

# President's Message

**K. Natarajan, President ISSS**

*I am extremely happy and delighted that ISSS is bringing out its technical journal of international professional standards during the 5<sup>th</sup> ISSS National Conference. I would like to briefly summarize the 13 long years of ISSS existence.*

*The idea of a professional society for supporting micro and smart systems activities in India was germinated during the first International Conference on Smart Materials and MEMS held in collaboration with SPIE, in 1996. The conference was a great success and this has led to the formation of Institute of Smart Structures and Systems (ISSS) in 1999 with Dr. V.K. Aatre as the President. ISSS as a professional society supports scientists, engineers and students in the emerging area of smart materials, structures and micro systems. ISSS has successfully conducted six international conference and in addition conducting national conferences at different locations. These international conferences were attended by scientists from many foreign countries. In addition, the society also holds annual National Conferences to create MEMS awareness in local academic institutions. The first National Conference was organized at Hyderabad which is one of the largest defense technology base in India; subsequently these conferences were held at Kottota, Pilani, and Nagpur.*

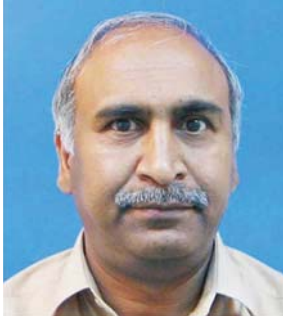
*Over the last six International Conferences held triennially at Bangalore, the quality and quantity of participation of Indian scientists and students has increased steadily. It is evident that ever since the first International Conference, there has been a phenomenal growth in research and development activities in India. The last Conference held in January 2012 was a great success wherein a large number of students participated. Encouraged by this success the Governing Council of ISSS has formulated plans for launching this journal.*

*The initiation of National Programme on Smart Materials (NPSM) in 2002 has indeed accelerated the growth of research activities and infrastructure establishment for MEMS development. ISSS has organized many workshops and seminars with the support from NPSM and created a large interest in Smart Systems. The 2<sup>nd</sup> Phase of the national programme namely National Programme on Micro and Smart Systems (NPMSS) has given higher visibility in the development of many prototypes. ISSS has brought out a monograph in 2002. Since 2006, ISSS in collaboration with Visveswaraya Technology University (VTU) has trained many faculty members from the University and this has resulted in the introduction of MEMS curriculum. Based on these workshops two books were written by Prof V.K.Aatre, Prof K.N.Bhat, Prof A.K. Ananthasuresh, Prof Goplakrishna and Prof K.J. Vinoy titled *Micro and Smart Systems* for national and international audience.*

*The national and international conferences have given opportunity for the National Laboratories to exhibit their products. NPMSS has created a unique University programme to develop microsystems expertise by creating design centers in premier institutions. In 2006 ISSS has started its newsletter named "SUKSHMA" edited by Prof. G.K. Ananthasuresh and his team. Over a period this has gained momentum and is circulated to all members. ISSS has funded many young scientists from the country to participate in the International conferences. Recently, ISSS is also created a young scientist award and student awards for various categories. These awards will be distributed annually in the national/international conferences. I believe that the launch of the Journal is just natural evolution of the activities of ISSS.*

*Finally I wish to thank all the members of the Editorial board of the journal, ISSS General Council members and all the authors for their contribution in bringing out the first issue of the Journal of ISSS.*

**Dr. K. Natarajan** completed his under graduate from PSG Tech, Coimbatore, in the year 1976 and he has been awarded Jawaharlal Nehru award from the University of Madras for his best performance.



He did his MTech from IIT Delhi, in the area of Electronics & VLSI Technology in the year 1978 and obtained his PhD from IISc Bangalore, in the area of Poly Silicon Materials & its usage in solar industry in the Year 1988. He has published more than 30 national & international papers. He has taken a joint patent on the Thyristor Design & Fabrication and submitted a patent application on "On large area conductive polymer based pressure switch."

He joined BEL, as a Deputy Engineer and worked in epitaxial growth, crystal growth, Wafering. He has setup 3inch & 4inch wafer fab facilities for processing silicon devices and it was one its kind in India during 1989. He had designed and produced more than 40 types of silicon Transistors with a volume of more than 100 Million Devices per annum for more than 10 years. He has developed the whole range of devices covering low voltage, high voltage, High frequency, low noise, switching etc. He was also instrumental in developing solar cell materials & processing

technology for large scale manufacturing. He was instrumental in starting MEMS R& D Program in BEL during the year 2000 & many DRDO Labs. Under his leadership BEL was very successful in developing the basic technologies through NPSM/ NPMASS/BEL support and World class facility was setup at BEL for packaging MEMS Pressure Transmitters. He has developed aero space grade MEMS based Pressure Transmitters. In addition his group has developed Pressure Sensors, Accelerometer, Gas Sensors and RF MEMS Components.

Currently, he is the President for the Institute of Smart Sensors and Systems (ISSS) and popularizing the MEMS device application in Academia, Defense Labs and Industry. He is in the Board of NPMASS, Karpagam University, NITTE Bangalore and Member of Board of study in many Engg colleges. He has travelled abroad to many countries (Germany, Italy, USA, China, and Singapore, Austria, Hungary) for training, Conferences and Business development. He had participated and presented papers in INDO-CHINA and INDO-FRANCE conferences in the area of MEMS. He has delivered more than 50 Lectures on Semiconductor Technology, MEMS Technology and its applications. He is a *certified CII Auditor* for Business Excellence and trained on QCC, SPC and Six Sigma Techniques.