

Aniket Basu

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CURRENT POSITION Assistant Professor
Department of Physics
Vidyasagar College, Kolkata March 2015–present

COURSES TAUGHT Mathematical Methods, Statistical Mechanics, Quantum Mechanics, Computer Programming in C,
Computer Programming in Python

INDUSTRY • Analyst Global Risk, Investments and Treasury Technology
EXPERIENCE Bank of America, Hyderabad May 2009–June 2010

• First Year Analyst Total Return Swaps Trading
Bank of America, Mumbai July 2008–April 2009
Nature of work: Training for a trading job, mainly involving maintenance of code in C# and Java that simulated a model employed by the bank to apprehend credit risk, and picking up the necessary mathematics and software skills in that particular line of business.

EDUCATION **Ph.D. in Theoretical High Energy Physics** (ongoing) 2015–present
University of Calcutta
Nature of work: Evaluation of Feynman diagrams, building up to evaluation of beta functions for non-Abelian gauge theories. We hope to achieve some simplifications in calculations in quantum chromodynamics.

M.Phil. in Theoretical Physics 2002–2008
Tata Institute of Fundamental Research, Mumbai
Nature of work: Black hole microstate counting using string theoretic approaches

Graduate Student, Department of Physics 1999–2001
Cornell University, Ithaca, NY GPA 3.2 out of 4
Passed qualifying exams without further requirements
Subsequently transferred to TIFR, Mumbai

5-year Integrated M.Sc. in Physics 1994–99
Indian Institute of Technology, Kharagpur Specialization: Nuclear & Elementary Particle Physics
Thesis Advisors: (the late) Prof. G. P. Sastry and (the late) Prof. R. S. Saraswat
Thesis title: Computer Simulations of the Tippe Top Paradox in Relativity
code written using C, later published as *Tippe Top Paradox in Relativity*, European Journal of Physics **23**, 295 (2002) with R.S. Saraswat, G. P. Sastry, Kedar Khare, and Sougato Bose
CGPA 8.87 out of 10 over 5 years

PUBLICATIONS	<p>Preprints:</p> <ol style="list-style-type: none"> 1. Preprint: <i>Tachyon Perturbation on Two dimensional Black Hole</i>, [arXiv:1308.2734 [hep-th]], with Parthasarathi Majumdar <p>Papers published in refereed journals:</p> <ol style="list-style-type: none"> 1. <i>Gauge Invariant Matter Field Actions from an Iterative Nöther Coupling</i>, [arXiv:1711.05608], Phys. Rev. D 98, 105018 (2018), with Parthasarathi Majumdar and Indrajit Mitra 2. <i>Dual giant gravitons in $AdS_m \times Y^n$ (Sasaki-Einstein)</i>, Journal of High Energy Physics JHEP 0707, 014 (2007) [arXiv:hep-th/0608093] with Gautam Mandal. 3. <i>Tippe Top Paradox in Relativity</i>, European Journal of Physics 23, 295 (2002) with R.S. Saraswat, G. P. Sastry, Kedar Khare, and Sougato Bose
CONFERENCE PROCEEDINGS	<ul style="list-style-type: none"> • <i>Deconstructing a non-Abelian gauge theory</i>, at Symmetry 2021 - The 3rd International Conference on Symmetry, session <i>Physics and Symmetry</i>, August 7, 2021, with Parthasarathi Majumdar, Indrajit Mitra and Suman Ghosh.
PROFESSIONAL ACTIVITIES	<ul style="list-style-type: none"> • Reviewer for <i>Journal of Modern Optics</i> (Taylor and Francis Group, UK) • Reviewer for <i>Journal of Physics Communications</i> (Institute of Physics Publishing, UK) • Student reviewer for prepublication version of <i>Exploring Black Holes</i> by Edwin F. Taylor and John Archibald Wheeler
MEMBERSHIP OF PROFESSIONAL SOCIETIES	Life Member of the Indian Association of Physics Teachers.
COMPUTER SKILLS	<ul style="list-style-type: none"> • <i>Operating Systems</i>: Windows, Linux • Programming Languages Known: C (have taught this for five years), python (have taught this for ten semesters since 2018).
AWARDS, ACHIEVEMENTS AND SCHOLARSHIPS	<ul style="list-style-type: none"> • Ranked 5 in West Bengal College Service Commission 2013–4 • Kanwal Rekhi Scholarship at TIFR from 2002 to 2006 • Senior Research Fellowship at TIFR from 2004 to 2008 • Junior Research Fellowship at TIFR from 2002 to 2004 • Ranked 1 in TIFR Graduate School Admission Test in Physics 2002 • Ranked 14 in GATE 2002 (Physics)—percentile score 99.29 • Ranked 52 in JEST 2002 (Physics)—percentile score 97.6026 • Qualified for JRF through CSIR-NET, December 2001; was shortlisted for the final interview for the S. P. Mukherjee Fellowship • <i>J.C. Ghosh Award</i> in my final year of M.Sc. at IIT Kharagpur, 1998–9 for ranking 1st over four years of study • <i>Encouragement Award</i> at the <i>Jagadis Bose National Science Talent Search Contest</i> 1995 • Ranked 1383 in IIT-JEE 1994 • Ranked 190 in WBJEE 1994 • Ranked in the top 1 per cent of 21000+ examinees in the National Standard Examination in Physics, 1994, conducted by the Indian Association Physics Teachers • Ranked 6 in a Talent Search Test of the Association for Improvement of Mathematics Teaching 1992

HOBBIES

- Chess
- Chess programming

REFERENCES

Available on request, mainly from various scientific institutions in India.