



IPSL - Newsletter

February – 2013

The News Letter of the Institute of Physics, Sri Lanka

Volume 6, Issue 1

INSTITUTE OF PHYSICS, SRI LANKA (IPSL)

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

Council Members 2012 / 2013

President	Professor S.R.D. Kalingamudali
Past President	Professor K.P.S.C. Jayaratne
Vice Presidents	Professor D.D.N.B. Daya Dr. L.B.D.R.P. Wijesundera
Jt. Secretaries	Dr (Mrs) W.J.M. Samaranyaka Dr N.G.S. Shantha
Treasurer	Dr H.H Sumathipala
Asst. Treasurer	Mr N.W.K. Jayatissa
Editors	Dr. R.V. Coorey (until 10/2012) Dr. V.P.S. Perera Dr K.P. Vidanapathirana (from 11/2012)
Members	Professor K.D. Jayasuriya Professor D.U.J. Sonnadara Professor J.R.P. Jayakody Dr (Mrs) U.K. Abeywana Dr (Ms) H.O. Wijewardane Mr R.C.L. De Silva Mr G.H. Asoka

Inside this issue

Information for members	1
AGM 2011/12	2
Technical Sessions	2
New Council	3
Guest Lectures	3
Mailvaganam Memorial Oration	3
Physics & Astronomy Olympiad	4
Membership Application	5
Membership Application	6
Olympiad Highlights– 2012	7
Membership Information	7
IPSL Journal Information	8
Event Calendar	8

Information for members



Physics and Astronomy Olympiad Awarding Ceremony - 2012

The IPSL Olympiads Awards Ceremony-2012 was held on 23 November 2012 at King George Hall, Faculty of Science, University of Colombo. The Chief Guest of this annual event was Vidya Nidhi Professor M.A.K.L. Dissanayake, Emeritus Professor of the University of Peradeniya and Research Professor at the Institute of Fundamental Studies. He awarded Gold, Silver and Bronze medals for those who had excelled in the Sri Lankan Physics Olympiad Competition, Sri Lankan Astronomy and Astrophysics Olympiad Competition and Sri Lankan Junior Astronomy Olympiad Competition.

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.

32nd Annual General Meeting

The 32nd Annual general meeting of the Institute of Physics Sri Lanka was held on 31th March, 2012 at the Board Room of Faculty of Science in the University of Kelaniya. New office bearers and the members of the Council were unanimously elected for the year 2012/2013.

Professor S.R.D. Kalingamudali was elected as the President for the second term. He thanked Dr. L.B.D.R.P. Wijesundera for chairing the council in his absence. Further he thanked all the council members for extending their fullest support in all the activities conducted by the Institute of Physics, Sri Lanka. He appreciated the dedicated work done by the Olympiad Coordinators to uplift the image of IPSL in the society. He did not forget to thank the two joint secretaries, the treasurer and all Council members for their untiring service.

At last the president sought dedicated support from the new council members to carryout the IPSL activities forward.

Papers Presented at the 28th Technical session

Papers were called for the 29th Technical Sessions in September 2012

The 28th technical session of the Institute of Physics, Sri Lanka was also held on 31st March, 2012 at the Board Room of the Faculty of Science in the University of Kelaniya. Professors W. P Siripala, K.D. Jayasuriya, and D.U.J. Sonnada chaired the three sessions.

