



Thuong D. HOANG, Ph.D.

<https://hoangducthuong.github.io/>

PERSONAL DETAILS

Degree Ph.D. in Physics of the Universe at University of Paris, France
Birth April, 1989
Nationality Vietnam
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Address School of Physics and Astronomy, University of Minnesota, Physics and Nanotechnology Building, 115 Union St SE, Minneapolis, MN 55455, USA.

EDUCATION & EXPERIENCE

Researcher

2023-present

School of Physics and Astronomy, University of Minnesota (UMN), USA.

- BICEP/Keck experiments, with Prof. Clement Pryke.
(*BICEP/Keck is the flagship Cosmic Microwave Background polarimeters located at the South Pole in Antarctica. The collaboration consists of UMN, Harvard, Caltech, and Stanford.*)

Project researcher

2021-2023

Kavli Institute for the Physics and Mathematics of the Universe (Kavli IPMU), The University of Tokyo, Japan.

- Develop, characterize, and test the Polarization Modulator Unit (PMU) of the LiteBIRD Low-Frequency Telescope (LFT). Advisor: Prof. Tomotake Matsumura.
(*LiteBIRD: The Lite (Light) satellite for the study of B-mode polarization and Inflation from cosmic background Radiation Detection. LiteBIRD collaboration consists of JAXA, ESA, CSA.)*)

Researcher/Lecturer

2020-2021

Vietnam-France University (University of Science and Technology of Hanoi (USTH)), Vietnam.

- Teaching modules: Basic programming; Data Analysis & Visualization (python); Modern cosmology; Advanced electronic system (Practical work)

Postdoctoral researcher

2019-2020

Department of Physics, Cornell University, USA

- Testbed focal plane superconducting detectors for the Simons Observatory (SO). Advisor: Prof. Michael Niemack
(*SO is a ground-based Cosmic Microwave Background experiment located in the Atacama Desert, Chile. SO collaboration formed between the Simons Foundation, the USA founding universities, and collaborating institutions across the world.*)

Ph.D. in AstroParticle and Cosmology (APC) laboratory

2015-2018

Paris University-France

- Title: Optimization of future projects for the measurement of Cosmic Microwave Background polarization. (*Bandpass filters mismatch systematic effect for LiteBird satellite & Interaction of particles with superconducting Transition Edge Sensors array of QUBIC ground-based experiment*). Supervisors: Prof. Guillaume Patanchon. [[dissertation](#)]
- 21-22 December 2017 Paris-France, my initiative: 1st Meeting of Young Vietnamese Community of Astronomy (YVCA), APC, Paris University.

Master in Space Science & Applications

2012-2014

Double-Diploma: Observatoire de Paris and Vietnam-France University (University of Science and Technology of Hanoi (USTH)).

- 3/2014 - 9/2014: Master thesis: Cosmic ray interaction with Planck satellite detectors for the measurement of the Cosmic Microwave Background (CMB) radiation polarization with Prof. Guillaume Patanchon at the APC laboratory, Paris, France.

Electrical Engineering

2007-2012

Hanoi University of Science and Technology (HUST), School of Electrical Engineering.

- Diploma: Degree of Engineer in Control and Automation Engineering.
(2011 - 2012: Lab work: ABB - HUST training center (teamleader). ABB is a global group in power and automation technologies.)

High School: Hai Phong-Vietnam

2004-2007

The 1st ranked student in Maths, Physics, and Chemistry.

LANGUAGE

- English: Fluent
- French: Intermediate
- Japanese: Beginner
- Vietnamese: Mother tongue

SKILLS [INSTRUMENTATION, DATA ANALYSIS, & SIMULATION]

- **CryoTherOptEleMec**: Cryogenic, Thermal, Optics, Electronic, and Mechanical experiences.
- Data analysis and Simulation of physical processes.

- Python (Advanced), Matlab (Advanced), C/C++ (intermediate), Bash shell (Basic), Labview (intermediate).
- Solidwork (Advanced), Catia v5/ v6 (Intermediate), AutoCAD (Intermediate).
- ANSYS-HFSS (intermediate), RCWA (basic), OrCAD/Altium Designer (Intermediate), Layout Editor / Klayout (Basic).

- Window/Linux/Mac OS (Advanced), Microsoft Office/Open Office/Keynote (Advanced), Latex (Advanced).
- HTML/CSS/Javascript (Intermediate).

- Adobe Photoshop/Lightroom/Premiere (Intermediate).
- Google Scholar: https://scholar.google.com/citations?hl=en&user=X6_u9x0AAAAJ&view_op=list_works&sortby=pubdate
- Photography (Intermediate), guitar player (Intermediate).
- Ping-pong/badminton (Intermediate).
- Astronomy Facebook fanpage (≈ 12000 likers): <https://www.facebook.com/thienvanhoc.org/>