

## GENERAL INFORMATION

**IMPORTANT:** To prepare the congress program/schedule, the title of all papers, authors names, affiliations were extracted from the meta-data of the draft paper submissions (manuscripts submitted by the authors for evaluation). Any changes to the titles of the papers, authors names, affiliations, ... are not reflected in this program. The FINAL versions of the papers (uploaded to the publication portal) will have the correct information.

ALL DATES AND TIMES ARE GIVEN IN USA PACIFIC TIME ZONE (PT).

**REGISTRATION: CONFERENCE REGISTRATION DESK:**

July 24 (Sunday): 05:00pm - 07:00pm  
July 25 (Monday): 07:00am - 05:00pm  
July 26 (Tuesday): 07:00am - 05:00pm  
July 27 (Wednesday): 07:00am - 05:00pm  
July 28 (Thursday): 07:00am - 05:00pm  
(LOCATION: Lotus Ballrooms 2 & 3)

**BREAKFASTS:** July 25 (Monday): 07:00am - 08:20am  
July 26 (Tuesday): 07:00am - 08:20am  
July 27 (Wednesday): 07:00am - 08:20am  
July 28 (Thursday): 07:00am - 08:20am  
(LOCATION: Lotus Ballrooms 2 & 3)

**DINNER:** July 25 (Monday): 07:30pm - 10:00pm  
(LOCATION: Velvet Room)

**BREAKS: REFRESHMENTS**

July 25 (Monday): 09:45am - 09:55am  
July 25 (Monday): 03:20pm - 03:40pm  
July 26 (Tuesday): 10:20am - 10:30am  
July 26 (Tuesday): 03:00pm - 03:20pm  
July 27 (Wednesday): 10:20am - 10:40am  
July 27 (Wednesday): 03:00pm - 03:20pm  
July 28 (Thursday): 10:20am - 10:40am  
July 28 (Thursday): 03:00pm - 03:20pm  
(LOCATION: Lotus Ballrooms 2 & 3)

**July 24**

05:00 - 07:00pm: REGISTRATION  
(LOCATION: Lotus Ballrooms 2 & 3; Registration Counter/Desk)

July 25

07:00a - 05:00p: REGISTRATION  
(LOCATION: Lotus Ballrooms 2 & 3; Registration Counter/Desk)

<----- LOCATION: (Galleria Ballrooms D & E) ----->

08:30 - 08:50am: CONGRESS WELCOME REMARKS - July 25, Monday:  
Professor Emeritus Hamid R. Arabnia (Chair, Steering  
Committee & Coordinator), School of Computing,  
University of Georgia, USA; Editor-in-Chief, The Journal  
of Supercomputing (Springer); Fellow, Center of Excellence  
in Terrorism, Resilience, Intelligence & Organized Crime  
Research (CENTRIC).  
(LOCATION: Galleria Ballrooms D & E)

08:50 - 09:45am: KEYNOTE LECTURE/ADDRESS - July 25, Monday:  
ARTIFICIAL EMOTIONS FOR AI AVATARS: ENHANCING HUMAN/AI  
INTERACTIONS AND COLLABORATION  
Dr. James A. Crowder  
Systems Fellow AT&E,  
CAES Advanced Technology and Engineering (AT&E), USA  
(Formerly at Raytheon Technologies. Recipient of technical  
achievement awards from Lockheed Martin, General Dynamics,  
Northrup Grumman, & Raytheon Technologies)  
(LOCATION: Galleria Ballrooms D & E)

09:45 - 09:55am: BREAK  
(LOCATION: Lotus Ballrooms 2 & 3)

09:55 - 10:55am: KEYNOTE LECTURE/ADDRESS - July 25, Monday:  
SYSTEM & METHODS FOR OPTIMAL SYNCHRONIZED WORKFLOW BASED  
COMMUNICATION & A FRAMEWORK FOR SEAMLESS INTEGRATION OF  
AI WITH WORKFLOW  
Massoud Alibakhsh  
Founder & CEO, Xeba Technologies, Atlanta Georgia, USA  
[www.xeba.tech](http://www.xeba.tech)  
(LOCATION: Galleria Ballrooms D & E)

SESSION 1-PDPTA: INTERNATIONAL WORKSHOP ON MATHEMATICAL MODELING AND PROBLEM  
SOLVING (MPS)  
Chairs: Prof. Masahito Ohue\*, Prof. Masakazu Sekijima\*,  
Prof. Kazuki Joe\*\*  
\* Tokyo Institute of Technology, Japan  
\*\*chair of Life Computing and Communication Department,  
Nara Women's University, Japan  
July 25, 2022 (Monday); 11:00am - 12:20pm  
(LOCATION: Galleria Ballrooms D & E)

11:00 - 11:20am: High-Dimensional Bayesian Optimization with Constraints:  
Application to Powder Weighing  
Shoki Miyagawa, Atsuyoshi Yano, Naoko Sawada, Isamu Ogawa  
Information Technology R&D Center, MITSUBISHI Electric Corporation,  
Kamakura, Japan

July 25

- 11:20 - 11:40am: A Method of High-Speed Segmentation for Body Motion According to Likelihood Calculation Parallelizing Based on GP-HSMM  
Miho Kawamura, Yuichi Sasaki, Yuichi Nakamura  
Information Technology R&D Center, Mitsubishi Electric Corporation,  
Kamakura Kanagawa, Japan
- 11:40 - 12:00pm: On a Fast Computation of the Condition L-curve in the LSMR Method for Solving Ill-conditioned Problems using the DQDS Method  
Itsuki Kuboi, Rika Tanaka, Shin-ya Ozawa, Yohsuke Hosoda,  
Masami Takata, Kinji Kimura, Yoshimasa Nakamura  
Nara Women's University, Nara, Japan
- 12:00 - 12:20pm: Proposal on Scheduling Method for Sightseeing with Unlimited Ride Tickets  
Shiori Higano, Reina Isono, Masami Takata  
Nara Women's University, Nara, Japan
- 12:20 - 01:20pm: LUNCH (On Your Own)
- SESSION 2-PDPTA: Continued ... INTERNATIONAL WORKSHOP ON MATHEMATICAL MODELING AND PROBLEM SOLVING (MPS)  
Chairs: Prof. Masahito Ohue\*, Prof. Masakazu Sekijima\*,  
Prof. Kazuki Joe\*\*  
\* Tokyo Institute of Technology, Japan  
\*\*chair of Life Computing and Communication Department,  
Nara Women's University, Japan  
July 25, 2022 (Monday); 01:20pm - 03:20pm  
(LOCATION: Galleria Ballrooms D & E)
- 01:20 - 01:40pm: Calculation of Spectral Similarity Independent of Measurement Equipment  
Ryo Murakami, Hiroshi Shinotsuka, Kenji Nagata, Hideki Yoshikawa,  
Hayaru Shouno  
University of Electro-Communications, Graduate School of  
Informatics and Engineerings, Chofu, Tokyo, Japan
- 01:40 - 02:00pm: Improved Fitness Functions for 3D Packing Problem  
Shigeka Nakajima, Masami Takata  
Nara Women's University, Nara, Japan
- 02:00 - 02:20pm: A New Ensemble Framework based on MOEA/D  
Jiayi Han, Shinya Watanabe  
Muroran Institute of Technology, Muroran Hokkaido, Japan
- 02:20 - 02:40pm: Random Population-based Decomposition Method by Linkage Identification with Non-linearity Minimization on Graph  
Rui Zhong, Masaharu Munetomo  
Faculty of Information Science and Technology,  
Hokkaido University, Sapporo, Japan;  
Information Initiative Center, Hokkaido University,  
Sapporo, Japan

July 25

02:40 - 03:00pm: Application of Deep Metric Learning to Early-modern Japanese Printed Character Recognition  
Norie Koiso, Yuki Takemoto, Sayaka Iida, Yu Ishikawa, Masami Takata, Kazuki Joe  
Nara Women's University, Nara, Japan;  
Shiga University, Japan

03:00 - 03:20pm: Translating Early-modern Written Style into Current Colloquial Style in Hoji Shinbun  
Honoka Nishikawa, Yuki Takemoto, Sayaka Iida, Yu Ishikawa, Masami Takata, Kaoru Ueda, Kazuki Joe  
Nara Women's University, Nara, Japan

03:20 - 03:40pm: **BREAK & POSTERS**  
**July 25, 2022 (Monday)**  
**(LOCATION: Lotus Ballrooms 2 & 3)**

0. CNN Performance of Node Numbers at FC Layer in sEMG Signals based Finger Number Recognition  
Sung-Hwan Bae, Chun-Ki Kwon  
Soonchunhyang University, Asan, ChungNam, South Korea
0. Empirical Study: Implementing Flex Class during Pandemic  
Hyung Jae Chang, Byungkwan Jung  
Department of Computer Science, Troy University, Alabama, USA
0. Application of Embedded System in Solar Generating Waste Receptacle  
Bassam Shaer, John Rijos-Esquilin, Nadia Kuchambi, Henry Baldwin, Jonathan Fulmer  
Electrical, Mechanical and Engineering Technology Department, University of West Florida, Florida, USA
0. Visualizing General Education Curriculum Assessment Data  
Cesur Dagli, Molly Hall, Bethany Bodo  
Office of Analytics and Institutional Effectiveness, Virginia Tech, Virginia, USA
0. A Systematic Way to Enhance Student Engagement in a Machine Learning Module  
Jie Cheng, Mehdi Zargham  
Department of Computer and Information Technology, Miami University, USA; Department of Computer Science, University of Dayton, Ohio, USA
0. Towards Adaptive Resilient Control of Evolving Environments  
Nils Wenninghoff, Eric MSP Veith  
OFFIS e.V. - R&D Division Energy, Oldenburg, Germany
0. Personalisation of d'Hondt's Algorithm and its Use in Recommender Ecosystems  
Stepan Balcar, Ladislav Peska, Peter Vojtas  
Faculty of Mathematics and Physics, Charles University, Prague, Czech Republic
0. ...

