

Sitender Pratap Kashyap, Ph.D.

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D.O.B 17 June 1990 **Nationality** India

Employment History

- November 2024 – Current **Physics for Future Post Doctoral Fellow**, Institute of Physics of the Czech Academy of Sciences, Prague.
- September 2023 – October 2024 **Post Doctoral Fellow**, Chennai Mathematical Institute, Chennai.
- January 2021 – July 2023 **Post Doctoral Fellow**, The Institute of Mathematical Sciences, Chennai.
- October 2018 – December 2020 **Post Doctoral Fellow**, Institute of Physics, Bhubaneswar.

Education

- August 2012 – September 2018 **Ph.D., Harish-Chandra Research Institute, Allahabad**
Thesis title: *Massive States in Pure Spinor Superstring and Evading an Implication of String Theory – Vacuum Decay.*
- September 2007 – July 2012 **M.Sc. Physics, Centre for Excellence in Basics Sciences, Mumbai**

Research Publications

Journal Articles

- 1 Harsh, S. J. Hoque, S. P. Kashyap, and A. Virmani, “de Sitter Teukolsky waves,” *Class. Quant. Grav.*, vol. 41, no. 22, p. 225 011, 2024. [DOI: 10.1088/1361-6382/ad8437](#). arXiv: 2405.10777 [gr-qc].
- 2 S. P. Kashyap, R. Pius, and M. Ramchander, “Theory dependence of black hole interior reconstruction and the extended strong subadditivity,” *JHEP*, vol. 10, p. 190, 2023. [DOI: 10.1007/JHEP10\(2023\)190](#). arXiv: 2306.10801 [hep-th].
- 3 S. P. Kashyap and M. Verma, “One loop mass renormalization of massive states using pure spinor formalism,” *JHEP*, vol. 05, p. 024, 2023. [DOI: 10.1007/JHEP05\(2023\)024](#). arXiv: 2301.04995 [hep-th].
- 4 S. Chakrabarti, S. P. Kashyap, B. Sahoo, A. Sen, and M. Verma, “Testing Subleading Multiple Soft Graviton Theorem for CHY Prescription,” *JHEP*, vol. 01, p. 090, 2018. [DOI: 10.1007/JHEP01\(2018\)090](#). arXiv: 1709.07883 [hep-th].
- 5 S. Chakrabarti, S. P. Kashyap, and M. Verma, “Amplitudes Involving Massive States Using Pure Spinor Formalism,” *JHEP*, vol. 12, p. 071, 2018. [DOI: 10.1007/JHEP12\(2018\)071](#). arXiv: 1808.08735 [hep-th].
- 6 S. Chakrabarti, S. P. Kashyap, and M. Verma, “Integrated Massive Vertex Operator in Pure Spinor Formalism,” *JHEP*, vol. 10, p. 147, 2018. [DOI: 10.1007/JHEP10\(2018\)147](#). arXiv: 1802.04486 [hep-th].
- 7 S. Chakrabarti, S. P. Kashyap, and M. Verma, “Theta Expansion of First Massive Vertex Operator in Pure Spinor,” *JHEP*, vol. 01, p. 019, 2018. [DOI: 10.1007/JHEP01\(2018\)019](#). arXiv: 1706.01196 [hep-th].
- 8 S. Chakrabarti, S. P. Kashyap, B. Sahoo, A. Sen, and M. Verma, “Subleading Soft Theorem for Multiple Soft Gravitons,” *JHEP*, vol. 12, p. 150, 2017. [DOI: 10.1007/JHEP12\(2017\)150](#). arXiv: 1707.06803 [hep-th].
- 9 C. de Lacroix, H. Erbin, S. P. Kashyap, A. Sen, and M. Verma, “Closed Superstring Field Theory and its Applications,” *Int. J. Mod. Phys. A*, vol. 32, no. 28n29, p. 1730 021, 2017. [DOI: 10.1142/S0217751X17300216](#). arXiv: 1703.06410 [hep-th].

- 10 S. P. Kashyap, S. Mondal, A. Sen, and M. Verma, "Surviving in a Metastable de Sitter Space-Time," *JHEP*, vol. 09, p. 139, 2015. [DOI: 10.1007/JHEP09\(2015\)139](https://doi.org/10.1007/JHEP09(2015)139). arXiv: 1506.00772 [hep-th].

