

DR. KORNOB BHIROMBHAKDI

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Interdisciplinary Scholar-Educator and AI Specialist with NASA postdoctoral experience at the Space Telescope Science Institute (AURA/NASA) and dual PhDs in Physics (Ohio University) and Economics (Chulalongkorn University). Brings a unique synthesis of natural sciences, social/behavioral sciences, and artificial intelligence to address complex challenges through holistic, creative solutions. Proven leadership in cross-functional, multicultural research teams and policy-informed initiatives, with experience spanning data-driven consulting, student governance, and community advocacy. Extensive experience in curriculum development, corporate training, and customized course design for diverse audiences. Currently focused on human-AI interaction, AI ethics, and community AI literacy—working to ensure responsible technological integration through education and policy-aware approaches. Record of high-impact publications in *Nature* and *Astrophysical Journal* complements substantial teaching experience across undergraduate, graduate, and professional levels.

EDUCATION

- Ph.D. Physics** | Ohio University (2014–2019) | *Light Curve Powering Mechanism of Superluminous Supernovae*
- Ph.D. Economics** | Chulalongkorn University (2009–2013) | *Game Theory & Experimental Studies on Reciprocity*
- M.S. Physics** | Ohio University (2014–2015) | GPA: 3.951
- M.S. Health Economics** | Chulalongkorn University (2007–2009) | *Technical Efficiency of University Hospitals*
- B.S. Medical Science** | Siriraj, Mahidol University (2003–2007) | Second Class Honours
- Physics Pre-Degree** | Ramkhamhaeng University (2013–2014) | GPA: 4.0

CERTIFICATIONS & TRAINING

- Cybersecurity Professional Course** NCSA Thailand ID: [5241057415KP](#) 2025
- Basic Cybersecurity** NCSA Thailand ID: [SPG-ZNEXJM1UDTRGX](#) 2025
- Deep Learning Specialization** DeepLearning.AI (Coursera) ID: [GYIBDXJ9UMCP](#) 2025
- Data Science and Machine Learning Specialization** Johns Hopkins University (Coursera) 2015 - 2017
Courses: [Developing Data Products](#), [Practical Machine Learning](#), [Regression Models](#), [Exploratory Data Analysis](#), [Getting and Cleaning Data](#), [Reproducible Research](#), [R Programming](#), [Statistical Inference](#), [The Data Scientist's Toolbox](#)

RECENT EMPLOYMENT

- On-Demand Consultant Business Analytics & AI Solutions** Sep 2025 – Present
DR.KB (Self-Employed), Bangkok, Thailand
Integrated consulting across business strategy, technical implementation, and research leadership. Specializes in AI-driven solutions, project initiative leadership, and cross-functional collaboration for complex data challenges.
- Data Scientist** Aug 2024 – Aug 2025
Sertis Co., Ltd., Bangkok, Thailand
- Postdoctoral Researcher** Aug 2019 – Feb 2024
Space Telescope Science Institute (AURA/NASA), Baltimore, MD, USA
- Research/Teaching Assistant** Aug 2014 – May 2019
Physics and Astronomy Department, Ohio University, Athens, OH, USA