July 25

- 03:40 - 04:40pm: KEYNOTE LECTURE/ADDRESS - July 25, Monday:  
HIGH TECH NOSTALGIA TO THE FUTURE OF COMPUTING  
Prof. Douglas D. Hodson  
Professor of Computer Engineering,  
Air Force Institute of Technology (AFIT),  
Wright-Patterson AFB, Ohio, USA  
(LOCATION: Galleria Ballrooms D & E)
- SESSION 3-ACC-ICAI-BIOCOMP-FCS: COGNITIVE COMPUTING + ARTIFICIAL INTELLIGENCE +  
COMPUTATIONAL BIOLOGY + ALGORITHMS & FOUNDATIONS OF CS  
Chairs: Prof. Ahmed Tarek  
Montgomery College, Rockville, Maryland, USA  
July 25, 2022 (Monday); 04:40pm - 07:00pm  
(LOCATION: Galleria Ballrooms D & E)
- 04:40 - 05:00pm: Incorporating Topological Complexity into a Multilayer Perception  
Kenneth Brezinski, Ken Ferens  
Department of Electrical and Computer Engineering,  
University of Manitoba, Canada
- 05:00 - 05:20pm: The Rasmussen Cognition Model as a Framework for a Modified  
OODA Loop  
James Crowder, Michael Hirsch  
CAES Advanced Technology and Engineering, Colorado Springs, USA;  
ISEA TEK LLC, Maitland, Florida, USA
- 05:20 - 05:40pm: Classifying SARS-CoV-2 and Common Co-infections from Genome  
Assemblies  
Mohaimen Rahman, Kenneth Brezinski, Ken Ferens  
Department of of Electrical and Computer Engineering,  
University of Manitoba, Winnipeg, Canada
- 05:40 - 06:00pm: Mathematical Dynamics of Three Kinds of Genetic Code Equivalences  
Matthew He  
Department of Mathematics, Halmos College of Arts and Sciences,  
Nova Southeastern University, Florida, USA
- 06:00 - 06:20pm: Effect of Trigonometric Transformations on the Machine Learning  
Prediction and Quality Control of Air Temperature  
Andrea Fenoglio, Torrey Wagner, Paul Auclair, Brent Langhals  
Graduate School of Engineering and Management, Air Force  
Institute of Technology, Wright-Patterson AFB, Ohio, USA;  
The Perduco Group (a LinQuest Company), Beavercreek, Ohio, USA
- 06:20 - 06:40pm: On Arguments and Argument Forms in Discrete Computational Structures  
Ahmed Tarek, Ahmed Alveed, Ahmed Farhan  
Engineering, Physical and Computer Sciences (EPCS), SET Division,  
Montgomery College, Rockville, Maryland, USA; The Wharton School,  
University of Pennsylvania (UPenn), Philadelphia, Pennsylvania;  
The Johns Hopkins University, School of Medicine, Maryland, USA

**July 25**

- 06:40 - 07:00pm: Risk-Based Cognitive Decision-Making Functionality for the Reconfiguration of the Level of Autonomy in Highly Automated Vehicles  
Ilias Panagiotopoulos, Konstantina Karathanasopoulou,  
George Dimitrakopoulos  
Department of Telematics and Informatics,  
Harokopio University of Athens (HUA), Athens, Greece
- 07:00 - 07:20pm: DISCUSSIONS (Informal)
- 07:30 - 10:00pm: **CONFERENCE RECEPTION DINNER / SOCIAL**  
July 25 - Monday; 07:30pm  
(LOCATION: Velvet Room)

ALL DATES AND TIMES ARE GIVEN IN USA PACIFIC TIME ZONE (PT).

08:20 - 08:40am: FREE SLOT  
 08:40 - 09:00am: FREE SLOT  
 09:00 - 09:20am: FREE SLOT  
 09:20 - 09:40am: FREE SLOT

**SESSION 1-ZOOM: ---> ESCS-ICOMP-ACC**  
**EMBEDDED SYSTEMS, COMMUNICATION SYSTEMS + INTERNET OF THINGS +**  
**AUTOMATION AND NOVEL TOOLS**  
**Chairs: TBA**  
**July 25, 2022 (Monday); 09:40am - 11:20am**  
**(ON-LINE / ZOOM)**

09:40 - 10:00am: A Novel Solution of Enhance Extreme Learning Machine in  
 Temperature Prediction of a Building  
 Ramanan Selvaratnam, Nawzat Sadiq Ahmed, Abeer Alsadoon,  
 Razwan Mohmed Salah, P.W.C. Prasad, Oday D. Jerew  
 School of Computing and Mathematics, Charles Sturt University (CSU),  
 Wagga Wagga, Australia; Department of Information Technology  
 Management, Duhok Polytechnic University - Duhok, KRG, Iraq;  
 School of Computer Data and Mathematical Sciences, University of  
 Western Sydney (UWS), Sydney, Australia; College of Science,  
 Department of Computer Science, The University of Duhok, Duhok,  
 KRG, Iraq; Asia Pacific International College (APIC), Information  
 Technology Department, Sydney, Australia; Kent Institute Australia,  
 Information Technology Department, Sydney, Australia

10:00 - 10:20am: Enhanced Data Security in Collaborative Intrusion Detection System  
 Chukwuebuka Ezelu, Ulrich Buehler  
 Fulda University of Applied Sciences, Germany

10:20 - 10:40am: WiFi CSI Subcarrier Selection Methods for Sensing Applications  
 Jesus A. Armenta-Garcia, Felix F. Gonzalez-Navarro,  
 Jesus Caro-Gutierrez  
 Engineering Institute, Universidad Autonoma de Baja California,  
 Mexicali, Mexico

10:40 - 11:00am: Multi-Agent Approach Promoting Interoperability between Internet  
 of Things Applications  
 Patrick Pierre, Roger Nkambou, Pierre Poirier  
 Department of Computer Science, University of Quebec in Montreal  
 (UQAM), Montreal, Canada

11:00 - 11:20am: Online Social Network Influencers  
 Mehran Asadi, Afrand Agah, Clayton Amondo  
 Lincoln University, USA; West Chester University, USA

**SESSION 1.2-ZOOM: ---> ICAI-ICOMP-ICWN-IKE-SERP**  
**AI + ETHICAL PROCESSES + WIRELESS NETWORKS + DATA SCIENCE +**  
**SOFTWARE ENGINEERING**  
**Chairs: TBA**  
**July 25, 2022 (Monday); 11:20am - 01:40pm**  
**(ON-LINE / ZOOM)**

11:20 - 11:40am: Classification of NBA MVP Candidates Using Machine Learning  
 Matthew Schanilec, Robyn Smith, Isnino Harun, Malyun Ali,  
 Matt Schoh, Mohammed Mahmoud  
 Minnesota State University, Moorhead, Minnesota, USA

**July 25**

- 11:40 - 12:00pm: Cybersecurity from an Ethical Viewpoint  
Isaac Mayo, Kathrine Stalemo, Kylie Hoff, Marideissa Dizon,  
Matthew Schanilec, Mohammed Mahmoud  
Minnesota State University, Moorhead, Minnesota, USA
- 12:00 - 12:20pm: IPv4/IPv6 Multifaceted-based Comprehensive and Comparative Study  
Khadeejah Hossain, Stefanie Markovski, Nick Perkins,  
Michael DePalma, Spencer Bucknam, Westly Durkee, Olyana Mushe,  
Mohammed Mahmoud  
Oakland University, Rochester, Michigan, USA;  
Minnesota State University, Moorhead, Minnesota, USA
- 12:20 - 12:40pm: Scenario-based Perspectives of Popular Ethical Theories on Cybersecurity  
Natnael Birhanu Teferi, Nahom Atsbha Gebreyohannes, Megan Steinkuehler,  
Maya Kruger, Nathan Ferrell, Nadin Qaqos, Mason Voxland, Mohammed Mahmoud  
Minnesota State University, Moorhead, Minnesota, USA
- 12:40 - 01:00pm: The Ethical Risks and Challenges in Big Data  
Mohammed Mahmoud, Dafer Alali, Surah Aldakhl  
Oakland University, Rochester, Michigan, USA;  
Minnesota State University, Moorhead, Minnesota, USA
- 01:00 - 01:20pm: Achieving Memory Safety for Unsafe Languages via Different  
Techniques  
Mohammed Mahmoud  
Minnesota State University, Moorhead, Minnesota, USA
- 01:20 - 01:40pm: A Security-privacy Based Model for Operating Systems  
Mohammed Mahmoud  
Minnesota State University, Moorhead, Minnesota, USA
- 01:40 - 02:40pm: **INVITED LECTURE/KEYNOTE: ONLINE/ZOOM KEYNOTE:**  
**Data Science in Education: Extracting Knowledge from Admissions and  
Course Enrollment Data**  
Prof. Gary Weiss  
Professor, Computer & Information Science Department,  
Fordham University, USA  
July 25, 2022 (01:40pm - 02:40pm)  
LOCATION: Online/ZOOM
- 02:40 - 04:20pm: FREE SLOTS
- SESSION 2-ZOOM: ---> BIOCAMP-HIMS-CSC-ICEQT-EEE**  
**BIOINFORMATICS + HEALTH SCIENCES + HEALTH INFORMATICS +**  
**SCIENTIFIC COMPUTING & APPLICATIONS + QUANTUM COMPUTING +**  
**ENTERPRISE INFORMATION SYSTEMS**  
Chairs: Ms. Surabhi Mishra  
India  
July 25, 2022 (Monday); 04:00pm - 07:20pm  
(ON-LINE / ZOOM)
- 04:00 - 04:20pm: Application of Dimensional Reduction in Artificial Neural Networks  
to Improve Emergency Department Triage During Chemical Mass  
Casualty Incidents  
Nicholas D. Boltin, Joan M. Culley, Homayoun Valafar  
Department of Computer Science and Engineering, University of  
South Carolina, Columbia, South Carolina, USA;  
College of Nursing, University of South Carolina, Columbia,  
South Carolina, USA



