



# IISc Alumni

Newsletter of IISc Alumni Association

*IIScAA Wishes You*



Volume 6 Issue 4 December 2013

*A Happy New Year 2014*

## Felicitation to Bharat Ratna, Prof. C.N.R. Rao



IISc. Alumni Association had the great privilege of felicitating Prof.C.N.R.Rao, Honorary President, Linus Pauling Research Professor, National Research Professor, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, on Friday, January 10, 2014 at the Faculty Hall, IISc, on being conferred Bharat Ratna by the Government of India.

Prof. Arcot Ramachandran, Former Secretary to the Department of Science and Technology and Former Director, Indian Institute of Technology-Madras, presided over the function. Prof. N. Balakrishnan, Prof. G. Padmanaban and Dr. V. K. Aatre spoke on the occasion.

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## Notes from the Secretary

Dear Fellow Alumni & Alumnae of IISc

Wish you a happy New Year 2014. We, at the IIScAA, have a number of activities lined up to start the New Year. These include the Annual Sports Meet and 'Honouring the Gurus' slated in January. Additionally, we just organized a function to felicitate Professor C.N.R. Rao, on the occasion of him being selected for the rare honour of Bharat Ratna.

World over, great universities and their alumni share a mutually-enriching relationship. The professional laurels and achievements of the alumni reflect positively on the university and generous financial support from alumni allows for new academic and research activities. For an alumni, his/her alma mater is an important part of his/her professional identity, so they would like it to thrive and be famous. In India too, IITs and IIMs share this symbiotic relationship with their respective alumni while our alma mater has a different view. IISc – being a research focused institution – thinks that the

research output of its current faculty and staff should alone be used to judge it. However, such an approach does not seem to work, at least when it comes world university rankings, which tend to give significant weightage to research. This being the case, I believe that there is an immediate need for IISc and its alumni to work together - much more closely than what has been practiced hitherto, so that both can benefit from each other in a substantial way. The alumni of IISc have played – and continue to play – an important role in the science and engineering landscape of the country. It is in the best interest of IISc to highlight it as much as possible. It is also imperative for the alumni to make their accomplishments taken notice by their alma mater and their voice heard in the portals of IISc. The role of IIScAA, as an enabler of this two-way exchange, will be crucial in times to come and we look forward to your enthusiastic participation in that process.

**Upadrasta Ramamurty**

## President's Desk

Dear Colleagues,

IISc. Alumni Association wishes all its members and spouses a very Happy Sankranti.

As mentioned in the last issue of the newsletter we are going ahead with the Global Conference of IISc. Alumni Association in the month of December 2014. The Convener for this Conference is going to be Shri. V. Babu Sathian. This is the third in the series and two have been conducted at USA.

The popular Science Forum lectures are going on as scheduled and we are happy that we are continuing with this series under your patronage.

The Annual Sports Meet is planned for January 19, 2014. There will be some social and interesting entertainment programme in the coming months. The honouring of Gurus is planned for January 26, 2014 and five Gurus are being honoured on that day.

My sincere request to all members to attend the programmes planned by IISCAA in large numbers and encourage us to conduct many more interesting programmes for you in future.

Thanking you all and looking forward to meeting a large cross section of members in the future programmes.

**H R Parthasarathy**

## Editorial

Dear readers,

On behalf of Editorial Board, I extend a very warm Happy New Year 2014 and Happy Sankranti.

The felicitation programme conducted recently by IISCAA in the honour of Prof. C.N.R. Rao for getting the highest civilian honour was highly inspirational. Let us all congratulate "the real jewel of India and the world". Prof. Rao is an embodiment of Science and Science is everything for him. Prof. Rao is a noble scientist and his contributions to the scientific community is unquestionable from all corners, in terms of number of research publications, awards and doing Science. He is a role model to all of us and the next generation.

In the felicitation programme Prof. Rao proclaimed that "nothing prevents Institute being top 10 or top 20 with little more hardwork, it is possible to achieve this. As Faraday remarked that 'it lies in picking the right problem' - the Institute should cross the threshold. India should not be competing with numbers but it should be competing with quality". Prof. Rao recalled how difficult it was in those early days in the Institute when there were no spectrometer, no furnace, very little budget, but still were motivated and engrossed to do research.

