



IPSL - Newsletter

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Volume 5, Issue 1

INSTITUTE OF PHYSICS, SRI LANKA (IPSL)

Vidya Mandiraya, 120/10, Wijerama Mawatha, Colombo 7, Sri Lanka.

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Information for members

Physics and Astronomy Olympiad Awarding Ceremony - 2011



The awarding ceremony of the Physics, and Astronomy & Astrophysics Olympiad competitions, conducted by the Institute of Physics, Sri Lanka (IPSL), was held at King George (KG) Hall, Faculty of Science, University of Colombo on 18 November 2011. The Chief Guest of this event was Honorable Minister of Education Mr. Bandula Gunawardana. The Vice-chancellor of the University of Colombo Prof. Kshanika Hirimburegama, The Dean of the Faculty of Science Prof. T.R. Ariyaratne were also present at this occasion.

The welcome speech was delivered by the President of the IPSL Prof. S.R.D. Kalingamudali. The coordinator of the Physics Olympiad Prof. S.R.D. Rosa and Coordinator of the Astronomy & Astrophysics Olympiad Prof. Chandana Jayaratne presented the statistics of medal winners and certificate holders in the year 2011. The Gold Medal winners of Physics, and Astronomy & Astrophysics Olympiad competitions received their awards from the chief guest.

31st Annual General Meeting

The 31st Annual general meeting of the Institute of Physics Sri Lanka was held on 26 March 2011 at the Conference Room, Department of Physics, University of Colombo. New office bearers and the members for the Council were unanimously elected for the year 2011/2012.

The out going President Prof. Chandana Jayaratne thanked all the council members for the support extended to achieve high image for IPSL by conducting different activities during the tenure of his presidentship. He mentioned that the biggest achievement was the Pearl Jubilee celebration of IPSL which involved felicitation of 22 senior members of IPSL over 60 years. He thanked specially the Treasurer and Assistant Treasurer for streamlining the IPSL accounts after clearing the backlog of two years and completing five audited accounts during the past two years. He also thanked the two Joint Secretaries for their support and said that it was a pleasure to serve in the council for the past two years.

In the absence of new president who was on sabbatical leave and due to return soon, Mr. A.S. Pannila the out going Treasurer thanked the outgoing President for his contributions to the institute during past two years. He also thanked the members for electing him to represent IPSL for the past two years.

Papers Presented at the 27th Technical session

Called for Papers

28th Technical Session

Deadline: 28 November 2011

The 27th Technical Session of the Institute of Physics, Sri Lanka was also held on 26 March 2011 at the Conference Room, Department of Physics, University of Colombo. Out going President of the Institute, Prof. K.P.S.C. Jayaratne delivered the presidential address on "Development of Astronomy Research in Sri Lanka" during the Technical Session.

- Study of Non-linear Stress-Strain Curves of Locally Available Low Density Polyurethane Foams
I. D. Ishan Pradeep Iddamalgoda and Ramal V. Coorey
- Thermal Capacity as a Function of Moisture Content of Sri Lankan Wood Species: Wheatstone Bridge Method
S. Anusha L Samarasekara and Ramal V. Coorey
- Study of the Effect of Temperature on Water Permeation Through Carbon Nanotubes: A Molecular Dynamics Simulation
Hiran Anushka Seram and Ramal V. Coorey
- Characterization of Composite Films Made from Tin (IV) Oxide and Zinc Oxide with Impedance Spectroscopy
C.N Nupearachchi and V.P.S Perera
- Degradation of Dye-sensitized Solar Cells due to Formation of Surface States in the Semiconductor Film
L. R. Gallege, Y.P.Y.P. Ariyasinghe and V.P.S. Perera
- Utilization of a Natural Pigment Extracted from Nilkatarolu Flowers as a Sensitizer in Photoelectrochemical Solar Cells
B.K.S. Perera, C.N Nupearachchi and V.P.S. Perera
- Investigating the Thermal Efficiency of Thermo-foils as a Roof Insulation Material
A.D. Maduranga, H.H. Sumathipala and N.W.K. Jayatissa
- Classification of Coir Fibres Using Machine Vision
M.W.T. Chamara and D.U.J. Sonnadara
- Color Image Segmentation Technique for Screen Printing
R.U. Hewage and D.U.J. Sonnadara
- Extracting Traffic Parameters at Intersections Through Computer Vision
K.D. Peiris and D.U.J. Sonnadara
- Using Image Processing Techniques to Automate Chess Game Recording
G.D. Illeperuma
- Variation of Physical Properties of Sri Lankan Currency Notes due to Their Usage
M. S. S. de Silva and T. R. Ariyaratne
- Gas Sensor Data Collection Over an RF Network
Earl Pannila, Aulis Tuominen, Mahesh Edirisinghe
- Server Room Monitoring System Capable of Remote Status Querying and Remote Administrating
D.M.D. D. P. Kumara, B. Thiruparan, H. H. E. Jayaweera and T. R. Ariyaratne
- Solar Radius Determination Using Baily Beads Observations of Annular Solar Eclipse on 15 January 2010 in Sri Lanka
S. Gunasekera, J. Adassuriya, I. Medagangoda, L.H.J.D.K. Fernando and K. P. S. C. Jayaratne
- Construction and Evaluation of a Drying Chamber Powered by Parabolic Trough Solar Concentrator
K. K. D. L. Ruvinda, S. K. K. Suraweera, H. H. E. Jayaweera, O. K. Ranasinghe and T. R. Ariyaratne

