanage (Chairman, Board of Study in Statistics & Computer Science and Co-coordinator, Diploma in IT for Education). PGIS in collaboration with the IT Centre of the University of Peradeniya trained 65 government school teachers. This project was funded by the World Bank. The teachers who followed the course are in-charge of IT centres at provincial and school levels to provide training to teachers and students in different parts of Sri Lanka.



Left: Visit by Dr. Lal Samarakoon (Director, GIS Application Centre, AIT, Bangkok, Thailand and Co-coordinator of the PGIS/MSc Programme in GIS & Remote Sensing) on 23rd June 2007 to conduct lectures for MSc students.
Right: Field Visit to the Diyaluma Falls by 3rd batch of students following MSc Programme in GIS and RS.

PUBLIC LECTURES & SEMINARS
(July 2006 – December 2007)

Title	Speaker & Affiliation	Date
"Gate oxide degradation in MOS devices under high field stress – Breakdown issues and the model"	Prof. Chandan Kumar Sarkar IEEE EDS Distinguished Lecturer Jadavpur University, Kolkata-700067, India	Aug. 11, 2006
"Radiation Physics in Cancer Treatment"	Dr. S. Lee Consultant Physicist Food and Drug Administration, South Korea	November 9, 2006
"Positron Emission Tomography (PET): Technique and Applications"		
The Processes of Scientific Discovery: Their Application to Exploring Obscure Phenomena"	Prof. S. N. Arsecularatne, Emeritus Professor Faculty of Medicine University of Peradeniya	April 4, 2007
Organized by the Young Researchers' Forum (YRF) of the PGIS.		
"Origin of the Universe"	Prof. Sir Arnold Wolfendale, FRS. Former Astronomer Royal and Professor of Physics, Durham University, U.K.	April 9, 2007
Inaugural Lecture on the occasion of the Ceremonial Opening of the new Building in the Department of Physics - Organized by the Board of Study in Physics of the PGIS and the Department of Physics, University of Peradeniya		
"Medical Hypnosis"	Dr. H.B. Jayasinghe	April 10, 2007
Organized by the Young Researchers' Forum (YRF) of the PGIS.		
"Work with Gifted Students for Physics at Czech Republic"	Dr. Zdenek Kluiber Associate Professor, Department of Physics and Computer Science, University of Hradec Kralove, Rokitanskeho 62 Czech Republic	May 20, 2007
"International Activities for Gifted Students for Physics"		
"Advanced Materials for Fuel Cell Applications"	Professor Dr. Vyacheslav Z. Barsukov Head, Department of Power Engineering and Chemistry Kiev National University of Technologies and Design Ukraine	June 19, 2007
"Ultrasonic Imaging: Advancements in Non-conventional Methods"	Dr. G P P Gunarathne Robert Gordon University Aberdeen, UK	August 29, 2007
"Ultrasound in Biomedical and Industrial Applications"		

VISITORS FROM FOREIGN UNIVERSITIES & INSTITUTES (July 2006 – December 2007)

- *Prof. Chandan Kumar Sarkar, IEEE EDS Distinguished Lecturer, Jadavpur University, Kolkata – 700067, India*
- *Dr. S. Lee, Consultant Physicist, Food and Drug Administration, South Korea*
- *Prof. Sir Arnold Wolfendale, FRS, Former Astronomer Royal and Professor of Physics, Durham University, U.K.*
- *Dr. Zdenek Kluber, Associate Professor, Department of Physics and Computer Science, University of Hradec Kralove, Rokitanskeho 62, Czech Republic*
- *Professor Dr. Vyacheslav Z. Barsukov, Head of Department of Power Engineering and Chemistry, Kiev National University of Technologies and Design, Ukraine*
- *Dr. G P P Gunarathne, The Robert Gordon University, Aberdeen, UK*
- *Dr. Arvind M. Deshmukh, Department of Microbiology, Dr. Babasaheb Ambedkar Marathwada University, Sub-Center, Osmanabad, India.*
- *Dr. Manzul Hazarika, Sr. Research and Training Specialist, Geoinformatic Center, Asian Institute of Technology, Klong Luang, Pathumthani, Thailand*
- *Prof. I M Dharmadasa, Faculty of Arts, Computing, Engineering & Sciences, Sheffield Hallam University, U.K.*
- *Prof. J E Furneaux, University of Oklahoma, Norman, Oklahoma, U.S.A.*
- *Dr. M N Gurusinge, Chalmers University of Technology, Sweden*
- *Prof. S J Spells, Materials and Eng. Research Institute, City Campus, Sheffield, U.K.*
- *Dr. Stephen Connor, Director, PAHO/WHO Collaborating Centre on Climate Sensitive Diseases, International Research Institute for Climate and Society (IRI), The Earth Institute, Columbia University, U.S.A.*
- *Dr. Lareef Zubair, Associate Research Scientist, IRI, Columbia University, U.S.A.*
- *Ms. Hyemin Yang, Research Assistant, Columbia University, U.S.A.*
- *Dr. Priyane Amerasinghe, International Water Management Institute, Hyderabad, India*

WORKSHOPS, SEMINARS, CONFERENCES & SHORT COURSES (July 2006 – December 2007)

Event <i>Workshop (WS), Seminar (S), Conference (C) & Short Course (SC)</i>	Coordinator(s) (Board of Study)	Period	No. of Participants
<i>5th Short Course on GIS & Applications (SC)</i>	<i>Dr. AAJK Gunatilaka (Earth Sciences)</i>	<i>July 5-10, 2006</i>	<i>27</i>
<i>2nd Short Course on Health & Anesthesia in Captive Elephants (SC)</i>	<i>Dr. A Dangolla (Zoological Sciences)</i>	<i>July 7, 2006</i>	<i>45</i>

<i>Applications of RS and GIS in Coastal Hazard Studies (SC)</i>	<i>Prof. K Dahanayake Dr. AAJK Gunatilaka (Earth Sciences)</i>	<i>July 7-9, 2006</i>	<i>56</i>
<i>Mineral Water & Water Bottling Industry (WS)</i>	<i>Dr. R Chandrajith (Earth Sciences)</i>	<i>July 27-28, 2006</i>	<i>20</i>
<i>Scientific Writing (WS)</i>	<i>Dr. NC Bandara (PGIS)</i>	<i>Aug. 31, 2006</i>	<i>119</i>
<i>Postgraduate Certificate Course in Advanced Organic Chemistry</i>	<i>Dr. ULB Jayasinghe (Chemical Sciences)</i>	<i>Oct. 14, 2006</i>	<i>21</i>
<i>PC and Network Management (WS)</i>	<i>Dr. SR Kodituwakku (Statistics & Computer Sc.)</i>	<i>Nov. 4-5, 2006</i>	<i>52</i>
<i>Identification of Snakes and Management of Snakebites (WS)</i>	<i>Dr. JGS Ranasinghe (Biochem. & Mol. Biology)</i>	<i>Nov. 11, 2006</i>	<i>100</i>
<i>Peradeniya University Research Sessions (PURSE) - 2006</i>	<i>PGIS joined the Faculty of Science for PURSE-2006 where PGIS students also presented research papers.</i>	<i>Nov. 30, 2006</i>	
<i>Earthquake & Tsunami Risk Mitigation (S)</i>	<i>Prof. MAKL Dissanayake (PGIS)</i>	<i>Dec. 3, 2006</i>	<i>112</i>
<i>Assessment, Evaluation & Management of Groundwater Resources (WS)</i>	<i>Dr. HA Dharmagunawardhane Mr. HASAA Perera (Earth Sciences)</i>	<i>Dec. 5-9, 2006</i>	<i>36</i>
<i>6th Short Course on GIS and Applications (SC)</i>	<i>Dr. AAJK Gunatilaka (Earth Sciences)</i>	<i>Jan. 4-9 & 10-13, 2007</i>	<i>61</i>
<i>Identification of Common Ants of Sri Lanka (WS)</i>	<i>Prof. JP Edirisinghe Dr. WAIP Karunaratne (Zoological Sciences)</i>	<i>Feb. 13-15, 2007</i>	<i>14</i>
<i>7th Short Course on GIS and Applications (SC)</i>	<i>Dr. AAJK Gunatilaka (Earth Sciences)</i>	<i>Mar. 12-14 & 24-26, 2007</i>	<i>23</i>
<i>Management of Disease in Fresh Produce supplied for Local and Export Market (WS)</i>	<i>Prof. NKB Adikaram Ms. C Karunanayake (Plant Sciences)</i>	<i>June 7-8, 2007</i>	<i>18</i>
<i>Biofertilizers and Biopesticides (WS)</i>	<i>Dr. RMRS Ratnayake (Plant Sciences)</i>	<i>June 14-15, 2007</i>	<i>33</i>

<i>Symposium on Capacity Building in Risk Assessment & Workshop on Disaster Management (SCRATCH)</i>	<i>Prof. MAKL Dissanayake Dr. AAJK Gunatilaka Mr. JK Rajapakse (PGIS)</i>	<i>July 2, 2007 July 3-6, 2007</i>	<i>56 33</i>
<i>2nd Short Course on Computer and Computational Mathematics</i>	<i>Dr. WB Daundasekera (Mathematics)</i>	<i>July 12-15, 2007</i>	<i>29</i>
<i>National Conference on Advanced Materials for Emerging Technologies (NCAMET)</i>	<i>Organizing Committee Prof. MAKL Dissanayake and Prof. MA Careem (Co-chairmen) (PGIS & Faculty of Science, University of Peradeniya)</i>	<i>July 21-22, 2007</i>	<i>74</i>
<i>Certificate Course on Environmental Awareness for Public Health Inspectors</i>	<i>Dr. S Yatigammana (Environmental Science)</i>	<i>July 28 - Sep. 22, 2007</i>	<i>29</i>
<i>8th Short Course on GIS & Applications (SC)</i>	<i>Dr. AAJK Gunatilaka (Earth Sciences)</i>	<i>Aug. 23-28, 2007</i>	<i>32</i>
<i>Audio/Video Editing and 3D Animation (SC)</i>	<i>Dr. S Kodituwakku (Statistics & Computer Science)</i>	<i>Sep. 2-7, 2007</i>	<i>12</i>
<i>Malaria Risk Management (WS)</i>	<i>Dr. R Rajakaruna (PGIS)</i>	<i>Sep. 21, 2007</i>	<i>29</i>
<i>Scientific Writing (WS)</i>	<i>Dr. NC Bandara (PGIS)</i>	<i>Sep. 28, 2007</i>	<i>127</i>
<i>Combined Mathematics for G.C.E. A/L Teachers (WS)</i>	<i>Dr. WB Daundasekera (Mathematics)</i>	<i>Oct. 24-27, 2007</i>	<i>47</i>
<i>9th Short Course on GIS & Applications (SC)</i>	<i>Dr. AAJK Gunatilaka (Earth Sciences)</i>	<i>Nov. 5-10, 2007</i>	<i>18</i>
<i>10th Short Course on GIS & Applications (SC)</i>	<i>Dr. AAJK Gunatilaka (Earth Sciences)</i>	<i>Nov. 26 - Dec. 2 & Dec. 5-8, 2007</i>	<i>61</i>
<i>Peradeniya University Research Sessions (PURSE) - 2007</i>	<i>PGIS joined the Faculty of Science for PURSE-2007 where PGIS students also presented research papers.</i>	<i>Nov. 30, 2007</i>	
<i>Workshop for GCE A/L Teachers on Chemistry Mathematics Physics</i>	<i>Dr. S Karunaratne (Science Education) Prof. ADLC Perera & Dr. CV Hettiarachchi (Chemical Sciences) Prof. UNB Dissanayake & Dr. WB Daundasekera (Mathematics) Prof. K Premaratne & Dr. V Seneviratne (Physics)</i>	<i>Dec. 10-14, 2007</i>	<i>173</i>

WORKSHOPS, SEMINARS, CONFERENCES & SHORT COURSES REPORTS OF COORDINATORS

SHORT COURSES ON GIS AND APPLICATIONS

Six more short courses (5th to 10th) in the series on GIS and Applications were organized and conducted at the PGIS from July 2006 to December 2007 and were coordinated by Dr. Jagath Gunatilake. The objective was to expose personnel from state and private sector organizations to Geographical Information Systems (GIS) & Global Positioning Systems (GPS) for efficient management and planning, and to provide basic theoretical and comprehensive hands-on training in the use of (GIS) for various applications.