The last word Prof. Rao emphasized was that whether or not getting a noble prize, doing Science is very important; that gives the satisfaction, which no other thing can give in the world.

Please feel free to express your views about our newsletter by email: [iiscaanlg@yahoo.com](mailto:iiscaanlg@yahoo.com)

**H K Anasuya Devi**

## IISCAA Science Forum – Popular Lecture Series

### The Fortieth Lecture ( October 5, 2013 )

Topic : " Solar Electricity "

Speaker : **Dr. K. S. Srinivas**

Retired Executive Director, BHEL, Bangalore

Currently working as independent Consultant and serving in various Committees of the Ministry of New & Renewable Energy and DST

Moderator : Shri. Srinivasa Adiga



### The Forty Second Lecture ( December 28, 2013 )

Topic : "Design Challenges in Satellite Antenna System"

Speaker : **Prof. V. Mahadevan**

Group Director, ISRO (Retd), Professor, People's Education Society Institute of Technology, Bangalore

Moderator : Dr. Surendra Pal



### The Forty First Lecture ( November 16, 2013 )

Topic : "Black Holes: Imprints of the Invisible"

Speaker : **Prof. C. V. Vishveshwara**

Former Senior Professor, Indian Institute of Astrophysics, Emeritus Director, Jawaharlal Nehru Planetarium, Bangalore

Moderator : Shri. Nagraj Rao



### Link to videos :

<http://mmcr.iisc.ernet.in:8008/cgi-bin/nwayfiles.py>, In the Folder Name, please select IISCAA and click on Search.

You can view the videos of the Lectures by clicking on Flash, Quicktime, VLC.

**H R Parthasarathy**

## Awards and Honours

Prof. U. Ramamurty, CNR Rao Prize Lecture in Advanced Materials, Materials Research Society of India, 2014; J.C. Bose National Fellowship, 2013 – 2018.

Prof. M. L. Munjal awarded "Prof. Jai Krishna Memorial Award 2013" by the Indian National Academy of Engineering (INAE) in recognition of his "sustained excellence with ethics".

Dr. Kalpathy B. Sundaram (BE 1973 ECE), Professor and Graduate Coordinator, Dept. of Electrical Engineering & Computer Science, University of Central Florida, Orlando, FL 32816, is awarded the 2013 Class Fellow of the Electrochemical Society. The citation was announced at the 224th Electrochemical Society Meeting in San Francisco, CA, October 27-31, 2013.

Prof. Saumitra Das, Ranbaxy Research Award 2012 in the field of Medical Sciences - Medical Research; Selected as J.C. Bose Fellow, DST, Govt. of India, CES, IISc

Prof. Raghavendra Gadagkar, Elected President, Indian National Science Academy, New Delhi, 2014-2016. Honorary Professor, Indian Institute of Science Education and Research, Mohali, India, 2013-2016.

Prof. A. Abraham Birth Centenary Lecture, Jawaharlal Nehru Tropical Botanic Garden & Research Institute, Thiruvananthapuram, Kerala, 1st November 2013.

Prof. R. Sukumar, Fellow, Third World Academy of Sciences, 2013.

## Karnataka Hybrid Micro Devices Limited

**E S Dwarakadasa, Karnataka Hybrid Micro Devices Limited**

(Prof. E.S. Dwarakadasa is an alumnus of the Indian Institute of Science and served the institute as a professor for more than four decades. After his retirement, he co-founded the Karnataka Hybrid Micro Devices Limited, market leader in microelectronics products for aerospace, defense and automotive industries)

Karnataka Hybrid Micro Devices Limited (KHMDL) is a diversified company focusing on Design, Development and Manufacture of Thick Film Hybrid Microcircuits and Equipment for Spacecraft, Aviation and Automotive Industries. It is an ISO 9001-2008 and TS-16949 certified company with approvals from CEMILAC & DGAQA. The 6000 sq.metre manufacturing facility is located in Electronics City; Bangalore houses the state-of-the art hybrid manufacturing lines and a high-end avionics assembly line. A dedicated R&D Centre recognized by DSIR is engaged in the development of aerospace devices, automotive electronics and solid state lighting products for aviation and defense applications.