New Council

Institute of Physics , Sri Lanka Council 2011/2012



Seated row (L-R) : Mr. N. W. K. Jayatissa (Joint Secretary), Dr. V. P. S. Perera (Co-Editor), Prof. K. D. Jayasooriya (Council Member), Dr. D. D. N. B. Daya (Vice President),
Dr. K. P. S. C. Jayaratne (Immediate past President), Prof. S. R. D. Kalingamudali (President), Dr. L. B. D. R. P. Wijesundera (Vice President), Prof. J. R. P. Jayakody (Treasurer),
Dr. R. V. Coorey (Co-Editor), Dr. N. G. S. Shantha (Joint Secretary)

Standing Row (L-R): Mr. G. H. Asoka (Council Member), Mr. R. C. L. De Silva (Council Member), Prof. S. R. D. Rosa (Council Member), Dr.(Miss) H. O. Wijewardane (Council Member),
Mr. C. L. Ranatunga (Asst. Treasurer)

Absent : Prof. D. U. J. Sonnadara (Council Member)

Guest Lectures – 2011

- Lecture was conducted by Professor S.B. Sant, Department of Metallurgical and Materials Engineering, Indian Institute of Technology, Kharagpur, India on “Piezo Electric MEMS” on 30 May 2011 at the Board Room of the Faculty of Science, University of Kelaniya.
- Lecture on “Robotics” was delivered by Dr. Rohan Munasinghe, Senior Lecturer, Department of Electronics and Telecommunication Engineering, Faculty of Engineering, University of Moratuwa on 26 March 2012 at the Auditorium of the Faculty of Science, University of Kelaniya.

Mailvaganam Memorial Oration – 2011

The Mailvaganam Memorial Oration titled “ Artificial Photosynthesis: An Environmentally Friendly Energy Solution” was delivered by Vidyanidhi Professor W.P. Siripala, Senior Professor of Physics, University of Kelaniya on 18 November 2011 at the Physics Conference Room, Department of Physics, University of Colombo.

In the lecture, fundamental process involved in natural photosynthesis and the possibility to adapt it to an artificial photosynthetic route to produce carbon free energy source, hydrogen was presented. The requirements, possibilities and future prospects were discussed for producing the carbon free energy carrier via the artificial photosynthesis.

Physics, and Astronomy & Astrophysics Olympiads

Sri Lankan Physics Olympiad Competition

The Institute of Physics conducts an island-wide competition annually, known as the "Sri Lankan Physics Olympiad (SLPhO)" to recognize and promote Physics among A/L students. The local competition took place at the Universities of Colombo, Eastern, Jaffna, Kelaniya, Peradeniya, Ruhuna, and Vavuniya on the 24 September 2011. A total of 487 students were registered for this competition. The best students were awarded Gold (5), Silver (16) and Bronze (22) medals at the IPSL Olympiads Award Ceremony – 2011 held at King George Hall, Faculty of Science, University of Colombo on the 18 November 2011.



The 12th Asian Physics Olympiad was held in Tel Aviv, Israel from 1 to 9 May 2011.



The 42nd International Physics Olympiad was held in Bangkok, Thailand from 10 to 18 July 2011.

Based on the marks obtained from this local competition, the best eight and five students respectively were selected to participate in the APHO and IPhO competitions, respectively. They were trained on voluntary basis by some Senior Lecturers in the University of Colombo before sending them for the above competitions.



Sivapalan Chelvaniththilan of St. Patrick's College, Jaffna received a **Silver medal**, **Danajaya Prasad Liyanage** and **Chelaka Bhagya Shirantha Welikala** of Kingswood College, Kandy received a **Bronze medal** each and **Rasika Sandaruwan Bandara** of Maliyadeva College, Kurunegalle received an **Honourable mention** in the IPhO competition. On behalf of Institute of Physics Sri Lanka, Dr. Ramal V. Coorey accompanied the contestants.

