

# CONVOCATION 2013



## Director's Report

MAY 25, 2013



**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH MOHALI**  
Knowledge City, Sector 81, SAS Nagar, PO Manauli 140 306, Punjab, India



## Board of Governors

Professor K. K. Talwar, Chairman, BOG, MCI, New Delhi - Chairman  
Shri Ashok Thakur, IAS, Secretary (HE), MHRD, New Delhi  
Sh. Rakesh Singh, IAS, Chief Secretary, Government of Punjab, Chandigarh  
Prof. P. Balaram, Director, Indian Institute of Science, Bangalore  
Prof. M. K. Surappa, Director, IIT Ropar, Rupnagar, Punjab  
Shri J. Sathyanarayana, IAS, Secretary, Department of Electronics and IT, New Delhi  
Dr. S. Ayyappan, Secretary, DARE, New Delhi  
Professor Kapil Paranjape, IISER Mohali  
Professor K. S. Viswanathan, IISER Mohali  
Shri Yogendra Tripathi, Joint Secretary and Financial Adviser, MHRD, New Delhi  
Prof. N. Sathyamurthy, Director, IISER Mohali  
Dr. P. Bapaiah, Registrar, IISER Mohali

## Academic Senate

Prof. N. Sathyamurthy, Director, IISER Mohali - Chairman  
Prof. Ashok Sahni, PU, Chandigarh  
Prof. S. V. Kessar, PU, Chandigarh  
Dr. Girish Sahni, Director, IMTECH, Chandigarh  
Prof. B. N. Goswami, PU, Chandigarh  
Prof. M. K. Surappa, Director, IIT Ropar  
Prof. Arun Grover, VC, PU, Chandigarh  
Dr. Rakesh Tuli, Director, NABI, Mohali  
Prof. K. K. Bhutani, Director, NIPER, Mohali  
Prof. Arvind, Dean Students, IISER Mohali  
Prof. Kapil H. Paranjape, IISER Mohali  
Prof. Sudeshna Sinha, IISER Mohali  
Prof. A. K. Bachhawat, Dean Faculty, IISER Mohali  
Prof. P. Guptasarma, IISER Mohali  
Prof. J. S. Bagla, Dean R&D, IISER Mohali  
Prof. Ramesh Kapoor, IISER Mohali  
Prof. C. G. Mahajan, IISER Mohali  
Prof. IBS Passi, IISER Mohali  
Dr. Sanjay Mandal, IISER Mohali  
Dr. N. G. Prasad, IISER Mohali  
Dr. Chanchal Kumar, Dean Academics, IISER Mohali  
Dr. Anu Sabhlok, IISER Mohali  
Dr. P. Bapaiah, Registrar, IISER Mohali

## Research Advisory Committee

Dr. S. Sivaram, NCL, Pune  
Dr. S. Rath, NII, New Delhi  
Prof. H. S. Mani, CMI, Chennai  
Prof. Rajendra Bhatia, ISI, New Delhi  
Prof. J. S. Bagla, Dean R&D, IISER Mohali

## Administration

Director - Dr. N. Sathyamurthy  
Registrar - Dr. P. Bapaiah  
Dean Faculty - Professor A. K. Bachhawat  
Dean Academics - Dr. Chanchal Kumar  
Dean Students - Professor Arvind  
Dean R & D - Professor J. S. Bagla  
Deputy Librarian - Dr. P. Visakhi  
Honorary Counsellor - Mrs. Suguna Sathyamurthy  
Assistant Registrar - Sh. Sandeep Ahalawat, Sh. Mukesh Kumar  
Stores & Purchase Officer - Sh. Kulwant Singh  
Executive Engineer cum Estate Officer - Mr. P.K. Srivastava  
Security Officer cum PRO - Sh. J. N. Ahuja





