

# Program

## The Fourth International Conference on Artificial Intelligence and Computational Intelligence (AICI 2023)

(January 13-14, 2023 postponed to) **February 18-19, 2023, Hanoi, Vietnam**

**Themes: Deep Learning and Other Soft Computing Techniques: Biomedical and Related Applications**

Organized by Thang Long University with sponsor of IFSA by virtual mode

Add: Nghiem Xuan Yem Road, Hoang Mai District, Hanoi, Vietnam

**Link to zoom meeting: Time: Feb 18-19, 2023 from 07:00 AM Bangkok Time**

**<https://us05web.zoom.us/j/85041212895?pwd=YnlYYINSK0xJd3JVOFh5c3doRXQrdz09>**

**Meeting ID: 850 4121 2895**

**Passcode: AICI2023**

(Website: <https://aici2023.thanglong.edu.vn>)

## February 18 (Saturday)

8:00-8:20

### Opening Ceremony

Greetings from Thang Long University

Greetings from Scientific Committee by Nguyen Hoang Phuong

Greetings from Vice President of IFSA by Vladik Kreinovich

8:20-9:00

### Keynote Speech 1: Chair: **Truong Anh Hoang**

Thang Long University, Vietnam

### Title: **Computational Paradox of Deep Learning: A Qualitative Explanation**

(Authors: Jonatan Contreras, Martine Ceberio, Olga Kosheleva,

Vladik Kreinovich, and Hoang-Phuong Nguyen)

**Professor Vladik Kreinovich**

IFSA Vice President, University of Texas at El Paso, USA

9:00- 10:40

### ***FRII-A: Computational Intelligence and Fuzzy Systems***

Chair: **Nguyen Hoang Phuong**

Thang Long University, Vietnam

**FRII-A1**

9:00-9:20

### **Explaining an Empirical Formula for Bioreaction to Similar Stimuli (Covid-19 and Beyond)**

**Olga Kosheleva**

Department of Teacher Education, University of Texas at El Paso 500 W. University, El Paso, Texas 79968, USA e-mail: [olgak@utep.edu](mailto:olgak@utep.edu)

**Vladik Kreinovich**

Department of Computer Science, University of Texas at El Paso 500 W. University, El Paso, Texas 79968, USA e-mail: [vladik@utep.edu](mailto:vladik@utep.edu)

**Nguyen Hoang Phuong**

Artificial Intelligence Division, Information Technology Faculty, Thang Long University Nghiem Xuan Yem Road, Hoang Mai District, Hanoi, Vietnam  
e-mail: nhphuong2008@gmail.com

**FRI1-A2**

9:20-9:40

**Why FLASH Radiotherapy Is Efficient: A Possible Explanation**

**Julio C. Urenda and Vladik Kreinovich**

Department of Computer Science, University of Texas at El Paso 500 W. University, El Paso, Texas 79968, USA e-mail: jcurenda@utep.edu, vladik@utep.edu

**Olga Kosheleva**

Department of Teacher Education, University of Texas at El Paso 500 W. University, El Paso, Texas 79968, USA e-mail: olgak@utep.edu

**Nguyen Hoang Phuong**

Artificial Intelligence Division, Information Technology Faculty, Thang Long University Nghiem Xuan Yem Road, Hoang Mai District, Hanoi, Vietnam  
e-mail: nhphuong2008@gmail.com

**FRI1-A3**

9:40-10:00

**Game-Theoretic Approach Explains -- on the Qualitative Level -- the Antigenic Map of Covid-19 Variants**

**Olga Kosheleva**

Department of Teacher Education, University of Texas at El Paso 500 W. University, El Paso, Texas 79968, USA e-mail: olgak@utep.edu

**Vladik Kreinovich**

Department of Computer Science, University of Texas at El Paso 500 W. University, El Paso, Texas 79968, USA e-mail: vladik@utep.edu

**Nguyen Hoang Phuong**

Artificial Intelligence Division, Information Technology Faculty, Thang Long University Nghiem Xuan Yem Road, Hoang Mai District, Hanoi, Vietnam  
e-mail: nhphuong2008@gmail.com

