

# Guru Gobind Singh Indraprastha University



GURU GOBIND SINGH  
INDRAPRASTHA  
UNIVERSITY

## 13th Convocation

TUESDAY, DECEMBER 3, 2019



*Convocation Address*

**Prof. Samir K Brahmachari**

Academy Professor, AcSIR, Founder Director CSIR -IGIB,  
Former Director General, CSIR, India.

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### **Use knowledge as a power and service as a mission**

His Excellency Honourable Lieutenant Governor Shri Anil Baijal Ji, respected Chief Minister Shri Arvind Kejriwal Ji, Members of the Board of Management and Members of Statutory bodies, Vice Chancellor Dr Mahesh Verma, graduating students and their proud parents, All the faculty and staff members of Indraprastha University and the invited guests,

It is an honour and privilege for me to give this 13<sup>th</sup> convocation address in this Guru Gobind Singh Indraprastha University. It is also a special honour for me to be present on the dias to deliver the second convocation address in Delhi, in this month when his Excellency Shri Baijal Ji is in the chair.

In this year the world celebrated the 550<sup>th</sup> birth anniversary of Guru Nanak Dev Ji who gave the message of SEVA to the world. 10<sup>th</sup> Sikh Guru, Guru Gobind Singh Ji gave the teaching to use the power of sword only to protect the poor. Today in this world of knowledge economy, the power has moved from sword to knowledge.



*In the words of Guru Nanak Dev*

***“Burn worldly love, rub the ashes and make ink of it, make the heart the pen, the intellect the writer, write that which has no end or limit”***

I would like to congratulate our Chief Minister and the Delhi Government for focusing on education and healthcare, two important aspects of social development. I have been associated as honorary distinguished Professor, after my retirement, with Indraprastha Institute of Information Technology Delhi, a state government supported excellent institution with brilliant faculties and vibrant young students. It gives me great pleasure to interact with young boys and girls just out of school with so much creativity and enthusiasm. I am sure similar enthusiasm with which you all entered this temple of learning few years back and now you are all responsible adults and ready to face the outside world. You are lucky that you have such a fantastic new campus and a visionary Vice Chancellor whom I know for the last decade, who is extraordinary in institution building as amply demonstrated if one goes to Dental Institute at Maulana Azad hospital. It is difficult to believe such well organized hospital in the public sector.

If you ask me today, it is the best time to be an Indian and young Indian. I wish I was 30 years younger. I wish I was of your age. This is different India. You will decide the destiny

of this nation not the government, not the old people like us. The destiny is in your hand and each of you can make a difference for this country. I believe, it is the young India which is ready today.

It is very difficult for you to realise 20 years back when the first chromosome 22 of the human genome was out, back then, we had to take our computer to NIC to download 300 MB data as we had only a dial-up ISDN connection with 128 KB speed which was the state of art connectivity in Delhi, but today, by one click you get everything. Today you have high bandwidth and aspire to carry about Tera-bytes of data in your mobile phone. Today you get access to scientific data ahead of others in many countries of the world because of the time zone difference. We had to wait three months for the fresh arrival of journals in the library. You are ahead of time and this is important. You can make a difference by being in a different time zone. Our ICT services for world are a standing example, when world sleeps Indians keep awake and keep the world running.

### **Fulfilling Your Ikigai**

I believe, education should stand on four strong pillars of excellence, inclusiveness, employability and value-based education. You can be a topper of the class or the winner of the best Ph.D. thesis, you can have great job, but if you have not got value based education then you are of no good for the society and the country. It is very important to have



good values. That's why Swami Vivekananda said- "*They only live who live for others, rest are more dead than alive*".

As you go out of this hall after receiving your degrees you are empowered to take care of those who were not as fortunate as you. As Mahatma Gandhi said in 1927 during his visit to Indian Institute of Sciences "*Just as some of the experiments in your laboratories go on for all the twenty-four hours, let the big corner in your heart remain perpetually warm for the benefit of the poor millions*". With this as your guiding principles you cannot go wrong in life. You will fulfill your Ikigai..." the things that makes your life worthwhile".