- Construction of Cu₂O Thin Film Based Light Detector
K.D.R.N. Kalubowila, K.M.D.C. Jayathileka, W. Siripala and J.K.D.S. Jayanetti
- Characterization of Composite Films Made from Tin (IV) Oxide and Aluminium Oxide with Impedance Spectroscopy
C.N. Nupearachchi and V.P.S. Perera
- An Artificial Neural Network Model for River Flow Forecasting
U. Selventhiran, H.L. Premaratne, D.U.J. Sonnada
- Artificial Neural Network based Method for Identification of Indian Palm Squirrel Calls
W.A.M. Madhavi, D.D.N.B. Daya and W.B. Yapa
- Development of a PC based Multichannel Analyzer for Gamma-Ray Spectrometry
W. S. N. Fonseka and M. K. Jayananda
- Quality Assessment of Commercially Available Coconut Oils in Sri Lanka Using Refractometry
M. M. M. Sashya D. Meedenya and Ramal V. Coorey
- Data Acquisition System for a Falling-Sphere Viscometer
K.P.V.B. Kobbekaduwa and W.M.K.P. Wijayarathna
- Sensitization of Photoelectrochemical Solar Cells with a Natural Dye Extracted from *Kopsia flavida* Fruit
M.R. Nishantha, Y.P.Y.P Yapa and V.P.S. Perera
- Fractal Analysis of Cloud Shapes
K.N.R.A.K. Madhushani and D.U.J. Sonnada
- Design and Construction of Cost Effective Turbidimeter to be Used in Water Purification Plants in Sri Lanka
D.M.A.Ranasinghe and T.R. Ariyaratne
- Investigation of the Peltier Cooling Effect Using Low Cost n-Cu₂O and p-Cu₂S Semiconductors
K.M. Kumarasiri, R. P. Wijesundera and U. K. Abeywarna
- Determination of the Temperature Coefficient of the Refractive Index of Liquids for Immersion Lithography
D. R. A. Mendis and W. J. M. Samaranayake
- Monitoring Temperature Change on a Surface to be Used as an Early Warning System of Fire
E.M.D. Siriwardane, C.K.G. Piyadasa and W.M.K.P. Wijayarathna
- Biodegradable Plantain Pith for Galvanic Cells
N. Jayashantha, K.D. Jayasuriya and R.P. Wijesundera
- Classification of Birds using FFT and Artificial Neural Networks
Anuradha Abewardana and D.U.J. Sonnada
- Revisiting the Physics behind Siphon Action
N.W.K.T.R. Nanayakkara and S.R.D. Rosa

New Council

Institute of Physics – Sri Lanka

Council 2012 / 2013



Seated row (L-R): Dr. W.J.M. Samaranyaka (Joint/Secretary), Prof. D.D.N.B. Daya (Vice President), Dr. H.H. Sumithipala (Treasurer), Prof. K.P.S.C. Jayaratne (Immediate Past President), Prof. S.R.D. Kalingamudali (President), Dr. L.B.D.R.P. Wijesundera (Vice President), Dr. V.P.S. Perera (Co-Editor), Dr. N.G.S. Shantha (Joint/Secretary)
 Standing Row (L-R): Prof. D.U.J. Sonnadara (Council Member), Prof. K.D. Jayasuriya (Council Member), Mr. R.C.L. De Silva (Council Member), Prof. J.R.P. Jayakody (Council Member), Mr. G.H. Asoka (Council Member), Dr. (Miss) H.O. Wijewardane (Council Member)

Guest Lectures – 2012

Lecture on “Aerodynamics” was delivered by Eng Dr D.H.R.J. Wimalasiri, Senior Lecturer, Department of Mechanical Engineering, Faculty of Engineering, Open University of Sri Lanka on 7th March 2013 at PLR2 Hall, Faculty of Science, University of Colombo.

Mailvaganam Memorial Oration – 2012



The Mailvaganam memorial Oration titled “*Sustainable Development – Is Sri Lanka on the right path*” was delivered by Dr Janaka Ratnasiri a former Deputy Director of the Ceylon Institute of Scientific and Industrial Research (now called Industrial Technology Institute) on 23rd November 2012 at the Physics Conference Room, Department of Physics, University of Colombo. He was a former Chief Technical Adviser to the Ministry of Environment and a past General President of the Sri Lanka Association for the Advancement of Science and the Institute of Physics Sri Lanka. He was also a student of

Professor Mailvaganam at the department of Physics in the University of Colombo.

