

CURRICULUM VITAE

QUYNH LAN NGUYEN

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Research Interest

- Dr. Nguyen is PI of the Notre Dame Research Unit-KAGRA gravitational wave collaboration, member of the LIGO-Virgo-KAGRA collaboration.
- Dr. Nguyen's research interest included dark matter and galaxy simulations, gravitational wave astronomy, compact object formation and evolution.

Education

- 2006 **Ph.D. in Physics** (Theoretical Physics), Institute of Physics, Vietnam Academy of Science and Technology
- 2001 **M.S. in Theoretical Physics**, Institute of Physics, Vietnam Academy of Science and Technology
- 1994 **B.A. in Physics**, Vinh University

Employment History

- 2023 – present **Associate Research Professor**, University of Notre Dame, Indiana, USA
Faculty Fellow, Liu Institute for Asia and Asian Studies (from Feb. 2024)
- 2017 – 2022 **Adjunct Associate Professor**, University of Notre Dame, Indiana, USA
- 2011 – 2017 **Associate Professor**, Hanoi National University of Education, Vietnam
Chair, General Physics Division (2013-2016)
- 2010 – 2011 **Postdoctoral Research Associate**, University of Notre Dame, Indiana, USA
- 2004 – 2010 **Lecturer** (tenured), Hanoi National University of Education, Vietnam
- 1994 – 2004 **Lecturer**, Vinh University, Vietnam
- 1991 – 1994 **Teaching Assistant**, Vinh University, Vietnam

Awards and Honors

- 2021 **Kalvi Institute for Theoretical Physics Scholar Award**, University of California-Santa Barbara.
- 2019 **FAMOUS Travel Grant Award**, American Astronomical Society.
- 2016 **Liu Institute Faculty Professional Development Award**, University of Notre Dame.
- 2009, 2016 **APS International Research Travel Award**, American Physical Society.
- 2015 **Ministry of Education Award**, Vietnam Ministry of Education.
For outstanding teaching and research.
- 2006, 2014, 2012 **IAU travel Award**, International Astronomical Union.

Awards and Honors (continued)

- 1999, 2005 **Odon Vallet Scholarship**, The Vallet Foundation, France.
For outstanding graduate student in physics.

Teaching Experience

- 2023–present **Associate Research Professor**, University of Notre Dame, IN. PHYS-10240: Elementary Cosmology. PHYS-48480-32: Undergraduate Research
- 2017–2022 **Adjunct Associate Professor**, University of Notre Dame, IN. PHYS-10240: Elementary Cosmology, helped with Physics for Life Science Lab, and gave guest lectures in Elementary Cosmology, Energy and Society, and Concepts of Energy courses.
- 2019–2020 **Instructor**, Holy Cross College at Notre Dame, IN. PHYS-221: Physics for Science (mechanics, heat), PHYS-221: Physics for Science (electromagnetism, optics), including labs.
- 2018–2019 **Instructor**, Indiana University South Bend, IN. General Physics 222 (electromagnetism, optics), PHYS-222: General Physics 222 lab, and PHYS-221: General Physics 221 lab.
- Instructor**, Ivy Tech College South Bend-Ekhart, IN. PHYS 101: Solar System, PHYS-102: Astronomy.
- 2017 **Instructor**, Center for Talented Youth - Johns Hopkins University, Maryland. PHYS: Astrophysics.
- Instructor**, Saint Mary's College at Notre Dame, IN. PHYS-444: Electricity and Magnetism spring course.
- 2013–2016 **Visiting Lecturer**, University of Science and Technology of Hanoi, Vietnam. PHYS-311: Introduction to Astronomy, PHYS-439: Advanced Astrophysics.
- 2004–2016 **Associate Professor/Lecturer**, Hanoi National University of Education, Vietnam. PHYS-311: Introduction to Astronomy, PHYS-439: Introduction to Astrophysics, PHYS-390: Introduction to Cosmology, PHYS-121: Classical Mechanics course for a physics major, Physics for Biology, and Physics for Geology major.
- 1994–2004 **Lecturer**, Vinh University, Vietnam. PHYS-224: Theoretical Mechanics, PHYS-311: Introduction to Astronomy, PHYS-144: General Physics, and PHYS-233: Physics Lab.

