The 1st International Conference on Health Science and Technology (ICHST-2023)

TENTATIVE PROGRAM
Venue: C2 Hall, Hanoi University of Science and Technology
Hanoi, December 28th-29th 2023

DAY 1: 28th December 2023 **CONFERENCE DAY**	
RECEPTION AND OPENING, C2 Hall	
7:30-8:30	Reception
8:30-9:00	Opening remark and welcome speech
	Prof. Huynh Quyet Thang, President of HUST
	Group Photo
9:00-10:30	**PLENARY SESSION, C2 Hall** **Chair: Prof. Nguyen Duc Thanh**
9:00-9:30	*Prof. Robert S. Langer, Massachusetts Institute of Technology, USA* Title: **From nanotechnology to mRNA vaccines: How overcoming skepticism led to new medical treatments and ways to tackle a global health challenge**
9:30-10:00	*Prof. Cato T. Laurencin, University of Connecticut, USA* Title: **Regenerative Engineering**
10:00-10:30	*Prof. Kam W. Leong, Columbia University, USA* Title: **Targeting Nucleic Acids to Combat Inflammation: A New Therapeutic Strategy**
10:30-11:00	*Prof. Mark Prausnitz, Georgia Institute of Technology, USA* Title: **Translation of drug delivery devices from lab to clinic**
11:00-11:30	**COFFEE BREAK**
11:30-12:00	**KEYNOTE SESSION, C2 Hall** **Chair: Prof. Mark Prausnitz**
11:30-12:00	*Prof. Thang Toan Phan, National University of Singapore, Singapore* Title: **Translational Research in Cellular Therapy: Umbilical Cord Stem Cell 4.0 for Regenerative Medicine, Cellular and Gene Therapy and Healthy Longevity**
12:00-12:30	*Prof. Ho Ba Tho Marie-Christine, Université de Technologie de Compiègne, France* Title: **Knowledge extraction from medical imaging for advanced patient specific musculoskeletal models**
12:30-14:00	**LUNCH**
14:00-15:00	**KEYNOTE SESSION, C2 Hall** **Chair: Prof. Bin Feng**
14:00-14:30	*Prof. Yadong Wang, Cornell University, USA* Title: **Design and application of bioelastomers**
14:30-15:00	*Prof. Thanh Duc Nguyen, University of Connecticut, USA* Title: **Smart biodegradable polymers at small scales for medical and healthcare applications**
	SCIENTIFIC SESSION

15:05-17:30	Session 01: Bio-Sensing Technology and Medical Devices C2 Hall Chair: Prof. Nguyen Duc Thanh	Session 02: Biomaterials and Drug Delivery C2 - 204 Chair: Prof. Liu Yang	Session 03: Biological and Medical Science C2 Conference Room Chair: Prof. Yupeng Chen	Session 04: AI and Data Science for Health C1 - 222 Chair: Dr. Nam Sy Vo

15:05-15:20	**Invited speaker: Prof. Bin Feng,** University of Connecticut, USA Title: How Does Mechanical Loading Make Bone Microstructure	**Invited speaker: Prof. Xu Chenjie,** City University of Hong Kong, China Title: Cryo-microneedles for Cell Delivery	**Invited speaker: Dr. Dang Thuy Tram**, Nanyang Technological University, Singapore Title: Immuno-modulatory biomaterials and therapeutic delivery systems	**Invited speaker: Dr. Phat K. Huynh,** University of South Florida, USA Title: Real-Time Monitoring and Diagnosis of COVID-19 Using Magnetic Respiratory Sensing Technology and Machine Learning
15:20-15:35	**FS1-16:** Challenges and Difficulties of Multi-Spectral MRI Based Brain Tumor Detection and Segmentation	**FS2-51:** Medical Textile Coated by Photocatalytic Titanium Dioxide Nanoparticles for Self-Cleaning Ability	**FS3-11:** Study of Neuronal Cell Morphology and Motility on Anisotropically Patterned Surfaces	**FS4-32:** Salient Features Selection for Liver Disease Prediction using Machine Learning
15:35-15:50	**FS1-25:** A Novel Acoustic Reflection Principle for Developing Tactile Sensors Integrated with Catheters for Cardiac Ablation	**FS2-53:** Synthesis of Cu-Doped ZNO nanoparticles by co-precipitiation method for photocatalytic activity and antibacterial properties into nancellulose fiber	**FS3-59:** Clinical and molecular surveillance of artemisinin resistance falciparum malaria in Central Highlands in Vietnam	**FS4-61:** Improve Classification Quality of Fetal Status from Cardiotocogram Data by Using Machine Learning
15:50-16:00	**Q&A**	**Q&A**	**Q&A**	**Q&A**
16:00-16:30	**COFFEE BREAK AND POSTER SESSION**			
16:30-16:45	**FS1-26:** Integration of IMU Sensors with Fugl-Meyer Assessment for Evaluating Lower Limb Rehabilitation in Stroke Patients	**FS2-71:** Preliminary synthesis and characterization of poly(lactic acid)/chitosan/n-hydroxyapatite composite scaffolds for bone tissue engineering	**FS3-62:** Molecular epidemiology of human respiratory syncytial virus in Viet Nam National Children's Hospital	**Invited speaker: Dr. Nam Sy Vo,** GeneStory & Vingroup BigData Institute, Vietnam Title: Data Science and Machine Learning Approaches to Decoding Human Genomes at Scale
16:45-17:00	**FS1-44:** Using EMG Sensor to Evaluate the Assistance Level of a Developing Rehabilitation Device	**FS2-80:** Solutions For Affordable Plastination – An Initial Attempt on Chicken Hearts	**FS3-63:** Computer-aided building of pharmacophore and QSAR model of benzo-fused compounds applied for screening of natural neolignans featuring anti-inflammation via inhibiting NF-kB.	**FS4-65:** Stress prediction using machine-learning technique on physiological signal
17:00-17:15	**FS1-47:** The non-contact height measurement method using Mediapipe and OpenCV in a 2D space	**FS2-83:** Study on the preparation and investigation of structural and photocatalytic properties of ZnO nanostructure materials co-doped with Co2+, Ni2+	**FS3-67:** Evaluation of New Insulin Infusion Therapy with Potential Variables for Diabetes Mellitus ICU Patients	**FS4_116:** Magnetic Bead Conjugated Lung Tumor Cell Binding Efficiency Assessment Based on Deep-Learning Approach
17:15-17:30	**Q&A**	**Q&A**	**Q&A**	**Q&A**
18:30-21:00	**GALA DINER** (Hotel du Parc Hanoi, 84 Tran Nhan Tong street, Hai Ba Trung district, Hanoi)			
	DAY 2: 29th December 2023			
8:00-10:00	**KEYNOTE SESSION, C2 Hall** Chair: *Prof. Yadong Wang, Cornell University, USA*			
8:30-9:00	*Prof. Ankur Singh, Georgia Institute of Technology, USA* Title: **Multiscale Immune Technologies for Discovering and Modulating Immune Processes**			
9:00-9:30	*Prof. Xiang-Dong Edward Guo, Columbia University, USA* Title: **How Does Mechanical Loading Make Bone Microstructure**			