Sri Lankan Astronomy and Astrophysics Olympiad Competition



A team comprising of five students who excelled at the National Astronomy and Astrophysics Olympiad - 2010 was sent to Selecia, Poland in August/September 2011 to participate in the 5th International Olympiad on Astronomy and Astrophysics (IOAA). The team was headed by the National Coordinator Prof. Chandana Jayaratne. The team was given a vigorous training on theory and practical sides of astronomy prior to their departure at the Department of Physics, University of Colombo by the scientists at the astronomical observatory of the Arthur C Clarke Institute for Modern Technologies, Katubedda, Moratuwa (S. Gunasekera, J. Adassuriya, and I. Medagangoda). Following students participated at the 2011 IOAA held from 25 August to 3 September 2011, J. V. Wijesekera (De Mazenod College, Kandana), C. S. B. Palugaswewa and B. V. A. Chaturanga (Isipathana College, Colombo), L. B. Meegahapola (Dharmaraja College, Kandy), M. K. B. D. Kularatne (Nalanda College, Colombo).

Olympiad Award Ceremony – 2011



OLYMPIAD AWARD CEREMONY – 2011
 Gold / Silver & Bronze Medal Winners of the 7th Sri Lankan Physics Olympiad Competition – 2011
 With the President of Institute of Physics – Sri Lanka, Prof. S R D Kalingamudali & Physics Olympiad Coordinator Prof. S R D Rosa
 18th December 2011



JUNIOR ASTRONOMY OLYMPIAD AWARD CEREMONY – 2011
 Gold / Silver & Bronze Medal Winners of the 1st Junior Astronomy Olympiad Competition – 2011
 With the President of Institute of Physics – Sri Lanka, Prof. S R D Kalingamudali & Astronomy Olympiads Coordinator Prof. Chandana Jayaratne
 18th December 2011



OLYMPIAD AWARD CEREMONY – 2011
 Gold / Silver & Bronze Medal Winners of the 5th Sri Lankan Astronomy & Astrophysics Olympiad Competition – 2011
 With the President of Institute of Physics – Sri Lanka, Prof. S R D Kalingamudali & Astronomy Olympiads Coordinator Prof. Chandana Jayaratne
 18th December 2011



Membership Information

Annual membership fees:

- Fellow - 600
- Member - 400
- Graduate - 300
- Licentiate - 250
- Associate - 200
- Student - 100

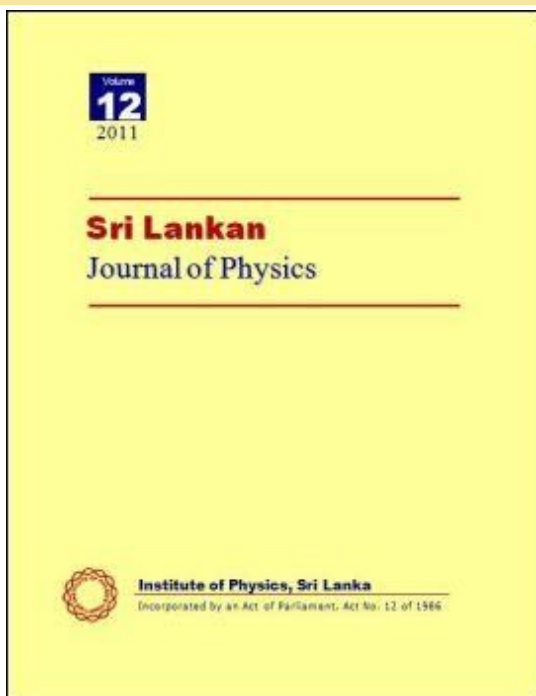
The Council encourage all academics and researchers who are working in Physics related areas to become a member of the IPSL. The Council issue a membership certificate for all members.

An application processing fee of Rs. 250.00 will be charged from all applicants, except from student members.

Life members:

To become a life member, 10 years of equivalent fees is required.

Sri Lanka Journal of Physics



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 SLJOL System: <http://www.sljol.info/index.php/SLJP>

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Call for papers

Papers are now accepted for issue 1 of volume 13 scheduled to be published in the year 2012. The deadlines to accept contributions is 30 April 2012.

The guidelines and instructions for submitting manuscripts can be found in IPSL website, the SLJOL system and also in the inside back cover of the journal.

Event Calendar 2011 / 2012

	Technical Session	IPSL Journal	Olympiad	Other Activities
April 2011	Publish on the web		Physics Olympiad (International)	
May 2011			Deadline 15 May	
June 2011		Publish on the web		
July 2011		Call for papers (2)	Physics, Astronomy & Astrophysics Olympiad (National)	
August 2011				IPSL Newsletter
September 2011		Deadline 31 September		
October 2011	Call for papers			
November 2011	Deadline 31 October			Mailvaganam Oration
December 2011		Publish on the web		
January 2012	Request soft-copies	Call for papers (1)	Award Ceremony	
February 2012			Call for applications	
March 2012	Presentations	Deadline 31 March		AGM

Important dates:

Sri Lankan J. of Physics

Deadline for submission of manuscripts:

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Prof. Malvaganam Memorial Oration

November 2012

IPSL Technical Sessions

Deadline for submission of papers 30 November 2012

Olympiad Award Ceremony

November 2012

Annual General Meeting

March 2013

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