

**The second International Symposium of Nano Life Science:
Nano Biotechnology, Biophysics and Computation (NanoBioCoM2024)**
ICISE, Quy Nhon City, Binh Dinh province, Vietnam, September 25-27, 2024

PROGRAMME AT A GLANCE

Date	Time	Program	
DAY 1 Sept. 25 (Wed.)	7:45 – 8:15	Moving to ICISE from Seagull Hotel by Shuttle Buses	
	8:30 – 9:00	Registration and hanging posters	
	9:00 – 10:00	Opening ceremony and group photo	
	10:00-10:30	Coffee break	
		Plenary session, Hall 1 (PL: 40 min; K: 30 min)	
	10:30- 12:10	1 Plenary Lecture (PL-01) + 2 Keynote Lectures (K-01, ,K-02)	
	12:10 – 13:30	Lunch/Poster visit	
		Plenary session, Hall 1 (K: 30 min; I: 25 min)	
	13:30 – 14:55	2 Keynote Lecture (K-03, K-04) + 1 Invited Lecture (I-19)	
		Parallel sessions (I: 25 min; O: 20 min)	
	15:30 – 17:20	Session 1: Nano Biotechnology (Hall 1) 2 Invited Lectures + 2 Oral talks	Session 2: Biophysics and Computation (Hall 2, 2 nd floor) 3 Invited Lectures + 1 Oral talk
	17:30	Moving to hotels by shutter buses	
DAY 2 Sept. 26 (Thu.)	8:00 – 8:45	Moving to ICISE from Seagull Hotel by Shuttle Buses, and hanging posters	
		Plenary session, Hall 1 (PL: 40 min; K: 30 min; I: 25 min)	
	9:00 – 10:35	1 Plenary Lecture (PL-02) + 1 Keynote Lectures (K-05) + 1 Invited Lecture (I-20)	
		Parallel sessions (I: 25 min; O: 20 min)	
	11:00– 12:10	Session 1: Nano Biotechnology (Hall 1) 2 Invited lectures + 1 Oral talk	Session 2: Biophysics and Computation (Hall 2, 2 nd floor) 2 Invited lectures + 1 Oral talk
	12:10 – 13:30	Lunch/Poster visit	
		Parallel sessions (I: 25 min; O: 20 min)	
	13:30 – 15:25	Session 1: Nano Biotechnology (Hall 1) 3 Invited Lectures + 2 Oral talks	Session 2: Biophysics and Computation (Hall 2, 2 nd floor) 3 Invited Lectures + 2 Oral talks
		Plenary session, Hall 1 (K: 30 min)	
	16:00-17:00	2 Keynote Lectures (K-06, K-07)	
	17:00-17:50	Roundtable discussion (Research & education colab., technology transfer)	
	18:00 – 21:30	GALA DINNER	
DAY 3 Sept. 27 (Fri.)	8:00 – 8:45	Moving to ICISE from Seagull Hotel by Shuttle Buses	
		Plenary session, Hall 1 (PL: 40 min; K: 30 min)	
	9:00 – 10:10	1 Plenary Lecture (PL-03) + 1 Keynote Lecture (K-08)	
		Parallel sessions (I: 25 min; O: 20 min)	
	10:40-12:20	Session 1: Nano Biotechnology (Hall 1) 2 Invited Lectures + 1 Oral talk	Session 2: Biophysics and Computation (Hall 2, 2 nd floor) 2 Invited Lectures + 2 Oral talk
	12:20 – 13:30	Lunch	
	13:30 – 14:30	Poster presentation	
		Plenary session, Hall 1 (K: 30 min; I: 25 min)	
	14:30-16:15	1 Keynote Lecture (K-09) + 3 Invited Lectures (I-21; I-22; I-23)	
	16:30-17:00	Roundtable discussion: Biophysics activities (Hall 1)	
	17:00-17:30	IUPAB & Poster awards and Closing ceremony	
	17:30	Moving to Seagull Hotel by Shuttle Buses or Free Excursion	