Course Contents: • *Introduction to GIS and applications* • *Overview of Remote Sensing and its applications* • *Introduction to Coordinate Systems, Map Projection, Geo-referencing* • *GIS Database Creation (GIS Functions, Input of geospatial data - Digitizing etc.)* • *GIS Analysis (Single Layer/ Multi Layer Analysis, DEM generation, 3-D Analysis etc.)* • *Map output generation* • *Introduction to Global Positioning Systems (GPS) & its Applications* • *Application of GIS in various disciplines - Case Studies* • *Individual Mini Projects*

Resource persons were drawn from several institutions and universities. Practical sessions were conducted at the GIS and Remote Sensing Laboratory of the PGIS. Practical sessions continued into the late evening on most days.

Participants commended the quality of the courses and the facilities provided. Some stressed the need for similar courses for the staff of their institutions. Many of the participants have also indicated the need for continuation of this programme and requested advanced training courses in the future.

Fifth Short Course on GIS and Applications:

The 5th Short Course on GIS and Applications was organized on the request of the Food and Agriculture Organization (FAO) of the United Nations, Sri Lanka, and was held from July 5 to July 10, 2006. The Deputy Vice-Chancellor, Prof. Anura Wickramasinghe was the Chief Guest at the Inaugural Session held at the PGIS Auditorium.

Twenty seven scientists from the Ministry of Fisheries and Aquatic Resources, Department of Fisheries and Aquatic Resources, National Aquatic Resources Agency (NARA), Coastal Conservation Department (CCD), and one individual from Central Engineering Consultancy Bureau (CECB) participated. All participants were funded by FAO.

Representatives from the sponsoring organization (FAO) were also present to evaluate the course. Majority of the participants requested the course to be conducted for a longer period. The necessity of conducting a follow-up advanced course was also pointed out by the participants. Several suggestions were made to improve the quality of the short course and facilities provided for the participants. Certificates were awarded to participants at the Closing Ceremony held on 10th July 2006.

Sixth Short Course on GIS and Applications:

The 6th Short Course on GIS and Applications was organized by the PGIS, University of Peradeniya and was held from 4th to 13th January 2007. It was coordinated by Dr. Jagath Gunatilake and Prof. Laxman Dissanayake. In order to accommodate all 61 applicants, participants were divided into 2 groups and the course was conducted

in 2 sessions. Lectures and practical sessions on GPS were conducted from 4th to 5th January 2007 for both groups and the GIS practical from 6th to 9th and 10th to 13th January 2007 for first and second groups respectively.

The Dean, Faculty of Science, Prof. Oliver Ileperuma was the Chief Guest at the Inaugural Session held at the PGIS Auditorium. The 61 participants were from various governmental and private sector organizations such as Universities, Central Engineering Consultancy Bureau (CECB), Veterinary Research Institute (VRI), Landuse Policy Planning Division (LUPPD), Road Development Authority (RDA), Dialog Broadband Network (DBN), Ceylon Electricity Board (CEB), National Water Supply & Drainage Board (NWS&DB), Water Resource Board (WRB), Animal Production and Health Department (AP&HD), Survey Department, Tea Research Institute (TRI), Navy (Sri Lanka), Mahaweli Authority of Sri Lanka, Board of Investments (BOI), Forest Department, Irrigation Department, Ministry of planning and National Development, Colombo Municipal Council (CMC), Coconut Cultivation Board (CCB), several NGOs, etc. There were three foreign participants from the Ministry of Construction and Public Infrastructure of the Republic of Maldives.

Seventh Short Course on GIS and Applications:

Responding to a request made by the Ministry of Education, PGIS offered the 7th Short Course on GIS and Applications for 20 nominees. Six applicants from CMC, Ministry of Healthcare and University of Kelaniya also participated in the short course. Lectures and practical sessions on GPS were conducted from 12th to 14th March 2007 and the GIS practical sessions from 24th to 26th March 2007.

The Deputy Vice Chancellor, Prof. Anura Wickramasinghe was the Chief Guest at the Inaugural Session held at the PGIS Auditorium. Practical sessions were conducted at the GIS and Remote Sensing Laboratory of the PGIS with the collaboration of the Geological Society of Sri Lanka (GSSL).

Eighth Short Course on GIS and Applications:

Responding to a request made by the Ministry of Healthcare & Nutrition, PGIS offered the 8th Short Course on GIS and Applications to 22 nominees from the ministry. There were 9 additional participants representing CMC, University of Sabaragamuwa and Teaching Hospital, Anuradhapura, and one foreign participant from the Ministry of Planning and National Development of the Republic of Maldives. Basic lectures and practical sessions on GPS were conducted on 24th and 29th August 2007 and the GIS theory and practical sessions were continued during 25th to 28th August 2007.

Ninth Short Course on GIS and Applications:

There were 18 participants for the 9th Short Course on GIS and Applications and they were from University of Sabaragamuwa, UNICEF, Anti Malaria Campaign, CECB, and CCF. Basic lectures and practical sessions on GIS, GPS and Remote Sensing were conducted from 5th to 10th November 2007.

The participants have pointed out the shortage of GPS instruments available for practical sessions. Sumathi Trading Co., the supplier of GPS units (free of charge), was unable to supply the required number of units due to reasons beyond their control.

Tenth Short Course on GIS and Applications:

There were 61 applicants for the 10th Short Course on GIS and Applications. In order to accommodate all the applicants, the participants were divided into 2 groups and the course was conducted in 2 sessions. The participants were from University of Sri Jayawardenapura, Wayamba University, Sabaragamuwa University of

Sri Lanka, CEB, Ministry of Power & Energy, Anti Malaria Campaign, CECB, CMC, NWS&DB, RDA, Irrigation Department, Department of Census & Statistics, Department of Archaeology, Suntel Limited, GSMB and from several NGOs. Lectures and some GPS practical sessions were conducted from 26th to 28th November 2007 for both groups and the GIS practical sessions were continued from 29th November to 2nd December and 5th to 8th December 2007 for first and second groups respectively. The duration of the short course was increased to 7 days in response to requests made at previous short courses.

A suggestion was made to organize a 1-2 day workshop for participants of past short courses to present the GIS related work they have carried out after the training. Director, PGIS and the coordinator of the short courses responded positively to this request and agreed to organize such an event.

Coordinator: Dr. Jagath Gunatilaka

SECOND SHORT COURSE ON HEALTH AND ANESTHESIA IN CAPTIVE ELEPHANTS

This course was conducted, for the second time, on the 7th July 2006 at the PGIS. The course was funded by Hon. Pradeep Nilanga Dela, Diyawadana Nilame and President of the Captive Elephant Owners Association. This course was held at the request of the Director General, Department of Animal Production and Health, in order to train 10 veterinary surgeons in the provinces who attend the regular temple processions with elephants.

During the morning session, theory on clinical aspects and recent research findings were presented by Prof. Indira Silva, principal resource person. The afternoon session was on anesthesia. New clinical findings such as *Acanthamoeba* – eye infection of elephants were highlighted.

At the practical sessions the use of different tranquilization guns was demonstrated. The participants were given the opportunity to use 0.77 guns, tranquilization guns and to assemble a dart syringe. The objective of this workshop was to give the participants hands-on experience necessary to handle elephants during processions and elephants on rampage. Certificates were awarded to the participants at the end of the course.

Coordinator: Dr. A Dangolla

WORKSHOP ON APPLICATIONS OF RS AND GIS IN COASTAL HAZARD STUDIES

A Workshop on Applications of Remote Sensing (RS) and GIS in Coastal Hazard Studies was organized by the PGIS in collaboration with the International Institute for Geo-Information Science and Earth Observation (ITC), The Netherlands, and the United Nations University (UNU) and was conducted at the PGIS from 7th to 9th July 2006.

The objectives of the workshop were to train postgraduate students, scientists, engineers, academics and researchers working on coastal hazard assessment and related fields of the government and private sector organizations, on the use of GIS in Dynamic Modelling for Landslides and Floods.

The lectures conducted were on Sensors and platforms suitable for coastal hazard studies (SPOT, Landsat, IIRS, Aster, Lidar), Case studies on the use of geoinformation for coastal hazard studies, Sensors and platforms used for 3D terrain extraction, SRTM data processing, Cartographic visualization and design, Coastal zone

management in the Netherlands, Tsunami reconstruction planning and evacuation shelter location study in Meulabog city, Aceh.

Resource persons were Drs. Michiel Damen and Joan Looijen of ITC, The Netherlands, and their visit was sponsored through Prof. Cees Van Westen of the same institute. Fifty one M.Sc. students of the PGIS and five officers from the Central Engineering Consultancy Bureau (CECB), participated at the workshop.

*Coordinators: Prof. K Dahanayake
Dr. A A J K Gunatilaka*

WORKSHOP ON MINERAL WATER & WATER BOTTLING

The Board of Study in Earth Sciences of the PGIS conducted a two-day Workshop on Mineral Water and Water Bottling from 27th to 28th July 2006. Twenty participants, mainly from private organizations, attended the workshop.

The workshop activities commenced with the interactive lecture by Prof. C B Dissanayake, Senior Professor of Geology. Lectures were conducted by Prof. Atula Senaratne, Dr. H A Dharmagunawardhane and Dr. C Abayasekera from the University of Peradeniya, Mr. J P Padmasiri (Counsellant Chemist) and Mrs. Nayana Satharasinghe from Sri Lanka Standards Institute. A demonstration on water quality analysis was conducted by Mr. Wasantha Mannaperuma and Mr. Eranda Samararatne from Analytical Instruments (Pvt.) Ltd.

The responses received from the participants were encouraging and the workshop was useful for improving the quality of their products. Certificates were awarded to the participants.