The senior management team has more than 250 man-years of experience in material sciences, spacecraft and aircraft industries.

KHMD is a market leader in hybrids and has indigenized more than 30 types of hybrid microcircuits for automotive applications. It has the heritage of supplying 25 million devices for various high-reliability applications at six-sigma quality level. Its microelectronics products are used in almost all operational space crafts launched by ISRO and meet the stringent quality levels required for 15-year operational life in compliance to MIL-PRF-385341 Class K quality level. KHMD has the heritage of manufacture of more than 25000 complex avionics board assemblies for 250 aircraft.

KHMD has been focusing on cutting-edge technologies and the products include Safety lighting for helicopters, Laser-based Free Space optics for communication, LED based lighting for Military and Airport applications, DC-DC Convertors, Automotive Voltage Regulators and Rectifiers, Power Window Regulators with Anti-pinch features for



Active Laser trimming of Resistors



Reliability Evaluation Laboratory



Space-grade Microcircuit Inspection

automotive application and a variety of drivers for solid state commercial lighting incorporating hybrid microcircuits for high-reliability.

Product assurance has been the primary driver in delivering reliable products and the in-house test and evaluation laboratory approved by ISRO caters to the screening and environmental testing of components and sub-systems. KHMD currently is executing a contract for the reliability evaluation of COTS Li-Ion cells for space missions.

The mission goal is to " Be a global player in high-end microelectronics products and services" for aerospace and strategic applications.

**E S Dwarakadasa**

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## Exhibitions at Archives and Publications Cell

The Archives and Publications Cell (APC) aims to showcase the research activities of the various departments of The Indian Institute of Science (IISc) through a series of exhibitions.

The first Exhibition was on the Open Circuit Wind Tunnel of the Aerospace Department. It was inaugurated by the Chairman of the Department, Professor Debasish Ghose on the 1st of October 2013. On display were different models that were tested at the wind tunnel for endurance and performance, as well as for structural stability and aerodynamic design for wind velocities upto 250 Km/hr.



There were 12 models on display at the exhibition. The exhibits included scaled down models of the Light combat Aircraft (LCA), an aero elastic model of a chimney, model of the Asian games Talkatora swimming pool at the ASIAD village, ISRO's satellite launch vehicles, an umbilical tower, a Tata Teko truck and several other models.

The Open Circuit Wind tunnel at IISc was inaugurated in 1959 by the then Maharaja of Mysore Sri Jayachamrajendra Wodeyar. The transcript of the original speech delivered by the Maharaja was also on display.

On display were also several archival photographs associated with the Aerospace Department. Several visitors came forward to help us identify people in the photographs.



Overall the exhibition evoked an overwhelming response from alumni, faculty and students. It also attracted several visitors from outside the Institute fraternity.

The second Exhibition RIPPLES... Knowledge in action from Centre for Product Design and Manufacturing was inaugurated by the chairman of the department Professor Anindya Deb on the 9th of December 2013.

The exhibition has on display 12 prototype/models all conceived designed and built by the students of CPDM under the guidance of the faculty.

The CPDM Department has eight labs in all. They are the HER Lab-Human Research laboratory, the SuDesi Lab Sustainability by Design laboratory, The VR Lab -Virtual Reality lab, The Car Lab- Creative Automotive Research/Creative Analysis-Realize laboratory, the PLM Lab- Product Lifecycle Management laboratory, The RIMM Lab- Research in Materials and Manufacturing Laboratory, SCALE Lab- Computerized Anthropometry and Ergonomics Simulation Laboratory, and the Ideas Lab-Innovation, Design Study and Sustainability laboratory.



On display at the on-going exhibition are: Several posters explaining the various design concepts and projects undertaken by the M.Des (Masters in Design) students of CPDM; scientific publications and books by CPDM faculty and students.

The CPDM exhibition is currently on at the Exhibition Hall of the Archives and Publications Cell (APC), which is situated in the erstwhile NCSI Building -Opposite the IISc Faculty club and is open to all Monday to Friday between 10.00 a.m to 5.00 p.m until the 31st of January 2014. Contact Tel No 22932618 (office of the Archives and Publications Cell.)

**Sowmithri Ranganathan**

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