**Present Status:**

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| --- | --- |
| Postdoctoral researcher  [2023-present] | Oak Ridge Associated Universities, Tennessee, USA  DIII-D National Fusion Facility, San Diego, USA |
|  | Currently working on a technique to characterize the detached plasma through quantification of plasma-atomic and plasma-molecular contributions in particle, power and momentum balance. This utilizes several existing visible diagnostics of DIII-D along with extensive computational analysis based on a Bayesian inference technique. |

**Ph. D. Thesis title:**

**“Spectroscopic Investigation of Neutrals and Impurity Dynamics in the Edge Region of Aditya-U Tokamak” [[1]](#footnote-1)**

**Work Experience:**

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| Ph. D. (Physics) | [2020-2023] Institute of Science, Nirma University, Ahmedabad, Gujarat, India |
| Senior Research Fellow | [2021-2022] Senior Research Fellow, Indian Institute of Technology, Kanpur, UP, India |
| Junior Research Fellow | [2018-2021] Junior Research Fellow, The National Institute of Engineering, Karnataka, India |
| Research Scholar | [2016-2018] Research Scholar, Gujarat University, Ahmedabad, Gujarat, India |
| Scientific Assistant | [2015-2016] Scientific Assistant, Institute for Plasma Research, Gandhinagar, India |

**Academic qualifications:**

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| Master of Science (Physics) | [2013-2015] Gujarat University, India 1st Rank (80.3 %) [[2]](#footnote-2) |
| Bachelor of Science (Physics) | [2010-2013] Gujarat University, India 2nd Rank (79.23 %) [[3]](#footnote-3) |

**Awards/ achievements:**

|  |  |
| --- | --- |
| 2024 | US-DOE Experiment Award[[4]](#footnote-4) |
| 2022 | Buti Young Scientist Award[[5]](#footnote-5) (presented thesis work) |
| 2021 | PSSI - Z. H. Sholapurwala Award for Fusion Research[[6]](#footnote-6) |
| 2018 | PSSI visiting student fellowship [November 2017 to March 2018] |
| 2017 | PSSI poster award |
| 2016 | Selected for the DST-INSPIRE Fellowship. |

### Scientific contributions (66)

|  |  |
| --- | --- |
| Peer reviewed publications (30)  Papers in preparation (3) | Conference proceedings (International-12)  Presentations: Oral (7), Poster (16) |

1. [**Nandini Yadava,** et al. Plasma and Fusion Research 17 (2022), 2401095-2401095](https://doi.org/10.1585/pfr.17.2401095).
2. [**Nandini Yadava**, et al. Plasma and Fusion Research, 16 (2021), 2402055-2402055.](https://doi.org/10.1585/pfr.16.2402055)
3. [**Nandini Yadava**, et al. Atoms 7, no. 3 (2019): 87.](https://doi.org/10.3390/atoms7030087)
4. [**Nandini Yadava**, et al. Nuclear Fusion 59 (2019), no 10, 106003.](https://doi.org/10.1088/1741-4326/ab2d57)

**Planned contributions:**

1. **APS-DPP 2025 oral presentation (18th November 2025):**

Understanding Detachment Processes in DIII-D via Bayesian Analysis of Balmer Emissions

1. **Under review:**

Assessment of DIII-D plasma with Balmer analysis technique to quantify plasma detachment, **N. Yadava,** et al.

1. Research work was carried out at the Institute for Plasma Research, Gandhinagar, Gujarat, India during 2015 to 2023 under different fellowship and institutional support. [↑](#footnote-ref-1)
2. Project title: “Variable regulated power supply using IC LM317” [↑](#footnote-ref-2)
3. Project title: “Op-amp IC tester with dual 12V DC power supply” and “Sensitive Alarm system for LPG Leakage and smoke detection” [↑](#footnote-ref-3)
4. Proposed experiment: Validation of edge fluid codes for degree of detachment of the high-field side divertor + Quantification of Plasma-Molecular Interaction Effects on Divertor Detachment in L-mode and H-mode. [↑](#footnote-ref-4)
5. Oral presentation: Understanding the Physical Processes Prevailing in the Edge Plasma Region of ADITYA-U Tokamak using Spectroscopic Measurements more details: https://www.pssi.in/documents/buti\_young\_scientist\_award.html [↑](#footnote-ref-5)
6. Presented work: Impurity Transport in Aditya-U Tokamak with Indigenously Developed Semi-Implicit Impurity Transport Code [↑](#footnote-ref-6)