

CHAVILKKADAN Mufeeduzaman



14/09/1997



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English **C1**, Malayalam **C2**, Hindi **B1**, Arabic **A2**

EDUCATION (GRADUATION AND ABOVE)

3/2024 - Present **Laboratoire Ondes et Matière d'Aquitaine (LOMA), Université de Bordeaux, France**
1st Year PhD student in singular optics group

1/2023 - 12/2023 **Indian Institute of Science (IISc), Bangalore, India**
INSPIRE Junior Researcher Fellow at Nanoscience and Engineering (CeNSE)

7/2016 - 1/2022 **University of Hyderabad (UoH), Hyderabad, India**
5-year Integrated Masters in Physics, Cumulative grade: 8.73/10

RESEARCH EXPERIENCES

1/2023 - 4/2023 **AFM Nanolithography** **Course Project**
IISc, India
By using AFM, produced an array of fine structures on materials like SiN and SiO₂-Si and Figured out the limitations in terms of Martials, Lateral resolution, and vertical resolution.
Skills & tools: AFM, Origin, SEM, Latex, Dip pen lithography

5/2020 - 9/2021 **Measurement of chirality by using Spin-Orbit beams** **Master's Project**
UoH, India
Demonstrated an alternate method to measure and understand the weak optical activity or the chirality of the material and the Complex nature of chirality is experimentally established. **Skills & tools:** MATLAB, MS Office, Optical beam measurement techniques such as Interferometry, stokes Polarimetry, Profilometry

PUBLICATIONS

- [1] **Mufeeduzaman Chavilkkadan** and Sergei Shevtsov and Peter Kazansky and Etienne Brasselet. *Purely Geometric Spin-Orbit Laguerre-Gauss Waveplates from 3D Laser-Nanostructured Silica Glass*. submitted to APL Photonics (presently under review)
- [2] **Mufeeduzaman Chavilkkadan** and Etienne Brasselet. *Tunable optical skyrmionic plates from sessile droplets* (Manuscript under preperation).

SCHOLARSHIP AND AWARDS

2016 - 2023 **INSPIRE Fellowship (JRF) & Scholarship**
The DST(INSPIRE) fellowships support doctoral research in science, engineering, and medicine, while the INSPIRE scholarship honours top 1% rankers in India's higher secondary exams

2011 **INSPIRE Award**
Awarded by the DST and INSPIRE for excellence in academic and extracurricular activities in preliminary standards.

TEACHING EXPERIENCE

1/2022 - 1/2024 **ENTRI, CORE Science Academy, PREPWISE** **Physics faculty**
Offline
I have worked as a Physics faculty member at various institutes, teaching graduate students and preparing them for national-level competitive exams in India, such as NEET, JEE, and NET.