Professional Experience

Grant and External Funding

- 2023 – **Inter-University Research Program, University of Tokyo, Japan**, *Gravitational Waves and Dark Matter, PI.*
- 2020 – 2022 **Inter-University Research Program, University of Tokyo, Japan**, *Gravitational Waves from Compact Binary Coalescence, PI.*
- 2019 – 2020 **Nuclear Theory grant, DE-FG02-95-ER40934, US Department of Energy**. *Nuclear Properties at Extreme Density, Temperature, Spin, and Isospin, participant.*
- 2014 – 2016 **Ministry of Education Research Foundation, Vietnam**. *Using LIDAR System to Study Physical Properties of the Atmosphere, PI.*
- 2009–2012 **Vietnam National Foundation for Science and Technology Development**. *Dark Matter and Large Scale Structure, PI.*
- 2007–2011 **International Astronomical Union (IAU) Grant**. *Developing Research and Teaching Astrophysics in Vietnam, PI.*

Professional Experience (continued)

Professional Memberships, Activities and Visiting Positions

- 2020 – present 📌 LIGO-Virgo-KAGRA (LVK) gravitational waves collaboration.
- 2018 – present 📌 American Astronomical Society (AAS).
- 2017 – present 📌 American Physical Society (APS).
- 2016 – present 📌 KAGRA gravitational waves collaboration.
- 2012 – present 📌 International Astronomical Union.

Leadership and Service Activities

- 2024 📌 NSF Reviewer
- 2023 📌 NASA-ATP Reviewer (chair)
📌 Reviewer, Astronomy and Computing Journal
📌 Poster judge, LIGO-Virgo-KAGRA March meeting
- 2022 📌 NASA Postdoctoral Fellow Program Reviewer
- 2021 📌 Reviewer, NASA Astrophysics Theory Program, NASA Astrophysics Data Analysis
- 2021 – present 📌 KAGRA Diversity Committee.
- 2020 – present 📌 LVK Climate Change Committee, chair of the KARA Climate Change Committee .
- 2018 – present 📌 LVK Education Public Outreach Committee.
- 2014 – 2016 📌 Coordinator, International Science Youth Forum Program.
- 2013 – 2016 📌 Chair, General Physics Division, Hanoi National University of Education.
- 2011 – 2016 📌 Undergraduate Curriculum Committee.
📌 Graduate Research Committee.
- 2007 – 2016 📌 Undergraduate Curriculum Committee.
- 2011 – 2013 📌 Assistant Dean for Graduate Studies.
- 2007 – 2011 📌 Vietnam coordinator, Teaching Astronomy for Development, IAU.
- 2009 📌 Reviewed proposals for Vietnam National Foundation for Science and Technology Development.
- 2007 – 2009 📌 Assistant Dean for Undergraduate Studies.
- 2007 📌 Courses development: Proposed and developed astrophysics, cosmology courses for physics major.

Advisor/Mentor:

- 2023-present 📌 Advisor for three undergraduate students at the University of Notre Dame.
- 2020-present 📌 PhD Research Committee for three Ph.D. candidates at the University of Notre Dame.
- 2007-2016 📌 Advisor for 12 undergraduate and 6 master's students (3 of them were awarded a full prestigious scholarship for Ph.D. programs in Japan, Sweden, and Belgium) and co-advisor for 1 Ph.D. student at the Hanoi National University of Education.

Scientific Organizing Committee:

- October 2022 📌 16th International Symposium on Origin of Matter and Evolution of Galaxies (OMEG16), Hanoi, Vietnam.
- July 2022 📌 14th International LISA Symposium, Glasgow, UK. (International Advisor Committee, chair section)
- September 2018 📌 48th International Symposium on Multi-particle Dynamics, Singapore.