- 04:20 - 04:40pm: Human Activity Recognition on Time Series Accelerometer Sensor Data using LSTM Recurrent Neural Networks  
Chrisogonas O. Odhiambo, Sanjoy Saha, Corby K. Martin,  
Hodayoun Valafar  
Computer Science & Engineering, The University of South Carolina,  
Columbia, South Carolina, USA; Pennington Biomedical Research  
Center, Louisiana State University, Baton Rouge, Louisiana, USA
- 04:40 - 05:00pm: A Modification Of Chatterjee's Correlation Test and its Applications to Transcriptomics Analysis  
Qingyang Zhang  
Department of Mathematical Sciences, University of Arkansas,  
Fayetteville, Arkansas, USA
- 05:00 - 05:20pm: Practical Screening Method of Cancer Gene Diagnosis - Four Universal Data Structures of Discriminant Data  
Shuichi Shinmura  
Professor Emeritus Seikei University, Sakasai Kashiwa City,  
Chiba, Japan
- 05:20 - 05:40pm: Practical Screening Method for Cancer Gene Diagnosis - How to Choose Cancer and Normal Patients by Four Principles  
Shuichi Shinmura  
Professor Emeritus Seikei University, Sakasai Kashiwa City,  
Chiba, Japan
- 05:40 - 06:00pm: Validation of a Neighborhood Spot Evaluation Method for Walking Route Recommendation  
Katsuyuki Yamauchi, Panote Siriaraya, Da Li, Felix Dollack,  
Yukiko Kawai, Shinsuke Nakajima  
Kyoto Sangyo University, Japan;  
Kyoto Institute of Technology, Japan;  
Fukuoka University, Japan
- 06:00 - 06:20pm: Performance Evaluation of Multi-exaflops Machines using Equality Network Topology  
Chi-Hsiu Liang, Chun-Ho Cheng, Yng-Ching Wu, Chao-Chin Li,  
Chun-Ming Chen, Po-Lin Huang, Chi-Chuan Hwang  
Department of Engineering Science, National Cheng Kung University,  
Tainan, Taiwan
- 06:20 - 06:40pm: Why Does AI Fail in Healthcare?  
Aaron Lai, Thomas Ming  
Health Industry Advisory, PwC Advisory, San Francisco, CA, USA;  
California Northstate University Medical School, Elk Grove, CA, USA;  
HKUSPACE Community College, Hong Kong
- 06:40 - 07:00pm: Knowledge Navigated Quantum-Inspired Tabu Search Algorithm for Reversible Circuit Synthesis  
Shu-Yu Kuo, Yao-Hsin Chou, Shan-Jung Hou, Yu-Yuan Chen,  
Hsing-Yu Hsu, Yu Chen  
National Chung Hsing University, Taiwan, R.O.C.;  
National Chi Nan University, Taiwan, R.O.C.
- 07:00 - 07:20pm: How Singapore's Manufacturing Small and Medium Enterprises Embrace Industry 4.0  
Gopal Surianarayanan, Thomas Menkhoff  
Singapore Management University, Singapore

July 26

07:00a - 05:00p: REGISTRATION  
(LOCATION: Lotus Ballrooms 2 & 3; Registration Counter/Desk)

<----- LOCATION: (Galleria Ballrooms D & E) ----->

08:20 - 09:20am: KEYNOTE LECTURE/ADDRESS - July 26, Tuesday:  
HIGH-LEVEL DEVELOPMENT OF DISTRIBUTED REAL-TIME APPLICATIONS  
USING MOBILE CLOUD & SOFTWARE-DEFINED NETWORKING  
Prof. Dr. habil. Sergei Gorlatch  
Professor of Computer Science, University of Muenster, Germany  
(LOCATION: Galleria Ballrooms D & E)

09:20 - 10:20am: KEYNOTE LECTURE/ADDRESS - July 26, Tuesday:  
AUTOMOTIVE INTELLIGENCE FOR CONNECTED, SHARED AND AUTONOMOUS  
MOBILITY OF THE FUTURE  
Prof. Dr. Eng. George Dimitrakopoulos  
Harokopio University of Athens, Greece;  
Infineon Technologies AG, Munich, Germany  
(LOCATION: Galleria Ballrooms D & E)

10:20 - 10:30am: BREAK  
(LOCATION: Lotus Ballrooms 2 & 3)

10:30 - 11:00am: KEYNOTE LECTURE/ADDRESS - July 26, Tuesday:  
DEEP LEARNING COMPUTER VISION TO ADVANCE TOTAL JOINT  
ARTHROPLASTY (TJA) RESEARCH  
Dr. Ahmad P. Tafti  
Director, Health + Explainable AI (HexAI) Research  
Laboratory ( <https://hexailab.github.io/> )  
Graduate Program Director; University of Southern Maine,  
Portland, USA  
(LOCATION: Galleria Ballrooms D & E)

SESSION 4-ICDATA-MSV: DATA SCIENCE + SIMULATION & MODELING  
Chairs: Alexander Stephens  
Air Force Institute of Technology, USA  
July 26, 2022 (Tuesday); 11:00am - 12:20pm  
(LOCATION: Galleria Ballrooms D & E)

11:00 - 11:20am: Investigation of Hand-Tracking Versus Controllers in Virtual Reality  
Devin Shapiro, Leonidas Deligiannidis  
School of Computing and Data Science, Wentworth Institute of  
Technology, Boston, Massachusetts, USA

11:20 - 11:40am: Three-Dimensional Comparative Analysis of Large Populations to  
Determine Data Relationships: An Alternative to Statistics  
Vera Dolan  
VFD Consulting, Inc., Las Vegas, Nevada, USA

11:40 - 12:00pm: DeepPoint: A Hybrid of Deep Neural Network and Self-Exciting Point  
Process for Street Crime Prediction in New York Crime Data  
B Shanker Jaiswal, B Chandra, Kolin Paul  
Indian Institute of Technology (IIT), Delhi, India

12:00 - 12:20pm: Weighted Ensembles of Multiple Class Rankers  
Jonathan I. Lee, Sung-Hyuk Cha  
Computer Science Department, Pace University, New York, USA

12:20 - 01:00pm: LUNCH (On Your Own)

**SESSION 5-ICDATA: DATA SCIENCE + DATA MINING**

**Chairs: Dr. Richard Dill**

**Air Force Institute of Technology, USA**

**July 26, 2022 (Tuesday); 01:00pm - 02:20pm**

**(LOCATION: Galleria Ballrooms D & E)**

01:00 - 01:20pm: Machine Learning Framework for Traffic Congestion and Equity  
Althea Henslee, Haley Dozier, Ashley Abraham, Andrew Strelzoff,  
Alexandre Ligo, Jules White  
U.S. Army Engineer Research and Development Center, USA

01:20 - 01:40pm: Analyzing Operational Technology Data with Multiple Correspondence  
Analysis and Factorial Analysis of Mixed Data  
Hunter Sylvester, David Schweitzer  
USACE ERDC ITL CEAB R&D - US Army Corps of Engineer, Information  
Technology Laboratory (ITL), Engineer Research and Development  
Center, USA;  
The U.S. Army Engineer Research and Development Center (ERDC), USA

01:40 - 02:00pm: Cluster Analysis on Operational Technology Data Using K-Modes  
Hunter Sylvester, David Schweitzer  
The U.S. Army Engineer Research and Development Center (ERDC),  
U.S. Army Corps of Engineers, USA

02:00 - 02:20pm: Forecasting Sensor-data in Smart Agriculture with Temporal Fusion  
Transformers  
Boje Deforce, Bart Baesens, Jan Diels, Estefania Serral Asensio  
Katholieke Universiteit Leuven, KU, Belgium

**SESSION 6-SAM: Fourth Workshop on Cybersecurity Applications and Intelligent  
Transportation Systems (CAITS 2022)**

**Chair: Prof. Pino Caballero-Gil**

**Department of Computer Engineering and Systems, Higher  
Polytechnic School of Engineering & Technology, University  
of La Laguna, Spain**

**July 26, 2022 (Tuesday); 02:20pm - 03:00pm**

**(LOCATION: Galleria Ballrooms D & E)**

02:20 - 02:40pm: QuantumSolver: A Quantum Tool-set for Developers  
Jose Daniel Escanez-Exposito, Pino Caballero-Gil,  
Francisco Martin-Fernandez  
University of La Laguna, Tenerife, Spain;  
IBM Research, New York, USA

02:40 - 03:00pm: Analysis and Implementation of the SNOW V  
Jezabel Molina-Gil, Yanira Gonzalez-Gonzalez, Oscar Cigala-Avarez  
University of La Laguna, Tenerife, Spain

03:00 - 03:20pm: BREAK & POSTERS

July 26, 2022 (Tuesday)

(LOCATION: Lotus Ballrooms 2 & 3)

- 0. Development of a Synergistic Education Framework for Tech-Oriented Startups and Scaleups Leaders  
Dong H. Lee, Jong H. Lee  
Center for Technology Startup Education Team, Research Institute of Convergence, DGIST, Daegu, Korea
- 0. The Effects of Physical Activity Levels on Sleep in Shift-Work Nurses During the COVID-19 Pandemic  
Sang-Ho Lee, Yeongmi Ha, Sanghun Yun, Oh-Seok Kwon, Dong-Ha Lee, Jinung An  
Division of Intelligent Robot, DGIST, Daegu, South Korea; College of Nursing, Gyeongsang National University, Jinju, South Korea; Division of Electronics and Information System, DGIST, Daegu, South Korea
- 0. Automated Acne Assessment  
Yihang Li, Alex Kot  
School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore
- 0. ABC-based Optimal Hyper-parameter Tuning for Electric Load Forecasting  
Yasaman Saadati, Leila Zahedi, Farid Ghareh Mohammadi, M. Hadi Amini  
Knight Foundation School of Computing and Information Sciences, Florida International University, Miami, Florida, USA; Sustainability, Optimization, and Learning for InterDependent Networks Laboratory (solid lab), Miami, Florida, USA; School of Computing, University of Georgia, Athens, Georgia, USA
- 0. Blockchain's Distributed Ledger on Supply Chain: Discourse on the Method  
S. Fernandez-Vazquez, R. Rosillo, N. Alvarez, D. De la Fuente, M. Luna  
Escuela Politecnica de Ingenieria Gijon, Campus de Viesques s/n, Gijon (Asturias), Spain
- 0. An Ontology and Taxonomy Based Model for Dealing with Radicalization in Social Media  
Andres Montoro, Jose A. Olivas, Francisco P. Romero, Jesus Serrano-Guerrero, Javier Morejon-de-Giron, Enrique Larriba-Gonzalez, Antonio Ramos  
Computer Science Department, University of Castilla-La Mancha, Paseo de la Universidad, Ciudad Real, Spain
- 0. A Recommendation System for Short Recipe Videos with Supplementary Cooking Operation  
Takuya Yonezawa, Yuanyuan Wang, Kazutoshi Sumiya, Yukiko Kawai  
Kyoto Sangyo University, Kyoto, Japan;  
Yamaguchi University, Yamaguchi, Japan;  
Kwansai Gakuin University, Hyogo, Japan
- 0. ...

