

Dr. Arup Roy

📍 HOOGHLY MOHSIN COLLEGE · HOOGHLY WEST BENGAL · India ✉ arup145.roy@gmail.com 📞 (+919432922388) Google Scholar id

PROFILE

- » Assistant Professor
- » Area of research interest: Quantum Information and Communication theory, Quantum Entanglement theory, Quantum Thermodynamics, Quantum Foundation

TEACHING, RESEARCH EXPERIENCE & ACADEMIC QUALIFICATION

- 📅 January, 2025–present Assistant Professor
Hooghly Mohsin College 📍 Hooghly WEST BENGAL, India
- 📅 August, 2020–Dec 2024 Assistant Professor
A B N Seal College 📍 Coochbehar WEST BENGAL, India
- 📅 May, 2019–July, 2020 Research Associate-I
S N Bose National Centre For Basic Sciences 📍 Kolkata, India
- 📅 November 2018–May, 2019 Senior Research Fellow (Extended)
Bose Institute 📍 Kolkata, India
- 📅 August, 2012–October, 2018 Ph.D. (Thesis awarded on April 29, 2019)
Indian Statistical Institute Kolkata 📍 Kolkata, India
 - » **Thesis Title:** Study of Quantum Correlations: Their Manifestations and Simulation.
 - » **Supervisor:** Prof. Guruprasad Kar
Senior Professor,
Physics & Applied Mathematics Unit,
Indian Statistical Institute, Kolkata-700108, India.
- 📅 2010–2012 M.Sc. in Physics
University of Calcutta 📍 Kolkata, India
 - » Grade: A , 75.6 %
 - » **Project title during M.Sc.** Quantum Information and Foundation
 - » **Project Guide:** Prof. Guruprasad Kar
Professor,
Department of Physics,
Indian Statistical Institute, Kolkata-700108, India.
- 📅 2007–2010 B.Sc. in Physics
University of Calcutta 📍 Kolkata, India
 - » Grade: First Class (71.3%)
 - » St. Xaviers College, University of Calcutta, India
- 📅 2005-2007 Higher Secondary (Science)
WBCHSE 📍 West Bengal, India
 - » Percentage: 90%
- 📅 2005 Secondary Exam
WBBSE 📍 West Bengal, India
 - » Percentage: 86.375%

0.1 Quantum Foundation

- » Beyond quantum correlation and Physical Principal for characterizing Quantum Correlation
- » Quantum composition
- » Network nonlocality, Contextuality, Steering
- » Generalized probability theory
- » Process Matrix formalism
- » Quantum switch, Indefinite causal order and superposition of paths

0.2 Information and Communication Theory

- » Capacity of quantum and classical channels
- » Mathematical Structure of Quantum Channel
- » Information causality principle, RAC game

0.3 Quantum Games

- » Bayesian Game Theory and Nonlocality
- » Multipartite Version of Quantum Games

0.4 Quantum Thermodynamics

- » Fundamental Relation between Quantum Theory and Thermodynamics
- » Thermodynamical Approach of Information Science
- » Work extraction, Ergotropy, Quantum Batteries
- » Thermodynamic signature of quantum discord and quantum entanglement

0.5 Quantum Entanglement and Its application

- » Entanglement resource theory, LOCC state transformation
- » State distinguishability, Quantum data hiding, Unextendible products bases
- » Random number generator, quantum cryptography

NO. OF WORKS AND IMPACT FACTOR

Journal	# of Paper	Impact Factor
Physical Review Letters	2	9.161
Physical Review A (Letter)	3	3.989
Physical Review A and E	16	3.989
Quantum	1	6.777
New Journal of Physics	1	3.3
Journal of Physics A	1	2.331
Quantum Information Processing	6	2.5
Annals of Physics	1	3.036
The European Physics Journal D	1	1.611
International Journal of Quantum Information	1	0.979
Foundation of Physics	2	1.276
Quantum Studies: Mathematical and Foundation	2	0.92
Quanta	1	0.726
Pramana	1	2.8

