

# Kallol Roy

## Curriculum Vitae

DST Centre for Mathematical Biology  
Department of Mathematics  
Indian Institute of Science Bangalore  
☎ +91-8861288073  
☎ +91-08023605390  
+91-08022933217  
FAX +91-08023605390

✉ kallolskynet@gmail.com, kallol.kutty@gmail.com  
Additional Email: kallol14@math.iisc.ernet.in



### Info

Birth September 03, 1977 (Burdwan, India)  
Citizenship Indian  
LinkedIn [http://www.linkedin.com/profile/view?id=24664357&trk=hb\\_tab\\_pro\\_top](http://www.linkedin.com/profile/view?id=24664357&trk=hb_tab_pro_top)  
Skype kallol.kutty

### Areas Of Research Interest

Machine Learning with Topological Data Analysis  
Big Data Analytics and Immersive Visualization  
Virtual reality  
Human-Machine Interface

### Education

2014-2015 **Postdoctoral Research Fellow. Department of Mathematics, Indian Institute of Science Bangalore .**  
2014 **Ph.D. Electrical Communication Engineering, Indian Institute of Science Bangalore.**  
2005 **B.Tech. Electrical Engineering, Indian Institute of Technology Kanpur.**

### Academic Experience

2012 **Visiting Research Scholar, Indiana University-Purdue University, Indianapolis, USA.**  
2012 **Visiting Research Scholar, Indian Association For Cultivation Of Science, Kolkata, India.**  
2006 **Summer Intern, SN Bose National Center For Basic Science, Kolkata, India.**  
2005 **Research Assistant, Indian Institute Of Technology,, Kanpur, India.**

### Work Experience

2009 **Teaching Assistant, Course: Fiber Optics Communication and Networks, Electrical Communication Engineering, Indian Institute Of Science Bangalore.**  
2008 **Teaching Assistant, Short Term Course On Wireless Security, Center For Continuing Education, Indian Institute Of Science Bangalore.**

---

## Awards And Honors

APS-IUSSTF Physics Student Visitation Award, 2012  
Microsoft Travel Award  
Sterlite Best Paper Award at Photonics 2010, IIT Guwahati  
MHRD Scholarship, Government of India 2007  
Jawaharlal Nehru Scholarship Steel Authority of India Limited,2000

---

## Computer Skills

Languages Linden Scripting Language, C, Java  
Virtual Reality Platforms OpenSim, Second Life  
Tools MATLAB

---

## References

Govindan Rangarajan  
Director, Indo-French Centre for  
Applied Mathematics  
DST Centre for Mathematical Biology  
Department of Mathematics  
Indian Institute of Science Bangalore  
Bangalore - 560012  
govindan.rangarajan@gmail.com

T. Srinivas  
Associate Professor  
Applied Photonics Lab  
Electrical Communication Engineering  
Indian Institute of Science Bangalore  
Bangalore - 560012  
tsrinu@ece.iisc.ernet.in

Le Luo  
Associate Professor  
Trapped Atoms and Ions Lab  
Indiana University-Purdue University,  
Indianapolis, IN 46202, USA  
leluo@iupui.edu

R. Srikanth  
Associate Professor  
Poonaprajna Institute Of Scientific Research  
No 4,16th Cross, Sadashivnagar,  
Bangalore- 560 080  
srik@poornaprajna.org

---

## Publications

- 2015 Gaining Intelligence through Topological Data Analysis(in preparation)
- 2015 **Book: Quantum Algorithmic Engineering With Photonic Integrated Circuits(ISBN 978-3-659-66740-4)**, LAMBERT Academic Publishing, Germany
- 2014 Google Quantum PageRanking With Photonic Waveguide Lattice (to be submitted)
- 2012 Dynamical Decoherence Control of Atomic Spin Ensemble In 23<sup>rd</sup> International Conference on Atomic Physics(ICAP 2012) Ecole Polytechnique Palaiseau, France.
- 2011 Decoherence Suppression By Parallelism In A Trapped Ion System In Current Developments In Atomic, Molecular, Optical and Nano Physics(CDAMOP 2011), New Delhi, India.
- 2011 Decoherence Suppression By Parallelization Of Quantum Circuits In International Conference on Theoretical and Applied Physics (ICTAP 2011), IIT Kharagpur, India.
- 2010 Kolmogorov Complexity Approach to Decoy-Based Quantum Cryptography in Photonics 2010, IIT Guwahati, India.