Coordinator: Dr. R Chandrajith

WORKSHOP ON SCIENTIFIC WRITING

A one-day Workshop on Scientific Writing was held on 31st August 2006 at the PGIS auditorium for 119 postgraduate students of the PGIS. Objective of the workshop was to familiarize the students with scientific writing in order to help them in the preparation of their theses/project reports and scientific papers.

The workshop consisted of lectures/discussion sessions on different aspects of postgraduate thesis/project report writing. The topics covered at the workshop were: *Structure and layout of a thesis/project report; Ethics; Title & Abstract; Computer Aided Literature Survey; Introduction & Bibliography; Experimental/Materials and Methods; Results, Interpretation & Conclusion..* Resource persons were Professors B M R Bandara, M A Careem, K Dahanayake, M A K L Dissanayake, J P Edirisinghe, O A Ileperuma, S A Kulasooriya (Faculty of Science), J S Edirisinghe (Faculty of Medicine), and Dr. P M K Alahakoon (Faculty of Agriculture), University of Peradeniya.

Coordinator: Dr. N C Bandara

POSTGRADUATE CERTIFICATE COURSE IN ADVANCED ORGANIC CHEMISTRY

The Board of Study in Chemical Sciences organized a Postgraduate Certificate Course in Advanced Organic Chemistry to facilitate the compulsory 4-credit requirement for M.Phil. and Ph.D. students and also to give those

interested an opportunity to acquire competence in Advanced Organic Chemistry. Twenty one students followed the course conducted from October 2006 to June 2007.

The course consisted of five modules: *Biosynthesis and Biomolecules (15 h)*; *Advanced Spectroscopy (15 h)*; *Organic Synthesis (15 h)*; *Structure, Reactivity and Stereochemistry (15 h)*; *Seminar presentation*. The resource persons were Prof. B M R Bandara, Prof. V Kumar, Dr. N Karaunaratne, Prof. N L V V Karunaratne, Prof. A Wickramasinghe, Prof. N S Kumar, Prof. H R W Dharmaratne, Prof. L Jayasinghe and Dr. N C Bandara.

Coordinator: Prof. L Jayasinghe

WORKSHOP ON PC & NETWORK MANAGEMENT

The Workshop on PC and Network Management was held from 4th to 5th November 2006 at the PGIS, University of Peradeniya. Fifty two persons participated in the workshop. The participants commented that the workshop was good and useful. Those familiar with basic Network Management Systems preferred to participate in a workshop that would cover advanced network management systems.

Coordinator: Dr. S R Kodituwakku

WORKSHOP ON IDENTIFICATION OF SNAKES & MANAGEMENT OF SNAKE BITE

This workshop was held on 11th November 2006 at the PGIS. There were 101 participants comprising undergraduates, postgraduates, veterinary surgeons, doctors and others.

Prof. S A M Kularatna talked on Management of Human Victims of Snakebites, Dr. I B Gawarammana on Epidemiology of Snakebites in Sri Lanka, Dr. A Dangolla on Management of Animal Victims of Snakebites, Mr. Nihal Senarath on Identification of Snakes and Dr. J G S Ranasinghe on Sri Lankan Cobra *Naja naja naja*.

The objectives of the workshop were to educate the participants on identification of snakes with respect to poisonous and non-poisonous snakes, to minimize unnecessary killing of snakes, awareness on prevention of snake bites and precautions to be taken after snake bites and treatment of snake bite victims, both human and animal.

Coordinator: Dr. J G S Ranasinghe

SEMINAR ON EARTHQUAKE AND TSUNAMI RISK MITIGATION

Eng. Teddy Boen, Senior Advisor, World Seismic Safety Initiative (WSSI), Jakarta, Indonesia conducted a Seminar on Earthquake and Tsunami Risk Mitigation at the PGIS on 3rd December 2006. Forty two postgraduate students of the PGIS, following the M.Sc. and M.Sc. Eng. Programmes in Disaster Management and also about 100 undergraduates following the Geology and Civil Engineering degrees at the University of Peradeniya participated.

The lectures covered *Structural and Non-structural Mitigation Measures, Lifelines/Infrastructure and Collateral Damage with regard to Earthquakes and Tsunamis*. Participants were impressed by the expertise of Eng. Teddy Boen in the field of earthquake and tsunami risk mitigation. Eng. Teddy Boen's visit was supported by the ADPC, Bangkok, Thailand under an MOU between the ADPC and the PGIS.

Coordinator: Prof. M A K L Dissanayake

NATIONAL TRAINING WORKSHOP ON ASSESSMENT, EVALUATION AND MANAGEMENT OF GROUNDWATER RESOURCES

A 5-day residential training workshop was held for 36 participants from the National Water Supply and Drainage Board, Water Resources Board, and researchers from Peradeniya, Kelaniya, Sabaragamuwa and South Eastern Universities. The Workshop was funded by the South African Water Sector, Tsunami Reconstruction Support to Sri Lanka. Workshop inaugural session was held on 5th December 2006 and the Chief Guest was Hon. Tikiri Kobbekaduwa, Governor of the Central Province. Three resource persons from the South African Groundwater Institute of the University of the Free State South Africa, conducted the lectures and practical classes. Participants were awarded certificates, jointly by the PGIS and the Free State University at the end of the workshop.

Participants expressed their satisfaction about the workshop which had strengthened their capacity to continue in their careers. They requested the PGIS to conduct workshops of this nature in the future. The South African group expressed their willingness to continue collaborative scientific programs with the PGIS and the NWSDB. A joint concept paper was prepared for submission to the relevant authorities.

*Coordinators: Dr. H A Dharmagunawardhane
Mr. H A S A A Perera*

WORKSHOP ON IDENTIFICATION OF COMMON ANTS OF SRI LANKA

A 3-day Workshop on Identification of Common Ants of Sri Lanka was conducted from 13th to 15th February 2007 by the PGIS in collaboration with the National Science Foundation (NSF) at the Department of Zoology, University of Peradeniya. Fifteen participants from Universities, Museums, Agriculture Research, Export Agriculture and Plantation Research Institutes were trained on methods of collection, curation and identification of common ants.

Each participant was provided with a set of specimens of 20-identified ant species to work on using illustrated keys and notes for identification to genera and species. Following a field class at the Meewatura Agriculture Farm on collecting methods, ant distribution and nesting, the participants collected ants and identified them using the knowledge gained. The workshop included lecture sessions on the importance of studying ants, external morphology and terminology used in ant taxonomy, ants of Sinharaja and the natural history and distribution of *Aneuretus simoni*, the monotypic, endemic, relict ant species of Sri Lanka.

The chief resource person of the workshop was Ms. Nihara Gunawardena, Ph.D. student, Department of Environmental Biology, Curtin University of Technology, Australia. She was assisted by Ms. Herendra Amerasinghe, who graduated with a special degree in Zoology having conducted a research project on ants. The workshop was funded by the National Science Foundation.

*Coordinators: Prof. J P Edirisinghe
Dr. W A I P Karunaratne*

WORKSHOP ON MANAGEMENT OF DISEASE IN FRESH PRODUCE SUPPLIED FOR LOCAL AND EXPORT MARKETS

This 2-day workshop was conducted at the PGIS from 7th to 8th June 2007. The workshop was organized and conducted by the Department of Botany with financial assistance from the Australian Center for International Agricultural Research (ACIAR). The aim of the workshop was to educate fresh produce handlers on managing produce quality as well as disease diagnosis and control; both at pre-harvest and postharvest level.

The workshop focused on major issues relating to fresh produce in Sri Lanka, mode of infection of fresh produce at the pre-harvest level and management practices that help to minimize infection. A laboratory session explained disease diagnosis in fresh produce, identification of causal organisms of diseases and the two major insect pests of fruits, the fruit fly and the mango seed weevil.

Comparison of the status of the fresh produce industry in Sri Lanka with that of more developed countries such as Australia, drew attention to areas in Sri Lanka which needed improvement. New research findings that could be implemented were also discussed. Important issues such as pesticide residues in fresh produce, the use of packaging to minimize disease in fresh produce were also emphasized during lectures and laboratory sessions.

The 20 participants included university and industry personnel, postgraduate students, and those involved in upgrading agriculture in the country. The participants commented favorably on the practical as well as theoretical knowledge they gained in the management of disease in fresh produce.

*Coordinators: Prof. N K B Adikaram
Ms. C Karunanayake*

WORKSHOP ON BIOFERTILIZERS AND BIOPESTICIDES

A 2-day Workshop on Biofertilizers and Biopesticides was held from 14th to 15th June 2007 at the PGIS. The workshop was organized by the Department of Botany in collaboration with the National Science Foundation (NSF). The 35 participants included researchers, academics, industry personnel, growers, and plantation owners from public and private sector.

The objective of the workshop was to provide scientific knowledge on biological fertilizers and pesticides, their potential sources and technical know-how needed to develop them into new commercial products.

Resource persons were drawn from Osmanabad University (India), Tea Research Institute (Talawakele), Department of Agriculture, Universities of Peradeniya and Kelaniya. Technical sessions were on Nitrogen fixing biofertilizers, Vermicomposting, Bio-composting, Biopesticides, Developing botanical pesticides and Pesticides regulations.

Coordinator: Dr. R M R S Ratnayake

SYMPOSIUM ON CAPACITY BUILDING IN RISK ASSESSMENT & DISASTER MITIGATION 'SCRATCH' WORKSHOP ON DISASTER MANAGEMENT

The Symposium on Capacity Building in Risk Assessment & Disaster Mitigation (July 2, 2007; 56 participants) and the 'SCRATCH' Workshop on Disaster Management (July 3-6, 2007; 33 participants) were organized by the PGIS, University of Peradeniya, in collaboration with the Asian Disaster Preparedness Centre (ADPC), Bangkok, Thailand, and International Institute for Geo information Science and Earth Observation (ITC), The Netherlands. The participants were from Sri Lanka Navy, National Housing and Development Authority (NHDA), Oxfam GB, Survey Department, South Eastern University of Sri Lanka, Sabaragamuwa University, Colombo University, Practical Action, Urban Development Authority, Water Resources Board, National Aquatic Resource Agency (NARA), Disaster Management Center (DMC), National Water Supply and Drainage Board (NWSDB), Land Use Policy Planning Department (LUPPD) and from several Non-Government Organizations (NGOs).

The objective of this symposium and workshop was to expose personnel engaged in disaster management/disaster mitigation activities to experience gathered by local and foreign experts in this field. Resource Persons were from several Institutions and Universities. While commending the quality of the course many participants indicated the need for more training programmes.

*Coordinators: Prof. M A K L Dissanayake
Dr. Jagath Gunatilaka
Mr. J K Rajapakse*

SECOND SHORT COURSE ON COMPUTER AND COMPUTATIONAL MATHEMATICS

This Course was jointly organized by the PGIS and Department of Mathematics of the University of Peradeniya from 12th to 15th July 2007. The course was designed to provide an integrated assessment of the use of mathematics in computer related fields as well as the use of computers in mathematics related model problem solving.

