

Academic Profile

Name: Dr. Sabita Das

Designation: Assistant Professor (Stage -I)

Department: Physics

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Teaching Experience: 5 Years

Asst. Prof. (Jan 2018 ~) : Kuntal Kumari Sabat Women's College, Balasore, Odisha

Specialisation: High Energy Physics

Research Experience: 7 Years 3 Months

Educational Qualification:

- **Post Doctoral Fellow (May 2016 - Jan 2018):** Central China Normal University, Hubei, China.
- **Post Doctoral Fellow (Jan 2016 - May 2016):** National Institute of Science Education and Research (NISER), Bhubaneswar, India.
- **Visiting Scientist (Sept 2015 - Dec 2015):** Institute of Physics, Bhubaneswar, India.
- **Ph. D. (2015):**Institute of Physics (Homi Bhaba National Institute), Bhubaneswar, Odisha, India
- **Research Assistant (Aug 2012 - Aug 2013):** Brookhaven National Laboratory, Upton, New York, USA
- **Diploma in Advance Physics (Aug 2009):** Institute of Physics (Homi Bhaba National Institute), Bhubaneswar, Odisha, India
- **M.Sc in Physics (2008):** Utkal University, Bhubaneswar, Odisha

- Qualified National Eligibility Test (NET - 2009, AIR - 26)
- Qualified Graduate Aptitude Test in Engineering (GATE - 2009, AIR - 265)
- Qualified Joint Entrance Screening Test (JEST - 2009, AIR - 52)

Research Interests:

Experimental High Energy Physics

Quantum ChromoDynamics (QCD) phase diagram

- Signatures of Quark-Gluon Plasma (QGP)
- Nuclei production in ultra-relativistic heavy-ion collisions
- Hadron Resonance Gas Model

Research Grant (National)

Name of Project: SERB-Teachers Associateship for Research Excellence (TARE)

Sanction Order Number : TAR/2022/000643

Project titled "Study of freeze-out dynamics in heavy-ion collisions at RHIC BES-II energies using hadron resonance gas model"

Sanctioned Amount : 18.3 Lakh,

Duration : 3 Years, 2022-25

Mentor: Prof. Bedangadas Mohanty, Professor, School of Physical Sciences, NISER, Odisha
Collaboration Linkage: NISER, Odisha

Selected Publications

- Bulk Properties of the System Formed in Au+Au Collisions at $\sqrt{s_{NN}}= 14.5$ GeV.
J. AdamS. Das et al. (STAR Collaboration), *Phys. Rev. C* **101** (2020) 24905
- Beam energy dependence of (anti-)deuteron production in Au+Au collisions at RHIC.
J. AdamS. Das et al. (STAR Collaboration), *Phys. Rev. C* **99** (2019) 64905
- Strangeness freeze-out: role of system size and missing resonances
S Chatterjee, S Das, A K Dash, D Mishra, B Mohanty and S Samanta,
EPJ Web of Conf. **171** (2018) 14002.

- Bulk Properties of the Medium Produced in Relativistic Heavy-Ion Collisions from the Beam Energy Scan Program.
L. Adamczyk, ..., S. Das et al. (STAR Collaboration),
Phys. Rev. C **96** (2017) 044904.
- Freeze-out conditions in proton-proton collisions at the highest energies available at the BNL Relativistic Heavy Ion Collider and the CERN Large Hadron Collider.
Sabita Das, Debadeepti Mishra, Sandeep Chatterjee, and BedangadasMohanty,
Phys. Rev. C **95** (2017) 014912.
- Freeze out parameters in heavy-ion collisions at AGS, SPS, RHIC, and LHC energies.
SandeepChatterjee, Sabita Das, and BedangadasMohanty et al.,
Adv. in High Eng. Phys. (2015) , *Review Article ID: 349013*
- Cosmic ray test of Mini-drift Thick Gas Electron Multiplier for Transition Radiation Detector.
Shuai Yang, Sabita Das, and ZhangbuXu et al., *Nucl. Instr. Meth. A* **785** (2015) 33–39.
- Centrality dependence of freeze-out parameters from the beam energy scan at STAR.
Sabita Das (for the STAR Collaboration),*Nucl. Phys. A* **904** (2013) 891c

Full list of Publications:

<https://scholar.google.com/citations?user=qNfdle0AAAAJ&hl=en&oi=ao>

<https://www.scopus.com/authid/detail.uri?origin=resultslist&authorId=55605761948&zone=>

Selected Seminars/Workshops/Conferences Attended:

- **International Conference on Physics and Astrophysics of Quark Gluon Plasma, Puri, India, February 7-10, 2023.**
- Workshop on Critical Point and Onset of Deconfinement, Online, Nov 28 – Dec 3, 2022
- DAE-BRNS symposium on "Contemporary and Emerging Topics in High Energy Nuclear Physics (CETHENP-2022)" November 15-17 at VECC, Kolkata
- Advanced Radiation Detector and Instrumentation in Nuclear and Particle Physics, Online, Department of Physics, University of Jammu, India, October 25 - 29, 2021
- XXIV DAE-BRNS Symposium on High Energy Physics, Online, NISER, Bhubaneswar, India, December 14 - 18, 2020.