PUBLICATIONS-PREPRINTS

Best five publications

- » **1.**Title: *Distilling Nonlocality in Quantum Correlations*
Authors: S. G. Naik, G. L. Sidhardh, S. Senn, **A. Roy**, A. Rai, and M. Banik
Journal: [Phys. Rev. Lett **130**, 220201 \(2023\)](#)
- » **2.**Title: *Ability of unbounded pairs of observers to achieve quantum advantage in random access codes with a single pair of qubits*
Authors: D. Das, A. Ghosal, A. G. Maity, S. Kanjilal, and **A. Roy**
Journal: [Phys. Rev. A **104**, L060602 \(2021\)](#)
- » **3.**Title: *Constraining the state space in any physical theory with the principle of information symmetry*
Authors: M. Banik, S. Saha, T. Guha, S. Agrawal, S. S. Bhattacharya, **A. Roy**, and A. S. Majumdar
Journal: [Phys. Rev. A **100**, 060101\(R\) \(2019\)](#)
- » **4.**Title: *Two-Qubit Pure Entanglement as Optimal Social Welfare Resource in Bayesian Game*
Authors: M. Banik, S. S. Bhattacharya, N. Ganguly, T. Guha, A. Mukherjee, A. Rai, and **A. Roy**
Journal: [Quantum **3**, 185 \(2019\)](#)
- » **5.**Title: *Indefinite causal order enables perfect quantum communication with zero capacity channel*
Authors: G. Chiribella, M. Banik, S. S. Bhattacharya, T. Guha, M. Alimuddin, **A. Roy**, S. Saha, S. Agrawal, and G. Kar
Journal: [New Journal of Physics **23**, 033039 \(2021\)](#)

Peer-reviewed Journals

- » **41.**Title: *Self-testing of nonmaximal genuine entangled states using tripartite Hardy relations*
Authors: R. Adhikary, S. Sasmal and **A. Roy**
Journal: [Phys. Rev. A. **112**, 022407 \(2025\)](#)

- » **40.**Title: *Information causality: An operational principle in limiting nonlocality in nature*
 Authors: G.Kar and **A. Roy**
 Journal: [B.N Seal Journal of Science 12, \(2024\)](#)
- » **39.**Title: *Quantum Nonlocality: Multi-copy Resource Inter-convertibility Their Asymptotic Inequivalence*
 Authors: S. B. Ghosh, S. R. Chowdhury, G. Kar, **A. Roy**, T. Guha, and M. Banik
 Journal: [Phys. Rev. Lett.132, 250205 \(2024\)](#)
- » **38.**Title: *Minimum detection efficiencies for loophole-free genuine nonlocality tests*
 Authors: S. B. Ghosh, S. R.Chowdhury, R. Adhikary, **A. Roy** and T. Guha
 Journal: [Phys. Rev. A 109, 052202 \(2024\)](#)
- » **37.**Title: *Broadcasting of non-locality*
 Authors: D.Patel, **A. Roy**, I. Chakrabarty and N. Ganguly
 Journal: [Pramana - J Phys 98, 59 \(2024\)](#)
- » **36.**Title: *Distilling Nonlocality in Quantum Correlations*
 Authors: S. G. Naik, G. L. Sidhardh, S. Senn, **A. Roy**, A. Rai, and M. Banik
 Journal: [Phys. Rev. Lett 130, 220201 \(2023\)](#)
- » **35.**Title: *Creating quantum correlations in generalized entanglement swapping*
 Authors: P. Bej, A. Ghosal, **A. Roy**, S. Mal, and D. Das
 Journal: [Phys. Rev. A 106, 022428 \(2022\)](#)
- » **34.**Title: *“All-versus-nothing” proof of genuine tripartite steering and entanglement certification in the two-sided device-independent scenario*
 Authors: S. Gupta, D. Das, C. Jebarathinam, **A. Roy**, S. Datta, and AS Majumdar
 Journal: [Quantum Studies: Mathematics and Foundations 9, 175–198 \(2022\)](#)
- » **33.**Title: *Ability of unbounded pairs of observers to achieve quantum advantage in random access codes with a single pair of qubits*
 Authors: D. Das, A. Ghosal, A. G. Maity, S. Kanjilal, and **A. Roy**
 Journal: [Phys. Rev. A 104, L060602 \(2021\)](#)
- » **32.**Title: *Indefinite causal order enables perfect quantum communication with zero capacity channel*
 Authors: G. Chiribella, M. Banik, S. S. Bhattacharya, T. Guha, M. Alimuddin, **A. Roy**, S. Saha, S. Agrawal, and G. Kar
 Journal: [New Journal of Physics 23, 033039 \(2021\)](#)
- » **31.**Title: *Genuine Einstein-Podolsky-Rosen steering of three-qubit states by multiple sequential observers*
 Authors: S. Gupta, A. G Maity, D. Das, **A. Roy**, and AS Majumdar
 Journal: [Phys. Rev. A 103, 022421 \(2021\)](#)
- » **30.**Title: *Information-disturbance trade-off in generalized entanglement swapping*
 Authors: P. Bej, A. Ghosal, D. Das, **A. Roy**, and S. Bandyopadhyay
 Journal: [Phys. Rev. A 102, 052416 \(2020\)](#)
- » **29.**Title: *Persistency of genuine correlations under particle loss*
 Authors: B. Paul, K. Mukherjee, A. Sen, D. Sarkar, A. Mukherjee, **A. Roy**, S. S.r Bhattacharya
 Journal: [Phys. Rev. A 102, 022401 \(2020\)](#)
- » **28.**Title: *Detection of genuine tripartite entanglement in quantum network scenario*
 Authors: B. Paul, K. Mukherjee, S. Karmakar, D. Sarkar, A. Mukherjee, **A. Roy**, and S. S. Bhattacharya
 Journal: [Quantum Information Processing 19, 246 \(2020\)](#)