The lectures and laboratory sessions were on Matrix Programming with MATLAB, 3D Animations and Applications in Web Designing, Financial Mathematics and Computer Applications, High Performance Computing, Block Designs and Steiner Triple Systems, Computer Networks, Decision Analysis with Spreadsheet Modeling, Creating Business Value through ICT systems, Accurate Computation in Milliseconds and Data Security. The participants (29) who followed the course commended the programme for providing insight into the interconnection between mathematics and computers.

*Coordinators: Dr. A A I Perera
Dr. H M Nazeer*

CERTIFICATE COURSE ON ENVIRONMENTAL AWARENESS FOR PUBLIC HEALTH INSPECTORS

In response to a request made by the Ministry of Healthcare and Nutrition, the Board of Study in Environmental Science of the PGIS designed a Certificate Course on Environmental Health for Public Health Inspectors (PHIs). The course provided participants with a knowledge on physical, chemical and biological aspects of the environment. The effect of rapid increase of human population on the environment, actions that could be taken to minimize human impact and also the methods used for waste management were discussed.

Sixteen resource persons in different disciplines of environmental health conducted the course, which was sponsored by the Ministry of Healthcare and Nutrition of Sri Lanka. There were 30 participants from different districts of the country. The participants commented favourably on the quality of the course, which was conducted on 9 weekends from 28th July to 22nd September 2007.

Coordinator: Dr. S Yatigammana

SHORT COURSE ON AUDIO/VIDEO EDITING AND 3D ANIMATION

A six-day Short Course on Audio/Video Editing and 3D Animation was organized by the PGIS and the Department of Statistics & Computer Science. The course was held at the PGIS from 2nd to 7th September 2007 and was conducted for 12 officers from the Provincial Education Department, Central Province.

The objective of the course was to provide hands-on training in multimedia data processing including editing audio/video data and creating 3D animations. Lectures and practical sessions were conducted by resource persons from the University of Peradeniya. Presentations were made on the following themes: multimedia data and its characteristics, issues in handling multimedia data, editing audio/video data with Adobe premier, Adobe audition and Adobe illustrator, and creating 3D animations with 3D Maya. The participants evaluated the workshop favourably.

Coordinator: Dr. S R Kodituwakku

WORKSHOP ON MALARIA RISK MANAGEMENT USING CLIMATE INFORMATION

A Workshop on Malaria Risk Management using Climate Information was conducted on 21st September 2007 at the PGIS. This workshop was jointly organized by the Foundation for Environment, Climate and Technology (FECT), Digana Village and International Research Institute for Climate and Society (IRI), New York, USA. The Workshop was targeted at dissemination of knowledge and interaction among researchers and young scientists in the following fields of Malaria & other infectious diseases: climatology, medical geography, community medicine, public health, environmental engineering, etc. The workshop provided an opportunity to bring together related research on insecticide resistance, vector control, investigations on recent outbreaks, the specifics of the situation in the Uva Province.

The Acting Director of Anti Malaria Campaign (AMC), Dr. R R Abeysinghe gave the keynote address on "Forecasting of Malaria: its importance for Malaria control in Sri Lanka". Dr. Stephen Connor, from Columbia University, USA and the Director of PAHO/WHO Collaborating Centre on Climate Sensitive Diseases and International Research Institute for Climate and Society (IRI) was the guest speaker. Dr. Lareef Zubair and Ms. Hyemin Yang from IRI shared their information and experience on Climate and Malaria Linkages in Sri Lanka. The academics from University of Peradeniya, including Prof Manel Wijesundara from the Department of Parasitology, Faculty of Medicine, Prof. S H P P Karunaratne and Dr. Rupika Rakjakruna from the Department of Zoology, Faculty of Science contributed in areas in entomology and parasitology. Ms. Janaki Chandimala, an engineer from the Foundation for Environment, Climate and Technology, Digana Village talked on Climate and Hydrology Monitoring in Sri Lanka. Dr. Priyani Amerasinghe of the International Water Management Institute, Hyderabad, India, made a valuable contribution as the chairperson of the discussion panel.

Coordinator: Dr. R Rajakaruna

WORKSHOP ON SCIENTIFIC WRITING

A Workshop on Scientific Writing was held on 28th September 2007 at the PGIS auditorium for 127 postgraduate students of the PGIS. The workshop consisted of lectures/discussions on different aspects of postgraduate thesis/project report writing. The topics covered were: *Title & Abstract* – Prof. J P Edirisinghe, Department of Zoology; *Computer Aided Literature Survey* – Dr. P. M. K. Alahakoon, Department of Agricultural Engineering; *Introduction & Bibliography* – Prof. M A Careem, Department of Physics; *Experimental/Materials and Methods* – Prof. M A K L Dissanayake, PGIS/Department of Physics (Physical Science group) & Prof. C V S Gunatillake, Department of Botany (Biological Science group); *Results, Interpretation & Conclusion* – Prof. B M R Bandara, Department of Chemistry; *Structure and layout of a thesis/project report, an overview* – Prof. K Dahanayake, Department of Geology, University of Peradeniya.

Coordinator: Dr. N C Bandara

WORKSHOP ON COMBINED MATHEMATICS FOR G.C.E. (A/L) TEACHERS

A 4-day Workshop on Combined Mathematics for G.C.E. (A/L) Teachers was held at the PGIS Auditorium from 24th to 27th October 2007. Forty seven (47) GCE (A/L) teachers from government schools, international schools and private schools participated in the workshop.

Nine resource persons from the Universities of Peradeniya and Kelaniya conducted lectures and practical sessions on “*Mathematica*”, *IT, Microsoft Applications and Internet*. In addition, *Effective Teaching Methods, Principles in Mechanics, Mathematical Concepts, Methods of Solving Problems, Why do we Study Mathematics?*, *Methods of Proof, Presenting the Solutions to Mathematics Problems* were also discussed. Certificates were awarded to the participants.

Coordinator: Dr. W B Daundasekera

5-DAY WORKSHOP FOR GCE (A/L) TEACHERS ON CHEMISTRY, MATHEMATICS & PHYSICS

Board of Study in Science Education of the PGIS in collaboration with the Boards of Study in Chemical Sciences, Mathematics and Physics organized a 5-day Workshop for G.C.E. (A/L) Teachers from 10th to 14th December 2007. The workshop was sponsored by the Secondary Education Modernization Project (SEMP) of the Ministry of Education. Mr. Anura Dissanayake, Director of SEMP, Ministry of Education was the Guest of Honor at the inaugural session.

The main objective of the Workshop on Chemistry was to discuss Unit 8 on *Equilibria* in the A/L Chemistry syllabus. Fifty four teachers from the Central Province participated in the workshop. Resource persons were Prof. R M G Rajapakse, Prof. A D L C Perera, Dr. M Ranasinghe and Dr. V N Senevirathne from the University of Peradeniya, Dr. J W Hewage from the University of Ruhuna, Prof. R Mageswaran from the University of Jaffna and Dr. D Dissanayake from the University of Colombo.

Forty six teachers from the Central Province participated in the ‘Workshop on Mathematics for G.C.E. A/L teachers’. Five resource persons from the University of Peradeniya and University of Kelaniya conducted lectures under the following topics: *Quadratic and Polynomial functions, Topics in Calculus, Complex numbers and Argand diagram, Topics in Dynamics, Probability and Statistics, Introduction to “Mathematica”*. Practical sessions on ‘Mathematica’ software was conducted in a computer laboratory at the Department of Mathematics.

Workshop on Physics for G.C.E. A/L teachers was held at the Department of Physics, University of Peradeniya for 75 teachers from the Central Province. The aim of the workshop was to hold theory and practical sessions based on selected important sections of the GCE A/L Physics syllabus that included Mechanics, Properties of matter and Fluid dynamics.

The experiments were designed to demonstrate theoretical principles addressed in lectures and to give hands-on experience to the teachers. A detailed document on the experiments was prepared and distributed to the teachers during the workshop.

Coordinators: Dr. S Karunaratne (Science Education)
Prof. A D L C Perera & Dr. C V Hettiarachchi (Chemistry)
Prof. U N B Dissanayake & Dr. W B Daundasekera (Mathematics)
Prof. K Premaratne & Dr. V Seneviratne (Physics)

PGIS ACTIVITIES IN FOCUS ...

SECOND SHORT COURSE ON HEALTH AND ANESTHESIA IN CAPTIVE ELEPHANTS



Left - Participants of the Short Course. Front row (L to R): Prof. Indira Silva (Principal Resource Person), Dr. Ashoka Dangolla (Coordinator of the course), Prof. Anura Wickramasinghe (Deputy Vice-Chancellor, University of Peradeniya), Hon. Pradeep Nilanga Dela Bandara (Diyawadana Nilame of Sri Dalada Maligawa, Kandy), Prof. Kapila Goonasekara (Vice-Chancellor, University of Peradeniya), Prof. Lakshman Dissanayake (Director, PGIS) and Prof. O A Ileperuma (Dean, Faculty of Science). Right - A practical session on the use of tranquilization guns.

WORKSHOP ON MINERAL WATER AND WATER BOTTLING



Mr. L R K Perera (Chairman, Board of Study in Earth Sciences) addressing the Inaugural Session of the Workshop on Mineral Water and Water Bottling. Seated (L to R): Dr. Rohan Chandrajith (Workshop Coordinator), Prof. M A K L Dissanayake (Director, PGIS) and Prof. A Wickramasinghe (Deputy Vice-Chancellor, University of Peradeniya).

WORKSHOP ON PC & NETWORK MANAGEMENT



Prof. O A Ileperuma (Dean, Faculty of Science) addressing the Inaugural Session of the Workshop on PC and Network Management held on 4th November 2006 at the PGIS Auditorium. Seated (L to R): Dr. Saluka Kodituwakku (Workshop Coordinator), Prof. B S B Karunaratne (Acting Director, PGIS), Prof. Anura Wickramasinghe (Deputy Vice-Chancellor, University of Peradeniya) and Dr. Kithsiri Liyanage (Chairman, Board of Study in Statistics and Computer Science).

WORKSHOP ON IDENTIFICATION OF SNAKES & MANAGEMENT OF SNAKE BITE



Prof. Anura Wickramasinghe (Deputy Vice-Chancellor, University of Peradeniya) addressing the Workshop on Identification of Snakes and Management of Snake Bite held at the PGIS Auditorium. Seated (L to R): Dr. Shirani Ranasinghe (Workshop Coordinator), Prof. M A K L Dissanayake (Director, PGIS) and Prof. R Sivakanesan (Chairman, Board of Study in Biochemistry and Molecular Biology).



Participants taking a close look at a snake during the practical session on Identification of Snakes.