**July 26**

- SESSION 7-SAM: Continued ... Fourth Workshop on Cybersecurity Applications and Intelligent Transportation Systems (CAITS 2022)**  
**Chair: Prof. Pino Caballero-Gil**  
**University of La Laguna, Spain**  
**July 26, 2022 (Tuesday); 03:20pm - 06:20pm**  
**(LOCATION: Galleria Ballrooms D & E)**
- 03:20 - 03:40pm: Study and Security Analysis of the Spanish Identity Card  
 Javier Correa-Marichal, Pino Caballero-Gil,  
 Carlos Rosa-Remedios, Rames Sarwat-Shaker  
 University of La Laguna, Tenerife, Spain;  
 Government of the Canary Islands, Tenerife, Spain;  
 Telefonica Tech, Madrid, Spain
- 03:40 - 04:00pm: Blockchain-based Voting System with Homomorphic Encryption  
 Candido Caballero-Gil, Nestor Alvarez-Diaz, Moti Yung,  
 Pino Caballero-Gil  
 University of La Laguna, Tenerife, Spain;  
 Expero, Tenerife, Spain
- 04:00 - 04:20pm: Driver Facial Recognition and Drowsiness Detection  
 Alba Cruz-Torres, Pino Caballero-Gil, Candelaria Hernandez-Goya  
 University of La Laguna, Tenerife, Spain
- 04:20 - 04:40pm: Development of a Meteorological Station and Orientation System for  
 an IPS: Application in the ITS Field  
 David Suarez-Suarez, Gabriele Salvatore de-Blasio,  
 Jose Carlos Rodriguez, Carmelo Ruben-Garcia, Alexis Quesada-Arencia  
 University of Las Palmas de Gran Canaria, Spain
- 04:40 - 05:00pm: McEliece Cryptosystem based on Goppa Codes and LDPC Codes  
 Paula Perez-Pacheco, Irene Marquez-Corbella, Pino Caballero-Gil,  
 Ignacio Garcia-Marco  
 University of La Laguna, Tenerife, Spain
- 05:00 - 05:20pm: Drowsiness Detection in Drivers with a Smartwatch  
 Sonia Diaz-Santos, Pino Caballero-Gil  
 University of La Laguna, Tenerife, Spain
- 05:20 - 05:40pm: Preliminary Study on Post-quantum TLS  
 Carlos Barreda-Falciano, Pino Caballero-Gil, Jezabel Molina-Gil  
 University of La Laguna, Tenerife, Spain
- 05:40 - 06:00pm: Cybersecurity in Voice Virtual Assistants  
 Eduardo Nacimiento-Garcia, Carina S. Gonzalez-Gonzalez,  
 Candido Caballero-Gil, Francisco Gutierrez-Vela  
 University of La Laguna, Tenerife, Spain;  
 University of Granada, Granada, Spain
- 06:00 - 06:20pm: Cybersecurity Analysis for a Smart-Home Lock  
 Candido Caballero-Gil  
 University of La Laguna, Tenerife, Spain
- 06:20 - 07:20pm: INVITED LECTURE/KEYNOTE:**  
**Developing Effective Extremism Detection Systems at Scale**  
**Andrew Johnston**  
**Consultant, Mitiga (a leading global cloud security company) &**  
**CEO and Co-Founder of Recluse Laboratories**  
**July 26: 06:20pm - 07:20pm**  
**(LOCATION: Galleria Ballrooms D & E)**

<----- LOCATION: (Galleria Ballroom A) ----->

**SESSION 8-CSC-ESCS-ICAI: AI + Scientific Computing + EMBEDDED SYSTEMS,  
CYBER-PHYSICAL SYSTEMS, & APPLICATIONS**

**Chairs: Prof. Haydar Teymurlouei\* and Prof. Janos Vegh\*\***

**\* Bowie State University, USA**

**\*\*Hungary**

**July 26, 2022 (Tuesday); 10:00am - 12:20pm**

**(LOCATION: Galleria Ballroom A)**

- 10:00 - 10:20am: Application of Machine Learning to Radar System Identification  
Jonathan Clement, Elham Khorasani Buxton  
Department of Computer Science, University of Illinois  
at Springfield, Illinois, USA
- 10:20 - 10:40am: A Machine Learning Approach for Targeting Network Anomalies  
with an Intrusion Detection System  
Haydar Teymurlouei, Lethia Jackson, Daryl Stone  
Department of Technology & Security, Bowie State University,  
Bowie, Maryland, USA
- 10:40 - 11:00am: Digital Closed Loop IFOG Based on True-Log Amplifier  
Ahmed El Ghrabawy, Mostafa Fedawy, Mohamed Saad Elmahallawy  
Electronics and Communication Department, College of Engineering,  
Arab Academy for Science, Technology, and Maritime Transport,  
Cairo, Egypt; Mechatronics Department, Higher Technological  
Institute, Ramadan City, Egypt; Center of Excellence in  
Nanotechnology, Arab Academy for Science, Technology and Maritime  
Transport, Egypt
- 11:00 - 11:20am: An Embedded Malware Detection System Using a Support Vector Machine  
Robert Oshana, Mitchell A. Thornton, Mike Caraman, Nathan Srirama  
Edge Processing Business Line, NXP Semiconductors, Austin,  
Texas, USA; Darwin Deason Institute for Cybersecurity, Southern  
Methodist University, Dallas, Texas, USA; Edge Processing Business  
Line, NXP Semiconductors, Bucharest, Romania
- 11:20 - 11:40am: Charging Scheduling of Electric Vehicles using Charge Time Priority  
Myrzabek Murataliev, Hakduran Koc  
College of Science and Engineering,  
University of Houston-Clear Lake, Houston, Texas, USA
- 11:40 - 12:00pm: Compressing the Compressor; Reducing VHDL Generated FFTs Using  
Memory Table Isolation and Compression  
Michael Kapralos, Ethan Shafer  
Department of Electrical Engineering & Computer Science,  
United States Military Academy, West Point, New York, USA;  
University of Connecticut, Connecticut, USA
- 12:00 - 12:20pm: Fault Detection and Identification in Industrial Control Systems  
based on Measurement Data, a Machine Learning Approach  
Sohrab Mokhtari, Kang K. Yen  
Electrical and Computer Engineering Department,  
Florida International University, Miami, Florida, USA
- 12:20 - 01:00pm: **LUNCH (On Your Own)**

July 26

**SESSION 9-CSC: MILITARY AND DEFENSE MODELING AND SIMULATION**  
Chairs: Prof. Douglas D. Hodson (Chair)\*, Prof. Michael R. Grimaila\*\*,  
Dr. Richard Dill\*  
\*Computer Science and Engineering Department, US Air Force  
Institute of Technology (AFIT), USA;  
\*\*Head, Systems Engineering & Management Department, US  
Air Force Institute of Technology (AFIT), USA  
July 26, 2022 (Tuesday); 01:00pm - 02:00pm  
(LOCATION: Galleria Ballroom A)

01:00 - 01:20pm: Integrating Data Distribution Service (DDS)-Cerberus into Cyclone  
Jesse Sidhu, Richard Dill, Wayne Henry, Douglas Hodson  
US Air Force Institute of Technology (AFIT), USA

01:20 - 01:40pm: Benchmarking Performance of Unity's Data Oriented Technology Stack  
Brett M. Martin, Michael J. Visci, John W. Visci,  
Jonathan Thompson, Douglas Hodson  
US Air Force Institute of Technology (AFIT), USA

01:40 - 02:00pm: SPARK and Rust: An Overview of Safe and Reliable Software  
Brian S. Wheelhouse, Kenneth M. Hopkinson, Laura R. Humphrey,  
Douglas Hodson  
US Air Force Institute of Technology (AFIT), USA

**SESSION 10-ESCS-CSC: EMBEDDED SYSTEMS, CYBER-PHYSICAL SYSTEMS, & APPLICATIONS +  
SCIENTIFIC COMPUTING + EDUCATION**  
Chairs: Dr. Choong-Hee Han\* and Prof. Sergei Gorlatch\*\*  
\* Korea Power Exchange, Korea  
\*\*University of Muenster, Germany  
July 26, 2022 (Tuesday); 02:00pm- 03:00pm  
(LOCATION: Galleria Ballroom A)

02:00 - 02:20pm: An Intelligent Smart Parking System Leveraging on IoT Parking  
Sensors and AI-based Prediction Algorithms for Parking Occupancy  
Optimization  
Elena Politi, George Dimitrakopoulos, Eleni Giannopoulou,  
Michalis Mitrou, Alexandros Diakogiannis, Vera Stavroulaki,  
Panagiotis Demestichas, Alexandros Zacharis  
Department of Informatics and Telematics, Harokopio University  
of Athens, Greece; WINGS ICT Solutions, Athens, Greece;  
NETLINK, Athens, Greece

02:20 - 02:40pm: WalkOrder: Combining Graph Sampling and Reordering for  
Fast Computation  
Kohei Tsuchida, Kunitake Kaneko  
Graduate School of Science and Technology, Keio University,  
Yokohama, Japan; Faculty of Science and Technology,  
Keio University; Research Institute for Digital Media Content,  
Keio University, Japan

02:40 - 03:00pm: An Integrated Project/coach-Based Teaching Approach in an  
Undergraduate Software Engineering Course: Preliminary Observations  
Robert S. Ellinger, Marc Boumedine  
University of the Virgin Islands, St. Thomas, Virgin Islands, USA

03:00 - 03:20pm: BREAK & POSTERS

July 26, 2022 (Tuesday)

(LOCATION: Lotus Ballrooms 2 & 3)

