

## 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 M. Singh, **P. Bista**, Y.-C. Lin, C.-N. Kuo, Y.-J. Chuang, M. Paleschke, C.-B. Huang, M.-C. Chung, C.-S. Lue, and C.-T. Chiang, "[Valence band momentum imaging of NiTe<sub>2</sub> by two-photon photoemission momentum microscopy](#)", *Applied Physics Letters* **128**, 031601 (2026).
- 2 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

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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

- 10/2025 – Present ■ **Internship**  
[Sunko Group](#), Institute of Science and Technology Austria
  - Constructing an optical setup for time-resolved magneto-optical Kerr effect.
- 12/2024 – 05/2025 ■ [Baykusheva Group](#), Institute of Science and Technology Austria
  - Built a non-degenerate parametric down-conversion setup using a nonlinear crystal.
  - Developed LabVIEW program for Ophir powermeter.
  - Measured beam point stability.
- 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.
- 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.

## Experience (continued)

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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.
- 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.