## IISER Mohali Milestones

September 27, 2006	Foundation stone laid by the Hon'ble Prime Minister of India, Dr. Manmohan Singh
June 18, 2007	Professor N. Sathyamurthy took charge as the Director
July 18, 2007	The first meeting of the Board of Governors, Chairman : Professor P. Rama Rao
August 2, 2007	The first meeting of the Senate, Chairman : Professor N. Sathyamurthy
August 16, 2007	BS-MS classes started
June 3/4, 2008	125 acres of land transferred by the Government of Punjab
December 29, 2008	Ground breaking ceremony for the boundary wall
March 3, 2010	Inauguration of the Central Analytical facility
December 3, 2010	Hostel 5 inaugurated
December 13, 2010	The Director moved into his residence
January 26, 2011	Hostel 7 inaugurated
February 23, 2011	Gate complex inaugurated
July 25, 2012	Lecture Hall complex inaugurated by the Hon'ble HRM Sh. Kapil Sibal The first convocation Chairman: Dr. R. A. Mashelkar Chief Guest: Sh. Kapil Sibal Guest of Honour: Professor C. N. R. Rao No. of BS-MS graduates: 26 I recipient of Doctor of Philosophy (Honoris Causa) : Professor C. N. R. Rao
May 25, 2013	II convocation : Chairman : Professor K. K. Talwar Chief Guest: Professor P. Rama Rao, Founder Chairman No. of BS-MS graduates : 30 No. of PhD degrees to be awarded : 3

## List of Graduates (BS-MS)

Sr. No.	R. No	Name
1	MS08001	Abhilasha Joshi
2	MS08003	Abhishek Goswami
3	MS08006	Amit Kumar
4	MS08007	Ankit Kumar
5	MS08008	Anshu Gupta
6	MS08010	Anuj Shukla
7	MS08011	Arashdeep Singh
8	MS08014	Asif Equbal
9	MS08016	Deepansh Srivastava
10	MS08020	Gade Vinay Krishna
11	MS08021	Gagan Preet Singh
12	MS08022	Gaurav Kumar
13	MS08024	Himanshu Sachan
14	MS08026	Jithin Paul. M
15	MS08027	Kapil Dave
16	MS08028	Karishma Bhasne
17	MS08029	Kasturi Banerjee
18	MS08030	Keshav Aggarwal
19	MS08031	Manish Pareek
20	MS08032	Manmeet Singh
21	MS08033	Mehreen Khaleel
22	MS08035	Nikhil Kumar
23	MS08036	Nilmani Singh
24	MS08039	Nitish Sharma
25	MS08040	Nitish Tayal
26	MS08047	Shivam Bhardwaj
27	MS08049	Sumit Mittal
28	MS08050	Suraj Singh Khurana
29	MS08053	Vikesh Siddhu
30	MS08055	Vinod Kumar



## List of Candidates Receiving the PhD Degree

S.No.	Reg. No.	Name	Title of the thesis
1.	PH08001	Amrita Kumari	Structure and Dynamics of Nanomaterials & Biomolecules: Insights from NMR spectroscopy
2.	PH08008	Shalini Gupta	The structure of semisimple finite metabelian group algebras
3.	PH08011	Bodhisatta Nandy	Of war and love: a study of sexual conflict and sexual selection using <i>Drosophilla melanogaster</i> laboratory system

### President's Gold Medal for the best Academic Performance

Keshav Aggarwal

### Professor S N Kaul Prize for the best overall performance

Abhilasha Joshi

### Academic Excellence Prize in Biology

Abhilasha Joshi

### Academic Excellence Prize in Chemistry

Kapil Dave

### Academic Excellence Prize in Mathematics

Keshav Aggarwal

### Academic Excellence Prize in Physics

Vikesh Siddhu

“Remember that your knowledge and intellectual attainment is the most sacred wealth of the nation. You shall, therefore, use it in a manner befitting the honour and dignity of your country and of your alma mater. You shall make every effort, in all circumstances, to uphold the dignity of your profession and integrity of your character. You shall endeavour, in every way, through thought, word and action, to bring about the well being of the people. You must live a well disciplined life. Never forget the commandment of the sacred scriptures: 'Thou shalt perform deeds that are commendable and no others'.”