EMPLOYMENT HISTORY

On-Demand Consultant Business Analytics & AI Solutions DR.KB (Self-Employed), Bangkok, Thailand Integrated consulting across business strategy, technical implementation, and research leadership. Specializes in AI-driven solutions, project initiative leadership, and cross-functional collaboration for complex data challenges.	Sep 2025 – Present
Data Scientist Sertis Co., Ltd., Bangkok, Thailand	Aug 2024 – Aug 2025
Postdoctoral Researcher Space Telescope Science Institute (AURA/NASA), Baltimore, MD, USA	Aug 2019 – Feb 2024
Research/Teaching Assistant Physics and Astronomy Department, Ohio University, Athens, OH, USA	Aug 2014 – May 2019
Senior Consultant LEARN Corporation Co., Ltd., Bangkok, Thailand	Jan 2012 – Jan 2014
Market Research Consultant Freelance, Bangkok, Thailand	Jan 2010 – Jan 2012
Coordinator Assistant Economic Impacts of Demographic Change Project, Thailand Research Fund, Bangkok, Thailand	Jan 2011 – Jan 2013
Lecturer - Principles of Economics (Undergraduate Level; International Program) Faculty of Hospitality and Tourism, Prince of Songkla University, Phuket, Thailand - Health Economics (Undergraduate Level) Faculty of Economics, Khonkaen University, Nongkhai, Thailand	2010, 2012 2009
Mathematician Institute of Academic Development Inc., Bangkok, Thailand	2009
Teaching Assistant Faculty of Economics, Chulalongkorn University, Bangkok, Thailand - Advanced Microeconomic Theory II (Ph.D. Level; International Program) - Statistics for Health Economics (Graduate Level; International Program) - Introduction to Econometrics (Undergraduate Level) - Introduction to Economics (Undergraduate Level) - Math for Economist I (Undergraduate Level) - Math for Economist II (Undergraduate Level)	2010, 2011 2011 2010 – 2012 2010 2009 2012
Consultant for Business Research and Development Freelance, Bangkok, Thailand	2007 – 2014
Tutor Freelance, Bangkok, Thailand	2007 – 2014
Actor/Model/DJ/Brand Ambassador Freelance, Bangkok, Thailand (Link to IMDb)	2005 – 2010

RESEARCH, PUBLICATIONS, AND TALKS

Software released

- [hstgrism](#)

***The Redshift of GRB 190829A/SN 2019oyw: A Case Study of GRB-SN Evolution**

Bhirombhakdi et al. (2024) in The Astrophysical Journal, Volume 977, Issue 2, id.256, 16 pp. ([Link](#))

A Hubble Space Telescope Search for r-Process Nucleosynthesis in Gamma-ray Burst Supernovae

with Rastinejad et al. (2024) in The Astrophysical Journal, Volume 968, Issue 1, id.14, 17 pp. ([Link](#))

Heavy-element Production in a Compact Object Merger Observed by JWST

with Levan et al. (2024) in Nature, Volume 626, Issue 8000, p. 737–741 ([Link](#))

A Long-duration Gamma-ray Burst of Dynamical Origin from the Nucleus of an Ancient Galaxy

with Levan et al. (2023) in Nature Astronomy, Volume 7, p. 976–985 ([Link](#))

Panning for Gold, but Finding Helium: Discovery of the Ultra-stripped Supernova SN2019wxt from Gravitational-wave Follow-up Observations

with ENGRAVE Collaboration (2023) in Astronomy & Astrophysics, Volume 675, id.A201, 34 pp. ([Link](#))

The First JWST Spectrum of a GRB Afterglow: No Bright Supernova in Observations of the Brightest GRB of all Time, GRB 221009A

with Levan et al. (2023) in The Astrophysical Journal Letters, Volume 946, Issue 1, id.L28, 14 pp. ([Link](#))

An Extremely Energetic Supernova from a Very Massive Star in a Dense Medium

with Nicholl et al. (2020) in Nature Astronomy, Volume 4, p. 893–899 ([Link](#))

Observational Constraints on the Optical and Near-infrared Emission from the Neutron Star-Black Hole Binary Merger Candidate S190814bv

with Ackley et al. (2020) in Astronomy & Astrophysics, Volume 643, id.A113, 48 pp. ([Link](#))

***SN2008es: Strong Interacting Hydrogen-rich Superluminous Supernova Without Narrow H-alpha Features and Early Dust Formation**

Bhirombhakdi (2019) in STScI Newsletters, Volume 36, Issue 03 ([Link](#))

***The Type II Superluminous SN2008es at Late Times: Near-infrared Excess and Circumstellar Interaction**

Bhirombhakdi et al. (2019) in Monthly Notices of the Royal Astronomical Society, Volume 488, Issue 3, p. 3783–3793 ([Link](#))

