

Curriculum Vitae - Sudipta Tung

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Current Institution: Indian Institute of Science Education and Research (IISER)-Kolkata, Mohanpur Campus, West Bengal, India.

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EDUCATION:

| Degree/ Certificate | Institution | Year | CGPA/ Percentage |
|--|--|-------------------|--|
| 5 year integrated B.S-M.S Major: Biology | Indian Institute of Science Education and Research (IISER), Kolkata | 2007 - present | 8.69 (On an absolute grade scale of 10) (Department rank: 02) |
| Diploma in Biology | Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bangalore | 2010 | NA (Research training based) |
| Standard 12 (West Bengal Council of Higher Secondary Education) | Nava Nalanda High School, Kolkata | 2007 | 88.4% (State rank: 13) |
| Standard 10 (West Bengal Board of Secondary Education) | Ramakrishna Mission Boys' Home High School, Rahara | 2005 | 91.6% (State rank: 48) |

RESEARCH EXPERIENCES:

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- (2011) "Parameterization and model-exploration of the newly constructed simplified individual-based model for *Drosophila*."
Guide: Dr. Sutirth Dey, Indian Institute of Science Education and Research (IISER), Pune, India.
- (2010) "Construction of a simplified Individual-Based Model for studying the population dynamics under different food regimes in *Drosophila*."
Guide: Dr. Sutirth Dey, IISER, Pune and Prof. Amitabh Joshi, Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bangalore, India.

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- (2009) Modelling adult fecundity to construct an Individual-Based Model for *Drosophila*.
Guide: Dr. Sutirth Dey, IISER, Pune, India.
- (2009) Modelling larval competition in different nutritional environment in order to construct an Individual-Based Model for *Drosophila*.
Guide: Prof. Amitabh Joshi, JNCASR, Bangalore, India.
- (2009) Site Directed Mutation at a Conserved Valine at the Second Helix of HTH Motif of C1 Gene of L1 *Mycobacteriophage*.
Guide: Dr. Tridib Ganguly, Indian Institute of Science Education and Research (IISER), Kolkata, India.

I also undertook following other projects evaluated under different courses in the curriculum of IISER, Kolkata:

- I. Antibacterial activity of some herbs and Indian spices on three different bacteria and cross comparing them, 2007.
- II. Determination of modulus of rigidity of the materials of three different wires using the Phoenix-PC Interface, 2007.
- III. Determining the molecular formula of Nickel-ethylenediamine complexes using the method of continuous variations (Job's Method), 2007.
- IV. Thermal stability of the antibacterial agent in aqueous Garlic Extract, 2007.
- V. Qualitative analysis of aqueous garlic extract, 2008.
- VI. In search of antibacterial agent present in aqueous garlic extract, 2008.
- VII. Synthesis of gold nanoparticles, testing its antibacterial effect and its influence on the antibacterial ability of Garlic, 2008.
- VIII. Estimation of ballistic galvanometer constant by solenoid method, 2008.
- IX. Estimation of the $\mu - \lambda$ graph using prism spectrometer, 2008.
- X. Making a simple logic probe using a Tri-state Non Inverting Buffer Gate (74367 IC), 2008.
- XI. Extraction of Gallic acid from Amla, 2009.
- XII. In search of the antibacterial agent present in aqueous Garlic Extract, 2009.
- XIII. Temporal fluctuation of bacterial content in the nearby water body (A 24 hours study), 2009.

ADDITIONAL SKILLS:

Programming languages: Python and Perl. I have also used R and MATLAB for implementation of certain time-series analyses.

Bioinformatics: Use of *BLAST*, *CLUSTAL-W*, *NEBCutter* and familiarity with PCR primer designing.

Model systems: Familiarity with *E.coli*, *S. aureus*, *Drosophila*, *S.cerevisiae*, Mouse.

Cloning, expression and purification of proteins in vectors of the pET series.

Basic knowledge of Chemistry laboratory, Titration, Column chromatography, TLC, Synthesis of gold nanoparticles.