- » **27.**Title: *Revealing genuine steering under sequential measurement scenario*
 Authors: A. Mukherjee, A. Roy, S. S. Bhattacharya, B. Paul, K. Mukherjee, and D. Sarkar
 Journal: [Quantum Information Processing 19, 143 \(2020\)](#)
- » **26.**Title: *Detection of genuine tripartite entanglement by multiple sequential observers*
 Authors: A. G. Maity, D. Das, A. Ghosal, **A. Roy**, and AS Majumdar
 Journal: [Phys. Rev. A 101, 042340 \(2020\)](#)
- » **25.**Title: *Characterizing quantum correlations in a fixed-input n-local network scenario*
 Authors: K. Mukherjee, B. Paul, and **A. Roy**
 Journal: [Phys. Rev. A 101, 032328 \(2020\)](#)
- » **24.**Title: *Constraining the state space in any physical theory with the principle of information symmetry*
 Authors: M. Banik, S. Saha, T. Guha, S. Agrawal, S. S. Bhattacharya, **A. Roy**, and A. S. Majumdar
 Journal: [Phys. Rev. A 100, 060101\(R\) \(2019\)](#)
- » **23.**Title: *Role of maximally entangled states in the context of linear steering inequalities*
 Authors: D. Das, S. Sasmal, and **A. Roy**
 Journal: [Quantum Information Processing 18, 315 \(2019\)](#)
- » **22.**Title: *Two-Qubit Pure Entanglement as Optimal Social Welfare Resource in Bayesian Game*
 Authors: M. Banik, S. S. Bhattacharya, N. Ganguly, T. Guha, A. Mukherjee, A. Rai, and **A. Roy**
 Journal: [New Journal of Physics 23, 033039 \(2021\)](#)
- » **21.**Title: *Several trade off features of quantum steering in distributed scenario*
 Authors: **A. Roy**, S. S. Bhattacharya, A. Mukherjee, N. Ganguly, B. Paul, K. Mukherjee
 Journal: [The European Physical Journal D 73, 66 \(2019\)](#)
- » **20.**Title: *Sharing of tripartite nonlocality by multiple observers measuring sequentially at one side*
 Authors: S. Saha, D. Das, S. Sasmal, D. Sarkar, K. Mukherjee, **A. Roy**, and S. S. Bhattacharya
 Journal: [Quantum Information Processing 18, 42 \(2019\)](#)
- » **19.**Title: *Uncertainty principle as a postquantum nonlocality witness for the continuous-variable multimode scenario*
 Authors: P. Cherian, A. Mukherjee, **A. Roy**, S. S. Bhattacharya, and M. Banik
 Journal: [Phys. Rev. A 99, 012105 \(2019\)](#)
- » **18.**Title: *Characterization of the quantumness of unsteerable tripartite correlations*
 Authors: D. Das, C. Jebaratnam, B. Bhattacharya, A. Mukherjee, S. S. Bhattacharya, and **Arup Roy**
 Journal: [Annals of Physics 398, 55-79 \(2018\)](#)
- » **17.**Title: *Tripartite-entanglement detection through tripartite quantum steering in one-sided and two-sided device-independent scenarios*
 Authors: C. Jebaratnam, D. Das, **Arup Roy**, A. Mukherjee, S. S. Bhattacharya, B. Bhattacharya, A. Riccardi, and Debasis Sarkar
 Journal: [Phys. Rev. A 98, 022201 \(2018\)](#)
- » **16.**Title: *Environmental effects on nonlocal correlations*
 Authors: T. Guha, B. Bhattacharya, D. Das, S. S. Bhattacharya, A. Mukherjee, **A. Roy**, K. Mukherjee, N. Ganguly, and A. S. Majumdar
 Journal: [Quanta 8, 57 \(2019\)](#)