**FRI1-A4**

10:00-10:20

**How to Combine Expert Estimates? How to Estimate Probability in the Intersection of Two Populations?**

**Miroslav Svítek**

Faculty of Transportation Sciences, Czech Technical University in Prague, Konviktska 20 CZ-110 00 Prague 1, Czech Republic, e-mail: svitek@fd.cvut.cz

**Olga Kosheleva and Vladik Kreinovich**

University of Texas at El Paso, 500 W. University, El Paso, Texas 79968, USA  
e-mail: olgak@utep.edu, vladik@utep.edu

**Nguyen Hoang Phuong**

Artificial Intelligence Division, Information Technology Faculty, Thang Long University Nghiem Xuan Yem Road, Hoang Mai District, Hanoi, Vietnam  
e-mail: nhphuong2008@gmail.com

**FRI1-A5**

10:20-10:40

**Why Decreased Gaps Between Brain Cells Cause Severe Headaches: A Symmetry-Based Geometric Explanation**

**Laxman Bokati and Vladik Kreinovich**

Computational Science Program, University of Texas at El Paso 500 W. University, El Paso, Texas 79968, USA e-mail: lbokati@miners.utep.edu, vladik@utep.edu

**Olga Kosheleva**

Department of Teacher Education, University of Texas at El Paso 500 W. University, El Paso, Texas 79968, USA e-mail: olgak@utep.edu

**Nguyen Hoang Phuong**

Artificial Intelligence Division, Information Technology Faculty, Thang Long University Nghiem Xuan Yem Road, Hoang Mai District, Hanoi, Vietnam  
e-mail: nhphuong2008@gmail.com

10:40-11:20

**Keynote Speech 2: Chair: Thai Quang Vinh**

Institute of Information Technology,  
Vietnam Academy of Science and Technology, VN

**Title: Fuzzy Control and Nano-Drive Fuzzy Controller for Stepping Motor**

**Professor Kauru Hirota**

Beijing Institute of Technology

Professor Emeritus Tokyo Institute of Technology, Japan

11:20 -13:30

**Lunch**

13:30-14:10

**Keynote Speech 3: Chair: Anh Nguyen**

Auburn University, Alabama, USA

**Title: Analytics and decision support of germs and viruses in a large hospital (including SARS-CoV-2)**

**Professor Klaus-Peter Adlassnig**

Medical University of Vienna, Austria

14:10-15:50

***FRII-B: Artificial Intelligence and Computational Intelligence in Medicine***

Chair: **Dao Nam Anh**

Electric Power University, Hanoi,  
Vietnam

**FRII-B1**

14:10-14:30

**Type-2 Fuzzy Relations: An Approach towards Representing Uncertainty in Associative Medical Relationships**

**Bassam Haddad**

Department of Data Science and Artificial Intelligence, University of Petra, Amman 11196, Jordan, e-mail: haddad@uop.edu.jo

**Klaus-Peter Adlassnig**

Institute for Artificial Intelligence, Center for Medical Statistics, Informatics and Intelligent Systems, Medical University of Vienna, Spitalgasse 23, 1090 Vienna, Austria, e-mail: klaus-peter.adlassnig@meduniwien.ac.at and Medexter Healthcare GmbH, Borschkegasse 7/5, 1090 Vienna, Austria, e-mail: kpa@medexter.com

**FRII-B2**

14:30-14:50

**Segmentation of the Abnormal Regions in Breast Cancer X-Ray images using U-Net**

**Nguyen Hoang Phuong**

Artificial Intelligence Division, Information Technology Faculty, Thang Long University, Nghiem Xuan Yem Road, Hoang Mai District, Hanoi, Vietnam email: nhphuong2008@gmail.com

**Ha Manh Toan**

Institute of Information Technology, Vietnam Academy of Science and Technology, Hanoi, Vietnam, email: hmtoan@ioit.ac.vn

**Dao Van Tu, Nguyen Khac-Dung, Nguyen Van Thi, Ngo Le Lam**

Vietnam National Cancer Hospital, 30 Cau Buou, Tan Trieu, Thanh Tri, Hanoi, Vietnam emails: daovantu@hmu.edu.vn, khacdung.nguyen@bvk.org.vn, nvanthi@gmail.com, lamntxq28@gmail.com