Physics and Astronomy Olympiad Competitions

The 8th Sri Lankan Physics Olympiad Competition, 6th Sri Lankan Astronomy and Astrophysics Olympiad Competition and 2nd Sri Lankan Junior Astronomy Olympiad Competition were held on 14 July 2012 at the Colombo, Eastern, Jaffna, Kelaniya, Peradeniya, Ruhuna, and Vavuniya universities (however, some centres were shifted to nearby outside public places due to the Trade Union action of the University academic staff members).

Physics Olympiad

A total of 633 students participated in the 8th Sri Lankan Physics Olympiad Competition. Eight students have been selected to participate in the 14th Asian Physics Olympiad scheduled to be held from 5-13 May 2013 in Bogor, West Java, Indonesia, and 5 students will be selected to participate in the 44th International Physics Olympiad scheduled to be held from 7-15 July 2013 in Copenhagen, Denmark.

Following students participated in the 13th Asian Physics Olympiad held from 30 April to 7 May 2012 in New Delhi, India: Welisarage Rochelle Crishani Fernando (Devi Balika Vidyalaya, Colombo 8), Dombagaha Gedara Prasad Randika Maithriepala (Royal Central College, Polonnaruwa), Liraj Harsha Prabath Kodithuwakku and Madivilage Janidu Chandrashantha Gunarathna (Royal College, Colombo 7), Chanaka Manoj Singhabahu (Ananda College, Colombo 10), Edurapotha Gamaralalage Inoka Amanthie Dharmasena (Uwa Science College, Haliela) and Akila Kasunjith Hettiarachchi (St Thomas College, Mount Lavinia).

Following students participated in the 43rd International Physics Olympiad held from 15–24 July 2012 in Tallinn and Tartu, Estonia: Dombagaha Gedara Prasad Randika Maithriepala (Royal Central College, Polonnaruwa), Liraj Harsha Prabath Kodithuwakku and Madivilage Janidu Chandrashantha Gunarathna (Royal College, Colombo 7), Chanaka Manoj Singhabahu (Ananda College, Colombo 10) and Edurapotha Gamaralalage Inoka Amanthie Dharmasena (Uwa Science College, Haliela).

On behalf of the IPSL, Dr R.V. Coorey accompanied the contestants in both competitions as the national representative and team leader. It was noted that some of the suitable students did not participate for the above competitions due to the limitation of age, A/L examination and several other reasons.

Astronomy and Astrophysics Olympiad


A total of 285 and 749 students participated for the 6th Sri Lankan Astronomy and Astrophysics Olympiad competition, and the 2nd Sri Lankan Junior Astronomy Olympiad competition respectively. A team of five students excelled in the national competition will be selected to participate for the 7th International Olympiad on Astronomy and Astrophysics competition which will be held in Volos, Greece from 27 July to 5 August 2013.

A team comprising of five students who excelled at the 5th Sri Lankan Astronomy and Astrophysics Olympiad (SLAAO)-2011 were sent to the 6th International Olympiad on Astronomy and Astrophysics (IOAA-6) held from 4-14 August 2012 in Rio de Janeiro, Brazil. However, the first four students who obtained best results at the 5th SLAAO could not participate due to the A/L examinations held in August overlapped with the 6th IOAA dates in 2012. The team to Brazil was headed by the National Coordinator Professor K.P.S.C. 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, Planetarium and by the scientists at the Astronomical Observatory in the Arthur C Clarke Institute for Modern Technologies, Katubedda, Moratuwa. The five participants were: Munaweera Kankanamage Banuka Dimuthu Kularatne (Nalanda College, Colombo 10), Lamappulage Dona Tharika Dishani (Devi Balika College, Colombo 08), Udugamasuriyage Dian Indula (Ananda College, Colombo 10), Sembukutti Arachchige Ayodya Bede Thejasiri (De Mazenod College, Kandana) and Bellana Vithanage Ashan Chathuranga (Isipathana College, Colombo 05). Udugamasuriyage Dian Indula (Ananda College, Colombo 10) received an Honorable Mention Award and Lamappulage Dona Tharika Dishani (Devi Balika, College, Colombo 08) won the prize for the Logic Competition.