- 0. Development of a Synergistic Education Framework for Tech-Oriented Startups and Scaleups Leaders  
Dong H. Lee, Jong H. Lee  
Center for Technology Startup Education Team, Research Institute of Convergence, DGIST, Daegu, Korea
- 0. The Effects of Physical Activity Levels on Sleep in Shift-Work Nurses During the COVID-19 Pandemic  
Sang-Ho Lee, Yeongmi Ha, Sanghun Yun, Oh-Seok Kwon, Dong-Ha Lee, Jinung An  
Division of Intelligent Robot, DGIST, Daegu, South Korea; College of Nursing, Gyeongsang National University, Jinju, South Korea; Division of Electronics and Information System, DGIST, Daegu, South Korea
- 0. Automated Acne Assessment  
Yihang Li, Alex Kot  
School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore
- 0. ABC-based Optimal Hyper-parameter Tuning for Electric Load Forecasting  
Yasaman Saadati, Leila Zahedi, Farid Ghareh Mohammadi, M. Hadi Amini  
Knight Foundation School of Computing and Information Sciences, Florida International University, Miami, Florida, USA; Sustainability, Optimization, and Learning for InterDependent Networks Laboratory (solid lab), Miami, Florida, USA; School of Computing, University of Georgia, Athens, Georgia, USA
- 0. Blockchain's Distributed Ledger on Supply Chain: Discourse on the Method  
S. Fernandez-Vazquez, R. Rosillo, N. Alvarez, D. De la Fuente, M. Luna  
Escuela Politecnica de Ingenieria Gijon, Campus de Viesques s/n, Gijon (Asturias), Spain
- 0. An Ontology and Taxonomy Based Model for Dealing with Radicalization in Social Media  
Andres Montoro, Jose A. Olivas, Francisco P. Romero, Jesus Serrano-Guerrero, Javier Morejon-de-Giron, Enrique Larriba-Gonzalez, Antonio Ramos  
Computer Science Department, University of Castilla-La Mancha, Paseo de la Universidad, Ciudad Real, Spain
- 0. A Recommendation System for Short Recipe Videos with Supplementary Cooking Operation  
Takuya Yonezawa, Yuanyuan Wang, Kazutoshi Sumiya, Yukiko Kawai  
Kyoto Sangyo University, Kyoto, Japan;  
Yamaguchi University, Yamaguchi, Japan;  
Kwansai Gakuin University, Hyogo, Japan
- 0. ...



**SESSION 11-BIOCOMP: COMPUTATIONAL BIOLOGY AND BIOINFORMATICS**

**Chairs: Dr. Ahmad Al Shami**

**Southern Arkansas University, USA**

**July 26, 2022 (Tuesday); 03:20pm - 05:00pm**

**(LOCATION: Galleria Ballroom A)**

- 03:20 - 03:40pm: Self-supervised Multimodal Pre-training for Lung Adenocarcinoma overall Survival Prediction  
Francisco Carrillo-Perez, Marija Pizurica, Ignacrio Rojas, Kathleen Marchal, Luis Javier Herrera, Olivier Gevaert  
Department of Computer Architecture and Technology, University of Granada. C.I.T.I.C., Periodista Rafael Gomez Montero, Granada, Spain;  
Stanford Center for Biomedical Informatics Research (BMIR), Department of Medicine, Stanford University, Stanford, CA, USA;  
Internet Technology and Data science Lab (IDLab), Ghent University, Technologiepark-Zwijnaarde, Gent, Belgium
- 03:40 - 04:00pm: Detecting the Most Relevant Slices in MRI Parkinson Disease for Multi-Classification using Evolutionary Algorithm  
Olga Valenzuela, Francisco Carrillo-Perez, Luis Javier Herrera, Hector Pomares, Fernando Rojas, Ignacio Rojas  
Faculty of Science, University of Granada, Spain;  
Department of Computer Architecture and Technology, University of Granada. C.I.T.I.C., Periodista Rafael Gomez Montero, Granada, Spain
- 04:00 - 04:20pm: How Information Theory shall be Generalized for Neural Communication  
Janos Vegh, Adam Jozef Berki  
Kalimanos BT, Debrecen, Hungary;  
Department of Neurology, Semmelweis University, Budapest, Hungary
- 04:20 - 04:40pm: Continued ...  
How Information Theory shall be Generalized for Neural Communication  
Janos Vegh, Adam Jozef Berki  
Kalimanos BT, Debrecen, Hungary;  
Department of Neurology, Semmelweis University, Budapest, Hungary
- 04:40 - 05:00pm: Comparison of Deep Learning Architectures for COVID-19 Multi-class Classification over CT-Scans  
Jesus Toledano Pavon, Francisco Carrillo-Perez, Juan Carlos Morales Vega, Luis Javier Herrera, Ignacio Rojas  
Department of Computer Architecture and Technology, University of Granada. C.I.T.I.C., Periodista Rafael Gomez Montero, Granada, Spain;  
Stanford Center for Biomedical Informatics Research (BMIR), Department of Medicine, Stanford University, Stanford, CA, USA

**July 26**

**SESSION 12-SAM: SECURITY AND MANAGEMENT**

**Chairs: Mr. Michael O'Hara\* and Prof. Sergei Gorlatch\*\***

**\*MEDSEC Privacy Consulting, USA**

**\*\*University of Muenster, Germany**

**July 26, 2022 (Tuesday); 05:00pm - 06:20pm**

**(LOCATION: Galleria Ballroom A)**

- 05:00 - 05:20pm: Quantifying the Milestones of Cyber Vulnerabilities  
Michael Lidestri, Neil C. Rowe  
U.S. Naval Postgraduate School, USA
- 05:20 - 05:40pm: Comparison of Tamarin-prover and ProVerif Security Verification  
Takehiko Mieno, Hiroyuki Okazaki, Kenichi Arai, Yuichi Futa  
Shinshu University, Japan; Nagasaki University, Japan;  
Tokyo University of Technology, Japan
- 05:40 - 06:00pm: Identity Management for Intelligent Energy Devices Supporting  
Balance-Responsible Virtual Energy Communities  
Marius Stuebs, Kristi Kola, Wolfgang Renz  
University of Hamburg, Germany;  
HAW Hamburg, Germany
- 06:00 - 06:20pm: Cybersecurity Requirements for Critical Infrastructures  
Choong-Hee Han, Chang-Hee Han  
Korea Power Exchange, Korea;  
Korea Military Academy, Korea

ALL DATES AND TIMES ARE GIVEN IN USA PACIFIC TIME ZONE (PT).

**SESSION 3-ZOOM: ---> CSC-EEE-ICAI-SERP-IKE**  
**ARTIFICIAL INTELLIGENCE AND NOVEL APPLICATIONS + SOFTWARE**  
**ENGINEERING RESEARCH AND PRACTICE + KNOWLEDGE & INFORMATION ENGINEERING**  
**Chairs: Prof. Devon M. Simmonds\* and Dr. Jayesh Soni\*\***  
**\* University of North Carolina Wilmington, USA**  
**\*\*Florida International University, USA**  
**July 26, 2022 (Tuesday); 08:20am - 10:40am**  
**(ON-LINE / ZOOM)**

08:20 - 08:40am: Of Polygons, Curtains, and Corridors in Multidimensional Grid Spaces  
 Peter Baumann, Dimitar Misev, Bang Pham Huu  
 Jacobs University, Bremen, Germany

08:40 - 09:00am: Towards AI-based Audio Processing: A Literature Review  
 Vladislav Rykov, Praveen Meduri  
 California State University, Sacramento, California, USA

09:00 - 09:20am: Towards a Roadmap for Trustworthy Dynamic Systems-of-Systems  
 Rasmus Adler, Frank Elberzhager, Julien Siebert  
 Fraunhofer Platz 1, Kaiserslautern, Germany

09:20 - 09:40am: Citizen Perspectives on Necessary Safeguards to the Use of AI by  
 Law Enforcement Agencies  
 Yasmine Ezzeddine, Petra Saskia Bayerl, Helen Gibson  
 CENTRIC, Sheffield Hallam University, Sheffield, UK

09:40 - 10:00am: Trends and Strategies to Optimize Training Processes to Decrease  
 Learning Time in Deep Neural Networks  
 Miroslava Barua, Patricia A. Nava  
 Department of Electrical and Computer Engineering,  
 The University of Texas at El Paso, El Paso, Texas, USA

10:00 - 10:20am: Generalized Churn Classification Across Multiple Business Domains  
 Maryam Naveed, Arslan Shaukat, Usman Akram, Sajid Gul Khawaja  
 National University of Sciences and Technology (NUST),  
 Islamabad, Pakistan

10:20 - 10:40am: CALIME: Causality-Aware Local Interpretable Model-Agnostic  
 Explanations  
 Martina Cinquini, Riccardo Guidotti  
 University of Pisa, Pisa, Italy

**SESSION 4-ZOOM: ---> CSC**  
**SCIENTIFIC COMPUTING + DISTRIBUTED PROCESSING + DATA SCIENCE**  
**Chairs: TBA**  
**July 26, 2022 (Tuesday); 10:40am - 12:00pm**  
**(ON-LINE / ZOOM)**

10:40 - 11:00am: Mitigating the Effects of Attribute Noise Using Two-Level Filtering  
 Learner Algorithm  
 Eman Allogmani, Darsana Josyula  
 Department of Computer Science, Bowie State University, Bowie,  
 Maryland, USA; Department of Computer Science, Majmaah University,  
 Al-Majmaah, Saudi Arabia

- 11:00 - 11:20am: Understanding Health Information Overload in Patients Using Technology in the UAE Amidst COVID-19  
Naja Yoosuf, Zeenath Khan  
Department of Engineering and Information Science, University of Wollongong in Dubai, Dubai, United Arab Emirates, UAE
- 11:20 - 11:40am: Driver Safety Reward with Cooperative Platooning using Blockchain  
Sruthi Rachamalla, Henry Hexmoor  
School of Computing, Southern Illinois University, Carbondale, Illinois, USA
- 11:40 - 12:00pm: Evaluation of Reduced-precision Computation on the Tendral Statistical Interpolation System (T-SIS) for Ocean Modeling  
Daniel Voss, Gary Tyson, Ashwanth Srinivasan  
Computer Science, Florida State University, Tallahassee, Florida, USA; Tendral, LLC, Key Biscayne, Florida, USA
- SESSION 5-ZOOM: ---> PDPTA-ICEQT  
PARALLEL & DISTRIBUTED PROCESSING TECHNIQUES & APPLICATIONS + PERFORMANCE STUDIES + QUANTUM COMPUTING  
Chairs: Dr. Bernard Lee\* and Dr. Curtis Busby-Earle\*\*  
\* HedgeSPA Pte. Ltd., Singapore  
\*\*The UWI, Mona campus, Jamaica  
July 26, 2022 (Tuesday); 12:00pm - 02:00pm  
(ON-LINE / ZOOM)**
- 12:00 - 12:20pm: Quantumized Graph Cuts in Portfolio Construction and Asset Selection  
W. Bernard Lee, Anthony G. Constantinides  
HedgeSPA Limited, Singapore; School of Accounting and Finance, Hong Kong Polytechnic University, Hong Kong;  
Financial Signals Processing Laboratory, Imperial College London, London, United Kingdom (UK)
- 12:20 - 12:40pm: Parallel Computing for Large Data Visualizations: A Review  
Ananth N. Ramasari Chandra, David Apostol  
School of Electrical Engineering and Computer Science, University of North Dakota, Grand Forks, North Dakota, USA
- 12:40 - 01:00pm: Shadow Process to Improve Running Speed of a Program  
Chong Tian, Noha Hazzazi  
Department of Electrical Engineering and Computer Science, Howard University, Washington DC, USA
- 01:00 - 01:20pm: Selective Filtering of Large PDF Document Sets: A Performance Oriented Approach  
Glenn Davidson, Shikharesh Majumdar  
Chancellor's Professor, Director, Real Time and Distributed Systems Research Centre, Department of Systems and Computer Engineering, Carleton University, Ottawa, Canada
- 01:20 - 01:40pm: An Overview of Quantum Probability Support for Robotic Object Tracking  
Shahram Payandeh  
Networked Robotics and Sensing Laboratory, School of Engineering Science, Simon Fraser University, British Columbia, Canada