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9:30-10:00	*Prof. Levente Kovács, Óbuda University, Hungaria* Title: **Robust control of Cyber-Medical Systems**			
	SCIENTIFIC SESSION			
10:05-12:15	**Session 01: Bio-Sensing Technology and Medical Devices** **C2 Hall** **Chair: Prof. Bin Feng**	**Session 02: Biomaterials and Drug Delivery** **C2 - 204** **Chair: Prof. Xu Chenjie**	**Session 03: Biological and Medical Science** **C2 Conference Room** **Chair: Dr. Dang Thuy Tram**	**Session 04: AI and Data Science for Health** **C1 - 222** **Chair: Prof. Hai Vu**
10:05-10:20	**Invited speaker: Dr. Thien Nguyen**, National Institute of Health, USA Title: Utilization of Near-Infrared Spectroscopy as a wearable technology to Monitor General and Pregnancy Health	**Invited speaker: Prof. Liu Yang**, Peking University School of Stomatology, China Title: Biodegradable piezoelectric scaffold for cartilage regeneration	**Invited speaker: Prof. Yupeng Chen,** University of Connecticut, USA Title: Janus Base Nanomaterials for Regenerative Engineering	**FS4-121:** Machine Learning–based Diagnosis of Autism Spectrum Disorder using Resting-state Functional Magnetic Resonance Imaging Data
10:20-10:35	**FS1-60:** A novel breast insert design approach of mastectomy bra for breast cancer patients applying 3D scanning technology	**FS2-110:** Biomechanical Evaluation of Polyether Ether Ketone (PEEK) Cranial Implants with Different Thickness Using Finite Element Method	**FS3-77:** HosRev: A Comprehensive Aspect-Category Sentiment Analysis Dataset on Hospital Reviews in Vietnam	**FS4-128:** Identification of patients with Attention Deficit Hyperactivity Disorder from Electroencephalography Signals using Support Vector Machine Models and Linear Discriminant Analysis Algorithm
10:35-10:50	**FS1-74:** A novel approach to protein detection utilizing the microfluidic pre-concentrator based on the impedance measurement method	**AS-04:** A novel injectable piezoelectric hydrogel for osteoarthritis treatment	**FS3-78:** Lipidomic Analysis Reveals Biomarkers for Alzheimer's Disease	**FS1-33:** Systematic evaluation of loss functions for ovarian tumors segmentation from ultrasound images
10:50-11:20	**COFFEE BREAK AND POSTER SESSION**			
11:20-11:35	**Invited speaker: Dr. Michinao Hashimoto**, Singapore University of Technology and Design, Singapore Title: Direct Ink Writing 3D Printing for Fabricating MicROFLUIDIC Electronic Devices		**Invited speaker: Prof. Thuy Ngo**, Oregon Health and Science University, USA Title: De-mixing high-throughput measurements of circulating RNA and extracellular vesicles in the blood for cancer detection and treatment stratification	**FS4-133:** Melanoma Classification using Machine Learning and Deep Learning
11:35-11:50	**FS1-130:** Novel Electrochemical Immunosensing Structure Based on a Functionalized Carbon Electrode with 11-MUA for NSE Protein Detection		**FS3-104:** Exploring novel plumbagin derivatives as potential inhibitors for HepG2 cell line using QSAR and molecular docking models	**FS4-143:** Application artificial intelligence to identifying and personalize lung cancer treatments
11:50-12:05	**FS4-123:** Development of a smart necklace for stroke warning based on IoT and Convolutional Neural Network Deep Learning Techiniques		**FS3-117:** A novel complex impedance flow cytometry method for single-cell electrical characterization toward biomedical applications	**Invited speaker: Prof. Marco Santello**, Arizona State University, USA Title: NSF Industry-University Cooperative Research Centers: A successful model for supporting

				partnerships between industry and universities
11:05-12:15	**Q&A**		**Q&A**	**Q&A**
12:30-13:30	LUNCH			
14:00-17:00	**ROUNTABLE: TRAINING AND RESEARCH ON HEALTH SCIENCE AND TECHNOLOGY IN VIETNAM** **Room C1-222** (invited only)			
18:00	**Dinner (invited only)**			
	DAY 3: 30th December 2023 **Sightseeing, Trang An – Ninh Binh (Speakers and Registration)**			