



Revised annual membership fees:

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

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. For active members, up to 5 years membership equivalent fees can be waived.

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Theme Seminar and Annual General Meeting

The 24th Technical Session and 29th Annual General Meeting of the Institute of Physics Sri Lanka was held on March 29th 2008 at the New Physics Lecture theatre, Department of Physics, University of Colombo. New office bearers and the members of the Council were unanimously elected for the year 2008. Dr. W.L. Sumathipala highlighted the importance of organizing fund generating programs for IPSL.



Member gathering at the 24th Technical Session

As a special event, a theme seminar was held in conjunction with the technical sessions. Following scientists were invited to deliver lectures of the theme seminar:

1. Physics in Post-harvesting Technology by Prof. T. R. Ariyaratne, University of Colombo
2. Review of Solar Energy Research in Sri Lanka by Prof. W. P. Siripala, University of Kelaniya
3. Prospects for Geo-Physical Research in Sri Lanka by Prof. D. A. Tantrigoda, University of Sri Jayawardenepura

Papers Presented at the 24th Technical Sessions

MORNING SESSION

- *Comparison of firmness of tomato varieties grown in Sri Lanka*, C.L. Ranatunga, H.H.E. Jayaweera and T.R. Ariyaratne
- *Estimation of the speeds of moving vehicles from video sequences*, L.G.C. Wimalaratna and D.U.J. Sonnadara
- *Detection and extraction of road traffic signs*, W.K.I.L. Wanniarachchi, D.U.J. Sonnadara and M.K. Jayananda
- *Dispersion of ink through papers*, D.P. De silva, T.R. Ariyaratne
- *Revisiting the mysterious Mpemba effect*, R.P. Gamage and S.R.D. Rosa
- *Analysis of human voice using non-linear techniques*, H.P. Mahabuduge and M.K. Jayananda

AFTERNOON SESSION

- *Study of charge transport & carrier lifetime in dye-sensitized Solar Cells made from gold particle embedded SnO₂ films*, R.C.L. De Silva, L.S.G. Liyanage and V.P.S. Perera
- *Removal of ocular artifacts from EEG signals in brain computer interface*, Z. Sakkaff and A. Nanayakkara
- *The critical closing pressure and resistance area product of the cerebral circulation*, U.G. Jayasekera
- *Recording of the acoustic signal from the stethoscope electronically & investigation of abnormalities in the heart function*, T.S. Yogeewaran, J.A.P. Bodhika, D.D.N.B. Daya and K.D.I. Wasudeva
- *Construction of a low cost electronic heart sound monitoring system*, T.S. Yogeewaran and D.D.N.B. Daya
- *Construction of a proton magnetometer*, W.D.S. Ruhunusiri and M.K. Jayananda



The 4th Sri Lankan Physics Olympiad Competition was held on July 12, 2008.

The 9th Asian Physics Olympiad was held in Mongolia from 20 to 28 April, 2008.

The 39th International Physics Olympiad was held in Vietnam from 20 to 29 July, 2008.

Sri Lankan Physics Olympiad Competition

Annually, the Institute of Physics conducts an island - wide competition called “Sri Lankan Physics Olympiad” to recognize and promote Physics among A/L students. The local competition takes place normally at the universities of Colombo, Peradeniya, Kelaniya, Ruhuna, Jaffna and Batticaloa.

The best students receive medals and certificates from the Institute of Physics, Sri Lanka. Based on the marks obtained from this local competition, the best eight and five students are selected to participate in the Asian Physics Olympiad (APhO) and International Physics Olympiad (IPhO), respectively. They are trained extensively before attending the international competitions.



For the 1st Sri Lankan Physics Olympiad competition held in 2005, a total of 559 students participated. IPSL awarded 46 Gold, Silver and Bronze medals. In the year 2006, a total of 834 participated and 78 were awarded Gold, Silver and Bronze medals. In 2007 competition, a total of 921 participated and 46 were awarded Gold, Silver and Bronze medals. In 2008 competition, a total of 818 participated and award winners are now being finalized.

Dr. R.V. Coorey and Dr. C.M. Edirisinghe accompanied four students who participated in the 39th IPhO held in Vietnam from 20th - 29th July 2008.



The 2nd National Astronomy and Astrophysics Olympiad Competition was held on March 29, 2008.