Professional Experience (continued)

- June 2017 📌 4th KAGRA International Workshop, South Korea.
- 📌 Asia Pacific Regional International Astronomical Union Meeting, Taipei, Taiwan.
- October 2016 📌 Hanoi International Workshop on Gravitation and the Universe, Hanoi, Vietnam.
- April 2014 📌 12th Asian-Pacific Regional IAU Meeting, South Korea.
- July 2011 📌 Principal, scientific organizer of the IAU-Vietnam Workshop on Astrophysics, Hochiminh city, Vietnam.
- July 2007 📌 Principal, scientific organizer of the IAU - Vietnam Workshop on Astrophysics, Hanoi, Vietnam.

Local Organizing Committee:

- October 2020 📌 Midwest Relativity Meeting, University of Notre Dame, USA.
- August 2016 📌 Cosmic Flows Workshop, Qui Nhon, Vietnam.
- 2015, 2013 📌 Hot Topic in General Relativity and Gravitation Workshop, Quinhon, Vietnam.
- August 2013 📌 Cosmology in the Planck Era Workshop, Quinhon, Vietnam.
- July 2013 📌 Windows on the Universe Workshop, Quinhon, Vietnam.
- August 2011 📌 10th International Conference on Gravitation, Astrophysics, and Cosmology, Quinhon, Vietnam.

Volunteer, Outreach/Education Activities, Public talk

- 2024 📌 **Eclipse Ambassador**, Astronomical Society of the Pacific, USA.
- 2023 - present 📌 **Board of Directors Member**, Friends of VinUniversity, non profit non stock corporation, Delaware, USA.
- 2023 📌 **Public talk**, Gravitational Wave, Quarknet Education Discussion, USA.
- 2021 📌 **Mentor**, Gravitational Wave Open Data Workshop, Caltech, USA.
- 2018 – 2020 📌 **Judge (chair section)**, Northern Indiana Regional Science and Engineering Fair, USA.
- 2019 📌 **Public talk** "Gravitational Waves: the New Window to the Universe", University of Notre Dame, USA.
- 📌 **Chair section**, Biennial History of Astronomy Workshops, University of Notre Dame, USA.
- 📌 **Chambliss judge**, 234th AAS meeting.
- 📌 **Judge**, Competitive Science, Marian High School, Mishawaka, Indiana, USA.
- 2017 📌 **Math tutor**, Excel High School Center, South Bend, Indiana, USA.
- 📌 **Vietnamese tutor**, Center for the Study of Languages and Cultures, University of Notre Dame, USA.
- 📌 **Organizer member**, Total Eclipse Event, University of Notre Dame, USA.
- 2016 📌 **Vietnam Team Leader** (management, scientific advisor). International Science Youth Forum, Singapore.
- 2015 📌 **Vietnamese Team Leader** (management, scientific advisor). Asian Science Camp, Bangkok, Thailand.
- 2014 📌 **Organizer, Chair**, Women in Astronomy section, Asian-Pacific Regional International Astronomical Union Meeting, Seoul, South Korea.
- 2012 📌 **Organizer Annular Solar Eclipse event at Hanoi National University of Education**, Vietnam.

Professional Experience (continued)

- 2009 **Single Point of Contact of the International Year of Astronomy, International Astronomical Union**, Vietnam.
- 2008 **Judge**, Theoretical Section, International Physical Olympic, Hanoi, Vietnam.

