

# Analabha Roy

*Curriculum Vitae*

## PERSONAL DETAILS

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*Birthdate*      March 21, 1978  
*Address*        CK-147, Sector 2, Salt Lake, Kolkata 700091, India  
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## RESEARCH INTERESTS

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- Theoretical Statistical Mechanics and Complex Quantum Systems out of Equilibrium
- Quantum simulators and Information Science, Quantum Chaos and Control
- Theoretical Condensed Matter and Many Body Physics
- Scientific Computing, High Performance Computing

## CITATION METRICS

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Available at <http://www.researcherid.com/rid/C-8681-2012>

## EDUCATION

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### Ph.D. - Doctor of Philosophy

2002 – 2009

*University of Texas at Austin, Austin, Texas, USA*

Advisor: Linda E. Reichl

Thesis Title: Dynamics of Quantum Control in Cold-Atom Systems

Thesis Link: <http://catalog.lib.utexas.edu/record=b7270815~S2>

### M.Sc. - Master of Science

2000-2002

*Indian Institute of Technology, Kanpur, India*

Two-year M.Sc. Degree Program in Physics

### B.Sc. - Bachelor of Science

1997-2000

*Jadavpur University, Kolkata, India*

First Class in Physics with Honors (Distinction in Minor Subjects - Chemistry and Mathematics)

## RESEARCH EXPERIENCE

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### Assistant Professor

2017-Present

*Department of Physics, The University of Burdwan, Bardhaman, India*

Permanent faculty appointment on tenure-track. The appointment consists of teaching and research duties.

### Postdoctoral Fellow

2015-2017

*National Institute for Theoretical Physics, Stellenbosch, South Africa*

Research duties under the supervision of Prof. Michael Kastner.

### C.S.I.R. Senior Research Associate

2011-2014

*CMP division (Theory), Saha Institute of Nuclear Physics, Kolkata, India*

Postdoctoral Research under CSIR Fellowship (Scientists' Pool Scheme).

### Postdoctoral Fellow

2009-2011

*S.N. Bose National Centre for Basic Sciences, Kolkata, India*

Research duties under the supervision of Prof. J.K. Bhattacharjee.

### Postdoctoral Research Associate

2009-2009

*CQS, The University of Texas at Austin, Austin, TX, USA*

Research duties under the supervision of Prof. Linda E. Reichl.

## TEACHING EXPERIENCE

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### Assistant Professor

2017-Present

*Department of Physics, The University of Burdwan, Bardhaman, India*

Permanent faculty appointment on tenure-track. The appointment consists of teaching and research duties. Teaching duties involve M.Sc. courses on Statistical Mechanics, Numerical Methods, and Condensed Matter Physics (mainly lattice dynamics and Many-Body techniques).

### Lecturer

July 2015

*National Institute for Theoretical Physics, Stellenbosch, South Africa*

Lecture series on Fast Fourier Transform on the Winter School on Computational Physics.

### Graduate Teaching Assistant – Part Time

2002-2009

*Department of Physics and Department of Astronomy, University of Texas at Austin, Austin, TX, USA*

Support towards pursuing Ph.D provided by teaching assistantships. Duties involved teaching undergraduate labs, grading assignments in theory courses and conducting tutorials for undergraduate courses.

## SKILLS

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*Languages:* Bengali (Mother Tongue)  
English (Fluent, Certified by the Texas Intensive English Program)  
Hindi (Fluent)

*Software:* Mathematica, HTML/CSS, L<sup>A</sup>T<sub>E</sub>X, Jupyter/IPython, SciLab/Octave,  
Python-Matplotlib, GNUPlot, SciDavis/Qtiplot/Microsoft Origin.

## **SKILLS (CONTD.)**

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<i>Programming Paradigms:</i>	Procedural, Object-Oriented, and Parallel (OpenMP, MPI, CUDA).
<i>Programming Languages:</i>	C/C++, Python, Unix shell scripts
<i>Operating Systems:</i>	Linux, IBM AIX, SUN-OS, Microsoft Windows.
<i>Data management:</i>	HDF5, netCDF, XML, JSON, Parallel I/O
<i>Computational Methods:</i>	O.D.Es, P.D.Es, Eigensystems, Monte Carlo, Optimization, Matrices, Data analysis, FEM.
<i>Networking and Security:</i>	LAN setup and administration, FOSS client-server setup and maintenance, NAT, firewall, intrusion detection, basic LAMP stack, virtualization.
<i>Multimedia:</i>	Presentation and poster design using $\text{\LaTeX}$ and LibreOffice, Audio and Video transcoding, Network streaming of multimedia content.

## **HONOURS AND AWARDS:**

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1. Scored **1<sup>st</sup> rank nationwide** (India) in the **National Eligibility Test** for Lectureship held jointly by the University Grants Commission and the Council of Scientific and Industrial Research (CSIR-UGC NET) on July 17, 2012.
2. Awarded the **Senior Research Associateship** (Scientists' Pool Scheme) from the Council of Scientific and Industrial Research (CSIR), Government of India, in 2011.
3. Awarded the '**Dr. D.S. Kothari Postdoctoral Fellowship in Sciences, Medical & Engineering Sciences**' from the University Grants Commission (UGC) India, in 2011.
4. Scored 99.2162 percentile nationwide (**17<sup>th</sup> rank**) in the **Joint Entrance Screening Test** (JEST-2002) in Physics, 2002 and scored 99.0000 percentile nationwide (**9<sup>th</sup> rank**) in JEST-2000.
5. Awarded **Certificate of Merit** by the Indian Association of Physics Teachers (IAPT) for being placed in the Nationwide Top 1% in the **National Graduates Physics Examination** (NGPE), 1997.