- 01:40 - 02:00pm: Time-Efficient Quantum-to-Classical Data Decoding  
Naveed Mahmud, Mingyoung Joshua Jeng, Md. Alvir Islam Nobel,  
Manu Chaudhary, SM Ishraq-Ul Islam, David Levy, Esam El-Araby  
Electrical Engineering and Computer Science,  
University of Kansas, Lawrence, Kansas, USA
- SESSION 6-ZOOM: ---> IPCV-ICAI**  
**IMAGE PROCESSING, COMPUTER VISION, & PATTERN RECOGNITION +**  
**APPLICATIONS OF MACHINE LEARNING + CLOUD COMPUTING**  
**Chairs: TBA**  
**July 26, 2022 (Tuesday); 02:00pm - 03:40pm**  
**(ON-LINE / ZOOM)**
- 02:00 - 02:20pm: Unsupervised Graph-Based Object Search and Retrieval Using  
Airborne LiDAR Point Clouds  
Yassine Belkhouche, Bill Buckles  
Department of Computer Science, Missouri State University,  
Springfield, Missouri, USA; Department of Computer Science and  
Engineering, University of North Texas, Denton, Texas, USA
- 02:20 - 02:40pm: Window-based Lane Localization and Characterization for  
Self-driving Vehicles  
Jiajun Chen, Mark Paulik  
Department of Electrical and Computer Engineering and Computer  
Science, University of Detroit Mercy, Michigan, USA
- 02:40 - 03:00pm: Automatic Classification of White Blood Cell Images using  
Convolutional Neural Network  
Rabia Asghar, Arslan Shaukat, Usman Akram, Rimsha Tariq  
National University of Sciences and Technology (NUST),  
Islamabad, Pakistan
- 03:00 - 03:20pm: A Comparative Study on the Application of K-NN, ANN and RBFN  
to Predict Severe Thunderstorm  
Himadri Bhattacharyya Chakrabarty, Sonia Bhattacharya,  
Ajoy Kumar Chakraborty  
Bangabasi College affiliated to University of Calcutta, India;  
Department of Computer Science, Panihati Mahavidyalaya, West  
Bengal State University, Kolkata, India; Department of  
Irrigation and Water Resources, Government of West Bengal, India
- 03:20 - 03:40pm: Cost-Effective Resource Provisioning of Cloud Computing via  
Supervised Machine Learning  
Daniel Andresen, Mohammed Tanash, Caughlin Bohn, William Hsu  
Computer Science Department, Kansas State University, Manhattan,  
Kansas, USA; Holland Computing Center,  
University of Nebraska-Lincoln, Lincoln, Nebraska, USA
- 03:40 - 04:00pm: FREE SLOT

July 26

- SESSION 7-ZOOM: ---> FECS-EEE**  
**FRONTIERS IN EDUCATION: COMPUTER SCIENCE & COMPUTER ENGINEERING + E-LEARNING, E-BUSINESS, ENTERPRISE INFORMATION SYSTEMS, & E-GOVERNMENT**  
**Chairs: Dr. Razwan Mohmed Salah**  
**University of Duhok, Kurdistan Region, Iraq**  
**July 26, 2022 (Tuesday); 04:00pm - 05:20pm**  
**(ON-LINE / ZOOM)**
- 04:00 - 04:20pm: Capstone Experiences in Developing Augmented Reality Tables for Community Organizations  
H. Keith Edwards, Michael R. Peterson, Francis Cristobal  
Department of Computer Science, University of Hawaii at Hilo, Hawaii, USA
- 04:20 - 04:40pm: Improving the Performance of BSCS and BSIT Courses by Applying an Instant Messenger Tool in an Online Learning Environment  
Yanzhen Qu, Howard Evans, Noura Abbas, Mazen Alkhatib  
School of Computer Science, Colorado Technical University, Colorado Springs, Colorado, USA
- 04:40 - 05:00pm: Evaluating the Consistency of Student Performance Models for Individual Students  
Enzo Novi Migliano, Kelly M. Rivera, William Frazee, Sean C. Mondesire  
School of Health Science and Technology, St. Thomas University, Miami Gardens, Florida, USA; Department of Mathematics and Statistics, Villanova University, Villanova, PA, USA; Department of Computer Science, University of Central Florida, Orlando, Florida, USA; School of Modeling Simulation and Training, University of Central Florida, Orlando, Florida, USA
- 05:00 - 05:20pm: Edge Intelligent Agent Computing Systems with Blockchain Technology in Wireless Body Area Networks: Applications and Technologies  
Deok Hee Nam  
College of Professional Studies, Computer and Electrical Engineering and Computer Science, Wilberforce University, Wilberforce, Ohio, USA

July 27

07:00a - 05:00p: REGISTRATION  
(LOCATION: Lotus Ballrooms 2 & 3; Registration Counter/Desk)

<----- LOCATION: (Galleria Ballrooms D & E) ----->

SESSION 13-EEE: E-LEARNING, E-BUSINESS, ENTERPRISE INFORMATION SYSTEMS,  
AND E-GOVERNMENT  
Chair: TBA  
July 27, 2022 (Wednesday); 08:00am - 09:20am  
(LOCATION: Galleria Ballrooms D & E)

08:00 - 08:20am: FREE SLOT

08:20 - 08:40am: The Evaluation of Mobile Technology Adoption as an Employee  
Training Tool during the Pandemic  
Anastasia Tracy Biggs  
School of Computer Science and Information Technology, Colorado  
Technical University, Colorado Springs, Colorado, USA

08:40 - 09:00am: A Review Study on Self-Learning Braille Systems  
Amani AlSalman, Suheer Al-Hadhrami, Abdulmalik AlSalman  
Special Education Department, King Saud University, Riyadh,  
Saudi Arabia; Computer Science Department, King Saud  
University, Riyadh, Saudi Arabia

09:00 - 09:20am: Healthcare Information Security: A Paradigm Shift to Zero Trust  
Principles  
David Ang, Onome Christopher Edo  
Department of Information Systems, College of Business,  
Auburn University at Montgomery, Alabama, USA

SESSION 14-FCS-FECS: FOUNDATIONS OF COMPUTER SCIENCE + FRONTIERS IN EDUCATION:  
COMPUTER SCIENCE & COMPUTER ENGINEERING  
Chairs: Dr. Anastasia Tracy Biggs\* and Prof. Daniel Spiegel\*\*  
\*Colorado Technical University, Colorado, USA;  
\*\*Kutztown University of PA, USA  
July 27, 2022 (Wednesday); 09:20am - 10:20am  
(LOCATION: Galleria Ballrooms D & E)

09:20 - 09:40am: An Automated SQL Query Grading System Using an Attention-Based  
Convolutional Neural Network  
Donald R. Schwartz, Pablo Rivas  
School of Computer Science and Mathematics, Marist College,  
Poughkeepsie, New York, USA;  
School of Engineering and Computer Science, Department of Computer  
Science, Baylor University, Waco, Texas, USA

09:40 - 10:00am: A Method of Counting to Simplify Solving Recurrence Relations  
Daniel Spiegel, Danielle S. Hope  
Kutztown University of Pennsylvania, Pennsylvania, USA;  
T-Mobile, Atlanta, Georgia, USA

**July 27**

10:00 - 10:20am: On the Application of P2SH Bitcoin Scripts  
Yong Zhang  
Department of Computer Science & Information Technology,  
Kutztown University of Pennsylvania, USA

10:20 - 10:40am: **BREAK**  
(LOCATION: Lotus Ballrooms 2 & 3)

**SESSION 15-ICWN-SAM: WIRELESS NETWORKS + SECURITY AND MANAGEMENT**

**Chair: TBA**

**July 27, 2022 (Wednesday); 10:40am - 12:20pm**

**(LOCATION: Galleria Ballrooms D & E)**

10:40 - 11:00am: Extended RTS/CTS Control Protocol for More Concurrent Data Message  
Transmissions in Wireless Ad-Hoc Networks  
Yudai Yamazaki, Hiroaki Higaki  
Department of Robotics and Mechatronics, Tokyo Denki University,  
Tokyo, Japan

11:00 - 11:20am: Towards Security Enhancement of Blockchain-based Supply  
Chain Management  
Lamees Al-Alawi, Raiya Al-Busaidi, Abdul Khaliq Shaikh  
Department of Information Systems, Sultan Qaboos University,  
Muscat, Oman

11:20 - 11:40am: A Bayesian Deep Learning Regularization for Detecting  
Zero-Day Attacks  
Raaid Wilson, Farid Shirazi  
Data Science and Analytics, Toronto Metropolitan University,  
Toronto, Ontario, Canada;  
Ted Roger School of Information Technology Management,  
Toronto Metropolitan University, Toronto, Ontario, Canada

11:40 - 12:00pm: Drug Recommendation and Tracking using Blockchain and Machine  
Learning  
Gokay Saldamli, Amitha S. Papetla, Amol Sadasivan,  
Anjali Deshmukh, Sreeja Madanambeti, Levent Ertaul  
San Jose State University, San Jose, California, USA;  
California State University, East Bay, Hayward, California, USA