- ALICE-STAR-INDIA Meeting, NISER, Bhubaneswar, Odisha, September 17-20, 2018.
- A National Symposium on Heavy-ion physics at FAIR, RHIC and LHC facilities, NISER, Bhubaneswar, India, June 18-19, 2018.
- Fluctuation and critical point EMMI International Symposium, CCNU, Wuhan, China, October 10-14, 2017
- The 2nd CBM-STAR joint Workshop, CCNU, Wuhan, China, Sep. 23, 2017.
- International Conference on Quark Matter, Chicago, Illinois, USA, Feb. 5-11, 2017.
- XXII DAE-BRNS High Energy Physics Symposium, New Delhi, India, Dec. 12 - 16, 2016.
- Workshop on Hadron Production and fluctuations in Heavy ion Collisions, CCNU, Wuhan, China, October 18 - 21, 2016.
- International Conference on Hard and Electromagnetic Probes of High- Energy Collisions, Central China Normal University, Wuhan, China, Sept. 23-27, 2016.
- Workshop on QCD Phase Structure III, Central China Normal University, Wuhan, China, Jun. 6-9, 2016.
- Asian Triangular Heavy Ion International Conference, New Delhi, India, Feb. 15-19, 2016.
- STAR Regional Meeting, NISER, Bhubaneswar, India, Feb. 12-13, 2016.
- DAE-BRNS Symposium on Nuclear Physics, Prasanthi Nilayam, Andhra Pradesh, India, Dec. 7-11, 2015.
- International Conference on Physics and Astrophysics of Quark Gluon Plasma, Kolkata, India, Feb. 1-6, 2015.
- **International Symposium on Multi-particle Dynamics, Bologna, Italy, Sept. 8-12, 2014.**
- International Conference on Strangeness in Quark Matter, Birmingham, UK, July 22-27, 2013.
- RHIC and AGS Annual Users Meeting, Brookhaven National Laboratory, USA, June 25-28, 2013.
- STAR Analysis Meeting, UCLA, California, USA, Nov. 28 - Dec. 3, 2012.

- International Conference on Quark Matter, Washington, D.C., USA, Aug. 13-18, 2012.
- Quark Gluon Plasma Meet, Variable Energy Cyclone Centre, Kolkata, India, July 3-6, 2012.
- DAE Symposium on Nuclear Physics, Visakhapatnam, Andhra Pradesh, India, Dec. 26-30, 2011
- VIIIth SERC School on Experimental High Energy Physics,
Variable Energy Cyclone Centre, Kolkata, India, June 20 - July 10, 2011

Refresher/FDP/Orientation Attended

1. FDP on ICT & Its Implication in Teaching, 18-21 Jan, 2023,
KKS Women's College, Balasore
2. Refresher Course on Astronomy and Astrophysics, 16.05.2022 - 17.06.2022 ,
TLC, IUCAA, Pune, PMMMNMTT, MHRD
3. Faculty Development Programme on Software Tools for Academicians,
13.12.2021 - 18.12.2021, Fakir Mohan University, Balasore
4. Refresher Course in PHYSICS, 27.10.2021 - 10.11.2021, TLC, Ramanujan College,
DU PMMMNMTT, MHRD
5. Refresher Course on Astronomy and Astrophysics, 10.05.2021 - 11.06.2021, TLC, IUCAA,
Pune, PMMMNMTT, MHRD
6. Orientation Course for Faculties in Universities/Colleges/Institutes of Higher Education,
16.04.2021 - 15.05.2021
7. Induction Training Programme, Department of Higher Education, Govt. of Odisha,
24.01.2018 - 07.02.2018, Utkal University UGC - HRDC

Administrative Assignments:

- Head of the Department (Jan 2018 ~)
- Member of UG Admission Team (Jan 2018 ~)
- Member of IQAC (2019 ~)
- Member of RUSA committee (2022 ~)
- Asst. Coordinator, OHEPEE (2022~)
- Member NAAC Steering committee (2023)
- Associate Vice-President Athletics (2018 ~)
- Officer in charge (OIC) Proctorial (2019 ~)
- Associate OIC Scholarships (2018~)