***Light Curve Powering Mechanisms of Superluminous Supernovae**

Bhirombhakdi (2019), a dissertation presented to the faculty of the College of Arts and Science, Ohio University, Athens, OH, USA ([Link](#))

Talk: Hunting Magnetar Central Engines in Superluminous Supernovae

(2019) at [American Astronomical Society, AAS Meeting #233](#), id.410.04

***Where is the Engine Hiding its Missing Energy? Constraints from a Deep X-ray Non-detection of Superluminous SN2015bn**

Bhirombhakdi et al. (2018) in The Astrophysical Journal Letters, Volume 868, Issue 2, article id. L32, 7 pp. ([Link](#))

One Thousand Days of SN2015bn: HST Imaging Shows a Light Curve Flattening Consistent with Magnetar Predictions

with Nicholl et al. (2018) in The Astrophysical Journal Letters, Volume 866, Issue 2, article id. L24, 7 pp. ([Link](#))

The Type I Superluminous Supernova PS16aqv: Lightcurve Complexity and Deep Limits on Radioactive Ejecta in a Fast Event

with Blanchard et al. (2018) in The Astrophysical Journal, Volume 865, Issue 1, article id. 9, 17 pp. ([Link](#))

Spectroscopic Classification of Two Superluminous Supernovae

with Chornock et al. (2016) in The Astronomer's Telegram #8790 ([Link](#))

***Essays in Experimental Studies on Positive Reciprocity and Auction Design for an Object with Countervailing Positive Externalities**

Bhirombhakdi (2013), a dissertation presented to the faculty of the Faculty of Economics, Chulalongkorn University, Bangkok, Thailand ([Link](#))

***Cost of Action, Perceived Intention, Positive Reciprocity, and Signalling Model**

Bhirombhakdi and Potipiti (2012) in Journal of Business and Policy Research, Volume 7, Number 3, September 2012 Special Issue, ISSN: 1449-387X ([Link to preprint version](#))

Talk: Cost of Action, Perceived Intention, Positive Reciprocity, and Signalling Model

(2012) at The 6th Asian Business Research Conference, Bangkok, Thailand

***Performance of a Reciprocity Model in Predicting a Positive Reciprocity Decision**

Bhirombhakdi and Potipiti (2011) in Chulalongkorn Journal of Economics, Vol. 23, No. 1 ([Link](#))

Talk: Performance of a Reciprocity Model in Predicting a Positive Reciprocity Decision

(2011) at International Conference on Management, Economics and Social Sciences (ICMESS'2011), Bangkok, Thailand

Talk: Neuroeconomics

(2010, 2011) at Faculty of Economics, Chulalongkorn University, Bangkok, Thailand

Special Lecture: Opportunity Cost and Economic Evaluation

(2010) at The College of Public Health Science, Chulalongkorn University, Bangkok, Thailand

Special Lecture: Efficiency Analysis

(2010) at The College of Public Health Science, Chulalongkorn University, Bangkok, Thailand

Special Lecture: National Examination Preparation (Physics)

(2009) in โครงการคนเมืองแปะ คิดเป็น ทำเป็น (in Thai) organized by Buriram Provincial Administration Organization, Buriram, Thailand

Special Lecture: National Examination Preparation (Physics)

(2009) at Sarawittaya School, Bangkok, Thailand

***Technical Efficiency of University Hospitals in Thailand**

Bhirombhakdi (2008), a thesis presented to the faculty of the Faculty of Economics, Chulalongkorn University, Bangkok, Thailand ([Link](#))