12:00 - 12:20pm: Enhancing Security Awareness on Intelligent Automated Systems for  
Agile Practices in Service Organisations  
Olatorera C. Williams, Funminiyi Olajide, Ahmad Lotfi  
Nottingham Trent University Nottingham, United Kingdom (UK)

12:20 - 01:00pm: **LUNCH (On Your Own)**



**SESSION 16-IKE-ICDATA: INFORMATION & KNOWLEDGE ENGINEERING + DATA SCIENCE**

**Chairs: Dr. Haley Dozier\* and Wilmuth Muller\*\***

**\*U.S. Army Engineer Research and Development Center, USA**

**\*\* Fraunhofer IOSB, Germany**

**July 27, 2022 (Wednesday); 01:00pm - 03:00pm**

**(LOCATION: Galleria Ballrooms D & E)**

- 01:00 - 01:20pm: On Searching a Approximately Sorted Array  
Aditya Narasimhan, C. R. Subramanian, Sridhar Radhakrishnan  
School of Computer Science, University of Oklahoma, Norman,  
Oklahoma, USA;  
The Institute of Mathematical Sciences, HBNI, Chennai, India
- 01:20 - 01:40pm: An Empirical Study on Feature Selection for Prediction of Online  
Shopping Purchases  
Hank Helmers, Huanjing Wang  
Western Kentucky University, Bowling Green, Kentucky, USA
- 01:40 - 02:00pm: A Conceptual Solution Approach for Artificial Intelligence Adaption  
along the Student Lifecycle in Higher Education Institutions  
Christian-Andreas Schumann, Nico Kling, Frank Otto, Claudia Tittmann  
Institute for Management and Information,  
West Saxon University Zwickau, Zwickau, Germany
- 02:00 - 02:20pm: Random Graphs in DGL  
Peter M. Maurer  
Department of Computer Science, Baylor University, Waco, Texas, USA
- 02:20 - 02:40pm: Product Quantization for Surface Soil Similarity  
Haley Dozier, Althea Henslee, Ashley Abraham, Andrew Strelzoff,  
Mark Chappell  
US Army Engineer Research and Development Center, USA
- 02:40 - 03:00pm: Large-Scale Data Parallelization of Product Quantization and  
Inverted Indexing Using Dask  
Ashley Abraham, Andrew Strelzoff, Althea Henslee, Haley Dozier,  
Mark Chappell  
US Army Engineer Research and Development Center, USA
- 03:00 - 03:20pm: BREAK & POSTERS**  
**July 27, 2022 (Wednesday)**  
**(LOCATION: Lotus Ballrooms 2 & 3)**
- 0. Examining Operational Technology Data Abstractly Using Principal  
Component Analysis  
Cheronika Manyfield-Donald, David Schweitzer  
The U.S. Army Engineer Research and Development Center (ERDC),  
U.S. Army Corps of Engineers, USA
  - 0. Bimodal Classification with CNN and Sequence Models  
Wookey Lee, Keywoong Bae, Mukhiddin Toshpulatov, Suan Lee  
Inha University, Republic of Korea
  - 0. Blockchain-based Decentralized Identity Management for Privacy-  
preserving over 6G Smart Healthcare  
Sejong Lee, Jaehyeon Kim, Yongseok Kwon, Yushin Kim, Sunghyun Cho  
Hanyang University, Republic of Korea

**July 27**

- 0. Visualizing Discussion Flows in Expert Committees  
So Morikawa  
The University of Tokyo, Japan
- 0. Modeling the Effect of Big Data Analytics and Supply Chain Management on Firm Performance  
Steve Zhou  
University of Houston Downtown, Texas, USA
- 0. Analysis on Messenger Characteristics with k-gram Compositions of Chatting Texts  
Da-Young Lee, Hwan-Gue Cho  
Pusan National University, Republic of Korea
- 0. Securing IPsec Communications with Quantum Key Distribution  
Leo Truksans, Elina Kalnina, Andris Lapins, Edgars Rencis, Juris Viksna  
Institute of Mathematics and Computer Science, University of Latvia, Riga, Latvia
- 0. Low Heat Multi-Core Assignment Scheme by Considering CPU Overloading in Big.LITTLE Architectures  
Min-Ho Han, Young-Bae Ko, Sung-Hwa Lim  
Department of AI Convergence Network, Ajou University, Suwon, South of Korea; Department of Software, Ajou University, Suwon, South of Korea; Department of Multimedia, Namseoul University, Cheonan, South of Korea
- 0. ...

**SESSION 17-SERP: SOFTWARE ENGINEERING RESEARCH & PRACTICE**

**Chair: Prof. Sergei Gorlatch**

**University of Muenster, Germany**

**July 27, 2022 (Wednesday); 03:20pm - 04:20pm**

**(LOCATION: Galleria Ballrooms D & E)**

- 03:20 - 03:40pm: Unified Graph Representation of Traditional and Model-driven Avionic Software Systems  
Nathalie Skotnik, Andreas Frey  
Department of Computer Science, Technische Hochschule Ingolstadt, Ingolstadt, Germany
- 03:40 - 04:00pm: Optimized Real-Time Assembly in a RISC Simulator  
Marwan Shaban, Adam J. Rocke  
Seminole State College of Florida, Sanford, Florida, USA
- 04:00 - 04:20pm: Agile Effectiveness over Distributed Teams: A look into the aftermath of COVID-19  
Joe R. O'Bryant, Jr., Elizabeth Schmal, Soma Datta  
University of Houston - Clear Lake, Texas, USA

July 27

**SESSION 18-FECS: FRONTIERS IN EDUCATION: COMPUTER SCIENCE & COMPUTER ENGINEERING  
+ STEM + ONLINE**

**Chair: TBA**

**July 27, 2022 (Wednesday); 04:20pm - 06:20pm**

**(LOCATION: Galleria Ballrooms D & E)**

- 04:20 - 04:40pm: Empathic Design in Computer Engineering: Accessibility in Sport for Deaf Curling Athletes  
Marcia R. Friesen, Robert D. McLeod  
Electrical and Computer Engineering, University of Manitoba, Winnipeg, Canada
- 04:40 - 05:00pm: Segue Toolkit for Data Science  
Courtney S. Lamar, Lethia S. Jackson  
Department of Cyber-Physical Systems, Clark Atlanta University, Atlanta, Georgia, USA; Department of Technology and Security, Bowie State University, Bowie, Maryland, USA
- 05:00 - 05:20pm: BATTLE 2022: Preparation of Future Cyber Technologists  
Clarence Ray, Jesse Bemley  
Bowie State University, Bowie, Maryland, USA
- 05:20 - 05:40pm: Strengthening the Management Information Systems Course Syllabus  
Nadia Khalique, Saqib Ali, Abdul Khalique Shaikh  
Department of Information Systems, Sultan Qaboos University, Oman
- 05:40 - 06:00pm: Educating Digital Natives  
Matthew N. O. Sadiku, Uwakwe C. Chukwu, Abayomi Ajayi-Majebi, Sarhan M. Musa  
Roy G. Perry College of Engineering, Prairie View A&M University, Prairie View, Texas, USA;  
Department of Engineering Technology, South Carolina State University, Orangeburg, South Carolina, USA;  
Department of Manufacturing Engineering, Central State University, Wilberforce, Ohio, USA
- 06:00 - 06:20pm: MOC 6 - Using the EMDS-5 Dataset to Classify Microorganisms for Education  
Max Cole, Allen Mire, Ghassan Alkadi, Bonnie Achee  
Southeastern Louisiana University, Hammond, Louisiana, USA

<----- LOCATION: (Galleria Ballroom A) ----->

**SESSION 19-IPCV-CSC: IMAGE PROCESSING, COMPUTER VISION, & PATTERN RECOGNITION + SIMULATION & SCIENTIFIC COMPUTING**

**Chairs: Prof. Mehrube Mehrubeoglu\* and Dr. Ahmad Al Shami\*\***

**\* Texas A&M University-Corpus Christi, USA**

**\*\*Southern Arkansas University, USA**

**July 27, 2022 (Wednesday); 08:00am - 10:20am**

**(LOCATION: Galleria Ballroom A)**

- 08:00 - 08:20am: ASA: A Simulation Environment for Evaluating Military Operational Scenarios  
Joao P. A. Dantas, Andre N. Costa, Vitor C. F. Gomes,  
Andre R. Kuroswiski, Felipe L. L. Medeiros, Diego Geraldo  
Decision Support Systems Subdivision, Institute for Advanced  
Studies, Sao Jose dos Campos, Sao Paulo, Brazil
- 08:20 - 08:40am: Meta-Sel: 3D-model ShapeNet Core Classification using Meta-Semantic Learning  
Farid Ghareh Mohammadi, Cheng Chen, Farzan Shenavarmasouleh,  
M. Hadi Amini, Beshoy Morkos, Hamid R. Arabnia  
Department of Computer Science, University of Georgia, USA;  
College of Engineering, University of Georgia, USA;  
Knight Foundation School of Computing and Information Sciences,  
Florida International University (FIU), Miami, Florida, USA
- 08:40 - 09:00am: Sediment Plume and Seagrass Detection in Aerial Imagery of Seagrass Beds  
Mehrube Mehrubeoglu, Kirk Cammarata, Hua Zhang, Justin Giessel,  
Lifford McLaughlan  
Department of Engineering, Texas A&M University-Corpus Christi,  
Texas, USA; Department of Biology, Texas A&M University  
Corpus Christi, Texas, USA; Department of Electrical Engineering  
and Computer Science, Texas A&M University-Kingsville, Texas, USA
- 09:00 - 09:20am: Automation of Luminescence Quantitation for High-Throughput Plant  
Phenotyping Using Image Processing and U-Net Segmentation  
Mahbubur Rahman, Afroza Haque, Dinej S. Pujara, Jose Mayorga,  
Hong-Gu Kang, Damian Valles  
Ingram School of Engineering, Texas State University, San Marcos,  
Texas, USA; School of Electrical and Computer Engineering,  
Purdue University, Fort Wayne, Indiana, USA; Department of  
Biology, Texas State University, San Marcos, Texas, USA
- 09:20 - 09:40am: A Study on the Use of Perceptual and Robust Hashing to Detect  
Manipulation Of Embedded Messages in Images  
Sven-Jannik Wohnert, Kai Hendrik Wohnert, Eldar Almamedov,  
Carsten Frank, Volker Skwarek  
Digital Business Processes Research and Transfer Centre,  
Hamburg University of Applied Sciences, Hamburg, Germany
- 09:40 - 10:00am: AIC-AB NET: A Neural Network for Image Captioning with Spatial  
Attention and Text Attributes  
Guoyun Tu, Ying Liu, Vladimir Vlassov  
Department of Computer Science, KTH Royal Institute of Technology,  
Stockholm, Sweden; Norna, Stockholm, Sweden
- 10:00 - 10:20am: Modified Topological Image Preprocessing for Skin Lesion  
Classifications  
Hong Cheng, Rebekah Leamons, Ahmad Al Shami  
Department of Computer Science, Southern Arkansas  
University - Magnolia, Arkansas, USA