- » **15.**Title: *Operational characterization of quantumness of unsteerable bipartite states*
 Authors: D. Das, B. Bhattacharya, C. Datta, **A. Roy**, C. Jebaratnam, A.S. Majumdar, and R. Srikanth
 Journal: [Phys. Rev. A 97, 062335 \(2018\)](#)
- » **14.**Title: *Bell-CHSH violation under global unitary operations: necessary and sufficient conditions*
 Authors: N. Ganguly, A. Mukherjee, **A. Roy**, S. S.Bhattacharya, B. Paul, and K. Mukherjee
 Journal: [International Journal of Quantum Information 16, 04, 1850040 \(2018\)](#)
- » **13.**Title: *Characterization of nonlocal resources under global unitary action*
 Authors: **A. Roy**, S. S. Bhattacharya, A. Mukherjee, and N. Ganguly
 Journal: [Quantum Studies: Mathematics and Foundations 5, 318-323 \(2018\)](#)
- » **12.**Title: *Absolute non-violation of a three-setting steering inequality by two-qubit states*
 Authors: S. S. Bhattacharya, A. Mukherjee, **A. Roy**, B. Paul, K. Mukherjee, I. Chakrabarty, C. Jebaratnam, and N. Ganguly
 Journal: [Quantum Information Processing 17, 3 \(2018\)](#)
- » **11.**Title: *Conditional steering under the von Neumann scenario*
 Authors: K. Mukherjee, B. Paul, S. Karmakar, D. Sarkar, A. Mukherjee, S. S. Bhattacharya, and **A. Roy**
 Journal: [Phys. Rev. A 96, 022122 \(2017\)](#)
- » **10.**Title: *Improvement in device-independent witnessing of genuine tripartite entanglement by local marginals*
 Authors: S. S. Bhattacharya, B. Paul, **A. Roy**, A. Mukherjee, C. Jebaratnam, and M. Banik
 Journal: [Phys. Rev. A 95, 042130 \(2017\)](#)
- » **9.**Title: *Reciprocal Ontological Models Show Indeterminism Comparable to Quantum Theory*
 Authors: S. Bandyopadhyay, M. Banik, S. S. Bhattacharya, S. Ghosh, G. Kar, A. Mukherjee, **A. Roy**
 Journal: [Foundations of Physics 47, 265-273 \(2017\)](#)
- » **8.**Title: *Nonlocal correlations: Fair and unfair strategies in Bayesian games*
 Authors: **A. Roy**, A. Mukherjee, T. Guha, S. Ghosh, S. S. Bhattacharya, and M. Banik
 Journal: [Phys. Rev. A 94, 032120 \(2016\)](#)
- » **7.**Title: *Presence of quantum correlations results in a nonvanishing ergotropic gap*
 Authors: A. Mukherjee, **A. Roy**, S. S. Bhattacharya, and M. Banik
 Journal: [Phys. Rev. A 93, 052140 \(2016\)](#)
- » **6.**Title: *Limited preparation contextuality in quantum theory and its relation to the Cirel'son bound*
 Authors: M. Banik, S. S. Bhattacharya, A. Mukherjee, **A. Roy**, A. Ambainis, and A. Rai
 Journal: [Phys. Rev. A 92, 030103\(R\) \(2015\)](#)
- » **5.**Title: *Optimal quantum violation of Clauser–Horne–Shimony–Holt like steering inequality*
 Authors: **A. Roy**, S. S. Bhattacharya, A. Mukherjee, and M. Banik
 Journal: [Journal of Physics A: Mathematical and Theoretical 48, 41 \(2015\)](#)
- » **4.**Title: *Hardy's test as a device-independent dimension witness*
 Authors: A. Mukherjee, **A. Roy**, S. S. Bhattacharya, S. Das, Md R. Gazi and M. Banik
 Journal: [Phys. Rev. A 92, 022302 \(2015\)](#)
- » **3.**Title: *All-versus-nothing violation of local realism from the Hardy paradox under no-signaling*
 Authors: S. S. Bhattacharya, **A. Roy**, A. Mukherjee, and R. Rahaman
 Journal: [Phys. Rev. A 92, 0112115 \(2015\)](#)