**FRI1-B3**  
14:50-15:10

**Drug Repositioning for Drug Disease Association in Meta-paths**

**Xuan Tho Dang**

Hanoi National University of Education, Hanoi, Vietnam

**Manh Hung Le**

Electric Power University, Hanoi, Vietnam

**Dao Nam Anh**

Electric Power University, Hanoi, Vietnam

e-mail: anhdn@epu.edu.vn

**FRI1-B4**  
15:10-15:30

**Mental States Detection by Extreme Gradient Boosting and k-means**

**Nam Anh Dao**

Electric Power University, Hanoi, Vietnam

e-mail: anhdn@epu.edu.vn

**Quynh Anh**

Nguyen Electric Power University, Hanoi, Vietnam

**FRI1-B5**  
14:30-15:50

**Machine learning-based approaches for Internal organs detection on Medical Images**

**Duy Thuy Thi Nguyen, Mai Nguyen Lam Truc, Thu Bao Thi Nguyen, Phuc Huu Nguyen, Vy Nguyen Hoang Vo, Hai Thanh Nguyen**

Can Tho University, Vietnam e-mail: nthai.cit@ctu.edu.vn

**Linh Thuy Thi Pham**

FPT High School, FPT University, Can Tho, Vietnam e-mail: pttlinh42@gmail.com

**15:50 - 16:00**

**Coffee Break**

**16:00 - 17:00**

**FRI2-A: AI and Applications**

Chair: **Thai Quang Vinh**

Institute of Information Technology, Vietnam Academy of Science and Technology, Vietnam

**FRI2-A1**  
16:00 - 16:20

**Smart Blind Stick integrated with Ultrasonic sensors and Communication Technologies for Visually Impaired People**

**Linh Thuy Thi Pham, Lac Gia Phuong, Quang Tam Le**

FPT High School, FPT University, Can Tho, Vietnam

e-mail: pttlinh42@gmail.com,

phuonggialac2901@gmail.com, quangltfsc0378@fpt.edu.vn

**Hai Thanh Nguyen**

Can Tho University, Vietnam, e-mail: nthai.cit@ctu.edu.vn

**FRI2-A2**  
16:20 - 16:40

**Smart Bra based on Impact and Acceleration Sensors Integrated Communication Techniques for Sexual Harassment Prevention**

**Linh Thuy Thi Pham**

FPT High School, FPT University, Can Tho, Vietnam

e-mail: pttlinh42@gmail.com

**Khoi Vinh Lieu**

Greenwich University, Can Tho, Vietnam

e-mail: khoivl.net@gmail.com

**Thinh Phuc Nguyen, Huynh Nhu Tran**

Phan Van Tri high school, Can Tho, Vietnam

e-mail: thinhhoahuuco19@gmail.com, huynhpd2019@gmail.com

**Hai Thanh Nguyen**

Can Tho University, Vietnam

e-mail: nthai.cit@ctu.edu.vn

**FRI2-A3**

16:40 - 17:00

**Data Augmentation Techniques Evaluation on Ultrasound images for Breast Tumor Segmentation**

**Trang Minh Vo, Thien Thanh Vo, Tan Tai Phan, Hai Thanh Nguyen, Dien Thanh Tran**

Can Tho University, Vietnam,

e-mail: vominhtrangmtv1995@gmail.com, thanhthien4800@gmail.com,

pttai@cit.ctu.edu.vn, nthai.cit@ctu.edu.vn, ttdien@ctu.edu.vn

## **FEBRUARY 19 (Sunday)**

**8:30-10:10**

***SATI-A: Soft Computing and Applications***

**Chair: Nguyen Thi Huyen Chau**  
Thang Long University

**SAT1-A1**

8:30-8:50

**Stock price movement prediction using text mining and sentiment analysis**

**Nguyen Thi Huyen Chau, Le Van Kien and Doan Trung Phong**

Faculty of Information Technology, Thang Long University, Nghiem Xuan Yem Road, Hoang Mai District, Hanoi, Vietnam,

e-mail: huyenchau@thanglong.edu.vn,lvkien249@gmail.com,

phongdt@thanglong.edu.vn

**SAT1-A2**

8:50-9:10

**Lightweight models performances on a resource-constrained device for traffic application**

**Tuan Linh Dang**

School of Information and Communications Technology, Hanoi University of Science and Technology, Hanoi 100000, Vietnam e-mail: linhdt@soict.hust.edu.vn