The 2nd International Olympiad on Astronomy and Astrophysics was held in Indonesia from 19 to 28 August, 2008.

Astronomy Olympiad

First International Olympiad on Astronomy and Astrophysics (IOAA) competition was held in Thailand in 2007 and the 2nd IOAA was held in Indonesia in 2008. The goals of IOAA are to promote interests and education on Astronomy and Astrophysics among the students.



Those who sat for the 1st National Astronomy and Astrophysics Olympiad competition held in 2007 won 10 national awards. The five outstanding students represented Sri Lanka at the first IOAA competition held in Thailand in 2007. The 2nd National Astronomy and Astrophysics Olympiad competition was held in March 2008. Results of this competition will be published on the web soon. Five students selected from the national competition represented Sri Lanka in the 2nd IOAA held in Indonesia in 2008.

Dr. K.P.S.C. Jayaratne accompanied five students who participated in the 2nd IOAA held from 19th– 28th August 2008 in Indonesia.



The 1st Sri Lankan Junior Science Competition was held on August 17, 2008.

The 5th International Junior Science competition will be held in South Korea from 7 to 16 December, 2008.

Junior Science Olympiad

Since 2004 the International Junior Science Olympiad (IJSO) competition has been held in different countries. Participation of this competition gives opportunities to young talented students from all over the world to share experiences and face challenges in solving Science problems. According to the guidelines of IJSO, each nation could send a team of six students for the IJSO.

The 1st island-wide competition to recognize and promote Science among O/L students "The Sri Lankan Junior Science Olympiad Competition" was held on August 17, 2008 at the Universities of Colombo, Peradeniya, Kelaniya, Ruhuna, Jaffna, Eastern and Uva-Wellasa. Results of this competition will be published on the web soon. A maximum of six students will be selected to participate in the 5th International Junior Science Olympiad Competition which will be held in South Korea in December 2008.

Event Calendar 2008

	Technical Sessions	IPSL Journal	Olympiad	Other Activities
Apr, 2008	Publish on the web		Physics Olympiad (Asian—Mongolia)	
May, 2008			Junior Olympiad	Membership Drive
Jun, 2008		Publish on the web	Deadline—May 15	
Jul, 2008		Call for papers (2)	National Competition Physics Olympiad	
Aug 2008			Astronomy Olympiad (International—Indonesia)	IPSL News Letter
Sep, 2008		Deadline—Sep 31		
Oct, 2008	Call for papers		Award Ceremony	Prof. MML
Nov, 2008	Deadline—Nov 30			
Dec, 2008		Publish on the web		Member database—Publish on the web
Jan, 2009	Request softcopies	Call for papers (1)	Deadline—Apr 30	
Feb, 2009			Call for applications	
Mar, 2009	Presentations	Deadline—Mar 31	National Competition Astronomy Olympiad	AGM—Mar 15

Important dates:

Sri Lankan J. of Physics—
Deadline for submission of manuscripts:
Vol 9, Issue 2—Sep 31, 2008
Vol 10, Issue 1—Mar 31, 2009

Physics Olympiad Competition—
National examination was held on Jul 12, 2008

Junior Science Olympiad Competition—
National examination was held on August 17, 2008

Teacher Workshops—Towards
Oct 2008 and Jan 2009

Prof. Mailvaganam Memorial
Lecture—Oct 2008

IPSL Technical Sessions—Deadline
for submission of papers:
Nov 30, 2008

CPD workshops—Tentative dates:
Sep/Dec 2008

Annual General Meeting—
Mar 15, 2009

Past Achievements of Our Students in International Events

36th International Physics Olympiad, Spain, 2005 - Two Honorable Mentions

The awardees were, Mr. Nuwan Ganganath of Maliyadeva College, Kurunegala and Mr. Gayan Jayasumana of Kalutara Vidyalaya. In addition, Mr. Nuwan Ganganath was able to win the special prize awarded to the best student from the newly participated countries in the last three years.

37th International Physics Olympiad, Singapore, 2006 - One Honorable Mention

The awardee was, Mr. Tharindu Rukshan Bandaragoda of Richmond College, Galle.

8th Asian Physics Olympiad, China, 2007 - Bronze Medal

The first ever medal for Physics won by a Sri Lankan student was secured by Mr. Buddhi Wejerathna of Maliyadeva College, Kurunegala. Furthermore, he was the recipient of the special prize awarded to the best student among the newcomers.