- » **2.**Title: *Local deterministic simulation of equatorial Von Neumann measurements on tripartite GHZ state*
Authors: **A. Roy** , A. Mukherjee, S. S. Bhattacharya, M. Banik and S. Das
Journal: [Quantum Information Processing 14, 217-228\(2015\)](#)
- » **1.**Title: *Ontological models, preparation contextuality and nonlocality*
Authors: M. Banik, S. Sankar Bhattacharya, S. K Choudhary, A. Mukherjee, **A. Roy**
Journal: [Foundations of Physics 44, 1230-1244 \(2014\)](#)

Manuscript under Review/Submitted

- » **41.**Title: *Better transmission with lower capacity: lossy compression over quantum channels*
Authors: S. Agrawal, R. Tarafder, G. Smith, **A. Roy**, and M. Banik
ArXiv Link: [arXiv:2105.06617 \(2021\)\[Communicated\]](#)
- » **42.**Title: *Analytical construction of non local operator for n-qubit Dicke state*
Authors: S. Saha, S. S. Bhattacharya, **A. Roy**, A. Mukherjee, and R. Rahaman
ArXiv Link: [arXiv:1802.00214 \(2018\)](#)
- » **43.**Title: *Thermodynamics of local baths in the context of work extraction*
Authors: T. Guha, **M. Alimuddin**, A. Mukherjee, S. S. Bhattacharya, A. Roy, and A. Bhattacharyya
ArXiv Link: [arXiv:1708.09818 \(2017\)](#)
- » **44.**Title: *Quantum nonlocality does not demand all-out randomness in measurement choice*
Authors: M. Banik, S. Kunkri, A. Misra, S. S. Bhattacharya, **A. Roy**, A. Mukherjee, S. Ghosh, and G. Kar
ArXiv Link: [arXiv:1707.05339 \(2017\)](#)
- » **45.**Title: *Generation of Nonlocality*
Authors: K. Mukherjee, B. Paul, D. Sarkar, A. Mukherjee, S. S. Bhattacharya, **A. Roy**, and N. Ganguly
ArXiv Link: [arXiv:1702.07782 \(2017\)](#)
- » **46.**Title: *Witnessing Genuine Mutipartite Non-locality*
Authors: S. S. Bhattacharya, **A. Roy**, A. Mukherjee, and R. Rahaman
ArXiv Link: [arXiv:2411. 6822 \(2024\)](#)
- » **47.**Title: *Sequential Attack Impairs Security in Device-independent Quantum Key Distribution*
Authors: P. Roy, S. Sasmal, S. Bera, S. Gupta ,**A. Roy**, and A.S. Majumder
ArXiv Link: [arXiv:1507. 07327 \(2024\)](#)

REFEREE

- Various Peer Reviewed Journal (e.g APS, Springer etc.)

EDITOR IN CHIEF

- Acted as Editor in Chief for B.N.Seal Journal of Science from 2022-2024.