DETAILED AGENDA

DAY 1 Wednesday, September 25, 2024		
7:45 - 8:15	Moving to ICISE from Seagull Hotel by Shuttle Buses	
8:30 - 9:00	Registration and hanging posters	
9:00 – 10:00	Opening ceremony and group photo Prof. Jean Tran Thanh Van (ICISE) Assoc.Prof. Tran Quang Huy (Phenikaa Uni.) Prof. Takeshi Fukuma (NanoLSI, Kanazawa Uni.)	
10:00-10:30	Coffee break	
	PLENARY SESSION, HALL 1 Chairs: Prof. Wibool Piyawattanametha and Assist. Prof. Ngo Xuan Kien	
10:30 – 11:10	PL-01: Measurements of Nanoscale Dynamics and Mechanics in Living Cells by Nanoendoscopy AFM	Prof. Dr. Takeshi Fukuma Nano Life Science Institute (WPI-NanoLSI), Kanazawa University, Kakuma-machi, Kanazawa 920-1192, Japan
11:10 – 11:40	K-01: Integrative structural biology of cilia at multiscale resolution by cryo-electron microscopy	Prof. Dr. Khanh Huy Bui Department of Anatomy and Cell Biology, McGill University, Montreal, Quebec, Canada
11:40 – 12:10	K-02: 3D multi-spectral MEMS-based dual-axis confocal microendoscope for clinical applications	Prof. Dr. Wibool Piyawattanametha Department of Biomedical Engineering, King Mongkut's Institute of Technology Ladkrabang, Ladkrabang 10520, Thailand
12:10 – 13:30	Lunch/Poster visit	
	PLENARY SESSION, HALL 1 Chairs: Prof. Dr. Tran Van Nhieu and Prof. Dr. Florence Tama	
13:30-14:00	K-03: A Novel Gate Operating Pathway of Lipopolysaccharide Transport by Bacterial ABC Transporter MsbA and LptC	Assist. Prof. Dr. Kien Xuan Ngo Nano Life Science Institute (WPI-NanoLSI), Kanazawa University, Kanazawa, Japan

14:00-14:30	K-04: Structural and functional insights into vinculin supra-activation mediated by Shigella IpaA	Prof. Dr. Tran Van Nhieu Université Paris-Saclay, CNRS UMR 9198, Institute for Integrative Biology of the Cell (I2BC), Gif-sur-Yvette, France.
14:30 – 14:55	I-19: Integrative Modeling Approaches to Characterize Dynamics of Biomolecules: Application to Atomic Force Microscopy	Prof. Dr. Florence Tama Nagoya University, Japan
14:55 -15:30	Coffee break	
	PARALLEL SESSIONS	
	Session 1: Nano Biotechnology (Hall 1) Chairs: Assist.Prof.Dr. Kien Xuan Ngo and Dr. Anh-Dung Nguyen Assoc.Prof. Nguyen Bao Quoc	Session 2: Biophysics and Computation (Hall 2, 2 nd floor) Chairs: Prof. Dr. Shigehiko Hayashi and Assist. Prof. Dr. Ayumi Sumino
15:30 – 15:55 (online)	I-01: Metal/bimetallic nanoparticles for advanced radiation therapy Prof. Dr. N. T. Van-Oanh , Institut de Chimie Physique (ICP), Université Paris-Saclay, CNRS, UMR8000, Orsay, France	I-02: Atomistically deciphering functional activation processes of proteins with hybrid molecular simulations Prof. Dr. Shigehiko Hayashi , Graduate School of Science, Kyoto University, Kyoto, Japan
15:55 – 16:20	I-03: Nanomedicine: using nanobubbles and ultrasound for enhancing drug delivery Dr. Phuong H. Nguyen , Laboratoire de Biochimie Théorique, Institut de Biologie Physico-Chimique CNRS and Université Paris Cité Paris, France	I-04: High-speed atomic force microscopy studies on the structural dynamics of ion channels at the single molecule level Assist. Prof. Dr. Ayumi Sumino , Nano Life Science Institute (WPI-NanoLSI), Kanazawa University, Kanazawa, Japan
16:20 – 16:40	O-01: Developing pharmaceutical nano formulations of <i>Chandamarutha chenduram</i> to combat clinical bacterial resistance and assess its antibacterial efficacy Dr. Muddukrishnaiah Kotakonda ,	I-23: Low-cost SmartTrap: An Innovative Pest Observation System Harnessing TinyML and Edge Computing Dr. Hien Bich Vo , Vietnamese-German University, Binh Duong, Vietnam

