



Mr. Kris Gopalakrishnan on brain research in India

A GIANT LEAP FOR BRAIN RESEARCH IN INDIA

✍️ MEGHA PRAKASH

*Back in 2014, Senapathy Gopalakrishnan, better known as **Kris Gopalakrishnan**, former Executive Vice Chairman, Infosys, announced a grant of Rs. 225 crores from Pratiksha Trust, a charitable organization he co-founded with his wife Sudha Gopalakrishnan, towards the setting up of the **Centre for Brain Research (CBR)** in collaboration with the Indian Institute of Science (IISc). He recently spoke to CONNECT about what motivated his benefaction, his vision for CBR and more.*

Courtesy: INFOSYS SCIENCE FOUNDATION



Q When and how did you get interested in neuroscience? And what motivated you to fund research at IISc?

I got interested in understanding the brain a few

years ago. I always used to read about the latest research on it. I got even more interested when I started reading about plasticity of the human brain. I also knew people who had Parkinson's, Alzheimer's etc.

A few years back, I also used to support the Parkinson's Research Foundation in Bangalore. And after I retired, my interest and personal experiences prompted me to think big—to look at establishing a research facility on ageing and on some of the diseases related to ageing like Parkinson's, dementia, Alzheimer's etc. IISc also showed some interest and the former Director, Professor P Balaram asked me if this can be jointly done with IISc. I immediately agreed. This is how the Centre for Brain Research came about.

Q Could you tell us about the Chairs in neurocomputing that you have instituted at IISc?

In order to understand the brain, you need to look at how it performs as a computer—a human computer. It's one of nature's most complex creations. Of course, we humans ourselves are complex creations, but the brain is the last frontier for us to understand and decipher. So clearly this—how the brain functions as a complex computer—is something which I thought would be interesting to study here in India. I also saw that there were various initiatives in Europe and the US to study the brain in the last few years. Globally there is an effort to understand the brain better. An important benefit of understanding the brain is of course that we can better understand disorders associated with the brain. And perhaps even find cures. Another benefit of this effort will be that better models of computing will be developed and computer science itself will advance further.

The initial years of computing focussed primarily on numerical computing and we've created a machine that's far, far superior to human beings in numerical processing. It can process billions of arithmetic operations in a second and we've been able to achieve that now. But some of the new and interesting challenges are in the areas of information processing, machine intelligence, etc. Hence I felt that this is an appropriate time to launch this initiative here in India. I got support again from IISc and also from Indian Institute of Technology (IIT) Madras; I instituted three chairs each at IISc and IIT Madras. Four of these chairs have already been filled and a significant amount of work has been started in these two places.

Q What is the vision you have for CBR?

CBR will be focused on clinical research. More specifically, it will focus on ageing and age related disorders like Parkinson's, Dementia and

Alzheimer's. Hopefully, the Centre, once it is in full swing, will help us understand these diseases better; help slow it down or maybe even find a cure for some or all of them. So that is the vision for CBR.

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CBR will work collaboratively with other institutes across India and other parts of the world so that we can together achieve our goal of furthering computational brain research—to create better models of computing and to create new solutions for information processing. In the near future, with the internet of things, we are going to have a large number of sensors deployed everywhere that will give us real-time information about anything that we want to measure. That may be an opportunity



Courtesy: PUBLIC RELATIONS OFFICE

The Prime Minister Narendra Modi inaugurating the Centre for Brain Research during his visit to IISc on 18 February, 2015

to again model the brain and understand how the brain makes decisions and to use it to create better appliances and devices. A good example of this is the self-driving car. It is done using artificial intelligence to mimic how a human driver would navigate and drive. And we will be creating many such self-managed systems and this is an exciting area of what could happen in the future in computer science.

Q Can you tell us more about the Pratiksha Trust and its activities?

Pratiksha Trust is a family trust set up by my wife, myself and our daughter. It is involved in philanthropic and charitable activities in the areas of education and research. We provide scholarships to deserving students who want to go for higher studies. We support old people through a pension scheme. We support some educational institutions across the country and of course, we are now into two areas of research which have become part of the core activities of Pratiksha.

"It (Pratiksha Trust) is involved in philanthropic and charitable activities in the areas of education and research"

Q Besides computer science and neuroscience, what other subjects interest you?

Definitely physics is an area of interest. I studied physics during my postgraduate and undergraduate years in college. I am also an avid reader. I try and read a few articles on science on a periodic basis to keep myself updated on what is happening.

Q What keeps you motivated?

You've got to be curious about the things around you. There are lots and lots of things that are still not known; there are still exciting things that

need to be understood better. One of my main motivations is curiosity and trying to learn new things and understand things better. Secondly, I have been very lucky and I feel the need to give back to society—to people who want to come up in life, who want to create something new, who deserve to be supported. The activity has to be limited by what my Trust can do. It is not a big trust; so whatever we can support, we will. And the third is the excitement of what's coming.

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Q Any message to young students?

If you are in college today, if you are looking at the future, I think it looks extremely bright; it is very exciting. I believe that the next 30 years are going to be even more exciting and innovative than the last 30 years. It is going to be a period of amazing innovation, especially in the field of computer science. This means that students who are passing out today have the opportunity to be part of this journey to create a better, brighter future.

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Q What do you do for leisure?

Technology interests me. I like to play with technology. I like to buy and use new gadgets. I feel that constant playing with new gadgets helps me to be sharp and to be up to date with what is happening in the world around, especially in computer science. Reading is another passion. I read different types of books—fiction, science, and some management books. I am currently reading *Super Brain* by Rudolf (Rudy) Tanzi and Deepak Chopra.