In addition, two students were sent to the 17th International Astronomy Olympiad (IAO 2012) held from 16-24 October 2012 in Gwangju, Korea. This was the 1st time a team from Sri Lanka participated in an IAO event. The team was headed by the National Coordinator Prof. K.P.S.C. Jayaratne. The two participants were: Sembukutti Arachchige Ayodya Bede Thejasiri (De Mazenod College, Kandana) and Bellana Vithanage Ashan Chathuranga (Isipathana College, Colombo 05) who had already participated in the IOAA-6.



Membership Application

	INSTITUTE OF PHYSICS, SRI LANKA Vidya Mandiraya, 120/10, Wijerama Mawatha, Colombo – 00700, Sri Lanka. <i>(Incorporated by an Act of Parliament, Act No.12 of 1986)</i>	Membership No. (For office use only)	
	APPLICATION FOR MEMBERSHIP		
FOR : Fellow <input type="checkbox"/> Member <input type="checkbox"/> Graduate <input type="checkbox"/> Licenciante <input type="checkbox"/> Associate <input type="checkbox"/> Student <input type="checkbox"/>			
By: Election <input type="checkbox"/> Transfer <input type="checkbox"/>			
01. Full Name:			
02. Name with initials:			
03. Title: Rev. <input type="checkbox"/> Prof. <input type="checkbox"/> Dr. <input type="checkbox"/> Mr. <input type="checkbox"/> Mrs. <input type="checkbox"/> Miss. <input type="checkbox"/>		04. Date of Birth:	
05. Office Address:			
Phone:		Email:	
06. Home Address:			
Phone:		Email:	
07. Address for Correspondences: Office <input type="checkbox"/> Home <input type="checkbox"/>			
08. Qualifications:* (<i>attach certified copies of certificates</i>)			
<u>University/Institution</u>	<u>Subjects</u>	<u>Degree/Diploma</u>	<u>Date of Award</u>
09. Field of Specialisation (<i>if any</i>):			
10. Professional Experience:* (<i>Start with present employment</i>)			
<u>Name of Employer</u>	<u>Post</u>	<u>Duration</u>	<u>Nature of Work</u>
11. Publications:*			

Membership Application

- 2 -

12. Membership of other professional bodies:

13. Proposer and Seconder:

Proposed by: Name:..... (Member / Fellow)

Signature:..... Date:.....

Secoded by: Name:..... (Member / Fellow)

Signature:..... Date:.....

14. **Declaration**

I agree to abide by the rules and the regulations of the Institute of Physics, Sri Lanka, in the event of my election.

I declare that the statements made by me above are true and accurate to the best of my knowledge.

Date:..... Applicant's Signature:.....

Note: Cheques / Bank Drafts should be drawn in favour of "INSTITUTE OF PHYSICS, SRI LANKA"
 Read the IPSL information bulletin for membership information, requirements, fees, etc.

(*: if necessary, additional pages may be attached)

(For Office Use Only)

I. **Membership Committee:** Applicant is **eligible / not eligible** to be **elected / transferred to** as a Fellow / Member / Graduate / Licentiate / Associate / Student of the IPSL.

Date: Membership Committee Chairman:.....

Comments (if any) :.....

II. **Council Approval:**

The application of Prof./Dr./Mr./Mrs./Miss.
was considered by the Council on and it was decided to Elect / Transfer the applicant as a Fellow / Member / Graduate / Licentiate / Associate / Student member of the Institute of Physics, Sri Lanka with effect from today.

