

# Prabesh Bista

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🌐 <https://prabeshbista.github.io/>

## Education

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- 09/2021 – 11/2024    📖 **M.Sc. Physics**  
National Central University, Zhongli, Taiwan  
Thesis: *Development of a non-collinear optical parametric amplifier for photoelectron spectroscopy*.  
Advisor: [Dr. Cheng-Tien Chiang](#)
- 09/2015 – 09/2019    📖 **B.Sc. Physics**  
Tribhuvan University, Kathmandu, Nepal  
Minor in *Mathematics*

## Research Publications

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### 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).

### Conference Proceedings

- 1 M. Singh, **P. Bista**, Y.-C. Lin, C.-N. Kuo, C. S. Lue, and C.-T. Chiang, “[Angle-resolved photoemission spectroscopy and microscopy on bulk NiTe<sub>2</sub> using ultrafast tunable laser](#)”, in Ultrafast science and technology spain (2024).

## Presentation

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### 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*

## Experience

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### Research Experience

- 12/2024 – 05/2025    📖 **Internship**  
[Baykusheva Group](#), Institute of Science and Technology Austria  
• constructing a squeezed light source for studying Van der Waals magnetic materials.
- 09/2021 – 11/2024    📖 **Master's Project**  
[Institute of Atomic and Molecular Sciences](#), Academia Sinica, Taiwan  
• Constructed a non-collinear optical parametric amplifier from scratch.  
• Engaged in investigating the electronic structure of bulk NiTe<sub>2</sub> using ARPES.

## Experience (continued)

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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  $WS_2$ .

## 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.

## Mentorship

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### IAMS-IIP Internship

06 – 07/2023

### ■ [Marucheth Thongtheppairoj](#)

Undergrad student at Sirindhorn international institute of Technology (SIIT), Thailand

## Honors and Awards

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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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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

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- 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)

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- 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.