## Director's Report

The Indian Institute of Science Education and Research started functioning in its transit campus in MGSIPAP Complex, Sector 26, Chandigarh, in June 2007. Thanks to the Punjab Government, which provided the interim facility, the first class for the first batch of BS-MS students was held on August 16, 2007. We have come a long way since then.

The Punjab Government was generous enough to allot 125 acres of land in the Knowledge City in Sector 81, SAS Nagar, where our campus is located now. The ground breaking ceremony took place on December 29, 2008. The Central Analytical Facility was formally inaugurated by the Founder Chairman Professor P. Rama Rao on March 3, 2010. We are delighted to have Professor Rama Rao as the Chief Guest today.

Initially, the students of IISER Mohali were accommodated in the NITTR campus and in the MGSIPAP complex, Chandigarh. The first set of students had to go through a lot of inconvenience, but today we have our own campus. The first batch of students moved into Hostel 5 on December 3, 2010, and Hostel 7 was inaugurated on January 26, 2011. The Director and a few faculty members started living in the campus in December 2010.

I am happy to declare that we have vacated the transit campus about two weeks ago. We are in the process of consolidation in our new campus. We have a fully functional Lecture Hall Complex and an Academic Block, and all the teaching takes place in the permanent campus. The faculty members (about 60), along with the student community comprising the BS-MS, PhD and Int. PhD, carry out their research in Academic Block 1. Academic Block 2 is coming up and so is the Informatics Centre. The latter will house the computing facility, the textbook library and the e-library for the campus. Two new hostels are coming up to accommodate the students who will join us in July 2013 and the visitors' hostel is expected to be ready by July 2013.

It was a historic moment when the first convocation of IISER Mohali took place on July 25, 2012. The then Hon'ble Minister for Human Resource Development Sh. Kapil Sibal was the Chief Guest. Professor C. N. R. Rao, Honorary President, Jawaharlal Nehru Center for Advanced Scientific Research, Bangalore, was the guest of honour. It was the privilege of the institute to confer the Doctor of Philosophy (Honoris Causa) degree on Professor C. N. R. Rao.

It was a moment of immense pride and joy to see the first batch of 26 students graduating with the BS-MS degree. They were boys and girls when they joined the Institute in 2007. Both students and parents placed their trust in us. We had nothing to show them, but dreams and promises. The boys and girls grew up to become young men and women during the 5 years they spent at IISER. Today several of them are pursuing their PhD studies in India and abroad. Some of them have chosen to learn business administration. Some of them are working in industry and some of them are aspiring to become administrators.

The Institute did not wait for the buildings to come up. Right from the beginning, it set up state-of-the-art research facilities. There was no road, no electricity and no water when we started. Today we have all of them. We are committed to keep the campus green and beautiful. We have a distributed network of Sewage Treatment Plants, water from which is used in greening the campus. We have tried hard to save every single tree in the campus and we are proud of the

flora and fauna that we have inherited. We are committed to harvest solar energy. Hot water in most of the residences and in the hostels comes from solar heating and the street lights are powered by solar energy. During the day time the lights and fans in Academic Block 1 are on, thanks to the sun.

From a single research publication in 2007, the number of publications from IISER Mohali has crossed 100 per year. The faculty and students of IISER Mohali have published more than 200 research papers and 4 books in the last five years. We have a handful of patents too. What is special about the output from IISER Mohali is that many research publications are co-authored by our undergraduates. Many BS-MS students from IISER Mohali publish at least one research paper by the time they graduate.