In communication/Preprint






- 1 S. P. Kashyap, C. R. Mafra, M. Verma, and L. Ypanaque, *Massless representation of massive superfields and tree amplitudes with the pure spinor formalism*, Jul. 2024. arXiv: 2407.02436 [hep-th].
- 2 S. P. Kashyap, C. R. Mafra, M. Verma, and L. A. Ypanaque, *A relation between massive and massless string tree amplitudes*, Nov. 2023. arXiv: 2311.12100 [hep-th].
- 3 S. P. Kashyap, *The Mostly BRST Exact Operator in Superstrings*, Dec. 2022. arXiv: 2212.13838 [hep-th].
- 4 S. P. Kashyap, *Two-Point Superstring Tree Amplitudes Using the Pure Spinor Formalism*, Dec. 2020. arXiv: 2012.03802 [hep-th].

Skills

Computer Coding Languages  Can code in C++, FORTRAN 95, MATHEMATICA, CADABRA

Miscellaneous Experience

Awards and Achievements

- 2024  **Physics for Future (PF4), Postdoctoral Fellowship**, under Marie Skłodowska-Curie Actions COFUND.
- 2022  **Bharat Vikas Award 2022**, Institute of Self Reliance, Bhubaneswar.
- 2018  **Strings 2018 Fellowship**, Okinawa Institute of Science and Technology.
- 2012  **INSPIRE Scholarship**, by Ministry of Science and Technology - Department of Science and Technology, India
- 2010  **Top 1% in National Graduate Physics Exam**, by Indian Association of Physics Teachers
Top 1 Association of Physics Teachers

Invited Talks and Academic Visits

- 2024  **Numerical and Analytical Relativity-2024**, 20-22 March 2024, IIT Allahabad, India.
- 2023  **Chennai Strings Meeting 2023**, 28 Nov - 01 Dec 2023, The Institute of Mathematical Sciences, Chennai, India.
-  **Chennai Strings Meeting 2022**, 21-24 Feb 2023, The Institute of Mathematical Sciences, Chennai, India.
- 2022  **Lectured at Student Talks on Trending Topics in Theory (ST4)**, 4-15 July 2022, Indian Institute of Technology, Indore, India.
- 2019  **National Strings Meeting 2019**, 22-27 Dec 2019, Indian Institute of Science Education and Research, Bhopal, India.

Miscellaneous Experience (continued)

- 2018 ■ **Indian Strings Meeting 2018**, 16-21 Dec 2018, Indian Institute of Science Education and Research, Thiruvananthapuram, India.
- **Strings 2018**, 25-29 June 2018, Okinawa Institute of Science and Technology, Okinawa, Japan.
- **Chennai Mathematical Institute**, 22 February 2018. Invited talk by Prof. Amitabh Virmani.
- 2017 ■ **National Strings Meeting 2017**, 05-10 Dec 2017, NISER and IIT Bhubaneswar, Bhubaneswar, India.
- 2016 ■ **Perimeter Institute for Theoretical Physics**, 21 July - 11 August 2016, visited Dr. Roji Pius.

Participation in conferences/workshops/schools

- 2023 ■ **Indian Strings Meeting 2023**, 10-16 Dec 2023, Indian Institute of Technology, Mumbai, India.
- 2018 ■ **Spring School on Superstring Theory and Related Topics**, 14-22 March 2018, ICTP, Trieste, Italy.
- **Kavli Asian Winter School**, 08 Jan - 18 Jan 2018, International Center for Theoretical Sciences, Bengaluru, India.
- 2016 ■ **Indian Strings Meeting 2016**, 15-21 Dec 2016, Indian Institute of Science Education and Research, Pune, India.
- 2015 ■ **National Strings Meeting 2015**, 06-12 Dec 2015, IISER Mohali, India.
- **Strings 2015**, 22-26 June 2015, International Center for Theoretical Sciences, Bengaluru, India.
- 2014 ■ **Indian Strings Meeting**, 15-20 Dec 2014, Institute of Physics - Bhubaneswar, held at Puri.
- **Advanced Strings School**, 22-28 Sep 2014, Institute of Physics - Bhubaneswar, held at Puri.

References

- 1 Prof. Ashoke Sen, International Center for Theoretical Sciences, Bengaluru, India
Email: ashoke.sen@icts.res.in
- 2 Prof. Amitabh Virmani, Chennai Mathematical Institute, Chennai, India
Email: avirmani@cmi.ac.in
- 3 Prof. Rajesh Gopakumar, International Center for Theoretical Sciences, Bengaluru, India.
Email: rajesh.gopakumar@icts.res.in
- 4 Prof. Roji Pius, The Institute of Mathematical Sciences, Chennai, India
Email: rojipius@imsc.res.in