Asian Network School and Workshop on Complex Condensed Matter Systems 2025 November 10 – 14, 2025

National Institute of Physics

College of Science, University of the Philippines Diliman Quezon City, Philippines



Official Event Website: https://answ2025.nip.upd.edu.ph/

The Asian Network School and Workshop on Complex Condensed Matter Systems 2025 (ANSW25) is a combined school and workshop suited for graduate students in physics, postdoctoral fellows and early career researchers in Asia. The four-day school provides lectures of pedagogical nature in condensed matter physics, complex systems and statistical physics, while the one-day workshop will showcase current trends and research results in seminar type of talks. This is an external cooperative activity of the Asia Pacific Center for Theoretical Physics [APCTP-2025-E11], the Center for Theoretical Physics of Complex Systems, Institute for Basic Science, and the Abdus Salam International Centre for Theoretical Physics [SM-25/52]. Other contributions, such as those from graduate students and early career researchers, will be designated for poster presentations.

This is a hybrid event. As only selected participants can be accommodated on-site, the School and Workshop will be broadcast through an online platform to registered online participants and partner institutions. Recognizing that 2025 is the International Year of Quantum Science and Technology, the core topics that will be discussed in the school and workshop are:

- complex condensed matter systems,
- open quantum systems,
- nonequilibrium quantum thermodynamics,
- light-matter interaction in nanostructures, theoretical photonics,
- quantum transport, topological excitations,
- strongly correlated electronic systems,
- electronic structure near defects, interfaces & surface,
- nonequilibrium statistical physics and soft matter,
- entanglement and dynamics in quantum matter, and
- quantum machine learning & quantum algorithms.

This activity will be the third Annual School and Workshop in a series conducted by the ICTP Asian Network on Condensed Matter, Complex Systems and Statistical Physics 2023 - 2026 (https://pcs.ibs.re.kr/ICTP Asian Network/ICTP Asian Network.html). The first was held in 2023 at IOP, VAST, Hanoi, Vietnam and in 2024, it was held in Thailand. This cycle repeats the three-year cycle (Vietnam, Thailand and the Philippines) as established by the first iteration of our Network from 2017 to 2019.

Event Organizers

Cristine Villagonzalo (NIP UPD) Sergej Flach (PCS - IBS)

Paul Pearce (University of Melbourne, Australia) Ki-seok Kim (POSTECH / APCTP)

Local Organizers

Cristine Villagonzalo (NIP UPD) Gennevieve Macam (NIP UPD)

Roland Cristopher Caballar (University of Santo Thomas) Noel Lamsen (NIP UPD)

Wilson Garcia (NIP UPD) Francis Norman Paraan (NIP UPD)

Vladimir Villegas (Mapua University)

Sponsoring Institutions

APTCP - Asia Pacific Center for Theoretical Physics, Pohang, Korea

This event, APCTP-2025-E11, is an approved APCTP Category 4 Program.

ICTP - The Abdus Salam International Centre for Theoretical Physics, Trieste, Italy This event, SM-25/52 is an ICTP OEA Scientific Meeting supported activity.

PCS IBS - Center for Theoretical Physics of Complex Systems, Institute for Basic Science, Daejeon, Korea

NIP UPD - National Institute of Physics, College of Science, University of the Philippines Diliman, Quezon City, Philippines

School Lecturers

Tilen Cadez (APTCP)

Thi Kim Thanh Nguyen (IOP VAST)

Roland Cristopher Caballar (UST) Ahmad Tresna Ridwan Nugraha (BRIN)

Adam Badra Cahaya (UI)

Mark Nolan Confessor (MSU - IIT)

Jayson Cosme (NIP UPD)

Sunghun Park (PCS IBS)

Jariyanee Prasongkit (NPU)

Sorawis Songtawesin (SUT)

Barbara Dietz - Pilatus (PCS IBS)

Donny Dwiputra (APCTP)

Solawis Soligtawesin (Soli

Ngoc Linh Nguyen (Phenikaa) Kristian Hauser Villegas (NIP UPD)

Jung-Wan Ryu (PCS IBS)

Workshop Speakers

Seno Aji (UI)

Christopher Bernido (RCTP & NIP UPD)

Andy Octavian Latief (ITB)

Muhammad Aziz Majidi (U

Christopher Bernido (RCTP & NIP UPD) Muhammad Aziz Majidi (UI)
Jin Mo Bok (POSTECH / APCTP) Alexandra Santos - Puntungan (IOP UPLB)

Eduardo Cuansing Jr. (IOP UPLB)

Tran Van Quang (VNU)

Bach Huong Giang (VNU)

Iwan Setiawan (UNIB)