SEMINAR ON EARTHQUAKE AND TSUNAMI RISK MITIGATION



Eng. Teddy Boen giving a lecture presentation

NATIONAL TRAINING WORKSHOP ON ASSESSMENT, EVALUATION AND MANAGEMENT OF GROUNDWATER RESOURCES



Hon. Tikiri Kobbakaduwa (the Governor of the Central Province), the Chief Guest addressing the Inaugural Session of the Workshop on Assessment, Evaluation and Management of Groundwater Resources on 5th December 2006 at the PGIS Auditorium. Seated (L to R): Dr. H A Dharmagunawardhane (Workshop Coordinator), Mr. Kalinga Pelpola (Programme Manager, Masibambane Water Sector Support Program, South Africa), Prof. M A K L Dissanayake (Director, PGIS), Prof. H Abeygunawardhane (Vice-Chancellor, University of Peradeniya) and Mr. M Wickramage (General Manager, National Water Supply & Drainage Board, Ratmalana)

SIXTH SHORT COURSE ON GIS AND APPLICATIONS



Left: Inaugural Ceremony of the 6th Short Course on GIS & Applications.

Right: Group Photograph - Prof. Lakshman Dissanayake (Director, PGIS), Mr. S D P J Dampegama (Deputy Survey General, Survey Department) & Mr. Tilak Senanayke as Resource Persons and Dr. Jagath Gunatilake (Coordinator of the Short Course).

WORKSHOP ON IDENTIFICATION OF COMMON ANTS OF SRI LANKA



Left: A workshop session. Right: A group photograph of participants and resource persons

SEVENTH SHORT COURSE ON GIS AND APPLICATIONS



Left: Prof. Anura Wickremasinghe (Deputy Vice-Chancellor) at the Inaugural Session. Seated (L to R): Mr. Neil Gunadasa (Director/IT, Ministry of Education), Mr. P N Illappeuma (Director/Data Management, Ministry of Education), Mr. L R K Perera (Chairman, Board of Study in Earth Sciences) and Dr. Jagath Gunatilake (Short Course Coordinator). Right: Participants of the Short Course attending a lecture in the PGIS Auditorium. Rev. T. Chandananda thero (Asst. Director (NW), Education Department) was one of the participants.

TRAINING WORKSHOP ON MANAGEMENT OF DISEASE IN FRESH PRODUCE SUPPLIED FOR LOCAL AND EXPORT MARKET



Prof. N K B Adikaram (Chairman, Board of Study in Plant Sciences) at the Inaugural Session held at the PGIS Auditorium on 7th June 2007.

WORKSHOP ON BIOFERTILIZERS AND BIOPESTICIDES



Left: Prof. B S B Karunaratne (Acting Director, PGIS) at the Inaugural Session. Seated (L to R): Dr. Sunil Ratnayake (Workshop Coordinator), Prof. S H P P Karunaratne (Dean, Faculty of Science), Prof. H Abeygunawardhane (Vice-Chancellor, University of Peradeniya) and Prof. N K B Adikaram (Chairman, Board of Study in Plant Sciences). Right: Group photograph of workshop participants. Front row (L to R): Prof. S A Kulasooriya, Mrs. Deshmukh, Dr. Arvind M. Deshmukh, Dr. Sunil Ratnayake (Workshop Coordinator), Prof. N K B Adikaram (Chairman, Board of Study in Plant Sciences), Dr. Keerthi Mohotti and Dr. K N A P Bandara.

CERTIFICATE COURSE ON ENVIRONMENTAL AWARENESS FOR PUBLIC HEALTH INSPECTORS (PHIs)



Dr. C K Shanmugarajah (Director, Environmental & Occupational Health, Ministry of Healthcare and Nutrition) addressing the Inaugural Session. Dr. S K Yatigammana (Course Coordinator) is seated.

SYMPOSIUM ON CAPACITY BUILDING IN RISK ASSESSMENT & DISASTER MITIGATION & 'SCRATCH' WORKSHOP ON DISASTER MANAGEMENT

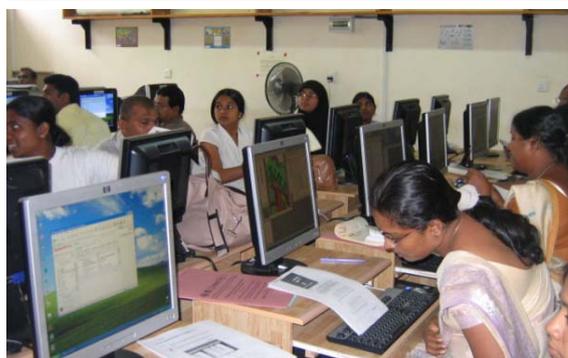


Top Left: Mr. P D Amarsinghe (Secretary, Ministry of Disaster Management and Human Rights) at the Inaugural Session held on 2nd July 2007 at the PGIS Auditorium.



Top Right: Participants of the SCRATCH Symposium held on 2nd July 2007.

Front row (L to R): Major General G Hettiarachchi (Director, Disaster Management Centre), Prof. S Edirisinghe, Prof. S H P P Karunaratna (Dean, Faculty of Science), Prof. M A K L Dissanayake (Director, PGIS), Mr. P D Amarsinghe (Secretary, Ministry of Disaster Management and Human Rights), Prof. H Abeygunawardena (Vice-Chancellor, University of Peradeniya), Prof. K G A Dahanayake, Dr. M Hazarika (Project Leader, SCRATCH), Mr. R Alwis (Registrar, University of Peradeniya) and Dr. A A J K Gunatilake (Coordinator of the Short Course).



Right: SCRATCH Workshop Participants during a practical session in GIS in the PGIS – GIS and RS laboratory

SECOND SHORT COURSE ON COMPUTER AND COMPUTATIONAL MATHEMATICS



Top – Prof. M A K L Dissanayake at the Inaugural Session held on 12th July 2007 at the PGIS Auditorium.

Seated (L to R): Dr. H M Nazeer (Co-coordinator), Prof. S H P P Karunaratne (Dean, Faculty of Science), Prof. A Wickramasinghe (Deputy Vice-Chancellor, University of Peradeniya), Prof. U N B Dissanayake (Chairman, Board of Study in Mathematics) and Dr. A A I Perera (Co-coordinator).



Left - During a technical session in the PGIS computer laboratory

EIGHTH SHORT COURSE ON GIS & APPLICATIONS



Left - Field sessions on GPS. Right - A practical session in the GIS and RS laboratory of the PGIS

SHORT COURSE ON AUDIO/VIDEO EDITING AND 3D ANIMATION



A technical session in the PGIS computer laboratory.

WORKSHOP ON MALARIA RISK MANAGEMENT USING CLIMATE INFORMATION



Dr. Stephen Connor (Columbia University, USA), Director, PAHO/WHO Collaborating Centre on Climate Sensitive Diseases and International Research Institute for Climate and Society (IRI), Dr. Lareef Zubair (IRI) and Dr. Priyani Amarasinghe (International Water Management Institute, IWMI, India) during the panel discussion of the workshop.

WORKSHOP ON COMBINED MATHEMATICS FOR G.C.E. A/L TEACHERS



Prof. B M R Bandara (Acting Director, PGIS) at the Inaugural Session held on 24th October 2007 at the PGIS Auditorium. Seated (L to R): Dr. W B Daundasekara (Co-coordinator), Prof. S H P P Karunaratne (Dean, Faculty of Science), Prof. U N B Dissanayake (Chairman, Board of Study in Mathematics) and Mr. D J C Suriyaarachchi (Co-coordinator).

NINTH & TENTH SHORT COURSES ON GIS & APPLICATIONS



Left - A field session on GPS at the 9th Short Course on GIS and Applications. Right - Group photograph of resource persons and participants of the 10th Short Course on GIS and Applications held from 26th November to 1st December 2007.

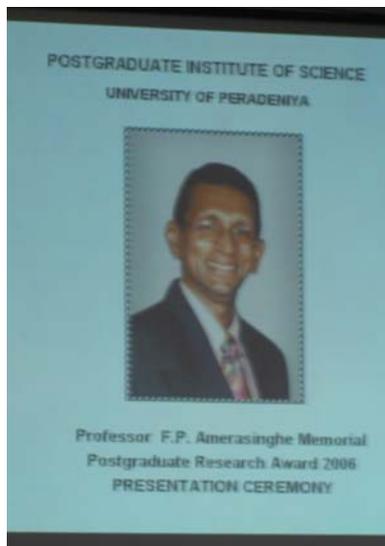
5-DAY WORKSHOP ON CHEMISTRY, MATHEMATICS & PHYSICS FOR GCE A/L TEACHERS



Prof. M A K L Dissanayake (Director, PGIS) at the Inaugural Session held on 10th December 2007 at the PGIS Auditorium. Seated (L to R): Dr. S Karunaratne (Co-coordinator), Mr. Anura Dissanayake (Director of Secondary Education Modernization Project - SEMP, Ministry of Education), Prof. A Wickramasinghe (Deputy Vice-chancellor, University of Peradeniya), Prof. V Karunaratne (Acting Dean, Faculty of Science), and Mr. HMW Herath (Provincial Director of Education, Central Province).

POSTGRADUATE RESEARCH AWARDS

PROF. F P AMERASINGHE MEMORIAL POSTGRADUATE RESEARCH AWARD-2006



Award Ceremony - Prof. Felix Prashantha Amerasinghe Memorial Postgraduate Research Award 2006 held on 30th November 2006 during the Peradeniya University Research Sessions (PURSE 2006). Dr. W A I P Karunaratne, Department of Zoology was the recipient of the award.



NSF MERIT AWARDS 2006

The National Science Foundation (NSF) Merit Awards for Scientific Excellence in Environment and Biodiversity-2006.

Awardees: Dr. W A I P Karunaratne, Prof. J P Edirisinghe and Prof. C V S Gunatilleke for the project on 'Taxonomy and ecology of bees in Sri Lanka'.

NSF MERIT AWARDS 2007



The National Science Foundation (NSF) Merit Awards for Scientific Excellence in Basic Sciences-2007.

Awardees: Ms. P A R D Jayathilaka, Prof. M A K L Dissanayake and Prof. M A Careem for the project on Development of novel electro-active polymers; (a) Solid Polymer Electrolytes, and (b) Conducting Polymers for possible applications in Solid State Ionic Devices.