1st International Olympiad on Astronomy and Astrophysics, Thailand, 2007 - Three Honorable Mentions

The awardees were, Mr. B D S Muthusinghe Nalanda College, Colombo, Mr. G D A Ariyawansa Nalanda College, Colombo and Mr. C M Rathnayake Dharmaraja College, Kandy.

9th Asian Physics Olympiad, Mongolia, 2008 - One Honorable Mention

The awardee was, Mr. Kirthevasan Kandasamy of S. Thomas' College, Mount Lavinia.

39th International Physics Olympiad, Mongolia, 2008 - Bronze Medal and One Honorable Mention

The awardees were, Mr. Kirthevasan Kandasamy of S. Thomas' College, Mount Lavinia and Nayana Sumanga Rajapakse of Anda College, Colombo 10.

2nd International Olympiad on Astronomy and Astrophysics, Indonesia, 2008 - One Honorable Mention

The awardee was, Mr. Yasith Mathangasinghe of Dharmaraja College-Kandy.



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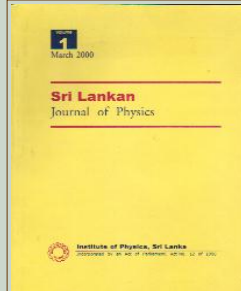
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- Dr. W.L. Sumathipala

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Short Communications:

1. Comparison of RegCM3 simulated meteorological parameters in Bangladesh: Part I - Preliminary result for rainfall, Md. Mizanur Rahman, Md. Nazrul Islam, Ahsan Uddin Ahmed and Romee Afroz
2. Comparison of RegCM3 simulated meteorological parameters in Bangladesh: Part II - Preliminary result for temperature, Md. Mizanur Rahman, Md. Nazrul Islam, Ahsan Uddin Ahmed and Romee Afroz
3. Effect of sputtering conditions on the gas sensitivity of copper oxide thin films P. Samarasekara and N.U.S. Yapa

Research Articles:

1. Optical properties of Poly-[2-methoxy-5-(2-ethyl-hexyloxy)-phenylene vinylene and its application in photovoltaic cells, P.M. Sirimanne and E.V.A. Premalal
2. Artificial muscles based on Polyacrylonitrile based polymer electrolyte, K. Perera, K.P. Vidanapathirana and M.A.K.L. Dissanayake
3. Electrochemical properties of LiCo_{0.4}Ni_{0.6}O₂ and its performance in rechargeable lithium batteries, N.W.B. Balasooriya and P.W.S.K. Bandaranayake

General Information

Mailvaganam Memorial Lecture (2007)

Application of Physics in Agriculture

Prof. T.R. Ariyaratne

Summary:

Agriculture is undoubtedly the most important and widely practiced discipline by the human being. These practices have their roots dated back to ancient civilizations, and the developments of all kinds of ancient technologies by the man were closely tied up with agriculture. With the industrial revolution, and the subsequent advancement of technologies, the agriculture was gradually transformed into a knowledge based industry. This was mainly due to the great deal of scientific research that had gone into improving the productivity and the quality of agricultural products. One of the major challenges faced by many nations belong to the developing world today, is the transferring of such knowledge to farmers who are accustomed to traditional agricultural farming, and post harvesting techniques. It is very common in developing countries that substantial percentage of agricultural produce go in waste due to poor harvesting, processing, packing, and transportation techniques. Drying of paddy (rice) under high humid conditions, damaging of fruits in harvesting and packing, vibration induced damages to fruits and other soft agricultural produce while transportation on poor roads are, for example, some of the problems faced by farmers in Sri Lanka. An attempt that has been made to address some of the above mentioned problems and find solutions, is presented.

National database on Physics research

The IPSL now maintains a database on publications carried out by Sri Lankans residing in Sri Lanka and abstracts of postgraduate degrees awarded by Sri Lankan Universities and Institutions related to Physics. The Institute hopes that this will become the primary source to obtain information related to Physics research in Sri Lanka and to contact potential researchers/supervisors.

Physicists, postgraduate students or their supervisors could submit information regarding their work directly to editor@ip-sl.org to be included in this database.

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

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Call for Papers

25th Technical Sessions
Deadline: Nov 30, 2008