Date: President:

III **Application Fee, Membership Fee & Membership No.:** Paid Rs..... on

Receipt No: Membership No.: Letter Sent on:

Olympiad Highlights – 2012



Team Sri Lanka together with guide Natalia at the Inauguration of the 6th IOAA



In front of a meteorite (mass is said to be 4200 times that of an official football) at the Brazilian National Observatory



Camera Captures of Award Ceremony– 2012 of the Sri Lankan Olympiad competition

Membership Information

Annual membership fees:

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

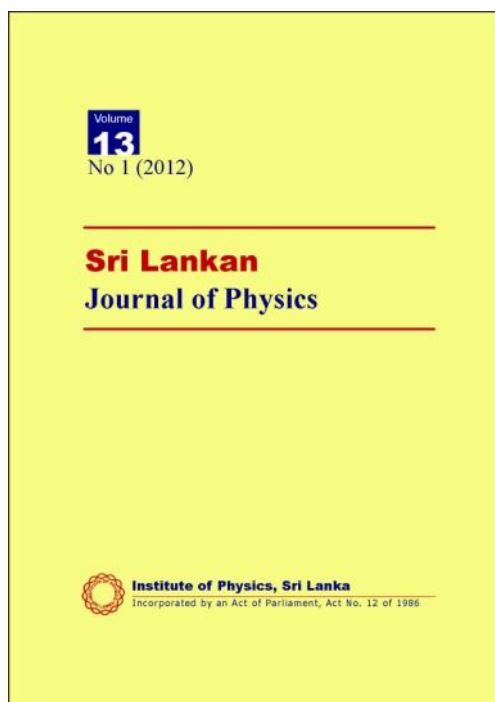
The council encourage all academics and researchers who are working in physics related areas to become member of the IPSL. The council issue a membership certificate for all the members.

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



Editor in Chief

- Professor K.D. Jayasuriya (University of Kelaniya)

Associate Editors

- Professor WGD Dharmaratne (University of Ruhuna)
 - Professor JKDS Jayanetti (University of Colombo)
 - Professor KPSC Jayaratne (University of Colombo)
 - Professor AGU Perera (Georgia State University)
 - Professor DUJ Sonnadara (University of Colombo)
 - Professor WL Sumathipala (Open University of Sri Lanka)
 - Professor RC Woods (Louisiana State University)

Ex-Officio

- Professor SRD Kalingamudali (University of Kelaniya)

Copy Editor

- Dr PS Hewageegana (University of Kelaniya)

Call for papers

Papers are now accepted for issue 2 of volume 13 scheduled to be published in the year 2013. The deadlines to accept contributions is 31 March 2013.

The guidelines and instructions for submitting manuscripts can be found in IP SL website and also in the inside back cover of the journal.

Email: editor@ip-sl.org,

Web: <http://www.ip-sl.org>

Event Calendar 2012 / 2013

	Technical Sessions	IPSL Journal	Olympiad	Other Activities
Apr, 2012	Publish on the web		Physics Olympiad (International)	
May, 2012			Deadline—May 15	
Jun, 2012		Publish on the web		
Jul, 2012		Call for papers (2)	National Competition (Physics & Astronomy Olympiad)	
Aug 2012				Call applications computer simulation Contest
Sep, 2012		Deadline—Sep 31		
Oct, 2012	Call for papers			
Nov, 2012	Deadline—Oct 31		Award Ceremony	Prof. MML
Dec, 2012		Publish on the web		
Jan, 2013	Request softcopies	Call for papers (1)		
Feb, 2013			Call for applications	IPSL News letter
Mar, 2013	Presentations	Deadline—Mar 31		AGM

Important dates:

Sri Lankan J. of Physics

Deadline for submission of manuscripts:

Vol 14, Issue 1— 31st March 2013

Prof. Mallvaganam Memorial Oration

November 2012

IPSL Technical Sessions

Deadline for submission of papers— 30th November 2012

Olympiad Award Ceremony

November 2012

Annual General Meeting

March 2013

Contact Information:

PAYMENTS: jrpj@kln.ac.lk

MEMBERSHIPS: jayatissa@kln.ac.lk

PHYSICS OLYMPIAD: rosa@phys.cmb.ac.lk

ASTRONOMY & ASTROPHYSICS OLYMPIAD:
chandana@phys.cmb.ac.lk

PHYSICS DATABASE & JOURNAL

upul@phys.cmb.ac.lk

PHYSICS MAGAZINE: kamalpv@wyb.ac.lk