INVITED SPEAKER IN INTERNATIONAL / NATIONAL CONFERENCES

📅 20-21th Feb, 2025 NSQIF 2025 (Invited Speaker)

Indian Statistical Institute Kolkata

📍 Kolkata, India

- » Title of the talk: "Strong Inequivalence of Quantum Nonlocal Resources"

📅 14-16th March, 2023 TRSQFQI 2023 (Invited Speaker)

A. B. N. S. College & in Coll. with SNBNCBS 📍 Coochbehar, India

» Title of the talk: "Why Quantum Mechanics is special"
- 📅 14th-24th Feb, 2022 ICQIF-2022 (Invited Speaker)

I.S.I Kolkata & in Coll. with SNBNCBS 📍 Kolkata, India

» Title of my Poster: "Classical Capacity of Quantum Channel: Still an Emerging Issue in Quantum Information"
- 📅 26th July-3rd Aug, 2021 NQSCTS-2021 (Invited Speaker)

IIIT Hyderabad 📍 Hyderabad, India

» Title of my talk: "Detection of genuine tripartite entanglement by multiple sequential observers"
- 📅 29th Jan-2nd Feb, '18 ISNFQC-2018 (Invited Speaker)

SNBNCBS 📍 Kolkata, India

» Title of my talk: "Bayesian Games, Social Welfare Solutions and Quantum Entanglement"
- 📅 29th Feb, 2016 ODSOGRPAMU-2016 (Invited Speaker)

ISI 📍 Kolkata, India

» Title of my talk: "Device independent Schmidt Rank witness by using Hardy Paradox"
- 📅 18-20th March, 2015 Physics and Applied Mathematics Researchers' Meet 2015 (Invited Speaker)

Indian Statistical Institute 📍 ISI (Kolkata), India

» Title of my talk: "Relation between joint measurability and steering, Tirlson bound"

POSTER PRESENTATION IN INTERNATIONAL/NATIONAL CONFERENCES

- 📅 24-26th Feb, 2015 Young Quantum-2015 (Poster Presentation)

Harish-Chandra Research Institute 📍 Prayagraj(Allahabad), India

» Title of my poster: "Local deterministic simulation of equatorial Von Neumann measurements on tripartite GHZ state"
- 📅 13-15th April, 2015 586. WE-Heraeus-Seminar. (Poster Presentation)

Physikzentrum 📍 Bad Honnef, Germany

» Title of my poster: "Local deterministic simulation of equatorial Von Neumann measurements on tripartite GHZ state"
- 📅 30th Nov-4th Dec, 2015 ICQF-2015. (Poster Presentation)

National Institute of Technology 📍 Patna, India

» Title of my poster: "All-versus-nothing violation of local realism from the Hardy paradox under no-signaling"
- 📅 9th-16th Feb, 2016 ISCQI-2016. (Poster Presentation)

Institute of Physics (IOP) 📍 Bhubaneswar, India

» Title of my poster: "Optimal quantum violation of Clauser-Horne-Shimony-Holt like steering inequality"
- 📅 17th-21th Oct, 2016 ICQF-2016. (Poster Presentation)

National Institute of Technology 📍 Patna, India

» Title of my poster: "Presence of quantum correlations results in a nonvanishing ergotropic gap"
- 📅 29th Jan-2nd Feb, 2024 PQIQC-2024. (Poster Presentation)

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

- » Title of my poster: "Distilling Nonlocality in Quantum Correlations"

ACADEMIC WORKSHOPS/CONFERENCES/SCHOOLS ON QUANTUM ATTENDED

- » 1. Diversity and complexity: Realm of today's Statistical Physics, Kolkata 2013, Calcutta University in collaboration with SINP, Kolkata, India.
- » 2. Satellite Meeting on Quantum Correlation and its application in communication and cryptography, 2-3th Sep 2013 Indian Statistical Institute, Kolkata,
- » 3. 1st IMSc School on Quantum Information, IMSC Chennai, January 19-31, 2014
- » 4. International Program on Quantum Information, Institute of Physics (IOP), Bhubaneswar, India, February 17-28, 2014
- » 5. National conference on Quantum correlations: Foundation and Information in Indian Statistical Institute, Kolkata, 4-5 March, 2014
- » 6. Summer School on Quantum Correlation; Foundation, Information Processing and Various Applications, June 22 - July 03, 2015, ISI Kolkata
- » 7. Workshop on Logic and Computability; ISI Kolkata 16th to 17th September, 2015
- » 8. National symposium on Recent Trends in Quantum Theory 2017, Department of Applied Mathematics, University of Calcutta, March 09-10, 2017
- » 9. Physics & Applied Mathematics Research scholars Meet, 2017, Indian Statistical Institute, Kolkata, India.
- » 10. National symposium on Recent Trends in Quantum Theory 2017, Department of Applied Mathematics, University of Calcutta, March 13-15, 2019

