Souvik Roy

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Personal Information

- Date of Birth – 9th December, 1987.

- Sex – Male.

- Nationality – Indian.

- Age – 30.

- Father – Late Ranjit Kumar Roy.

- Mother – Biva Roy.

Softwares Known and Programming Language Skills

- C++ - a high-level object oriented programming language.

- FENICS- a Python programming oriented language for Finite Element Method.

- COMSOL- Multiphysics interface for Finite Element Method.

- DEAL.II- a C++ programming oriented library package for Finite Element Method.

- MATLAB- for various areas like problems in Tomography, Industrial problems.

- OPENCV- a C++ programming oriented language used for Computer Vision problems.

- PARAVIEW- a plotting tool for .vtk file formats.

- VISIT- a plotting kit for .vtk and .eps file formats.

- CUDA- a GPU based parallel programming language.

- GITHUB- Web-based Git repository hosting service.

Degrees and Academic Positions

- **Tata Institute of Fundamental Research, CAM**   Bangalore, India
  Visiting fellow   *March 2018 – present*
  - Working with Dr. Venkateswaran P. Krishnan on inverse problems in medical imaging.

- **University of Würzburg**   Würzburg, Germany
  Post doctoral fellow   *Sep 2016 – Sep 2017*
  - Worked with Prof. Dr. Alfio Borzì on Fokker-Planck Kolmogorov optimal control problems and inverse problems in medical imaging related to acousto-electric tomography

- **ICTS, Bangalore and University of Nice**   India and France
  Post doctoral fellow   *Jan 2016 – August 2016*
  - Worked jointly with Prof. Didier Auroux and Prof. Amit Apte on developing observers for compressible Navier Stokes equation.

- **University of Würzburg**   Würzburg, Germany
  Post doctoral fellow   *July 2015 – Dec 2015*
  - Worked with Prof. Dr. Alfio Borzi on a bang-bang optimal control problem for Liouville equation.

- **University of Texas, Arlington**   Texas, USA
  Post doctoral fellow   *Jan 2015 – May 2015*
  - Worked with Prof. Gaik Ambartsoumian on inverse problems related to medical imaging.

- **University of Würzburg**   Würzburg, Germany
  DAAD visiting scientist   *Oct 2014 – Dec 2014*
  - Worked with Prof. Alfio Borzì and Prof. Mario Annunziato on Fokker-Planck equations related to stochastic processes.

- **Tata Institute of Fundamental Research, Centre for Applicable Mathematics (CAM)**   Bangalore, India
  Ph.D. Mathematics   *2011 – 2015*
  - Thesis title: Reconstruction of a class of fluid flows by variational methods and inversion of integral transforms in tomography – 2015.
  - Advisors: Prof. A. S. Vasudeva Murthy, Dr. Praveen Chandrashekar. and Dr. Venkateswaran P. Krishnan.

- **Tata Institute of Fundamental Research, CAM**   Bangalore, India
  M.Phil. Mathematics   *2010 – 2011*
  - Thesis: Optical Flows – Determination of 2D velocities of a moving fluid .
  - Advisors: Prof. A. S. Vasudeva Murthy and Dr. Praveen Chandrashekhar .

- **Tata Institute of Fundamental Research, CAM**   Bangalore, India
  M.Sc. Mathematics   *2008 – 2010*
  - Graduated with a Masters in Mathematics .
  - Graduated with 1st position and a 79.25% score .
  - Relevant courses: Partial Differential Equations, Computational PDE, Numerical Analysis, Mechanics, Measure Theory .

- **Ramakrishna Mission Vidyamandira, Belur Math**   West Bengal, India
  University of Calcutta   *2005 – 2008*
  B.Sc. Mathematics

- Graduated with a major in Mathematics and a minor in Physics and Computer Science .
- Graduated with Honours, a 82.5% score, and 4th position in the University of Calcutta rank list .
- Relevant courses: Mathematics, Physics, Computer Science .

- **Don Bosco, Bandel**   West Bengal, India
  Council for Indian School Certificate Examinations   *2005*
  ISC- XII

  - Obtained 91.75% score in the ISC examinations.
  - Relevant subjects: English, Bengali, Mathematics, Physics, Chemistry, Biology

- **Don Bosco, Bandel**   West Bengal, India
  Council for Indian School Certificate Examinations   *2003*
  ICSE- X

  - Obtained 89.4% score in the ICSE examinations.
  - Relevant subjects: English, Bengali, Mathematics, Science, Computer Science

Academic Awards, Grants & Honours

- H.C. Ørsted COFUND fellowship (under Marie Sklodowska-Curie Actions grant no. 609405 (FP7) and 713683 (H2020)) for postdoctoral studies at Denmark Technical University (declined), 2017

- DFG grant for postdoctoral studies at University of Würzburg, Germany.   Sep 2016–Sep 2017

- IFCAM visiting scientist fellowship for postdoctoral studies
  at University of Nice, France.   April 2016–June 2016

- ICTS postdoctoral fellowship   Jan 2016–August 2016

- Postdoctoral fellowship under the project "Multi-ITN Strike"
  at University of Würzburg.   July 2015–Dec 2015

- University of Texas, Arlington and EADS fellowship for postdoctoral studies
  at University of Texas, Arlington, USA   Jan 2015–May 2015

- Received DAAD visiting scholar fellowship for research visit
  to University of Würzburg, Germany.   Oct 2014–Dec 2014

- Received A.R.Drone for being one of the top 20 teams
  in EADS "Join the Spirit"contest.   2013

- Tata Institute of Fundamental Research doctoral fellowship   2010–2015

- Tata Institute of Fundamental Research masters fellowship   2008–2010

- Achieved 1st position in M.Sc exams
  at Tata Institute of Fundamental Research, CAM   2008–2010

- Achieved 3rd position in CSIR-UGC NET exams   2010

- Achieved 4th position in B.Sc exams at University of Calcutta   2005–2008

- Achieved 71st (out of more than 10000 participants) rank
  in the National Science Olympiad, India   2004

Extra-curricular activities

- Outdoor games – cricket, badminton, squash.

- Indoor games – chess, table-tennis, darts.

- Music – Singing, playing synthesizer, playing mouth-organ.

Extra-curricular activities achievements

Runner's up at TIFR-CAM badminton league. 2013
Winner of the badminton singles tournament at TIFR-CAM. 2011
Runner's up at TIFR-CAM badminton doubles tournament. 2011
Winner of the table-tennis doubles tournament at TIFR-CAM. 2009
Runner's up at the TIFR-CAM table-tennis doubles tournament. 2008
Runner's up at the Science fiesta scientific modeling at DBB 2004
Winner of the quiz tournament at DBB. 2004