

Phacharatouch Chaimongkon — Assistant Professor in Theoretical Physics

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Mueang District, Phayao 56000, Thailand

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Personal Details

Sex: Male

Date of Birth: 27 April 1987

Height: 167 cm

Weight: 84 kg

Health: Excellent

Nationality: Thai

Race: Thai

Marital Status: Married

Religion: Buddhism

Hobbies: Playing football, reviewing lessons, reading, programming

Qualifications

Reliable, willing, and punctual

Honest and trustworthy

Positive attitude, patient, helpful, eager to learn

Experienced with X'Pert HighScore, OriginPro, Photoshop; proficient in C, Fortran, Python, Perl; Linux (Fedora / Ubuntu); \LaTeX ; AI prompt engineering, deep learning, data science

Education

Naresuan University

Ph.D. Candidate in Physics

Research on exotic-particle production in heavy-ion collisions (UrQMD)

Phitsanulok, Thailand

2020–present

University of Phayao

Assistant Professor in Theoretical Physics

Department of Physics, School of Science

Phayao, Thailand

2020–present

University of Phayao

Lecturer in Physics

Phayao, Thailand

2012–2020

Naresuan University

M.Sc. in Applied Physics

High Energy Physics

Phitsanulok, Thailand

2011–2012

Naresuan University

B.Sc. in Physics

Phitsanulok, Thailand

2006–2010

Dokkhamtai Wittayakom School

High School Diploma

Phayao, Thailand

2000–2005

Professional Experience

University of Phayao

Assistant Professor (Theoretical Physics)

Teaching undergraduate physics; research on heavy-ion collisions and dense nuclear matter

Phayao, Thailand

2020–present

University of Phayao

Lecturer in Physics

Course design, laboratory development, departmental research projects

Phayao, Thailand

2012–2020

Research Interests

Nuclear and particle physics — heavy-ion collisions, dense nuclear matter, exotic-particle production

Teaching Experience

244351: Nuclear Physics — Course Instructor, University of Phayao

244241: Computer Programming for Physics — Course Instructor, University of Phayao

Research Collaborations

Prof. Yu-Ming Zheng: China Institute of Atomic Energy, China

Prof. Yupeng Yan: Suranaree University of Technology, Thailand

Assoc. Prof. Pornrad Srisawad: Naresuan University, Thailand

Asst. Prof. Ayut Limphirat: Suranaree University of Technology, Thailand

Dr. Panadda Sittiketkorn: Nakhon Sawan Rajabhat University, Thailand

Dr. Kristiya Tomuang: Siam Technology College, Thailand

Selected Publications

2025: K. Anukulkich, P. Srisawad, **P. Chaimongkon**, S. Sombun, C. Herold, A. Limphirat, Y. Yan, *High-order cumulants of the net-proton number in Au+Au collisions at $\sqrt{s} = 3\text{--}39$ GeV using the UrQMD model*, *J. Phys. G* **52** (2025) 044001.

2023: N. Thongyoo, P. Srisawad, K. Tomuang, P. Sittiketkorn, **P. Chaimongkon et al.**, *Production of charged particles and kaonic nuclei in Au+Au collisions at $\sqrt{s} = 130$ GeV*, *Mod. Phys. Lett. A* **38**(7) 2350045 (2023).

2022: P. Sittiketkorn, **P. Chaimongkon**, K. Tomuang, P. Srisawad, N. Suwannasri, *Effect of K^+ potential and nuclear EOS on K^+ cross-sections*, *Sci. Technol. Nakhon Sawan Rajabhat Univ. J.* **14**(20) 57–68 (2022).

2019: **P. Chaimongkon**, T. Thapang, T. Boonprasert, A. Chumsri, P. Sittiketkorn et al., *Elliptic flow of the proton in $^{197}\text{Au}+^{197}\text{Au}$ at intermediate energy (QMD)*, *J. Phys.: Conf. Ser.* **1380** 012008 (2019).

2019: **P. Chaimongkon**, P. Kunkaew, P. Rerkwattanaampai, P. Sittiketkorn et al., *Azimuthal emission patterns of protons in $^{58}\text{Ni}+^{58}\text{Ni}$ (QMD)*, *J. Phys.: Conf. Ser.* **1380** 012009 (2019).

2019: **P. Chaimongkon**, J. Jeerakad, T. Doo-saard et al., *Effect of K^+ potential on nuclear EOS using*

QMD, *J. Phys.: Conf. Ser.* **1380** 012011 (2019).

2018: P. Srisawad, K. Tomuang, **P. Chaimongkon**, Y.-M. Zheng, Y.-Z. Xing *et al.*, *In-medium K^+ potential and K^+ production*, *J. Phys.: Conf. Ser.* **1144** 012102 (2018).

2011: U. Chaimongkon, A. Thongtha, T. Bongkarn, *Effects of firing temperature and Ba content on $PbBaTiO_3$ ceramics*, *Current Applied Physics* **11**(3) S70–S76 (2011) (28 citations).

2009: T. Bongkarn, U. Chaimongkon, A. Laowanidwatana, S. Chootin, *Phase formation and microstructure of $(Ba_{0.6}Pb_{0.4})TiO_3$ powders*, *NU Int. J. Sci.* **6**(2) 156–164 (2009).

Statement of Interest (Revised for Siam School 2025)

Dear Selection Committee,

I am writing to express my strong interest in participating in the 2025 **Siam School of High-Energy Physics**, to be held from 6–10 October at Suranaree University of Technology. As an assistant professor and researcher specializing in high-energy nuclear physics, I am eager to deepen my understanding of heavy-ion collisions and explore new theoretical and experimental perspectives through this esteemed program.

My current research focuses on **exotic-particle production in heavy-ion collisions using the Ultra-relativistic Quantum Molecular Dynamics (UrQMD) model**. This work has honed my expertise in transport theory, computational simulation, and statistical data analysis. I am particularly interested in how dynamical descriptions of nuclear matter — such as those discussed in the School's curriculum — can complement and extend the modeling frameworks I currently employ.

The topics covered by the School, including heavy-ion collision experiments, transport theory, and the physics of the strong interaction, align closely with my academic goals. I am especially enthusiastic about sessions that explore the interplay between experimental data and theoretical models, as they will help me refine my research and contribute to ongoing efforts in the field.

Equally important is the opportunity to engage with leading experts and fellow young physicists from across East and Southeast Asia. I believe such interactions will foster meaningful collaborations and inspire new directions in both research and science outreach — areas I am deeply committed to. Thank you for considering my application. I look forward to contributing to and learning from the vibrant academic community at the **Siam School of High-Energy Physics 2025**.

Sincerely,
Phacharatouch Chaimongkon