

Dr. Jyoti Saini

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Employment History

- 08.09.2018 - 04.09.2019 **Assistant Professor**, Govt. Girls P.G. College, Chittorgarh, Raj.
05.09.2019 - Present **Assistant Professor**, Department of Physics, University of Rajasthan, Jaipur.

Education

- 2021 **Ph.D.**, Indian Institute of Technology Jodhpur
Thesis title: *Probing New Physics Through Bottom and Top Quark Decay.*
- 2015 **GATE**, All India Rank-487.
Subjects: *Physics.*
- JRF**, secured 107/0338 rank in Joint CSIR-UGC Test for Junior Research Fellowship and Eligibility for Lectureship(NET), Subjects: *Physical Sciences.*
- 2014 **M.Sc. Physics**, University of Rajasthan, Jaipur.
Specialization: *High Energy Physics.*
- 2012 **B.Sc.**, L.B.S Govt. P.G. College, Kotputli, Jaipur.
Subjects: *Physics, Chemistry, Mathematics.*

Research Publications




Journal Articles

- 1 A. K. Alok, S. Kumbhakar, J. Saini, and S. U. Sankar, "New physics in $b \rightarrow se^+e^-$: A model independent analysis," *Nuclear Physics B*, vol. 967, p. 115 419, 2021, ISSN: 0550-3213. [DOI](https://doi.org/10.1016/j.nuclphysb.2021.115419): <https://doi.org/10.1016/j.nuclphysb.2021.115419>.
- 2 S. Kumbhakar and J. Saini, "Flavor signatures of complex anomalous tcz couplings," *The European Physical Journal Plus*, vol. 135, no. 3, Mar. 2020, ISSN: 2190-5444. [DOI](https://doi.org/10.1140/epjp/s13360-020-00341-8): [10.1140/epjp/s13360-020-00341-8](https://doi.org/10.1140/epjp/s13360-020-00341-8).
- 3 S. Kumbhakar and J. Saini, "New physics effects in purely leptonic B_s^* decays," *The European Physical Journal C*, vol. 79, no. 5, May 2019, ISSN: 1434-6052. [DOI](https://doi.org/10.1140/epjc/s10052-019-6901-6): [10.1140/epjc/s10052-019-6901-6](https://doi.org/10.1140/epjc/s10052-019-6901-6).
- 4 D. Kumar, J. Saini, S. Gangal, and S. B. Das, "Probing new physics through $B_s^* \rightarrow \mu^+\mu^-$ decay," *Physical Review D*, vol. 97, no. 3, Feb. 2018, ISSN: 2470-0029. [DOI](https://doi.org/10.1103/physrevd.97.035007): [10.1103/physrevd.97.035007](https://doi.org/10.1103/physrevd.97.035007).

Conference Proceedings

- 1 S. Kumbhakar and J. Saini, " $B_s^* \rightarrow l^+l^-$ decays in light of recent B anomalies," in *XXIII DAE High Energy Physics Symposium*, P. K. Behera, V. Bhatnagar, P. Shukla, and R. Sinha, Eds., Singapore: Springer Nature Singapore, 2021, pp. 161–167, ISBN: 978-981-33-4408-2.
- 2 J. Saini and S. Kumbhakar, "Probing anomalous tcz couplings with rare b and k decays," in *XXIII DAE High Energy Physics Symposium*, P. K. Behera, V. Bhatnagar, P. Shukla, and R. Sinha, Eds., Singapore: Springer Nature Singapore, 2021, pp. 57–63, ISBN: 978-981-33-4408-2.
- 3 J. Saini, D. Kumar, S. Gangal, and S. Bharti Das, "Probing signatures of beyond standard model physics through $B_s^* \rightarrow \mu^+\mu^-$ decay," in *16th Conference on Flavor Physics and CP Violation*, A. Giri and R. Mohanta, Eds., Cham: Springer International Publishing, 2019, pp. 479–482, ISBN: 978-3-030-29622-3.

Skills and Interests



- Languages  Reading, writing and speaking competencies for Hindi and English.
- Computer skills  Basic knowledge of C programming, Python, Mathematica and \LaTeX .
- Interests  Teaching, Reading and Gardening.

Conferences, workshop and schools




Attended

- 2 Sept.-4 Sept., 2013  **Workshop on Introductory Astronomy**, jointly organized by IUCAA, Pune and Dept. of Physics, UOR, Jaipur in collaboration with B.M. Birla Planetarium.
- 5 Sep. - 2 Oct., 2016  **SERC school in Theoretical High Energy Physics** held at IIT Gandhinagar.
- 29 Nov. - 2 Dec., 2017  **7th Belle Analysis Workshop** held at MNIT, Jaipur.
- 10 Dec. - 14 Dec., 2018  **XXIII DAE-BRNS High Energy Physics Symposium** held at the IIT, Madras.
- 14 July - 18 July, 2018  **16th Conference on Flavor & CP Violation** jointly organized by IIT Hyderabad and University of Hyderabad.
- 10 Jan. - 12 Jan, 2019  **46th National Conference** by The Rajasthan Geography Association on the topic **Sustainable Future: Global Challenges for Environment Protection and Social Development** held at Maharana Pratap Govt. College, Chittorgarh, Raj.
- 14 May - 15 May, 2021  **Ahmedabad Learning Dialogues - A Conference on Teaching and Learning** (online) organized by Centre for Learning Futures, Ahmedabad University.

Organized (was part of organizing committee)

- 4 Aug. 2021  **Webinar 2021/01: Physics of Nuclear reactor** organized by Dept of Physics, University Maharani College, Jaipur.
- 7 Sept. 2021  **Webinar 2021/02: Fundamental of Astronomy and facing future challenges with RAD@home and GMRT** organized by Dept of Physics, University Maharani College, Jaipur.

Certification

- 15th Nov.-14th Dec.,2021  **Faculty Induction Programme**, organized by UGC-HRDC, University of Rajasthan, Jaipur.
- 23rd Feb.-8th March, 2023  **Interdisciplinary Refresher Course in Sustainable Development and Climate Change**, organized by UGC, HRDC, University of Allahabad.
- 18th Dec.-30th Dec, 2023  **NEP Orientation & Sensitization Programme** under Malaviya Mission-Teacher Training Programme, organized by UGC, Malaviya Mission- Teacher Training Centre, University of Rajasthan, Jaipur.