ACADEMIC VISIT

Visit at Institute of Mathematical Sciences, Chennai from 22th April, 2018 to 3rd May, 2018

NATIONAL EXAM QUALIFIED AND SCHOLARSHIPS

📅 2010	JEST qualified	📍 India
📅 2012	All India Rank - 165 National Eligible Test (NET)	📍 India
📅 2015	All India Rank - 297 Grad. Aptitude Test in Engineering (GATE)	📍 India
📅 2010	JEST qualified	📍 India
📅 2013	All India Rank - 323 Joint Admission test for Masters (JAM)	📍 India
📅 2008-2012	INSPIRE Scholarship Funded by DST	📍 India

ADMINISTRATIVE TRAINING

- First Training Program on Fundamentals of Python Language for faculty members, WBSCHER in collaboration with MAKAUT, WB 16/2/22-3/3/2023
- "National Level Workshop on NIRF INDIA RANKINGS - 2022 For Higher Educational Institutions", by Institute for Academic Excellence in collaboration with Collegiate Education & Technical Education Department, Govt. of Telangana. 5/1/2022-6/1/2022

- IAE – Workshop on NIRF India Rankings 2023, by Institute for Academic Excellence in collaboration with Collegiate Education & Technical Education Department, Govt. of Telangana. 21/12/2022-22/12/2022
- 9th Faculty Induction Programme organized by UGC- Human Resource Development Centre, Jadavpur University, 1/8/2022-2/9/2022
- Refresher Course in Physics (From 18 September to 03 October, 2023) UGC-HRDC, Kumaun University, Nanital
- Two-Day Online National Workshop entitled “Outcome-Based Education (OBE)” on 14-15 July, 2021.
- Two-Day training program at Bureau of Indian Standards” on 20-21 July, 2023.
- NEP:2020 Curriculum and Credit Framework for Four Year UG Programmes on 21 th June, 2023
- A workshop on NIRF by A B N Seal College Coochbehar on 12th August, 2023.
- Workshop on Hands on Training of NAAC Methodology and Preparation by IQAC, Coochbehar College on 10th January 2024
- M S Office Suite and Cloud Fundamental Training organized by Higher Education Department, West Bengal on 7th November,2023
- Importance of AI in education organized by Higher Education Department, West Bengal on 27th March 2024

ATTENDING WEBINAR BEYOND PHYSICS

- “Impact of COVID-19 upon the economy, polity, society and culture of Eastern and North- Eastern India” 29/8/2020 A B N Seal College Cooch Behar
- Environment Day Webinar Participation by A B N Seal College Cooch Behar
- “COVID-19: Challenges for Management of Mental Health and Risk Factors” 19/6/2021 and 20/6/2021 Department of Zoology, A B N Seal College Cooch Behar
- One Day International Webinar on ‘Revisiting Yoga: The Traditional Practice towards Physical and Mental Well-being’
- Two Days International Webinar on Bengali Drama and Stage Craft, Organized by : Department of Bengali, Acharya Brojendra Nath Seal College
- One day webinar on “Disaster Management in India: Many a slip between the cup and the lip
- International webinar on “Introduction to Nanochemistry: Introduction and Challenges”
- One day national webinar on “Contemporary India’s Demographic Dividend: Can India Reap this Benefit?”
- A J C Bose Memorial lecture on “ORIGIN OF LIFE”
- One day International webinar on ““Current Trends of Research in Biological Sciences : Cell to System”.
- State level webinar on Library Services at the Time of Pandemic
- One day National Level Webinar on “75 years of Indian Independence: Growth and Inequality”
- “One-Day State Level Webinar”, held on 2nd day of June, 2021, organised by the Department of Mathematics, Hooghly Mohsin College, in association with IQAC of the College, Topic of the webinar : Glimpses of Ancient Indian Mathematics
- Recent Trends in Physics and Chemistry of Materials Organized by Department of Physics and Chemistry, Dinhata College, Dinhata - 736135
- Workshop on Story Writing: Ichhe Korchhe Galpa Likhte

