# RESUME


## JITENDRA KUMAR

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### EDUCATIONAL PROFILE

- Ph.D in Applied Physics from Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal, 2005
  Ph.D. thesis title: ***Ultrashort pulse propagation analyses in optical fibers and semiconductor waveguides***
  Supervisor: Prof. P. K. Sen, Deptt. Of Applied Physics, SGSITS, Indore
- Master of Science in Physics (5 yrs. Int.) from IIT-Kanpur in 1991

### WORK EXPERIENCE

- Professor, Department of Electronics Engineering, Indian Institute of Technology (Indian School of Mines) Dhanbad, India (June 2019 till date)
- Associate Professor, Department of Electronics Engineering, Indian Institute of Technology (Indian School of Mines) Dhanbad, India (July 2011 to June 2019)
- Assistant Professor, Department of Electronics Engineering, Indian Institute of Technology (Indian School of Mines) Dhanbad, India (July 2008 to June 2011)
- Lecturer, Department of Applied Physics, Shri G. S. Inst. of Tech. and Science, Indore, India (September 2000 to June 2008)
- Senior Research Fellow (CSIR project), Department of Applied Physics, Shri G. S. Inst. of Tech. and Science, Indore, India (August 1998 to September 2000)
- Lecturer, Department of Applied Physics,Shri G. S. Inst. of Tech. and Science, Indore, India (July 1996 to June 1998)
- Research Scholar, Indian Institute of Technology, Powai, Mumbai, India (July 1991 to June 1996)

    - Teaching B. Tech., M. Tech. and M.Sc. (Applied Physics) courses
    - Research in nanophotonics, lasers, nonlinear optics, and condensed matter physics
    - Laboratory development
    - Curricula upgradation
    - Guiding Project students at undergraduate and postgraduate level as well as Ph.D. guidance

### FIELD OF RESEARCH

Nanophotonics and nanoelectronics, semiconductor nanostructures: optical and electronic properties, lasers and nonlinear optics, fiber optics, optical communication, Quantum technologies

### RESEARCH INTERESTS

I have been working in theoretical analysis and numerical computations of the electronic and optical properties of semiconductor nanostructures, and their applications for optoelectronic devices like photodetectors and lasers.

### SPONSORED PROJECTS

- Ultra-low power Neuromorphic spiking architecture for Assistive Smart Glass as Investigator (Project cost: 86 lacs, duration 2023-2028 funded by MietY
- Centre of Excellence in Renewable Energy under the Scheme Centre of Excellence for Training

and Research in Frontier Areas of Science and Technology (FAST) under MHRD as team member (total project cost: Rs.400.00 lakhs, duration: 2014-2017) at IIT (ISM) Dhanbad.

- Modeling of Semiconductor Nanostructured Devices as Deputy Coordinator (total cost - Rs.28.5 lakhs for the duration, 2011- 2016), on the thrust area under UGC-SAP at IIT (ISM) Dhanbad
- Participated in DST-DAAD Joint Research Project entitled "Steady state and transient coherent nonlinear optical processes in quantum wires and quantum dots", with Prof. Henneberger's group at the Institute for Physics, Humboldt University, Berlin (1st June 2003 to 31st May 2005) at SGSITS, Indore.

**COURSES AND TRAININGS**

- INUP Familiarization Workshop on Nanofabrication Technologies, 29-31 October 2012, Indian Institute of Science, Bangalore.
- Workshop on Nanophotonics, 3 – 7 December 2012, Trieste, Italy.
- Continuing Education Course on "Fiber Optic Communication Devices Systems and Networks, 10-12 August 2005, IISc, Bangalore.
- Curriculum Revision Workshop for Diploma in Electronics and Optoelectronics, 11-12 June, 2004, Shri Vaishnav Polytechnic, Indore.
- Course on Teaching Methodology, 4- 8 February 2002, Organized by Technical Teacher's Training Institute, Bhopal.
- SERC School in Lasers and Optics on Ultrafast Phenomena, 16$^{th}$ November – 4$^{th}$ December 1992 (Karnataka University, Dharwad)

## Ph.D. GUIDANCE

Degree awarded: 13, Ongoing: 4