SERVICES

Member of Slitless Spectroscopy Group at the Space Telescope Science Institute (AURA/NASA), Baltimore, MD, USA	2019 – 2024
Member of Review Editors for the Frontiers in Astronomy and Space Sciences (Link)	2023
Representative of Postdoctoral Fellows in the Research Computing Forum at the Space Telescope Science Institute (AURA/NASA), Baltimore, MD, USA	2019 – 2023
Support Astronomer for Seo Yoon Soyoona Kim in her work “Hearing Stars - SN1054 (Supernova)” (Link)	2020
Organizer for The Compact Objects and Supernovae Journal Club at the Space Telescope Science Institute (AURA/NASA), Baltimore, MD, USA	2020 – 2021
Leveler for the Hubble Space Telescope Cycle 29’s time allocation process (Link)	2021
Scientific Software Developer in the kickoff sprint for Astrogrism at the Space Telescope Science Institute (AURA/NASA), Baltimore, MD, USA (Link)	2020
Member of the Host for a visit by the Loyola University Physics Club at the Space Telescope Science Institute (AURA/NASA), Baltimore, MD, USA	2019
Member of the Judges for the Chambliss Astronomy Achievement Student Awards at the American Astronomical Society, AAS Meeting #233	2019
Member of the Judges for the Science Fair at the West Elementary, Athens, OH, USA	2018
Proposal Reviewer Committee for the Original Work Grant and Travel Awards, in collaboration with The Graduate College and the Graduate Student Senate at Ohio University, Athens, OH, USA	2018
Kendo Demonstration at various community events, in collaboration with the Ohio University Kendo Club, Ohio University, Athens, OH, USA	2014 – 2018
LGBT Affairs Commissioner for the Graduate Student Senate, Ohio University, Athens, OH, USA	2017
Science Staff for the Physics and Astronomy Open House organized by the Physics and Astronomy Department, Ohio University, Athens, OH, USA	2015, 2017
Volunteer for the Athens Beautification Day, Athens, OH, USA	2016
Science Staff for the Ohio Valley Museum of Discovery, Athens, OH, USA	2014

ACHIEVEMENTS

Thailand Cyber Talent 2025

NCSA Thailand, Bangkok, Thailand

Bravo! Awards

issued by the Space Telescope Science Institute (AURA/NASA)

- Hosting the Loyola University Physics Club on February 20, 2020
- Contributing in Astrogrism Sprint during May 12–21, 2020

Graduate Awards

2014 – 2019

Ohio University, Athens, OH, USA

Global Game Jam 2017

2017

as Lead Programmer and Project Coordinator in the project “EchoEcho” with a team at GRID Lab, Ohio University, Athens, OH, USA ([Link to the project](#))

Kendo 2-Dan

2017

issued by All United States Kendo Federation, USA (AUSKF ID: 017666)

Executive Course on Social Security

2012

as representative from the Faculty of Economics, Chulalongkorn University, organized by the International Labour Organization (UN), in collaboration with Chulalongkorn University, Bangkok, Thailand

Hands-on Training “How to Cost, Finance and Monitor Social Protection Schemes?”

2012

as representative from the Faculty of Economics, Chulalongkorn University, organized by the International Labour Organization (UN), in collaboration with Chulalongkorn University and Health Insurance Research Institute of Thailand, Bangkok, Thailand

The Best Paper Awards

2012

titled “Cost of Action, Perceived Intention, Positive Reciprocity, and Signalling Model” at The 6th Asian Business Research Conference between 8–10 April 2012, Bangkok, Thailand, organized by the World Academy of Social Science, Victoria, Australia

Associate Fellowship

2012

awarded by the World Academy of Social Science, Victoria, Australia

Research Grants

2012

The 90th Anniversary of Chulalongkorn University Fund (Ratchadaphiseksomphot Endowment Fund), Chulalongkorn University, Bangkok, Thailand

Brand Ambassador

2008

as Playsmart Idol, organized by NC True Co., Ltd., Thailand ([Link to news article](#))

Medical Scholarship Program

2004 – 2013

Mahidol University, Bangkok, Thailand

Gold Medal

2002

National Physics Olympiad Competition, The Promotion of Academic Olympiads, Thailand

High Distinction Awards

2001

from the Australian National Chemistry Quiz in the senior division, organized by the Royal Australian Chemical Institute

Thailand Representative

2001

Airang Youth Camp 5th, UNESCO, South Korea