Presentations

Invited Conference Talks and Seminar/Colloquium

- October 2023 **Gravitational Waves, Neutrino, and Dark Matter**, Particle-Astro-Nuclear Physics seminars, Wayne State University.
- September 2023 **Dark Matter in the Beyond Standard Model**, Physics seminar, Department of Science, Phenikaa University, Hanoi.
- March 2023 **MeV Dark Matter in the Beyond Standard Model and its Effect in the Gravitational Waves Signal**, Lighting New Lampposts for Dark Matter and Beyond the Standard Model Program at the Simon Center for Geometry and Physics, University of New York at Stony Brook.
- October 2022 **Astrophysical Constraint Dark Matter**, The 16th International Symposium on Origin of Matter and Evolution of Galaxies, Hanoi, Vietnam.
- July 2022 **Dark Matter and Neutron Star**, The KAGRA International Workshop (online)
- September 2021 **Self Interacting Dark Matter and Binary Neutron Star**, LIGO Seminar, California Institute of Technology, Pasadena, California.
- April 2021 **Self Interacting Dark Matter and Small Scale Structure**, Physics Colloquium, Mississippi University, Mississippi.
- Self Interacting Dark Matter and Small Scale Structure**, Physics Colloquium, Oakland University, Michigan.
- October 2020 **Notre Dame - KAGRA Gravitational Wave Collaboration**, Physics Colloquium, University of Notre Dame, Indiana.
- November 2019 **Constraints of the Neutron Star Equation of State from the BNS Gravitational Wave Chirp**, Theory Physics Seminar, University of Washington in St. Louis, Missouri.
- May 2019 **Cosmic Microwave Background Polarization**, Midwest Magnetic Field Meeting, University of Wisconsin-Madison, Wisconsin.
- November 2018 **Dark Matter and Small Scale Structure**, High Energy Physics Seminar, University of Notre Dame, Indiana.
- Spinning Dust Emission from Circumstellar Disks**, Astrophysics Seminar, University of Notre Dame, Indiana.
- September 2018 **Self Interacting Dark Matter and Small Scale Structure**, Physics Seminar, Indiana University South Bend, Indiana.
- October 2017 **Constraints on Interacting Dark Matter from Small Scale Structure**, High Energy Physics Seminar, University of Virginia, Virginia.
- May 2017 **Constraint of the Self Interacting Dark Matter**, Astrophysics Seminar, University of Wisconsin-Madison, Wisconsin.
- April 2017 **Interacting Dark Matter and the Galaxy Core-Cusp Problem**, Astrophysics seminar, University of Notre Dame, Indiana.
- April 2015 **Binary Neutron Stars**, Astrophysics seminar, Osaka City University, Osaka.
- May 2015 **Beyond the Standard Model for Dark Matter**, High Energy Physics Seminar, National University of Singapore.

Presentations (continued)

- August 2014 **Formulation and Constraints on Late Decaying Dark Matter**, The 12th Asia-Pacific Regional IAU Meeting, Seoul, South Korea.
- August 2013 **Dark Matter**, Invited, Vietnam School of Astrophysics and Workshop on Astrophysics and Cosmology, Quinhon, Vietnam
- November 2011 **Dark Matter**, Invited, IAU-Vietnam Workshop on Astronomy and Astrophysics, Hochiminh city, Vietnam.
- October 2010 **Bulk Viscosity and Dark Energy**, Physics Seminar, Southern Methodist University, Texas.
- January 2008 **Dark Energy as Bulk Viscosity from Decaying Dark Matter**, The 7th East Asian Meeting on Astronomy, Fukuoka, Japan.
- August 2007 **Decaying Dark Matter as Dark Energy**, Department of Physics, Chuo University, Japan.
- Late Decaying Dark Matter and Dark Energy: A Unified Approach**, Annecy Laboratory of Particle Physics Seminar, France.
- April 2007 **Effect Self-Interacting Dark Matter in the Galaxies Formation**, Gunma Observatory, Japan.
- May 2006 **Study on Dark Matter and Dark Energy**, Astrophysics Seminar, University of Notre Dame, Indiana.
- August 2006 **Astronomy in Vietnam**, General Assembly of the International Astronomical Union, Czech Republic.
- May 2004 **Self-Interacting Dark Matter in the 331 Models**, The 12th United Nation and European Space Agency Workshop on Basic Science, Beijing, China.