- ‘Importance and Relevance of Constitution in Democratic Countries with special reference to India’
- Indian National Flag Day and commemoration of the Idea of communal harmony
- State level Webinar on ‘Human Rights: Issues and Challenges’
- National Webinar on ‘Social Inclusion of Differently Abled Persons’ organised by Equal Opportunity Cell, Acharya Brojendra Nath Seal College, Cooch Behar on 3rd December, 2021.
- “Managing Innovations and Sustainability Transitions: Is IPR alone sufficient?”-conducted by Department of Economics
- National Level workshop on INTELLECTUAL PROPERTY RIGHTS: PATENTS and DESIGNS PROCESS on 3/12/2021 by IPO, India
- “Only One Earth: Living Sustainably in Harmony with Nature” by A B N Seal College Coochbehar
- National Intellectual Property Awareness Mission on 15/12/2022 by IPO, India
- Attending a seminar in APC College in New Barrackpore on S N Bose
- Attending a National Conference- “U.N.Brahmachari Socio-Medicon 2025”, Sponsored by Dept. of Higher Education, Govt of West Bengal, Organized by Hooghly Mohsin College on 7/6/2025

ADDITIONAL ACTIVITY

- Trainer at District Science Fair and State Science Fair in 2024.
- Project guide of Sabana Parvin, Deb Ghimary, Probhas Mandal, Subhadeep Banik for the batch 2024
- Project guide of Asif Iqbal Ahmed and Roushan Narjinary for the batch 2023.
- Judge at District Science Fair in Coochbehar 15/8/2024

CONDUCTING SEMINAR WORKSHOP

- Aryabhatta Memorial Lecture 2021 Story of Communication: from Shanon to Bennett et al. and What More? by A B N Seal College Cooch Behar
- Aryabhatta Memorial Lecture 2022 on “Introduction to Particle Physics: From Atoms to Quarks”
- Aryabhatta Memorial Lecture 2023/Playing with Order - conducted by Department of Physics
- TOPICAL RESEARCH SCHOOL ON QUANTUM FOUNDATION AND QUANTUM INFORMATION 2023 (TRSQFI2023) - conducted by Department of Physics acting as Organizing Secretary

INVITED LECTURE BEYOND PHYSICS

- Disha-2021 What to study and why for all UG study aspirants to the interactive workshop
- Utkarsha -An online career counselling programme for all UG and PG Students
- A lecture on Divergent Competencies by Skill and Job Potential Development Committee, , ABN Seal College, Cooch Behar
- A special lecture on Human Rights in Indian Cinema organized by Political Science Department, A B N Seal College
- HANDS-ON TRAINING ON PYTHON PART1, Organized by IQAC, ABN Seal College, Cooch Behar

ADMINISTRATIVE NODAL OFFICER

- Acting as Nodal Officer in A B N SEAL COLLEGE STANDARDS CLUB, in association with BIS, India

COMPUTATIONAL SKILLS

Latex	● ● ● ● ● ● ● ● ● ● ● ●
Mathematica	● ● ● ● ● ● ● ● ● ● ● ● ● ●
C Programming	● ● ● ● ● ● ● ● ● ● ● ● ● ●
Python	● ● ● ● ● ● ● ● ● ● ● ● ● ●
Scilab	● ● ● ● ● ● ● ● ● ● ● ● ● ●
Qbasic	● ● ● ● ● ● ● ● ● ● ● ● ● ●
Fortran	● ● ● ● ● ● ● ● ● ● ● ● ● ●
M.S.Office	● ● ● ● ● ● ● ● ● ● ● ● ● ●
Graphical Software-Origin, Gnuplot	● ● ● ● ● ● ● ● ● ● ● ● ● ●

RESEARCH RELATED TEACHING EXPERIENCE

- Study project to the summer students in Quantum Mechanics in 2015,2016,2017,2018,2019

PROJECTS

- How do we measure earth magnetic field using fluxgate magnetometer(2009-2010), in St.Xaviers College

LANGUAGES

English

Bengali(native) & Hindi

ACADEMIC REFEREE(S)

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