POSTGRADUATE DEGREES AWARDED (July 2006 – Dec. 2007)

Ph.D. & M.Phil. Degrees

Ph.D. – Biochemistry and Molecular Biology

1. A M Karunaratne Protein, energy, zinc, iron and vitamin A nutriture in children (3-5 years) of low socio-economic status in Kandy, Sri Lanka (2007)
Place of Research Work : Department of Botany, University of Peradeniya
Supervisors : Dr. P H Amerasinghe and Prof. P A J Perera

Ph.D. – Chemical Sciences

1. D M M Krishantha Preparation, characterization, electrical properties and applications of 2:1 layered silicate/conducting polymer nanocomposites (2006)
Place of Research Work : Department of Chemistry, University of Peradeniya
Supervisors : Prof. R M G Rajapakse and Prof. D T B Tennakoon
2. P A N Punyasiri Preformed and induced chemical resistance of tea leaf against *Exobasidium vexans* infection (2006)
Place of Research Work : Biochemistry Division, Tea Research Institute, Talawakelle
Supervisors : Prof. V Kumar and Dr. I S B Abeysinghe
3. T Manoranjan Chemical investigation of *Myristica ceylanica* and *Xylopiia nigricans* and synthetic studies on (2*S*, 3*R*, 1'*R*)-stegobinone (2007)
Place of Research Work : Department of Chemistry, University of Peradeniya
Supervisors : Prof. V Kumar and Prof. Anura Wickramasinghe
4. H K D K Wijesekara Mechanistic, spectroscopic and molecular model probing of the arsenic – gibbsite interface (2007)
Place of Research Work : Department of Chemistry, University of Peradeniya and Institute of Fundamental Studies, Kandy
Supervisors : Dr. W M A T Bandara and Prof. R Weerasooriya
5. V M Thadhani Semisynthesis and bioactivities of lichen substances (2007)
Place of Research Work : Department of Chemistry, University of Peradeniya
Supervisors : Prof. N L V V Karunaratne

Ph.D. – Physics

1. A D A D J M D S U Electrical properties of zircon (ZrSiO₄) ceramics doped with different dopants prepared via solid state sintering route (2006)
Dahanayake
Place of Research Work : Department of Physics, University of Peradeniya
Supervisor : Prof. B S B Karunaratne

Ph.D. – Plant Sciences

1. R R Ratnayake Effect of soil organic matter on nutrient availability under different land use patterns with special emphasis on the role of carbohydrates (2006)
Place of Research Work : Institute of Fundamental Studies, Kandy
Supervisors : Dr. G Seneviratne and Prof. S A Kulasoorya

Ph.D. – Zoological Sciences

1. M D B Perera Status and mechanisms of insecticide resistance in anopheline vectors of malaria in Sri Lanka (2007)
Place of Research Work : Regional Office, Anti-Malaria Campaign, Kurunegala
Supervisor : Prof. S H P P Karunaratne

M.Phil. – Biochemistry and Molecular Biology

1. L D A M Arawwawala Bioactivities of *Alpinia calcarata* Rosc. Rhizome (2006)
Place of Research Work : Herbal Technology Division, Industrial Technology Institute, Colombo
Supervisors : Dr. L S R Arambewela, Prof. B M R Bandara and Prof. W D Ratnasooriya
2. B M G K Balasuriya Toxicity and biological activity studies of green leafy vegetables consumed in Sri Lanka (2007)
Place of Research Work : Natural Products Programme, Institute of Fundamental Studies, Kandy.
Supervisors : Prof. HRW Dharmaratne, Dr. GSP De S Gunawardena and Prof. RPVJ Rajapakse

M.Phil. – Chemical Sciences

1. Y Ahilan Chemistry and activity of *Acronychia pedunculata* fruits (2006)
Place of Research Work : Department of Chemistry, University of Peradeniya
Supervisor : Prof. V Kumar
2. K W M S Keerthiratne Low cost methods for colour & metal ion removal from industrial effluents and polluted water (2006)
Place of Research Work : Department of Chemistry, University of Peradeniya
Supervisors : Prof. Namal Priyantha and Prof. D T B Tennakoon
3. T H N M Karunathilake Adsorption of 2-chlorophenol and 2,4-dichloroaniline on silica and adsorption and desorption of phosphate on kaolinite (2007)
Place of Research Work : Department of Chemistry, University of Peradeniya
Supervisor : Dr. W M A T Bandara
4. N R Amarasinghe Chemistry and bioactivity of the fruits of *Artocarpus altilis* and *Flacourtia indica* (2007)
Place of Research Work : Institute of Fundamental Studies, Kandy
Supervisor : Prof. U L B Jayasinghe

M.Phil. – Earth Sciences

1. S M Young Assessment of the potential threat to ground and surface water due to agricultural practices in Kala Oya basin (2007)
Place of Research Work : Department of Geology, University of Peradeniya
Supervisors : Dr. H M T G A Pitawala and Dr. A A J K Gunatilake

M.Phil. – Environmental Science

1. R G A Wijayawardhana Effects of fertilizer application in up-country tea lands on downstream pollution (2006)
Place of Research Work : Soil & Plant Nutrition Division, Tea Research Institute, Talawakelle
Supervisors : Dr. A K N Zoysa and Dr. H A Dharmagunawardhana

M.Phil. – Physics

1. K Abeygoonaratna Identification of standard local sand for cement testing (2007)
Place of Research Work : Puttalam Plant, Holcim Lanka Ltd.
Supervisor : Prof. B S B Karunaratne
2. Q Y Soundararajah Clay polymer nanocomposites: investigation of mechanical, thermal and optical properties of selected nanocomposites (2007)
Place of Research Work : Department of Physics, University of Peradeniya
Supervisors : Prof. B S B Karunaratne and Prof. R M G Rajapakse
3. K Vignarooban Synthesis and characterization of some composite polymer electrolytes based on poly (ethyleneoxide) (PEO) (2007)
Place of Research Work : Department of Physics, University of Peradeniya
Supervisor : Prof. M A K L Dissanayake
4. H D N S Fernando Fabrication of low cost clay bricks for building industry (2007)
Place of Research Work : Department of Physics, University of Peradeniya
Supervisor : Prof. B S B Karunaratne
5. E V A Premalal Sensitization of titania with natural and moderated flavylum pigments and MEH-PPV polymer for photovoltaic devices (2007)
Place of Research Work : Institute of Fundamental Studies, Kandy
Supervisors : Prof. K Tennakone and Prof. K Premaratne

M.Phil. – Plant Sciences

1. S R P Indrakeerthi Crown rot of banana and its possible control using papaya latex (2006)
Place of Research Work : Department of Botany, University of Peradeniya
Supervisor : Prof. N K B Adikaram
2. S C K Rubasinghe Species limits and phylogenetics of the endemic genus *Stemonoporus* Thw. (Dipterocarpaceae) (2007)
Place of Research Work : Department of Botany, University of Peradeniya
Supervisors : Dr. D M D Yakandawala and Dr. D S A Wijesundara

M.Phil. – Statistics and Computer Science

1. M H Hubert Improved methods of mixed estimation in linear regression model (2006)
Place of Research Work : Postgraduate Institute of Science, University of Peradeniya
Supervisor : Prof. P Wijekoon
2. S S Kalupahana An intelligent weather forecasting system for Sri Lanka (2007)
Place of Research Work : Postgraduate Institute of Science, University of Peradeniya
Supervisor : Dr. S Kodituwakku

M.Phil. – Zoological Sciences

1. R C Rajapaksa Elephant Orphanage at Pinnawala, Sri Lanka: its management and aspects of biology, ecology and behavior of its Elephants (2006)
Place of Research Work : Elephant Orphanage, Pinnawala
Supervisor : Prof. K H G M de Silva
2. M M S I Karunaratna Ecology, diversity and distribution of freshwater crabs (Decapoda: parathelphusidae) in Knuckles and Nuwara Eliya region of Sri Lanka (2007)
Place of Research Work : Department of Zoology, University of Peradeniya
Supervisor : Prof. P K de Silva

M.Sc. Degrees

M.Sc. – Analytical Chemistry

1. A M D W S M Adikari Investigation of the solid state photochemical reactivity and polymorphism of three common drugs (2006)
2. T S B Fernando Synthesis and characterization of poly(3,4-ethylenedioxythiophene) intercalated in bentonite clay (2006)
3. U R Dharmasiri Decontamination of cadmium containing aqueous solutions using feldspar (2006)
4. W M T C Pathirathne Utilization of conducting polymers as sensitizers in solid-state photocells (2006)
5. M G D Rodrigo Chemical characteristics of industrial effluents after treatment with brick particles (2007)
6. R Sinnathamby Preliminary investigation on drinking water quality of dug wells in Kattankudy Divisional Secretariat, Eastern Province (2007)

M.Sc. – Applied Statistics

1. D D Basnayake Temporal variability of soil temperature at different depths (2006)
2. N Jeyarajasingam Statistical analysis on the effect of global warming phenomenon in Colombo and Anuradhapura districts (2007)
3. P Shanmugam Analysis of measurement error model and the stein rule estimator (2007)
4. P Sabanathan Application of rotational residuals for normal diagnostics in regression analysis: a simulation study (2007)
5. A Pragalathan Application of statistical techniques in the interpretation of stream sediments data of some rivers in Sri Lanka (2007)
6. N Tharshanna Time series regression modeling of economic development and carbon dioxide emissions (2007)
7. E S Puvanasingam A correlation study on student achievements at grade five scholarship examination and G.C.E. Ordinary Level examination (2007)
8. P H C A Jayasooriya Vectors and transmission of malaria in a canal and traditional natural stream irrigated areas in Sri Lanka (2007)
9. S R Ginige Identifying the effect of information technology on total quality management (2007)

M.Sc. – Computer Science

1. G W P Keerthiwansa Data migration in software implementation projects (2006)
2. H K S Amarakeerthi Web enabled bandwidth prioritizing in Squid Cache without disturbing existing connections (2006)
3. D M I K Dassanayake Fractal based automated pattern design (2006)
4. K Gunarathinaraja Hospital management system (2006)
5. M H M Rizath Role model design and implementation using a set approach (2006)
6. M R M Dharmarathne Application of role-based access control in healthcare organization (2006)

7.	C C B Wijesinghe	Design and implementation of role-based access control in healthcare system (2007)
8.	S Thatheeswaran	Improving the user-friendliness of Tamil web browsing (2007)
9.	C I E Jayasooriya	Solving shortest path problem using genetic algorithms (2007)
10.	J M G I C Jayasundara	Semi-intelligent SQL Querying system (2007)
11.	M A C M Raafi	A keyboard configuration for Tamil unicode characters (2007)
12.	S Sandrasegaram	An efficient algorithm for locally fitted 3D mesh generation (2007)
13.	V Sivakumar	An automated diagnose of a anemia and malaria using image processing (2007)
14.	S Tharmaseelan	Querying database in natural language (2007)
15.	T Theiveegarajan	Introducing Tamil language in computer assisted learning software (2007)
16.	L D Upali	An education management information system for the Ministry of Education – Sri Lanka (2007)
17.	S M I Wickrama	User dependant speech-based lip synchronization (2007)
18.	B Gajasingha	Fingerprint image enhancement method using chain code based orientation estimation and directional median filter (2007)
19.	J A D M U Jayasinghe	Development of web-based aptitude test system for the Postgraduate Institute of Science (PGIS), University of Peradeniya (2007)
20.	W D D Pushpakumara	Free and open source spam and virus filtering gateway for remote Mail Transfer Agent (2007)
21.	I D Ranasinghe	Information system of payroll management for Lankem Plantations Ltd. (2007)
22.	J Walpola	A new information technology approach to Telco Revenue Assurance (2007)
23.	D A M Jayasekara	Create an efficient keyboard driver to minimize Sinhala typing errors (2007)
24.	N M A P B Nilwakke	A database to support university course timetabling (2007)

M.Sc. – Engineering Geology & Hydrogeology

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| 1. | S J K Gamage | Aquifer identification and groundwater development in Nuwara Eliya basin (2007) |
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M.Sc. – Environmental Science