Contributed Talks

- Aug. 2023 **Dark Matter and its Effect on Gravitational Wave Signal**, The European Physical Society Conference on High Energy Physics (EPS-HEP),
- Aug. 2022 **Self Interacting Dark Matter**, Dark Matter in Compact Objects, Stars, and in Low Energy Experiments Program, Institute for Nuclear Theory, University of Washington.
- Jan. 2022 **Self Interacting Dark Matter and Binary Neutron star**, Aspen Winter Conference: Dynamical Formation of Gravitational Wave Sources, Aspen, Colorado.
- April 2021 **Self Interacting Dark Matter and Gravitation Waves**, American Physical Society Meeting.
- February 2021 **Self Interacting Dark Matter and Small Scale Structure Problems**, Tehran Meeting on Cosmology at the Crossroads.
- October 2020 **KAGRA's Science Goal**, Midwest Relativity Meeting.
- June 2019 **Spinning Dust Emission and Circumstellar Disks**, The 234th American Astronomical Society meeting.
- April 2019 **Numerical Study of EoS Effects on Binary Neutron Star Mergers**, KAGRA F2F Meeting, University of Tokyo.
- April 2018 **Self Interacting Dark Matter and the Galaxy Core-Cusp Problem**, American Physical Society Meeting.
- October 2017 **Gravitational Wave-forms from Multiple-orbit Simulations of Binary Neutron Stars**, Midwest Relativity Meeting, University of Michigan, Michigan.
- Dark Matter and Small Scale Structure**, Midwest Theoretical Physics Meeting, Argonne National Laboratory, Illinois.

Presentations (continued)

- May 2017 ■ **Magnetic Field in the Standard Cosmology Model**, Midwest Magnetic Field Meeting, University of Wisconsin-Madison, Wisconsin.
- August 2016 ■ **Constraints on Pre-inflation Fluctuations**, The 22nd International Symposium on Particles, Strings and Cosmology, Qui Nhon, Vietnam.
- April 2015 ■ **Equation of State Dependence of the Gravitation Waves from Simulation of Binary Neutron Star**, Face to face KAGRA Meeting, Tokyo, Japan.
- October 2013 ■ **Cosmological Constraints on Dark Energy from Late Decaying**, The Window on the Universe Workshop, Quinhon, Vietnam.
- December 2012 ■ **Models for Dark Matter**, Thailand- Japan workshop on Cosmology, Pattaya, Thailand.
- August 2008 ■ **Dark Energy from Decaying Dark Matter**, The 33rd Vietnam National Conference on Theoretical Physics, Vietnam.
- August 2005 ■ **Effect of Self Interacting Dark Matter in the Galaxy Formation**, The 6th Vietnamese National Conference on Physics, Vietnam.
- August 2004 ■ **Dark Matter in the 331 Models**, The 9th Asia Pacific physics conference, Hanoi, Vietnam.
- August 2003 ■ **Gauge Theory for Self-Interacting Dark Matter**, The 26th Vietnam National Conference on Theoretical Physics, Vietnam.

Skills

- Languages ■ Vietnamese (native), English (full professional proficiency)
- Coding ■ Python, Fortran.
- Misc. ■ Academic research, teaching, training, consultation.

Publications

My update publications list on *Google Scholar Profile*.

Total citations: 4039; H-index: 32.

29 first-author and significant contributions in a total of 62 papers in peer-reviewed international journals.

One college textbook (Vietnamese).

One book chapter.

12 refereed proceedings.

List of Professional References

Dr. Robert Williams

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Dr. Takaaki Kajita

Nobel Laureate in Physics 2015
PI, The KAGRA Gravitational Wave Detector
Institute for Cosmic Ray Research,
The University of Tokyo Kashiwanoha 5-1-5, Kashiwa, Chiba 277-8582 Japan
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Dr. Michel Mayor

Nobel Laureate in Physics 2019
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