

Prabesh Bista

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🌐 <https://prabeshbista.github.io/>

Education

- 2021 – Present 📖 **M.Sc. Physics**
[National Central University](#), Zhongli, Taiwan
Thesis title: *Non-collinear optical parametric amplification as a light source for photoemission spectroscopy*.
Advisor: [Dr. Cheng-Tien Chiang](#)
- 2015 – 2019 📖 **B.Sc. Physics**
[Tribhuvan University](#), Kathmandu, Nepal
Minor in *Mathematics*

Experience

Research Experience

- 09/2021 – Present 📖 **Master's Project**
[Institute of Atomic and Molecular Sciences](#), Academia Sinica, Taiwan
• Constructed a non-collinear optical parametric amplification from scratch.
• Engaging in investigating the electronic structure of bulk NiTe₂ using ARPES.
- 08/2020 – 08/2021 📖 **Research Assistant**
[Institute of Atomic and Molecular Sciences](#), Academia Sinica, Taiwan
• Generated second and third harmonic signals in nonlinear optical experiments.
• Developed LabVIEW program for THORLABS PM 100D powermeter.
• Procured laboratory components and assisted in lab setup.
- 03/2020 – 07/2020 📖 **Internship**
[Institute of Atomic and Molecular Sciences](#), Academia Sinica, Taiwan
• Used Kelvin probe spectroscopy and Ambient-photoemission spectroscopy to determine the valence band of Pt and Ti-doped WS₂.

Work Experience

- 05/2016 – 11/2019 📖 **Physics Lab Assistant (full-time)**
[Sagarmatha Engineering College](#), Lalitpur, Nepal
• Trained and guided students in performing laboratory experiments.
• Troubleshoot and maintained laboratory equipment to ensure optimal functionality.




Research Publications

Journal Articles

- 1 T.-I. Yang, Y.-W. Huang, **P. Bista**, C.-F. Ding, J. Chen, C.-T. Chiang, and H.-C. Chang,
“Photoluminescence of nitrogen-vacancy centers by ultraviolet one- and two-photon excitation of fluorescent nanodiamonds”, *The Journal of Physical Chemistry Letters* **13**, 11280–11287 (2022).


Presentation

Poster




- 09/2023  [Thematic summer school](#) on 2D Materials in Roscoff, France
Title: *Non-collinear optical parametric amplifier for photoemission spectroscopy*
- 01/2023  Annual Meeting of the [Physical Society of Taiwan](#)
Title: *Development of an Infrared non-collinear optical parametric amplifier at sub-megahertz repetition rates*
- 11/2022  [IAMS Young Fellow](#) Research Presentation
Title: *Construction of an infrared by non-collinear optical parametric amplifier*

Mentorship






IAMS-IIP Internship

- 06 – 07/2023  [Marucheth Thongheppairoj](#)
Undergrad student at Sirindhorn international institute of Technology (SIIT), Thailand






Honors and Awards

- 09/2021-08/2024  **TIGP Scholarship** awarded by [Academia Sinica](#), Taiwan, covering tuition fees and living expenses.
- 11/2018  **Outstanding Administrative Staff Award** presented by the Student Welfare Society of Sagarmatha Engineering College.
- 09/2018  **Travel Grant** provided by the [National Center for Physics](#), Pakistan to attend a workshop on Tracking Detector in High Energy Physics.

Skills

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|-------------|---|
| Language |  Nepali (mother tongue), English (fluent), Chinese (basic) |
| Programming |  Python, LabVIEW |
| Software |  Microsoft Office, \LaTeX , Origin, SOLIDWORKS, ImageJ |
| Optics |  Beam-width measurement, second & third harmonic generation, white light generation, parametric amplification, pulse-width compression & measurement |
| Other |  Basic in handling angle-resolved photoemission spectroscopy (ARPES) |

Activities and Outreach

-  Attended the workshop on [Transport and Optics in Topological Systems](#) at the Institute of Physics, Academia Sinica, Taipei, Taiwan, on June 15 – 17, 2024.
-  Participated in the summer school on [Advanced Physics of van der Waals Hetero-Structures](#) in Roscoff, France, from September 23 to October 1, 2023.
-  Volunteered for [intercultural service](#) with a school in Taiwan through online engagement from September 5 to December 1, 2022.
-  Participated in the online [FOCUS PEEM](#) workshop organized by FOCUS GmbH on June 16 – 17, 2021.
-  Attended the Workshop on Space Weather and Upper Atmospheric Physics in Kathmandu, Nepal, from September 23 – 27, 2019.

Activities and Outreach (continued)

- Participated in the workshop on [Tracking Detector in High Energy Physics](#) in Islamabad, Pakistan, from October 15 – 19, 2018.
- Organized the National Science Exhibition at Patan Multiple Campus, Lalitpur, Nepal, on February 18 – 19, 2018.

References

Dr. Cheng-Tien Chiang

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