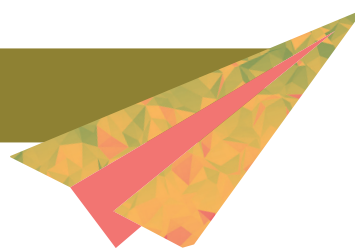




# INSTITUTE OF SMART STRUCTURES AND SYSTEMS (ISSS)

A Society Registered under Govt. of Karnataka  
Dept of Aerospace Engineering,  
Indian Institute of Science, Bangalore

## ABOUT ISSS



ISSS (Institute of Smart Structures And Systems) is a Professional Society that helps to keep pace with the advances being made in Micro and Smart Systems Technologies in India. It organizes a series of international conferences every three years on Smart Materials, Structures and Micro-Electro Mechanical Systems (MEMS) to bridge the gap between the advanced level of technology abroad and the R&D efforts in India. In addition, it organizes and supports various national conferences and awareness workshops in this area. It also provides a common forum for working in various related fields.

ISSS has made significant societal contributions in emerging areas of science and technology such as Micro-Electro Mechanical Systems (MEMS) and smart materials, to increase the awareness and interest among the public, students in general, and researchers from allied fields. Having come into prominence in the last three decades, these areas make use of developments in semiconductor and other materials technologies. It is felt that

the country can reap significant potential if these technologies are disseminated and nurtured at a pace. Hence, the following activities are taken up by the Society over the past several years.

The hub of activities of this Professional Society is located in IISc, in Bengaluru – the Silicon Valley of India. The city has various Aerospace, Electronics, Information Technology and other hi-tech establishments. This Society formed by a core group of researchers and experts has access to infrastructure and scientific support of all Defence Research & Development Organisation (DRDO), Council of Scientific & Industrial Research (CSIR), Department of Atomic Energy (DAE), Department of Space (DoS) Laboratories and Academic Institutions in various cities of the country. In order facilitate local activities, Chapters are formed.

The Institute has been exempt from paying taxes under Section 12/A.

## OFFICE BEARERS

**PRESIDENT: Prof. G. K. Ananthasuresh**

Indian Institute of Science, Bengaluru

**VICE-PRESIDENT: Dr. B. R. Vidyashankar**

General Electric, Bengaluru

**SECRETARY: Dr. Veda S. N.**

Tyndall National Institute, Ireland

**TREASURER: Dr. K. Sudhakar**

Aeronautical Development Authority, Bengaluru

### MEMBERS

Prof. A. Arockiarajan, IIT-Madras

Prof. Chandasree Das, BMSCE, Bengaluru

Dr. Vishal Dhamgaye, RRCAT, Indore

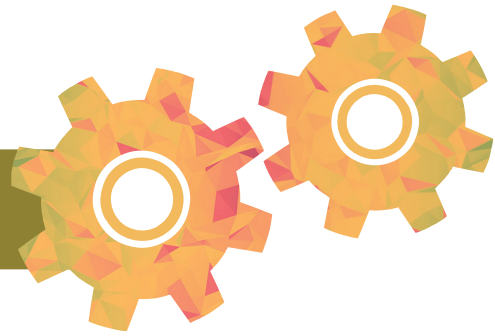
Dr. Anjana Jain, NAL, Bengaluru

Dr. Lakshmi S., MSRIIT, Bengaluru

Prof. Anurekha Sharma, Kurukshetra U.

Dr. Prosenjit Sen, IISc, Bengaluru

# ACTIVITIES OF ISSS

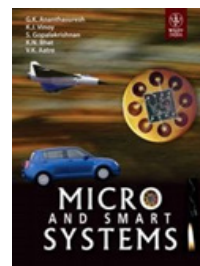


- Organized international conferences for the benefit of researchers in the country. One characteristic outcome of this is that the participation from Indian researchers has increased substantially during the last two decades. These were attended by a large number of researchers from across the country, many of whom were not yet the members of the Society. Some foreign experts were invited by ISSS to give special talks during these events.
- Annual National Symposia on MEMS and Smart Systems are held at various locations to distribute benefits to the society at large. Past events were held at Hyderabad (Dec 1-2 2006) Pilani (Nov 16- 17 2008) Kolkatta (Oct 14-16 2009) Nagpur (Sept 30-Oct 01 2010), Coimbatore (Sept 21- 22, 2012), Pune (Sept 6-7, 2013), Kochi (Sept 22-25, 2015), Kanpur (Sept 28-30, 2016) and Nitte (Oct 21 - 23, 2019)
- Collaborated with Visvesvaraya Technological



University (VTU-Belgaum) for curriculum development in the area of MEMS, by proposing a new syllabus, arranging experts to write a new text book, and organizing workshops for students and faculty members.