APCTP - Asia Pacific Center for Theoretical Physics, Pohang, Korea

BRIN - National Research and Innovation Agency, Indonesia

Chula - Chulalongkorn University, Bangkok, Thailand

 ${\tt IOP\ UPLB-Institute\ of\ Physics,\ University\ of\ the\ Philippines\ Los\ Banos,\ Laguna,\ Philippines}$

IOP VAST - Institute of Physics, Vietnam Academy of Science and Technology, Hanoi, Vietnam

ITB - Institut Teknologi Bandung, Bandung, Indonesia

 ${\sf MSU-IIT-Mindanao\ State\ University,\ Iligan\ Institute\ of\ Technology,\ Iligan\ City,\ Philippines}$

NIP UPD - National Institute of Physics, University of the Philippines Diliman, Quezon City, Philippines

NPU - Nakhon Phanom University, Nakhon Phanom, Thailand

 ${\sf PCS\,IBS-Center\,for\,Theoretical\,Physics\,of\,Complex\,Systems,\ Institute\,of\,Basic\,Science,\,Daejeon,\,Korea}$

Phenikaa - Phenikaa University, Hanoi, Vietnam

POSTECH - Pohang University of Science and Technology, Pohang, Korea

RCTP - Research Center for Theoretical Physics, Jagna, Bohol

SUT - Suranaree University of Technology, Nakhon Ratchasima, Thailand

UI - Universitas Indonesia, Jakarta, Indonesia

UNIB - Universitas Bengulu, Bengulu, Indonesia

UST - University of Santo Thomas, Manila, Philippines

VNU - Vietnam National University, Hanoi, Vietnam

School & Workshop Structure

The lectures in the School provides introductory graduate level on either the analytical, computational, and experimental techniques required to do research in the selected topics of condensed matter physics, complex systems and statistical physics. Continuing with the pedagogical style of the school, the lecturer can provide more advanced methods and examples of research results that offer unique perspectives on their respective fields of expertise. The ample breaks allow for free flow of discussions, networking and consultations with possible brief tutorials to intricate subject matter. The one-day Workshop component will cover recent scientific results in the areas covered by the school. These consist of short talks (30 mins) from invited speakers or authors of contributed papers. Other contributions, such as those from graduate students and early career researchers, will be designated for poster presentations. The detailed schedule of lectures will soon be uploaded here. A sample of the schedule is given below.

Updated program as of Oct. 13, 2025:

	School				Workshop	
	Monday	Tuesday	Wednesday	Thursday	F	riday
8:00-9:00	Registration					
9:00-9:30	Opening	Supanut Thanasilip	Tilen Cadez	Nguyen Ngoc Linh	9:00-9:30	Bok Jinmo
					9:30-10:00	Tran Van Quang
9:30 - 10:30	Adam Badra Cahaya				10:00-10:30	Muhamad Aziz Majidi
10:30-10:45	Break			10:30-10:45	Break	
10:45-11:45	Barbara Dietz- Pilatus	Jung-Wan Ryu	Roland Cristopher Caballar	Sorawis Songtawesin	10:45-11:15	Andy Octavian Latief
					11:15-11:45	Eduardo Cuansing Jr.
11:45-13:00	Lunch			11:45-13:00	Lunch	
13:00-14:30	Oleg Utesov	Park Sunghun		Mark Nolan Confesor	13:00-13:30	Bach Huong Giang
					13:30-14:00	Alexandra Santos- Putungan
					14:00-14:30	Seno Aji
14:30-14:35	Health Break		î)	Health Break	14:30-14:45	Break
14:35-15:35	Nguyen Thi Kim Thanh	Ahmad Ridwan Tresna Nugraha	Heritage Tour	Donny Dwiputra	14:45-15:15	lwan Setiawan
15:35-15:50	Break			Break	15:15-15:45	Christopher Bernido
15:50-17:20	Kristian Hauser	Jariyanee Prasongkit		Jayson Cosme	15:45 - 16:00	Break
	Villegas				16:00 - 16:30	Closing
17:20-18:30		Poster session		Coordinators' Meeting		
18:30 - 20:00		Banquet dinner				

Abstract Submission & Poster Presentation

The registration module allows the invited lecturers/speakers to upload the titles and abstracts of their lectures / talks. Other participants are encouraged to present a poster of their current research work. They can submit their poster abstracts through the registration module:

https://answ2025.nip.upd.edu.ph/registration.

Please prepare the poster in portrait (vertical) mode with a maximum size of A0 (841 mm x 1189 mm, or 33.1 inches x 46.8 inches). Posters will be displayed beginning on the first day of the school up to the workshop day to allow for more discussions during coffee breaks, free times and the designated poster session time slot.