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| 1. | B U G A K Abewardhana | Evaluation of laws regulating lakes and reservoirs of Sri Lanka (2006) |
| 2. | V Chandrasegaran | Impacts of dam construction of Upper Kotmale Hydropower Project in Kotmale Oya, Talawakelle on vertebrate fauna and possible mitigation measures (2006) |
| 3. | S Kandasamy | Removal mechanism of phosphate, sulfate and color on feldspar (2006) |
| 4. | M Kanagaretnam | Behaviour of the parasitoid <i>Diglyphus isaea</i> (Hymenoptera: Eulophidae) of the potato leafminer <i>Liriomyza huidobrensis</i> (Diptera: Agromyzidae) (2006) |
| 5. | D I C Gurusinghe | Occurrences and environmental impacts of acid sulfate soils in Colombo suburbs (2007) |
| 6. | K Thayaseelan | Prevalence of dengue vector mosquitoes and factors affecting dengue transmission in Wellawatta municipal council area (2007) |
| 7. | M A S S Silva | Development of a video programme on dry zone forests of Sri Lanka (2007) |

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| 8. | G P Srimalka | Study of bioaccumulation of heavy metals in aquatic flora and fauna in the Lunawa lagoon (2007) |
| 9. | U P Kooragama | Cadmium levels of paddy field soils and drinking water in Kebithigollewa area (2007) |
| 10. | M V D N R Wimalasena | Possible effects of some toxic elements of soil and plants in forest dieback areas of Hakgala Strict Natural Reserve (2007) |
| 11. | P De Silva | Heat treatment of oil based sludge (2007) |
| 12. | A S M R N C K
Ambanwela | Nutrients and sources of pollutants of Maduganga estuary, Sri Lanka (2007) |
| 13. | O L N G Chandrasiri | The operational parameters of a waste water treatment plant four decades after construction (2007) |
| 14. | K Gowrithasan | A study on spatial and temporal changes of ground water quality in the tsunami affected Navalady area in the Batticaloa district (2007) |
| 15. | S Liyanagama | A population study of elephants in the Katagamuwa sanctuary, Kataragama (2007) |
| 16. | S Rajaratnam | Uptake of cadmium and nickel by selected plant species under laboratory conditions (2007) |
| 17. | K Sugunthas | Contamination of shallow groundwater in the sinnauppodai coastal area, Batticaloa, Sri Lanka (2007) |
| 18. | S Thayananth | A modeling approach to explain the impact on the Batticaloa lagoon by the Unnichchai tank (2007) |

M.Sc. – Experimental Biotechnology

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|----|----------------|--|
| 1. | K Thiruchelvam | Establishment of a molecular diagnostic system for detecting Y-chromosomal micro deletions which cause male infertility (2006) |
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M.Sc. – GIS & Remote Sensing

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|----|--------------------|--|
| 1. | A H Lakmal | Functional and financial feasibility analysis of GIS software (2007) |
| 2. | C Kudahetty | Use of GIS in estimating the potential of groundwater availability in Koggala coastal aquifer – Sri Lanka (2007) |
| 3. | B R R P Jayasuriya | Crime mapping and spatial analysis of Kirulapone police division : A pilot project for Colombo city (2007) |

M.Sc. – Industrial Mathematics

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|----|------------------------|--|
| 1. | J A Ruwanthilaka | Low-cost laboratory teaching kits for automatic control education in developing countries (2006) |
| 2. | W A D H G M Wijesekera | Implementation of Kruskal's Algorithm (2006) |
| 3. | P Sureshkanna | Catastrophes and stabilization policies in economic dynamics (2007) |
| 4. | C H Baduraliya | Integro-differential inequalities and the impact of white noise in dynamic market models (2007) |

M.Sc. – Medical Physics

1. S S L Herath Quality control parameters of fluoroscopic X-ray units used in Sri Lanka (2006)
2. S Panchanatham Estimation of absorbed dose to thyroid carcinoma patients who are treated with radioactive nuclide iodine - I^{131} (2006)
3. T Yoganathan Clinical dosimetry of transmission factors for hard wedges and shielding trays used in T 780 E Telecobalt machines and its features (2006)
4. M A J C Marasinghe Variation of molybdenum concentration in daily elution of Tc^{99m} at Nuclear Medicine Unit, University of Peradeniya (2006)
5. A W M R N K Ratwatte Gonadal dose of radiation in patients undergoing chest radiography (2007)

M.Sc. – Oceanography

1. H M U B Herath Seasonal and spatial variation of thermocline and halocline in the Indian ocean around Sri Lanka (2007)

M.Sc. – Physics of Materials

1. K Ranganathan Neutron activation analysis of a meteorite sample (2006)
2. M A S K Gamage Ion transport mechanisms in mixed alkali glass (2006)
3. R M L C Karunathilake Fabrication of grinding wheels using locally available minerals (2006)
4. T Sivarupan Proton conduction in condensed phase (2006)
5. H Tennakone Hydrothermal synthesis of hydroxyapatite nanopowders (2006)
6. P R Fernando Fabrication and characterisation of $Bi_{1.6}Pb_{0.4}Sr_2Ca_2Cu_3O_y$ superconductors prepared by solid state reaction technique (2006)
7. R R M Kodikara Preparation and characterization of polyaniline/titanium dioxide heterojunctions for possible use in solar cells (2006)
8. D A Divaratne A study on polypyrrole/dodecylbenzenesulphonate (PPY/DBS) based actuators (2006)
9. K Varaprathan Dye sensitized photo electro chemical (PEC) solar cells using PEO based solid polymer electrolyte (2006)
10. A Jeyasuthan Electrochemical behaviour of polypyrrole/dodecylbenzenesulphonate films in highly concentrated electrolytes (2006)
11. K K H D Kumaraarachchi Cathodic electrodeposition of ZnO thin films for solar energy conversion (2006)
12. P Peratheepan Study on physical and mechanical properties of *Bambusa vulgaris* and *Dendrocalamus giganteus* for possible value addition in industrial flooring (2007)
13. K J P Fernando Experimental correlation among some mechanical properties of UPVC pipes (2007)
14. S M D K Samarakoon Design and construction of a testing machine to study the impact behaviour of materials (2007)
15. S Ahilan Construction and testing of an apparatus for thermal conductivity measurement (2007)
16. M P R N Gunasinghe Mechanical properties of ancient clay bricks and plasters of Jethawana Sthupa (2007)

M.Sc. – Plant Sciences

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1. E M S G M Edirisooriya A Study of Jurassic plant fossils in Tabbowa sediments, Sri Lanka (2006)
 2. W W R Wijesinghe An ethno-botanical analysis of Montane flora in the Ritigala range (2006)
 3. S K Pallewatta Wild orchids in Upper Hantane, Sri Lanka (2006)
 4. W S Premachandra A study on the occurrence and comparison of trichomes in selected wild rice species and hybrid rice varieties in Sri Lanka (2006)
 5. P K I D E Jayasinghe Activity of two medicinal plants against some bacteria causing skin and wound infections in humans (2007)
 6. H H Shanthilatha Antioxidant activity and antibacterial activity of “Shaddharanayogaya” prescribed for hypertension (2007)
 7. S D Hapuarachchi Comparison of chemical identities of natural plants and callus cultures of *Andrographis paniculata* and *Munronia pinnata* (2007)
 8. G K P K Dissanayake Morphological and anatomical studies of two wild rice species; *Oryza eichingeri* Peter and *Oryza rhizomatis* Vaughan (2007)
 9. P U M Perera Oral hypoglycaemic activity of the traditional native drug *Variprasadinadi* and the antioxidant activity of the drug and its constituents (2007)

M.Sc. – Science Education

1. S P Fernando Construction and testing of a supplementary guide on leafy vegetables for Advanced Level biology teachers (2006)
 2. R A A Rupasinghe Application of concepts of equilibrium in everyday life (2006)
 3. D T Wickramasooriya Development of an experimental package in electrostatics for G.C.E. (Advanced Level) students (2006)
 4. R M G K Rathnayake Analysis of water quality using bioindicators and effective usage of this knowledge in the teaching & learning process of A/L biology course (2006)
 5. M Rupasinghe Introducing “Scientific Method” for G.C.E. (Advanced Level) student projects using monkey menace as an example (2006)
 6. R M N W Rajapakse Effective ways of teaching periodicity, patterns and the properties of some elements (2006)
 7. H D M U B Ratnakela A survey of the problems associated with the teaching/learning process of G.C.E. (Advanced Level) chemistry in Sri Lanka and their links to G.C.E. (O/L) science (2006)
 8. K Senthilvadivelu Preparation of a computer based self-learning package for Advanced Level chemistry students (2006)
 9. K A P P Karunanayake The influence of students’ mathematics knowledge in learning Advanced Level physics (2006)
 10. R Uthayaraj Preliminary study for enhancing performance of physics among weak students in G.C.E. (O/L) through student oriented discussion (2006)
 11. S T A S Dahanayake Inculcating good attitudes regarding the environment among students of grade seven through the story telling method (2006)
 12. J A J Hanee Active instruction techniques for teaching science in lower secondary classes (2006)
 13. Y M C D Yaparathne The effect of student centered learning including criterion-based assessment on the performance of students (2006)
 14. P A C Pitumpe A study of the concepts of limit theorems and their applications in the G.C.E. (A/L) combined mathematics syllabus (2006)
 15. L H A Senapala Private tuition attendance by G.C.E. (A/L) biology students: a case from Gampaha district (2006)
 16. T Murukamoorthy Impact of the performance of G.C.E. (O/L) mathematics on the subject combined mathematics at the G.C.E. (A/L) examination in the Batticaloa district (2007)
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17.	R P P Lenora	Alternative ways of teaching basic concepts of Environmental Chemistry for Advanced Level students (2007)
18.	R M R D Siriwardhana	Integrated method in teaching Postharvest Technology for Advanced Level agriculture students (2007)
19.	E Sathiyapraha	Preparation of a study pack on Sri Lankan ecosystems related to the grade 9 syllabus for effective learning (2007)
20.	S Pakirathan	Learning difficulties in Grade 10 science students and possible solutions through demonstration experiments (2007)
21.	W S Wickramasooriya	Introduction of plant tissue culture practical for G.C.E. Advanced Level science students (2007)
22.	H M R K N Priyanthi	Development of human resources in science and technology: role of universities (2007)
23.	A H M N K Amarakoon	Oscillations and waves experiments using low cost materials and available instruments in the school laboratory (2007)
24.	L M Kariyawasam	Analysis of water quality in Tsunami affected areas: a case study to enhance G.C.E. (A/L) practical skills (2007)
25.	R P R Randeni	Iodization of edible common salt with the amended food regulation of year 2005 : a case study (2007)
26.	N Vigneswaran	An effective method for teaching organic synthesis for G.C.E. A/L students (2007)
27.	M N S Jayasuriya	Introduction of spectroscopy to the A/L syllabus (2007)
28.	B Chamanthi	Tracer study on future prospects of the Advanced Level science students in Sri Lanka (2007)
29.	N Koneshmoorthy	Learning difficulties in Advanced Level electrochemistry and suggestions to overcome them (2007)