	Department of Pharmaceutics, Jamia Salafiya Pharmacy College, Pulikkal, Malappuram, Kerala-673637, India	
16:40 – 17:00	O-03: Green bio-fabricated silver nanoparticles from fungal endophyte induces anti-proliferative and apoptotic activities against breast cancer and suppresses in ovo neovascularization PhD stu. Ashish Verma, Centre of Experimental Medicine and Surgery, Institute of Medical Sciences, Banaras Hindu University, Varanasi-221005, India	O-04: Effect of Glu78 on the transport of Cation-Protons across the cell membrane by Ec-NhaA. PhD stu. Anuradha Yadav Amity Institute of Biotechnology, Amity University Uttar Pradesh, Lucknow-226028, India
17:00-17:20	O-05: Antioxidant potential assessment of biosynthesized AgNPs and characterization of hepatoprotective phytoconstituents from Vitis vinifera extract using LC-MS/MS Dr. Muhammad Arshad Biochemistry Section, Jhang campus, University of Veterinary and Animal Sciences Lahore Pakistan	O-06: Exploration and identification of the NPR1 gene mediated plant defense response mechanism in Chili against begomovirus Infection Dr. Muhammad Shafiq, Department of Horticulture University of the Punjab New Campus Lahore, Pakistan
17:30	Moving to hotels by shutter buses, free excursion	
DAY 2 Thursday, September 26, 2024		
8:00 – 8:45	Moving to ICISE from Seagull Hotel by Shuttle Buses, and hanging posters	
	PLENARY SESSION, HALL 1 Chairs: Prof. Dr. Takeharu Nagai and Prof. Dr. Nguyen The Toan	
9:00 – 9:40	PL-02: Trans-scale scope opens up a new horizon in life science research	Prof. Dr. Takeharu Nagai SANKEN, The University of Osaka, Ibaraki, Japan
9:40 – 10:10	K-05: Comparing Receptor Binding Properties of SARS-CoV-2 and of SARS-CoV Virus by Using Unsupervised Machine Learning Models	Prof. Dr. Nguyen The Toan Key Laboratory for Multiscale Simulation of Complex Systems, and Faculty of Physics, University of Science, Vietnam National University,

		334 Nguyen Trai Street, Thanh Xuan, Hanoi 11400, Vietnam
10:10-10:35	I-20: Computational simulations supporting observations by atomic force microscopy	Assist. Prof. Dr. Takashi Sumikama, Nano Life Science Institute, Kanazawa University, Kanazawa, Ishikawa, Japan
10:35 – 11:00	Coffee break and Poster visiting	
	PARALLEL SESSIONS	
	Session 1: Nano Biotechnology (Hall 1) Chairs: Assoc. Prof. Anh T.N. DAO and Dr. Thuy Thi Thu Nguyen	Session 2: Biophysics and Computation (Hall 2, 2 nd floor) Chairs: Prof. Dr. Steven Hayward and Assist. Prof. Duy Phuoc Tran
11:00-11:25	I-05: Fabrication of Silk Protein to Hybrid Nanocarriers for Cancer Therapy Assoc. Prof. Anh T.N. DAO, Graduate School of Integrated Science and Technology, Nagasaki University, Japan	I-06: Interactive flexible receptor docking using DockIT Prof. Dr. Steven Hayward, School of Computing Sciences, University of East Anglia, Norwich, U.K.
11:25 – 11:50	I-07: Nanomaterials in biomedical applications: convergence in fighting against bacterial and virus infections Dr. Thuy Thi Thu Nguyen, Phenikaa University Nano Institute, Phenikaa University, Hanoi, Vietnam	I-08: Ions Permeation through the Stators of Bacterial Flagellar Motors Assist. Prof. Duy Phuoc Tran, School of Life Science and Technology, Tokyo Institute of Technology, Tokyo, Japan
11:50 – 12:10	O-07: Isolation and screening of hydrocarbon degrading bacterial isolated from oil contaminated sites. PhD stu. Hitendra Yadav, Amity Institute of Biotechnology, Amity University Uttar Pradesh, Lucknow Campus, India	O-08: Single fluorescence-based FLIM indicator for observing changes in GTP/GDP ratio in cancer cells PhD stu. Loan Thi Ngoc Nguyen, WPI Nano Life Science Institute (WPI-NanoLSI), Kanazawa University, Kanazawa, Japan
12:10 – 13:30	Lunch/Poster visit	