#### **Fourth Paradigm of Science and Sustainable Development Goal (SDG) 2030**

We are actually witnessing today the advent of what has been described by the pioneering computer scientist Jim Gray as the "fourth paradigm" in science. The fourth paradigm of science is based on data intensive discovery. The fourth paradigm is not just about huge amount of scientific and social data and the computational systems needed to handle it. It also calls for experts in different fields – biologist, chemist, physicist, astronomers, engineers, medical professionals, social scientist, management expert, economists and financial professionals etc. It demands sophisticated tools, technologies, and platforms that integrate seamlessly.

Crisply put, it consists of three activities capture, curation and analysis of data. The fourth paradigm of science has not happened overnight in a single job. It is actually the result of the path that scientific discoveries have taken over the ages.

There are distinct stages in the evolution of modern science. From being curiosity-driven in ancient times, it graduated to become hypothesis – experimentation dependent and then moved on to a phase where modelling and simulation studies shared the spotlight. These distinct stages have been referred to as the first the second and the third paradigm of science, respectively. The arrival of the fourth paradigm is demonstrated in the large-scale analysis of data from one million human genome sequencing project to brain mapping to Google Maps. The big data era will witness a paradigm shift, in the way we handle our problems today.

The fourth paradigm of science has transmuted the way science and engineering is being done. In turn, this has fuelled the need for a totally new generation of scientists, medical practitioners, social scientist, management students and financial experts to address the burning issues of today; for example, healthcare to alternate energy, structural engineering solutions to traffic control on roads, water harvesting to flood management. This is the time to energise the multi-talented young generation to transform the healthcare of tomorrow and sustainable energy



solutions for all. It will mean exploring innovative solutions such as crowd sourcing and cloud computing and it will be helped by distributed co-creation. We will be moving into an area of smart grid to smart building to smarter cities, eventually a smart world. World will get transformed into a giant web of billions of interacting people generating data and knowledge. This will involve global collaborations, at local levels to provide services to citizens such as affordable healthcare, electricity for all in a hunger free world meeting the targets of SDG 2030.

### **Final word**

Remember, the way to the future is always through dreams. As globalised citizens and Indians we must blaze new Paths, not follow a weary roads that many have travelled before. I know you all have a dream in your heart? The young always have dreams. I ask you to have faith in your dream, I ask you to think big and not bogged down in the face of opposition, or what if the world says it cannot be done. There are innovative solutions to every problem; The trick is to approach a challenge from an angle never tried before. Perseverance is the key and as important as is luck. However, luck is something you already have. You are a young Indian, you have been lucky to have gained training in this great university in the capital city of Delhi. The nation and your teachers have given you an exceptional education placing you at par with your peers anywhere in the world. Time has placed you in a position of power to

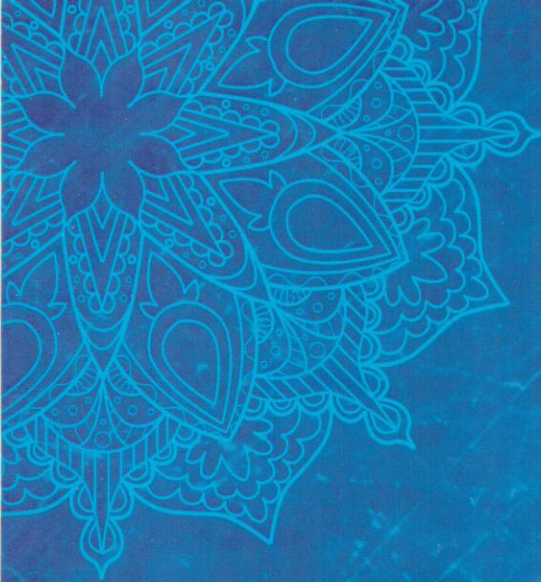
trigger change in an age when things are waiting to happen. The constraints of geography and of resources are not as much a hindrance as these used to be. There is no reason why success should not be yours.

I believe that all of you are graduating today and will do your bit so that in the next 10 years will fashion India meets the SDG 2030 targets. You should say this is my dream to make India a developed nation free from hunger, free from poverty and a clean India and green India.

Kavi Guru Rabindranath Tagore had a dream of a country ...*where the mind is without fear and the head is held high... and into that heaven of freedom, my Father, let my country awake.* I hope that you will be the torch bearers of the nation which Rabindranath Tagore described for the new designers and young leaders of India for the future.

THANK YOU





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