



Nuclear and Particle Physics Research in Thailand

A. Limphirat[†], C. Kobdaj^{*†}, K. Khosonthongkee^{*†}, P. Suebka^{*†}, Y. Yan^{*†}



**School of Physics, Institute of Science, Suranaree University of Technology,
Nakhon Ratchasima, 30000, Thailand*

†Thailand Center of Excellence in Physics, Commission on Higher Education, Bangkok, 10400, Thailand

Abstract

The Nuclear and Particle Physics Research Unit was founded by the school of physics, Suranaree University of Technology (SUT) in year 2000. Later in 2007, our group has joined the Research Center in Computational and Theoretical Physics which is financed by the Thailand Center of Excellence in Physics (ThEP Center). Suranaree University of Technology is one of the nation's leading research universities with particular strengths in science and technology. The school of physics was ranked first among all universities in Thailand by the Thailand Research Fund (TRF) in year 2008. Our unit itself is located in the north-eastern part of Thailand, about 250 km from Bangkok with the main interests as follows:

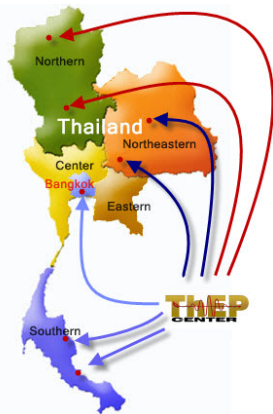
1. Hadron physics which include hadron interaction, exotic atoms, chiral perturbation theory and chiral quark models. In this area, we have collaborated with groups from University of Tübingen, GSI from Germany, TRIUMF from Canada and Institute of High Energy Physics (IHEP), China.
2. Heavy ion collision based on the QMD and UrQMD model to study hypernuclei, kaon and sigma meson production with exchange visits from Johann Wolfgang Goethe Universität, Germany and China Institute of Atomic Energy (CIAE) Beijing, China.
3. Lattice QCD to extract information about gluon and ghost propagator in Coulomb gauge at zero and finite temperature. In this topic we have collaborated with a group from University of Tübingen, Germany.

Past Activities

We hosted the third Asia-Pacific Conference on Few-Body Problems in Physics (APFB05) from July 26 to 30, 2005. Over 100 physicists from around the world participated in this program.



Pictures from CERN PhotoLab

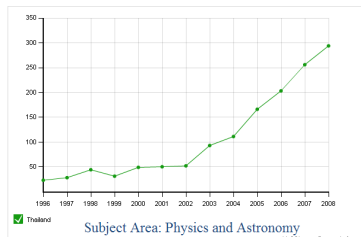


Suranaree University of Technology (SUT) is Thailand's first autonomous state university. SUT has served as one of the nation's leading research universities with particular strengths in science and technology. The university campus is located in Nakhon Ratchasima province, only 250 km from Bangkok. The school of physics was ranked first among all universities in Thailand by the Thailand Research Fund (TRF) in year 2008. The research group in physics currently being conducted at SUT are Condensed Matter Physics, Nuclear and Particle Physics, Synchrotron Radiation Physics, and Lasers Technology.



Her Royal Highness Princess Maha Chakri Sirindhorn of Thailand has visited CERN 3 times in year 2000, 2003 and 2009. Her interests have led to the selection of Thai teachers and students to participate in CERN's summer student programme and physics high school teacher programme. Her gracious patronage has been appreciated by physics community in Thailand.

The Thailand Center of Excellence in Physics, ThEP Center, is a collaboration of more than 12 Thai universities around the country. Evidently, there has been substantial growth of physics research in Thailand since 2003. The center aim is to enhance the quality of teaching and research in physics among Thai universities and support local industries with a supply of well-prepared graduates and innovative ideas.



The Nuclear and Particle Physics Research Unit was founded in year 2000. Later in 2007, our group has joined the Research Center in Computational and Theoretical Physics which is financed by the Thailand Center of Excellence in Physics (ThEP Center). We have strong collaborations with forefront physics institutes in Europe, North America, and China. The following is a list of the research projects currently being conducted.

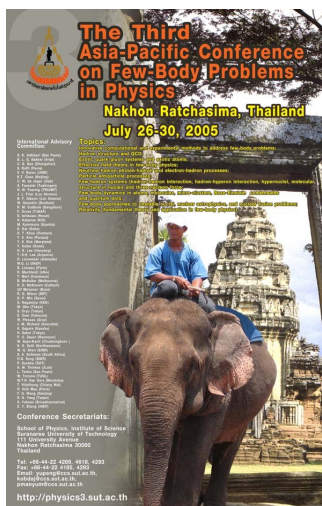
1. Hadron physics which include hadron interaction, exotic atoms, chiral perturbation theory and chiral quark models. In this area, we have collaborated with groups from University of Tübingen, GSI from Germany, TRIUMF from Canada and Institute of High Energy Physics (IHEP), China.



2. Heavy ion collision based on the QMD and UrQMD model to study hypernuclei, kaon and sigma meson production with exchange visits from Johann Wolfgang Goethe Universität, Germany and China Institute of Atomic Energy (CIAE) Beijing, China.



3. Lattice QCD to extract information about gluon and ghost propagator in Coulomb gauge at zero and finite temperature. In this topic we have collaborated with a group from University of Tübingen, Germany.



Past Activities: The third Asia-Pacific Conference on Few-Body Problems in Physics (APFB05) was held from July 26 to 30, 2005 in Nakhon Ratchasima, Thailand, with School of Physics, Suranaree University of Technology (SUT) as its host. Over 100 physicists from around the world participated in this program.