	PARALLEL SESSIONS	
	Session 1: Nano Biotechnology (Hall 1) Chairs: Research Assist. Prof. Dr. Thoa Tran and Assist.Prof. Dr. Nguyen Kim Hung	Session 2: Biophysics and Computation (Hall 2, 2 nd floor) Chairs: Assist. Prof. Dr. Shingo Fukuda and Dr. Silvano Piazza
13:30 – 13:55	I-09: Development of Regulable and Targeted Photochemical Internalization Therapy to combat borderline resectable and unresectable locally advanced pancreatic cancer Dr. Thoa Tran, Max Schmidt Indiana University, School of Medicine	I-10: Integrative Analysis of APE1-Mediated MicroRNA Processing and Protein-Protein Interactions in Cancer Prognosis Dr. Silvano Piazza, Group Leader, Computational Biology, International Centre for Genetic Engineering and Biotechnology, Italy
13:55 – 14:20	I-11: Design and Modification of Porous Nanomaterials as Drug Carriers in Cancer Therapy Assoc. Prof. Dr. Doan Le Hoang Tan Center for Innovative Materials and Architectures, Ho Chi Minh City, Vietnam	I-12: Ultra-high-speed atomic force microscopy for visualization of faster biomolecular dynamics Assist. Prof. Dr. Shingo Fukuda WPI Nano Life Science Institute (WPI-NanoLSI), Kanazawa University
14:20 – 14:45	I-13: Viscoelastic Characterization of Soft Materials Using Nanorheological Atomic Force Microscopy Assist.Prof. Dr. Nguyen Kim Hung, School of Materials and Chemical Technology, Tokyo Institute of Technology, 1-12-1 Ookayama, Meguro-ku, Tokyo 152-8552, Japan	I-14: Toward Quantitative Imaging of Cellular Metabolites with Fluorescence Lifetime Biosensors Assist. Prof. Dr. Cong Quang Vu, Nano Life Science Institute (WPI-NanoLSI), Kanazawa University, Kanazawa, Japan
14:45 – 15:05	O-09: Green synthesis, optimization, characterization and exploring the impact of biogenic zinc oxide nanoparticles derived from Lantana camara L. leaf extract on alleviating heat stress in wheat	O-10: The oligomerization and neutralization capabilities of alpha-hemolysin (Hla) toxin from Staphylococcus aureus by mutant Hla proteins Dr. Ngan Thi Phuong Le

	Mr. Neelesh Kapoor Division of Plant Biotechnology, College of Biotechnology, Sardar Vallabhbhai Patel University of Agriculture and Technology, Meerut-250110 (UP) India	Center for Bioscience and Biotechnology, University of Science, Ho Chi Minh City, Vietnam
15:05-15:25	O-11: Unlocking the enhanced Antimicrobial and Anti-biofilm Potential of Microbial Metabolites: A Nanoformulation Approach PhD stu. Shelly Singh, Department of Biological Sciences and Engineering, NSUT, Dwarka Sector-3, New Delhi, India-110078	O-12: High-efficiency Sperm Selection by Microchip Integrated of Electrospun Membrane PhD stu. Huynh-Nhu Luu-Thi, Ton Duc Thang University
15:25 -16:00	Coffee break/Poster visit	
	PLENARY SESSION, HALL 1 Chairs: Assoc. Nguyen Bao Quoc and Assist. Prof. Dr. Ngo Xuan Kien	
16:00 – 16:30	K-06: Twin transition in Vietnam – opportunities for integrating advanced science & technologies in agriculture	Dr. My T. Nguyen RYNAN® Technologies Vietnam JSC
16:30 – 17:00 (online)	K-07: Light Responsive Soft nano- objects: Light Triggered Manipulation of Particle Assembly	Prof. Dr. Svetlana Santer Institute of Physics and Astronomy, University of Potsdam, Germany
17:00 – 17:50	Roundtable discussion (Research & education colab., technology transfer) Chairs: Tran Quang Huy, Ngo Xuan Kien, Nguyen Bao Quoc	
18:00 – 21:30	Gala Dinner	
DAY 3 Friday, September 27, 2024		
8:30 – 9:00	Moving to ICISE from Seagull Hotel by Shuttle Buses	
	PLENARY SESSION, HALL 1 Chairs: Prof. Dr. Akio Kitao; Assoc.Prof. Dr. Tran Quang HUY	
9:00 – 9:40	PL-03: Mechanisms of Conformational Change, Association, and Dissociation of Proteins investigated by Parallel Cascade Selection Molecular Dynamics	Prof. Dr. Akio Kitao School of Life Science and Technology, Tokyo Institute of Technology, Japan