**Duc Loc Le**

School of Information and Communications Technology, Hanoi University of Science and Technology, Hanoi 100000, Vietnam e-mail: loc.ld211033M@sis.hust.edu.vn

**Trung Hieu Pham**

School of Information and Communications Technology, Hanoi University of Science and Technology, Hanoi 100000, Vietnam e-mail: hieu.pt194763@sis.hust.edu.vn

**Xuan Tung Tran**

School of Information and Communications Technology, Hanoi University of Science and Technology, Hanoi 100000, Vietnam e-mail: tung.tx194405@sis.hust.edu.vn

**SAT1-A3**

9:10-9:30

**Application of the Artificial Intelligence Technique to Recognize and Analyze from the Image Data**

**Lu Anh Duy Phan, and Ha Quang Thinh Ngo**

Faculty of Mechanical Engineering, Ho Chi Minh City, University of Technology (HCMUT), 268 Ly Thuong Kiet Street, District 10, HCMC, Vietnam, and at Vietnam National University Ho Chi Minh City (VNU-HCM), Linh Trung Ward, Thu Duc City, HCMC, Vietnam, email: nhqthinh@hcmut.edu.vn

**SAT1-A4**

9:30-9:50

**IT2-Neuro-Fuzzy Wavelet Network with Jordan Feedback Structure for the Control of Aerial Robotic Vehicles with External Disturbances**

**Rahul Kumar, Uday Pratap Singh, Arun Bali**

School of Mathematics, Shri Mata Vaishno Devi University,  
Katra-182320, (J& K), India  
**Siddharth Singh Chouhan**  
Vellore Institute of Technology, Bhopal-466114, (M.P.), India  
Corresponding author email: usinghiitg@gmail.com

**SAT1-A5**  
9:50-10:10

**iR1mA-LSTM: Identifying N1-Methyladenosine Sites in Human  
Transcriptomes using Attention-based Bidirectional Long Short-term  
Memory**

**Trang T. T. Do**

School of Innovation, Design and Technology,  
Wellington Institute of Technology, Lower Hutt 5012, New Zealand,  
e-mail: trang.do@weltec.ac.nz

**Thanh-Hoang Nguyen-Vo, Loc Nguyen, Binh P. Nguyen**

School of Mathematics and Statistics, Victoria University of Wellington,  
Wellington 6140, New Zealand,  
e-mail: thanhhoang.nguyenvo@vuw.ac.nz, khanhloc.nguyen@vuw.ac.nz,  
binh.p.nguyen@vuw.ac.nz

**Quang H. Trinh**

School of Information and Communication Technology,  
Hanoi University of Science and Technology, 100000, Vietnam,  
e-mail: trinhhuylquangbk98@gmail.com

**Phuong-Uyen Nguyen-Hoang**

Computational Biology Center, International University - VNU HCMC, Ho Chi Minh  
City 700000, Vietnam, e-mail: nguyenhoangphuongnguyenbiotech@gmail.com

**10:10**

**Closing**

Please, make your calendar:

**The 5th International Conference on Artificial Intelligence and  
Computational Intelligence AICI'2024, Hanoi, Vietnam, January 13-14, 2024,**

Topic: **Machine Learning and Other Soft Computing Techniques: Biomedical and  
Related Applications**

<https://aici2024.thanglong.edu.vn> (to appear soon, after AICI'2023) (hybrid mode:  
direct and online)

Contact email [nphuong2008@gmail.com](mailto:nphuong2008@gmail.com) or [phuongnh@thanglong.edu.vn](mailto:phuongnh@thanglong.edu.vn)