We have been able to attract bright young people to our PhD programme. There are more than 150 students registered for the PhD programme at IISER Mohali. The majority of them bring their own funds in the form of fellowship from UGC/CSIR. The faculty have brought a large number of sponsored projects. The total amount of funds received from sponsored projects is of the order of Rs. 30 crores. Four of our colleagues are recipients of DBT Wellcome Research Grants. Several of them receive Ramanujan/Ramalingaswami/DAE fellowships.

We at IISER Mohali are committed to quality teaching at the undergraduate and postgraduate levels. The BS-MS students go through two years of core programme, where they learn all the basic science subjects including earth and environmental sciences. They take courses in communication skills, computer programming, electronics and workshop, and history and philosophy of science. They concentrate on their major subjects during the 3rd and 4th year of their stay and finally they spend almost a year doing research in the 5th year. During every summer of their studies at IISER Mohali, the students carry out research projects either in-house or in other educational institutions.

Admission to IISER Mohali is highly competitive. Students having KVPY scholarship are admitted directly. Students clearing the joint entrance exam of IITs are admitted on the basis of their rank. The cream of the nation, which comes at the top one per cent of each state/central board, is eligible for admission to the IISERs. All the BS-MS students of IISER Mohali receive either the KVPY scholarship or the scholarship under the INSPIRE scheme of the Government of India. IISER provides scholarship for those PhD students who do not have their own scholarship. The Integrated PhD students, who join us after their bachelor's degree from other institutes, get financial support on par with the BS-MS students during the first two years and are on par with the PhD students in the subsequent years. Students who do exceedingly well in their BS-MS programme at IISER Mohali are eligible for direct admission to the PhD programme here.

We have been able to attract excellent faculty members from India and elsewhere. Their quality is reflected in the fact that many of them received several offers, but they chose to join us. The quality of their research is reflected in their publications in top peer reviewed journals. Some of the work done at IISER Mohali has appeared in journals like *Science*. The Earth and Environment programme completely focuses on the environment. Our blue eye in the sky monitors the pollution level continuously (24x7). Our colleagues have been able to establish the high level of aromatic hydrocarbons arising from post-harvest burning. Our colleagues are committed to



synthesizing biomolecules that have antimalarial activity. The front-line research conducted at IISER Mohali includes probing into the properties of materials at the nano level and also at low temperatures.

Spectroscopic tools are used to probe the structure and dynamics of molecules and biomolecules. While one of our colleagues attempts to unravel the fibril formation that may hold the key to understanding alzheimer disease, another engages in developing liquid crystals that can serve many purposes.

The faculty and students at IISER Mohali are constantly innovating and they come up with new techniques, be it for detecting trace amounts of acetone in biodiesel or in understanding the sexual conflict in drosophila, a model system in developmental biology.

Science is global and its standards are international. Therefore, it is important for our students and the faculty to stay connected with the rest of the world. Both faculty and students present their research works at international fora. Also our undergraduates are able to get training at the international level. Some of them have been awarded Har Gobind Singh Khorana Fellowships to work in American Universities and DAAD fellowships to work in German laboratories. Some of them were selected to attend the prestigious Lindau programme and also the Heidelberg Forum. We have a student exchange programme with St. Andrews in Scotland. Our colleagues have got Max-Planck-Partner Group projects and we plan to collaborate with some more Max-Planck-Institutes.

The process of building an institute like IISER depends on the unflinching support from the State and Central Governments. We have been singularly lucky in getting continual support from the Punjab Government through the Chief Secretaries, Sh. R. I. Singh, Sh. S. C. Agarwal and Sh. Rakesh Singh over the years. The former and present Ministers and Secretaries at MHRD have offered unwavering assistance. On this felicitous occasion, I extend my gratitude to all my colleagues at IISER Mohali for making the institute what it is today. I am particularly grateful to the founder Chairman Professor P. Rama Rao, his successor Dr. R. A. Mashelkar and our present Chairman Professor K. K. Talwar for their guidance and support.

Jai Hind!