9:40-10:10 (online)	K-08: A Bioactive Disintegrable Polymer Nanoparticle for Synergistic Vascular Anti-calcification and Drug Delivery	Prof. Dr. Hang Thu Ta School of Environment and Science, Griffith University, Brisbane, Queensland 4111, Australia
10:10 – 10:40	Coffee break	
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10:40 – 11:10	I-15: The Effect of Shear Stress on Fibronectin Fibrillogenesis: Morphological Properties and Cellular Implications Assoc. Prof. Huynh Chan Khon, International University, Vietnam National University, HCMC, Vietnam	I-16: Applying AI Algorithms to Recognize Important Genes in Cancer Tumors Prof. Turgay Ibrikci Adana Alparslan Turkes Science and Technology University, Adana, Türkiye
11:10 – 11:40	I-17: Development of nanomaterials-based electrochemical biosensors for food safety monitoring Assoc. Prof. Tran Quang Huy Phenikaa University Nano Institute, Phenikaa University, Vietnam	I-18: A combined optical and atomic force microscope for materials and life sciences research Dr. Tri Thanh Pham Department of Biology, School of Sciences and Humanities, Nazarbayev University, Kazakhstan
11:40 – 12:00	O-13: Synergistic Activation of p53 in Cancer Cells Using Zinc Oxide Nanoparticles: A Promising Approach for Cancer Therapy Dr. Samuel Shiferaw Biresaw, Department of Biotechnology, School of Engineering and Technology, Sharda University, Plot No. 32, 34, Knowledge Park III, Greater Noida, Uttar Pradesh 201310, India	O-14: Novel Enzyme- Assisted Cellulose Nanofibre (CNF) Synthesis and its Application in CR Dye Adsorption Using RSM Optimization PhD stu. Twinkle Gupta, Department of Biological Sciences and Engineering, Netaji Subhas University of Technology, Dwarka, New-Delhi, India-110078
12:00-12:20		O-15: Metabarcoding of fish species in mangrove nursery grounds using eDNA (environmental DNA) as a tool for

		conservation and fish stock assessment Tricksie Balatero Department of Biological Sciences, Mindanao State University-Iligan Institute of Technology, Iligan City, 9200 Philippines
12:20-13:30	Lunch	
13:30 – 14:30	Poster presentation	
	PLENARY SESSION, HALL 1 Chairs: Prof. Dr. Florence Tama and Assist. Prof. Dr. Takashi Sumikama	
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15:00-15:25	I-21: Molecular-scale observation of porphyrin derivatives self-assembled at solid-electrolyte interfaces	Assoc. Prof. Dr. Thanh Hai Phan Faculty of Natural Sciences, Quy Nhon University, 170 An Duong Vuong, Quy Nhon, Viet Nam
15:25-15:50	I-22: CM-AFM in biological applications: A correlation of the mechanical properties to the cell membrane composition	Dr. Anh-Dung Nguyen Lemans University, France
15:50-16:10	O-02: Integration of high-speed atomic force microscopy with in silico modeling for characterizing aptamers targeting METTL3 in cancer cells	Assist.Prof.Dr. Madhu Biyani Nano Life Science Institute (WPI- NanoLSI), Kanazawa University, Kanazawa, Ishikawa, Japan
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16:30 – 17:00	Roundtable discussion: Biophysics activities (Hall 1) Chairs: Tran Quang Huy, Ngo Xuan Kien, Nguyen Bao Quoc	
17:00-17:30	IUPAB, NanoBioCoM & Poster awards and Closing ceremony	
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	² <i>Université Paris-Saclay, CNRS UMR 9198, Institute for Integrative Biology of the Cell (I2BC), Gif-sur-Yvette, France.</i> ³ <i>Nano Life Science Institute (WPI NanoLSI), Kanazawa University, Kanazawa, Japan</i> ⁴ <i>Université de Lorraine, CNRS, Inria, LORIA, 54000 Nancy, France;</i>	
K-05	Comparing Receptor Binding Properties of SARS-CoV-2 and of SARS-CoV Virus by Using Unsupervised Machine Learning Models Cao Phuong Cong, Hien T. T. Lai, Ly H. Nguyen, and Toan T. Nguyen <i>Key Laboratory for Multiscale Simulation of Complex Systems, and Faculty of Physics, University of Science, Vietnam National University, 334 Nguyen Trai Street, Thanh Xuan, Hanoi 11400, Vietnam</i>	8
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