CONFERENCES/WORKSHOPS/SCHOOLS ATTENDED:

- (2011) 61st Meeting of Nobel Laureates and Students on Physiology and Medicine in Lindau, Germany.
- (2011) Frontiers in Modern Biology, a national symposium organized by Department of biological Sciences, Indian Institute of Science Education and Research (IISER), Kolkata.
- (2011) Modern Trends of Mathematical Applications in Biological and Other Systems, Department of Mathematics, RK Mission Vivekananda Centenary College, Rahara and Department of Mathematics, University of Kalyani.
- (2010) Symposium on Animal Behaviour, Indian Academy of Sciences and IISER Kolkata.
- (2010) 19th European Chronobiology School (EUCLOCK), Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bangalore.
- (2010) SERC school in Chronobiology 2010, JNCASR, Bangalore.
- (2010) Workshop and Symposium on Mathematical Ecology, Indian Institute of Science (IISc), Bangalore and Department of Science and Technology (DST), India.
- (2010) Third year Summer School of Project Oriented Biological Education, JNCASR, Bangalore.
- (2009) Second year Summer School of Project Oriented Biological Education, JNCASR, Bangalore.
- (2008) First year Summer School of Project Oriented Biological Education, JNCASR, Bangalore.
- (2008) Summer Camp, Kishore Vaigyanik Protsahan Yojana (KVPY), IISc, Bangalore.

AWARDS AND FELLOWSHIPS:

- (2011) Summer Research Fellowship, Indian Academy of Sciences (IAS) Bangalore, Indian National Science Academy (INSA) Delhi, The National Academy of Sciences (NASI) Allahabad, India.
- (2011) DST Award for participation in the Meeting of Nobel Laureates and Students in Lindau, Germany.
- (2011) Second best PowerPoint presentation in 'Get Involved in Biology Series-1' (GIBS-1), Homi Bhabha Centre for Science Education, TIFR, Mumbai, India.
- (2010) Third year fellowship under Project Oriented Biological Education (POBE), JNCASR, Bangalore.
- (2009) Second year fellowship under Project Oriented Biological Education (POBE), JNCASR, Bangalore.
- (2008) First year fellowship under Project Oriented Biological Education (POBE), JNCASR, Bangalore.
- (2008) Innovation in Science Pursuit for Inspired Research (INSPIRE) Scholarship for Higher Education (SHE), DST, Govt. of India. [*Declined*]
- (2008) KVPY Fellowship, Department of Science and Technology (DST), Government of India.

SEMINAR, POSTER OR POWERPOINT PRESENTATIONS IN NATIONAL PREMISES:

- (2011) Poster presentation titled 'Brain and Behavior: A Tale of 24 hours' – **Sudipta Tung** and Narendra Mukherjee (Brain and Behavior Public Awareness as part of Get Involved in Biology Series – 1 (GIBS-1), Homi Bhabha Centre for Science Education, Tata Institute of Fundamental Research (TIFR), Mumbai)
- (2011) PowerPoint presentation on 'Different Languages, different powers' – Arunabha Sarkar, Mayukh Mondal, **Sudipta Tung**, Rania Indu and Jyothi V. Nair (GIBS-1, TIFR, Mumbai)
- (2011) PowerPoint presentation titled 'Story of Left and Right Brain' –Mayukh Mondal, Rania Indu, **Sudipta Tung**, Arunabha Sarkar and Jyothi V. Nair (GIBS-1, TIFR, Mumbai)
- (2003) Seminar on 'Contribution of Indians in Ancient Mathematics: Usage of Zero', Calcutta Mathematical Society, Kolkata.

SOCIAL OUTREACH INITIATIVES:

- i. I am involved in teaching mathematics to students of class 8 as part of the IISER Kolkata Help Forum 'Jagriti'.
- ii. I taught all science subjects to two economically challenged kids for two years helping them preparing for their 10th standard examination.
- iii. I conduct school outreach programs in villages of Howrah district as part of the 'Biomajors-2009' group of IISER Kolkata where I talk to schoolchildren about bacteria and their basic biology and also about how to pursue a career in science, engineering or medicine after school.

REFEREES:

1. Dr. Sutirth Dey,
Assistant Professor, Biology Division,
Indian Institute of Science Education and Research,
3rd floor, Central Tower, Sai Trinity Building,
Garware Circle, Pashan,
Pune – 411 021, India.
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2. Prof. Amitabh Joshi,
Professor and Chairman,
Evolutionary and Organismal Biology Unit,
Jawaharlal Nehru Centre for Advanced Scientific Research,
Jakkur P.O., Bangalore-560 064, India.
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