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Interview with Balaji Rengarajan. Staff Researcher, Institute IMDEA Networks

1. To begin this interview, we are curious about how you were called to the life of science. When and why did you decide to become a scientist? What training and background do you have as a researcher?

Back in high school – I attended D.A.V. Higher secondary school in Madras, India - I was interested in computers, video games etc., just like a lot of people that age are. So, when it came to choosing a major in college, I chose electrical engineering at the University of Madras. While college was not all about video games, I still found myself having a lot of fun.

Once I completed my bachelor's degree, I chose to go to graduate school in the US, obtaining my master's degree and PhD under the guidance of Prof. Gustavo de Veciana at the Wireless Networking and Communications group (WNCG) at the University of Texas at Austin.

That is where I was first exposed to research and it is thanks mostly to my adviser, Prof. de Veciana, and other excellent researchers there that I discovered how much fun research could be. When I realized I could spend the rest of my life being paid to have fun, the decision was a no-brainer. During my graduate study, I had the opportunity to spend internships at Intel corp. and Bell labs, Alcatel-Lucent, and collaborate with researchers there. And now, here I am at IMDEA Networks…

2. How did you get the opportunity to come and work in Madrid?

After my PhD, I was looking for a research lab where I would be free to pursue the research I was interested in. I was also interested in experiencing a different research environment and culture. IMDEA Networks was a research institute that was just starting up with very ambitious plans for the future and was a great opportunity for me.

3. What interested you most about the IMDEA project? What made you want to become involved?

The possibility of conducting research on a topic of my interest, without strings attached was very attractive. Also, IMDEA Networks was established with the aim of building a premier research institute, where talented researchers from all over the world could work collaboratively.

Being a part of such an institute from its infancy and being able to help it grow was very appealing.

4. In what research lines will you be working? What specific results do you expect to see?

My interests lie mainly in the area of wireless networking. Wireless capacity is limited by the scarcity of readily usable wireless spectrum while the number of wireless users and the demand for capacity are continually increasing. Meeting these demands require innovative solutions that allow spectrum to be extensively reused while ensuring that everyone perceives good quality of service. I am also investigating opportunistic wireless networking, and the design of new communication paradigms that support evolving applications such as social networks and pervasive computing.

5. Did you know Spain before joining IMDEA? What do you like best about Madrid?

In fact, this is my first opportunity to visit both Spain and Europe. I enjoy the diversity of activities that Madrid offers. Between the cultural sites, like the various outstanding museums, and the outdoor activities whether it be the Retiro park, or the Sierras and the vibrant nightlife, Madrid provides me plenty of options for my leisure time.

Read more:
[Madrimasd - Entrevistas](#) (in Spanish only)

Source(s): IMDEA Networks Institute

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About us

IMDEA Networks Institute, promoted by the Regional Government of Madrid, is a research organization on computer and communication networks whose multinational team is engaged in cutting-edge fundamental science and technology. As a growing, English speaking institute located in Madrid, Spain, IMDEA Networks offers a unique opportunity for pioneering scientists to develop their ideas. IMDEA Networks has established itself internationally at the forefront in the **development of future network principles and technologies**. Our team of highly-reputed researchers is designing and creating today the networks of tomorrow.

Some keywords that define us: 5G, Big Data, blockchains and distributed ledgers, cloud computing, content delivery networks, data analytics, energy-efficient networks, fog and edge computing, indoor positioning, Internet of Things (IoT), machine learning, millimeter-wave communication, mobile computing, network economics, network measurements, network security, networked systems, network protocols and algorithms, network virtualization (software defined networks – SDN and network function virtualization – NFV), privacy, social networks, underwater networks, vehicular networks, wireless networks and more…