Postgraduate Diplomas

Diploma – Analytical Chemistry

1. A M A S K Abeykoon (2006)

Diploma – Biodiversity & Conservation Management

1. M P B Ekanayake (2007)

Diploma – Environmental Science

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|------------------------------|---------------------------------|
| 1. K Vinasithamby (2006) | 5. P S Yahampath (2006) |
| 2. V P N K Kulathunga (2006) | 6. U U K Rodrigo (2007) |
| 3. A J K Aluthge (2006) | 7. H M W L R B Weerakoon (2007) |
| 4. U C Jayanthi (2006) | |

Diploma – Industrial Chemistry

1. I C Galgodage (2007)

Diploma – Industrial Mathematics

1. A Arulalan (2007)

Diploma – Information Technology

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|--------------------------------|----------------------------------|
| 1. A Ananthkumar (2007) | 10. A Rukshan (2007) |
| 2. M U M Ashker (2007) | 11. S L D J Samayamantiri (2007) |
| 3. R M Asmi (2007) | 12. S Sureshkumar (2007) |
| 4. S M P Chandrakumara (2007) | 13. P C N Tissera (2007) |
| 5. R H A Jayaratna (2007) | 14. Y M C Wijerathne (2007) |
| 6. S Kishokumar (2007) | 15. S T W H Wimaladharm (2007) |
| 7. K J Kumara (2007) | 16. H L Sirajudeen (2007) |
| 8. R A P P B Ranasinghe (2007) | 17. K P C I Herath (2007) |
| 9. R M N S Ratnayake (2007) | 18. P G N D Kumari (2007) |

Diploma – Medical Physics

1. M K M V Munasinghe (2007)

Diploma – Oceanography

1. D K A P Dassanayake (2007)

Diploma – Physics of Materials

1. K Muraleetharan (2007)

Diploma – Plant Sciences

1. M H S Sareena (2007)

Diploma – Science Education

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|----------------------------------|-------------------------------------|
| 1. M N L Abeyrathna (2007) | 22. N Medawala (2007) |
| 2. A M S W Abeysinghe (2007) | 23. T A C N Meetiayagoda (2007) |
| 3. A M D W S M Adikari (2007) | 24. N F Nawas (2007) |
| 4. A M D D Anggammana (2007) | 25. R B N Sumanasinghe (2007) |
| 5. A R Ariyasinghe (2007) | 26. W G C Nisansala (2007) |
| 6. P A I C Athukorala (2007) | 27. P M I N Palletenna (2007) |
| 7. J M R I Bandara (2007) | 28. K H N Prasad (2007) |
| 8. N Dematage (2007) | 29. P G Y N Ranaweera (2007) |
| 9. A M U Dharmapala (2007) | 30. M K Rathnaweera (2007) |
| 10. D M C R K Dissanayake (2007) | 31. D E S Rathnayake (2007) |
| 11. R D N D K Dissanayake (2007) | 32. R G U Rathinda (2007) |
| 12. K R Edirisinghe (2007) | 33. R M C K Ratnayake (2007) |
| 13. M D A Gunasekara (2007) | 34. G R R Sanjeevani (2007) |
| 14. K H Gurukandura (2007) | 35. D W N A K Senevirathne (2007) |
| 15. T L Ishak (2007) | 36. H M D R Senevirathna (2007) |
| 16. K K V S Kankanamge (2007) | 37. D M S K Somatilake (2007) |
| 17. P G M S Karunathilake (2007) | 38. H A Udayamali Gunarathna (2007) |
| 18. C M K K Kumari (2007) | 39. H A Upamali Gunarathna (2007) |
| 19. P U Liyanage (2007) | 40. M W Vithana (2007) |
| 20. A H A R Madany (2007) | 41. W A S K Weerasinghe (2007) |
| 21. M W S K Mahagedara (2007) | 42. W W P Wewala (2007) |
| 43. S I S Wickramasinghe (2007) | 47. D J G S Dissanayake (2007) |

44. W M U M Wickramasinghe (2007)

45. K M C S K Wijerathne (2007)

46. W A D H G M Wijesekera (2007)

48. K M C K Keerawella (2007)

49. J Annanavabarathy (2007)

50. E M P Ekanayake (2007)

YOUNG RESEARCHERS' FORUM (YRF) - PGIS

PGIS-YRF was established on 12th May 2005 at a seminar on 'Challenges and Opportunities in Scientific Research for Young Researchers' conducted by the PGIS. The Forum was found with a view to

1. Interact and exchange information pertaining to scientific research for dissemination of knowledge and for collaboration with groups (local and foreign) having similar interests.
2. Realize the potential of young researchers as the next generation of scientists.
3. Generate a research climate that allows for creativity, open communication and free flow of ideas and talents.
4. Create a platform to bring to the attention of the authorities and government, the problems faced by young researchers in carrying out scientific research in Sri Lanka.
5. Promote public awareness on importance of scientific research.

Memberships of the Young Researchers' Forum are open to all postgraduate students currently registered for M.Phil./Ph.D Degrees and M.Sc. students (in their project phase at the Postgraduate Institute of Science), young research scientists and university staff who are active in scientific research in universities and other institutions.

The second committee was elected at the Annual General Meeting of the YRF, held on 26th June 2006 at the PGIS Auditorium, following a half day session.

Activities carried out by the committee:

A half-day session was held on 17th October, 2006 at the PGIS Auditorium. The session was addressed by Dr. C N B Bambaradeniya (The World Conservation Union (IUCN), Sri Lanka) on '*Environmental Issues in Sri Lanka and the Role of Research to Address Them*'. Two M.Phil. students registered at the PGIS presented their research findings. Miss Gayathri Balasooriya (Institute of Fundamental Studies (IFS), Kandy) made a presentation on '*Toxicity studies of Green Leafy Vegetables Consumed in Sri Lanka*' and Mr. H M J C Pitawala (Department of Physics, University of Peradeniya) made a presentation on '*Solid Polymer Electrolytes*'. Miss. Nihara Gunawardana (Curtin University, Australia), an occasional Ph.D. student registered at the PGIS made a presentation on '*Ants of Sinharaja*'.

A half-day session was held at the PGIS Auditorium on 14th February 2007. Dr. D B Nugegoda (Department of Community Medicine, University of Peradeniya) gave a talk on '*Overcoming Psychological Stress*'. Another talk on '*Biochemical Characterization of Human Kallikerin 8 and 14 in Search of their Physiological Substrates*' was made by Dr. Sanath Rajapakshe (Department of Molecular Biology and Biotechnology, University of Peradeniya). Two M.Phil. students registered at the PGIS presented their research findings. Miss. S M Young (Department of Geology, University of Peradeniya) gave a talk on '*An Assessment of Potential Threat to the Geochemical Quality of Surface and Groundwater – A Case Study From Kala Oya Basin, Sri Lanka*'. Miss Uthpala Jayawardhana (Department of Zoology, University of Peradeniya) gave a presentation on '*Effect of Biocide Exposure on the Survival, Growth and Development of Abnormalities in Hour-Glass Tree Frog*'.

PGIS-YRF committee organized a popular lecture series from April 2007. Interesting topics dealing with science related subjects were addressed by popular scientists in each field of science. The very first talk under this series was given by Prof. S N Arsecularatne of the Faculty of Medicine, University of Peradeniya on April 04th 2007 at the PGIS auditorium. The talk was titled "The Process of Scientific Discovery: It's Application to Exploring Obscure Phenomena". The second popular lecture was given by Dr. H B Jayasinghe on "Medical Hypnosis" on 10th April 2007 at the PGIS Auditorium.

Dr. W A I P Karunaratne

President, YRF-PGIS (2006/2007)

Opportunities for a higher degree of your choice ...

❖ **M.Sc. by course work with research (18 months)**

❖ **M.Phil. by research (2 - 3 years)**

❖ **Ph.D. by research (3 - 4 years)**

The Postgraduate Institute of Science (PGIS) is a national institution attached to the University of Peradeniya, Sri Lanka. The PGIS offers postgraduate training in various specialities in science. The academic programmes of the PGIS are conducted through ten Boards of Study:

- *Biochemistry and Mol. Biology*
- *Chemical Sciences*
- *Earth Sciences*
- *Environmental Science*
- *Mathematics*
- *Physics*
- *Plant Sciences*
- *Science Education*
- *Statistics and Computer Sc.*
- *Zoological Sciences*

In addition to the M.Sc., M.Phil. and Ph.D. programmes the PGIS routinely conducts workshops, certificate courses, short term training programmes and offers consultancy services.

Academic staff members with postgraduate qualifications from some of the best universities in the world serve in the teaching staff of the PGIS. The excellent research facilities available at the Faculty of Science and other science - based Faculties of the University of Peradeniya and research institutions in the country are being used to provide research training to students. The Postgraduate Institute of Science (PGIS) and the Faculty of Science are internationally known for scientific research.

M.Sc. DEGREE PROGRAMMES

At present, the PGIS offers M.Sc. degree programmes in the following specialized disciplines:

- *Analytical Chemistry*
- *Applied Statistics*
- *Biodiversity, Ecotourism & Environment Management*
- *Clinical Biochemistry*
- *Computer Science*
- *Disaster Management*
- *Environmental Science*
- *Experimental Biotechnology*
- *Gemmology & Industrial Minerals*
- *GIS & Remote Sensing*
- *Industrial Mathematics*
- *Industrial Chemistry*
- *Medical Microbiology*
- *Medical Physics*
- *Nanoscience & Nanotechnology*
- *Physics of Materials*
- *Plant Science*
- *Postharvest Tech. of Fruits and Vegetables*
- *Science Education*
- *Water Resources Management*

The M.Sc. programmes consist of two semesters of course work and a research project of 3-6 months duration. Most M.Sc. programmes are conducted on Fridays and weekends. The minimum requirements for registration for an M.Sc. degree programme is a B.Sc. degree in the relevant discipline from a recognized university or any other equivalent qualification.

Interested applicants are requested to visit the PGIS website <http://www.pgis.lk> for course contents and other details.

M.Phil./Ph.D. RESEARCH DEGREE PROGRAMMES

The PGIS offers postgraduate research degree programmes leading to the Degrees of Master of Philosophy (M.Phil.) and Doctor of Philosophy (Ph.D.). Candidates registered for these degrees are required to engage in a research project under the guidance of a supervisor. The minimum requirements for registration for an M.Phil. or Ph.D. degree is either an M.Sc. degree or a B.Sc. degree in the relevant area of study from a recognized university or any other equivalent qualification. Research programmes are available for M.Phil./Ph.D. candidates under different Boards of Study.

Occasional studentships are available for those who wish to follow courses and use other facilities over short periods without being registered for a postgraduate degree programme.

The PGIS welcomes applications from prospective students for M.Phil./Ph.D. (full-time or part-time) programmes. Please see the PGIS home page (<http://www.pgis.lk>) for more details and application forms.

INQUIRIES

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