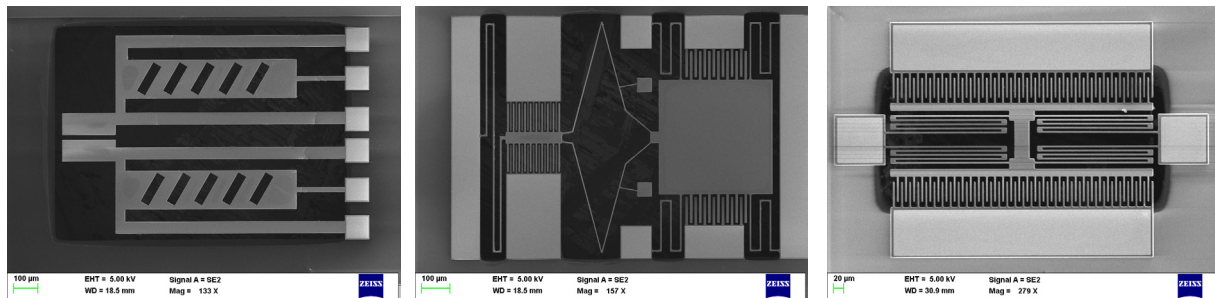
- A book is written in the area of Micro & Smart Systems by an expert team constituted by ISSS and published by John Wiley, India. An extended version of this book is published for international readers by John Wiley USA with the title Micro & Smart Systems Technologies.



- The society has collaborated with the National Program on Micro and Smart Systems to organize various workshops at Coimbatore (Nov 26-28, 2008) Pune (January 22-24, 2009) Kanpur (September 10-12, 2009) Shillong (March 25-27, 2010) and Kurukshetra (November 13-14, 2010)
- Organized technical talks by experts from within and outside the country, on cutting edge technologies during National and International Conferences organized by the Society, and also at various engineering colleges to guide students and scientists to initiate research activities in MEMS
- A Certificate Course Program was initiated in 2019. Foundational aspects of BioMEMS, IoT, Microsystem Design were covered in courses offered in 2019 and 2020.



- MEMS Community Chip activity was initiated in 2019; WIET, NMIT, NMAMIT, SJCIT, BMSCE, MS Engineering, SNN College of Engineering and Vignan University participated.

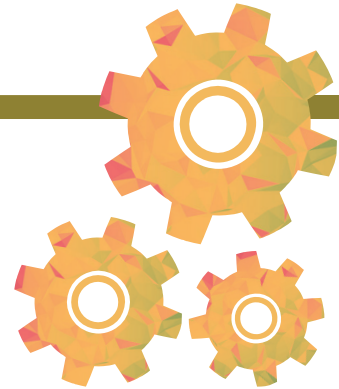


- Master class lecture series was organized and three lectures were conducted in 2021; Smart Machine Tools & Machining Technologies; Smart Grid Technologies; Introduction to Optoelectronic Devices and Semiconductor Nanowires for Optoelectronics, Energy and Neuroscience Applications
- ISSS is facilitating Prime Minister Research Fellows (PMRFs) in teaching engineering undergraduate and post-graduate students in the online mode from 2021. Under this programme, selected PhD scholars at IISc, IITs, and IISERs are recognized with the PMRF based on their academic and research performance. There is a requirement that they should also teach outside their institution. Under this activity in total 18 courses are being offered.
- The society has started an **online public lecture series**, called Sukshma Lectures, in 2020 in order to continue to engage with ISSS members, students and researchers during the CoVid - 19 pandemic. These lectures are now entrusted to ISSS Chapters to increase the activities in other cities in India.
- The society has constituted an **ISSS Annual Awards** in 2012, to recognise Young Scientists below the age of 40 by conferring on them a Young Scientist Award that includes a cash prize and a citation.
- A Technology Award was introduced in 2015 to recognize a significant translational activity that results in a commercial product, process or technology.
- Many Student Awards at different levels have been instituted by the Society.
- Provided financial support of students travelling for attending national and international conferences.
- Provided technical and financial assistance for institutions such as Engineering colleges for holding National and International Conferences.
- Facilitated Microfabrication of MEMS devices by college teachers and students in what is called the ISSS Community Chip programme. This was successfully conducted four times already and is poised to grow with a bespoke microfabrication processes to cater to the needs of MEMS device development by college teachers and students, who otherwise have limited or no access to microfabrication.
- Honoured accomplished scientific and technical experts in the areas of Smart and Micro systems, from across the country. The objective was to encourage people to take up research in areas of interest to this Institute.
- Provide common forum for the scientists, engineers and technologists working in this field by publishing a quarterly newsletter **Sukshma**

- A Scientific **Journal** has been started by the Society in 2012. Early issues of the journal are freely available online. Since 2017 this is co-published with Springer.
- Publish research work through Monographs. A monograph Structural Health Monitoring was published in 2002. An edited monograph on Micro and Smart Devices and Systems was published by Springer in 2014.
- ISSS also held mentoring sessions for its student members by pairing a student member with a senior member.
- ISSS also aims to engage with industry to benefit its industry and academic members.

---

We hope that the above activities of ISSS have been helpful to the society at large as these have facilitated researchers in emerging areas of science and technology such as microelectromechanical systems (MEMS) and Smart materials, and to increase the awareness and interest among the public, students in general, and researchers from allied fields. We seek volunteers to help us reach out to larger numbers of professionals across the country.



# TYPES OF MEMBERSHIPS & BENEFITS



(Membership Forms [available online](#))

## STUDENT MEMBER

Undergraduate and postgraduate students studying in recognized institutions can become members of the Institute. Student membership is only for the duration of the study, to be renewed annually. First-time members are required to pay Rs 750, and subsequent renewals are at Rs 250. Student members have all rights of regular members of the society, except voting rights. They do not get copies of the Journal of ISSS.

## LIFE MEMBER

Working professionals engaged in the area of micro and smart materials, devices, systems and modelling can become life members of the Institute. All life members get the ISSS quarterly newsletter Sukshma. They also get special discounts on conferences organized by ISSS. First time members are required to pay Rs 5500 for the life membership.

Existing life members get copies of the Journal of ISSS till end of 2015 after which the Journal will have to be subscribed. New life members will get copies of the current volume of the Journal of ISSS.

## ANNUAL MEMBER

Eligibility of annual membership is the same as that of Life Members. New annual memberships are at Rs 1000, and subsequent renewals at Rs 500. Annual members get subsidised rates for the Journal of ISSS.

## CORPORATE/ INSTITUTIONAL MEMBER

Academic and Industrial Research Organizations engaged in the area of micro and smart materials, devices, systems and modelling can become members of the Institute. Regular staff members of these Member Organizations can avail special discounts on conferences organized by ISSS. Life time Institutional membership fee is Rs 100 000 for Industries and Rs 50 000 for Academic Institutions. These organizations can subscribe copies of the Journal of ISSS at subsidised rates. Technical support may be provided by ISSS to organize workshops/seminars at these organizations.

## NEW MEMBERSHIP SUBSCRIPTION

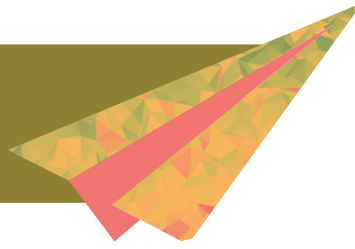
CATEGORY	Annual*	Life*
Member	Rs. 1000/-	Rs.5500/-
Student member	Rs. 750/-	N.A
Corporate member – (Industry)		Rs. 100,000/-
Corporate member (Academic Institution)		Rs 50,000

## CORPORATE/ INSTITUTIONAL MEMBERS

- B.M.S. College of Engineering, Bangalore-560 019
- Centre for Air Borne Systems(CABS) Defence R&D Organisation (DRDO) Bangalore-560 037.
- Central Electronics Engineering Research Institute (Council of Scientific and Industrial Research, India), Pilani, Rajasthan
- Central Glass & Ceramic Research Institute, Kolkata – 700 032.
- CVRDE, Avadi Chennai-600 054
- Defence Institute of Advanced Technology (Deemed University), Girinagar Pune – 411 025.
- Defence Metallurgical Research Lab (Po) Kanchanbagh, Hyderabad – 500 058.
- Defence R&D Establishment, Dehradun – 248 008
- Defence Research & Development Laboratory Hyderabad – 500 058.
- Instruments R&D Establishment Rajpur Road, Dehradun – 248 008.
- Laser Science & Technology Centre Ministry of Defence, Defence Research & Development Organisation Delhi – 110 054.
- M.S.Ramaiah Institute of Technology, MSR Nagar, Bangalore – 560 054
- National Aerospace Laboratories Bangalore – 560 017.
- National Metallurgical Laboratory Jamshedpur – 831 007.
- Naval Material Research Laboratory Ministry of Defence, Defence Research & Development Organisation Ambernath – 421 506.
- Naval Physical & Oceanographic Laboratory, Defence Research & Development Organisation Kochi – 682 021.
- SMVIT, Dept of Mechanical Engg, Bangalore, 562 157
- Structural Engineering Research Centre, Council of Scientific & Industrial Research, Chennai – 600 113.
- Thiagarajar College of Engineering, MADURAI – 625015
- Velammal College of Engg. & Tech. Madurai-9



# CONTACT US



## REGISTERED OFFICE

Institute of Smart Structures & Systems,  
Department of Aerospace Engineering Indian  
Institute of Science  
Bangalore 560 012, India

---

## ADDRESS FOR CORRESPONDENCE

Institute of Smart Structures & Systems  
c/o Dr. K. J. Vinoy  
Department of ECE  
Indian Institute of Science Bangalore 560 012, India  
Phone: 91-80-2293 2853/2360 0446  
Email: [admin@isssonline.in](mailto:admin@isssonline.in)