**10:20 - 10:40am: BREAK**  
(LOCATION: Lotus Ballrooms 2 & 3)

**SESSION 20-BIOCOMP-BIOENG-HIMS: BIOINFORMATICS & COMPUTATIONAL BIOLOGY + BIOMEDICAL ENGINEERING + HEALTH INFORMATICS**  
Chair: Jorge Juarez  
Astrophysics, Optics and Electronics National Institute, Mexico  
July 27, 2022 (Wednesday); 10:40am - 12:20pm  
(LOCATION: Galleria Ballroom A)

**10:40 - 11:00am:** Temperature Effect on the Structural Dynamics of SARS-CoV-2 Nucleocapsid Domain  
Samuel M. Naandam, Gideon K. Gogovi, Samuel Kakraba  
Department of Mathematics, University of Cape Coast, Cape Coast, Ghana; Department of Mathematics and Statistics, University of Houston - Downtown, Houston, Texas, USA; Department of Mathematics and Statistics, Eastern Kentucky University, Richmond, Kentucky, USA

**11:00 - 11:20am:** Embedding Of Functional Human Brain Networks on a Sphere  
Moo K. Chung, Zijian Chen  
University of Wisconsin-Madison, Wisconsin, USA

**11:20 - 11:40am:** Statistical Criteria for Gene Selections  
Hong Zhang  
Georgia Southern University, Savannah, Georgia, USA

**11:40 - 12:00pm:** Challenges Facing Traditional Medicine  
Matthew N. O. Sadiku, Janet O. Sadiku, Olaniyi D. Olaleye, Sarhan M. Musa  
Roy G. Perry College of Engineering, Prairie View A&M University, Prairie View, Texas, USA;  
Barbara Jordan-Mickey Leland School of Public Affairs, Texas Southern University, Houston, Texas, USA; Department of Manufacturing Engineering, Central State University, Wilberforce, Ohio, USA

**12:00 - 12:20pm:** Hybrid Matching Methods for Treatment Program Evaluation: A Case Study  
Nafis Neehal, Georgios Mavroudeas, Malik Magdon-Ismail, Jason Kuruzovich, Kristin, P. Bennett  
Rensselaer Polytechnic Institute, Troy, New York, USA

**12:20 - 01:00pm: LUNCH (On Your Own)**

**SESSION 21-FECS: FRONTIERS IN EDUCATION: COMPUTER SCIENCE & COMPUTER ENGINEERING + STEM AND ONLINE EDUCATION**  
Chair: TBA  
July 27, 2022 (Wednesday); 01:00pm - 03:00pm  
(LOCATION: Galleria Ballroom A)

**01:00 - 01:20pm:** Collaborative Learning to Teach Set Theory to Engineer Students  
Jorge Juarez, Maria del Rayo Guevara-Villa, Anabel Sanchez Sanchez, Raquel Diaz Hernandez, Leopoldo Altamirano Robles  
Instituto Nacional de Astrofisica, Optica y Electronica, Mexico; Universidad Politecnica de Puebla, San Mateo, Mexico

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- 01:20 - 01:40pm: Team Projects: Cross-pollinating Environmental Science and Technology (ESTEC) Using Project-Based Learning  
Velma C. Latson, Deidre Gibson  
Department of Technology & Security, Bowie State University, Maryland;  
Hampton University, Virginia, USA
- 01:40 - 02:00pm: Industry Connect Initiative (Student Projects):  
"Project Method" - A Class Organization Website  
Gabriel Bradford, Abby Ortego, Bonnie Achee, Ghassan Alkadi  
Southeastern Louisiana University, Hammond, Louisiana, USA
- 02:00 - 02:20pm: Industry Connect Initiative - On the Importance of an Industry Advisory Board in an Undergraduate CS/IT Program,  
An Experience Report  
Bonnie Achee, Ghassan Alkadi, Matthew McNulty, John Burris  
Southeastern Louisiana University, Hammond, Louisiana, USA
- 02:20 - 02:40pm: Industry Connect Initiative: The Distinguished Lecturer Series  
Bonnie Achee, Matthew McNulty, Ghassan Alkadi  
Southeastern Louisiana University, Hammond, Louisiana, USA
- 02:40 - 03:00pm: A Telepresence Robot for a Better Orientation at University  
Laurent Gallon, Timothee Duron, Marine Rigal  
Universite de Pau et des Pays de l'Adour, E2S UPPA, LIUPPA,  
Mont-de-Marsan, France; Universite de Pau et des Pays de  
l'Adour, E2S UPPA, SCUIO-IP, Pau, France
- 03:00 - 03:20pm: BREAK & POSTERS**  
**July 27, 2022 (Wednesday)**  
**(LOCATION: Lotus Ballrooms 2 & 3)**
- 0. Examining Operational Technology Data Abstractly Using Principal Component Analysis  
Cheronika Manyfield-Donald, David Schweitzer  
The U.S. Army Engineer Research and Development Center (ERDC),  
U.S. Army Corps of Engineers, USA
  - 0. Bimodal Classification with CNN and Sequence Models  
Wookey Lee, Keywoong Bae, Mukhiddin Toshpulatov, Suan Lee  
Inha University, Republic of Korea
  - 0. Blockchain-based Decentralized Identity Management for Privacy-preserving over 6G Smart Healthcare  
Sejong Lee, Jaehyeon Kim, Yongseok Kwon, Yushin Kim, Sunghyun Cho  
Hanyang University, Republic of Korea
  - 0. Visualizing Discussion Flows in Expert Committees  
So Morikawa  
The University of Tokyo, Japan
  - 0. Modeling the Effect of Big Data Analytics and Supply Chain Management on Firm Performance  
Steve Zhou  
University of Houston Downtown, Texas, USA

- 0. Analysis on Messenger Characteristics with k-gram Compositions of Chatting Texts  
Da-Young Lee, Hwan-Gue Cho  
Pusan National University, Republic of Korea
- 0. Securing IPsec Communications with Quantum Key Distribution  
Leo Truksans, Elina Kalnina, Andris Lapins, Edgars Rencis, Juris Viksna  
Institute of Mathematics and Computer Science,  
University of Latvia, Riga, Latvia
- 0. Low Heat Multi-Core Assignment Scheme by Considering CPU Overloading in Big.LITTLE Architectures  
Min-Ho Han, Young-Bae Ko, Sung-Hwa Lim  
Department of AI Convergence Network, Ajou University, Suwon, South of Korea; Department of Software, Ajou University, Suwon, South of Korea; Department of Multimedia, Namseoul University, Cheonan, South of Korea
- 0. ...

**SESSION 22-ICAI: ADVANCES IN ARTIFICIAL INTELLIGENCE + NOVEL APPLICATIONS**

**Chairs: Dr. Elham Buxton\* and Sarah Bolton\*\***

**\* University of Illinois at Springfield, Springfield, Illinois, USA**

**\*\*Air Force Institute of Technology, USA**

**July 27, 2022 (Wednesday); 03:20pm - 06:20pm**

**(LOCATION: Galleria Ballroom A)**

- 03:20 - 03:40pm: Addressing Usable-Security Challenges for NLP Systems  
Yasser M. Hausawi  
Deputy Director General for Shared Services and Associate Professor of IT & Cybersecurity at the Center for Digital Transformation and Information, Institute of Public Administration, Riyadh, Saudi Arabia
- 03:40 - 04:00pm: Research on the Setting of Text-based Policy Agenda for the Improvement of Human Rights and Treatment of Social Workers  
Seungjae Lee, Soongoo Hong, Sungho Park, Heiwon Lee, Seunghyeon Lee, Kangbae Lee  
Data Analysis & Artificial Intelligence Research Laboratory, Dong-A University, Gudeok-ro, Seo-gu, Busan, Republic of Korea; Smart governance Research Laboratory, Dong-A University, Gudeok-ro, Seo-gu, Busan, Republic of Korea
- 04:00 - 04:20pm: Machine Learning Land Cover and Land Use Classification of 4-Band Satellite Imagery  
Lorelei Turner, Torrey Wagner, Paul Auclair, Brent Langhals  
Graduate School of Engineering and Management, Air Force Institute of Technology, Wright-Patterson AFB, Ohio, USA; The Perduco Group (a LinQuest Company), Beavercreek, Ohio, USA
- 04:20 - 04:40pm: Effect of Connection State and Transport/Application Protocol on the Machine Learning Outlier Detection of Network Intrusions  
George Yuchi, Torrey Wagner, Paul Auclair, Brent Langhals  
Graduate School of Engineering and Management, Air Force Institute of Technology, Wright-Patterson AFB, Ohio, USA; The Perduco Group (a LinQuest Company), Beavercreek, Ohio, USA

- 04:40 - 05:00pm: Increasing UAS Sensor Fusion Autonomy with Spatial Voting  
Enhanced Spatio-Temporal Memory  
James Crowder, John Carbone  
Cobham Advanced Electronic Solutions (CAES), Advanced Technology  
and Engineering (AT&E), Colorado Springs, Colorado, USA;  
Forcepoint Global Governments and Critical Infrastructure,  
Richardson, Texas, USA
- 05:00 - 05:20pm: Multiscale Graph Neural Networks for Protein Residue Contact  
Map Prediction  
Kuang Liu, Rajiv K. Kalia, Xinlian Liu, Aiichiro Nakano,  
Ken-Ichi Nomura, Priya Vashishta, Rafael Zamora-Resendiz  
Collaboratory for Advanced Computing and Simulations, University of  
Southern California, Los Angeles, California, USA;  
Department of Computer Science, University of Southern California,  
Los Angeles, California, USA; Department of Physics & Astronomy,  
University of Southern California, Los Angeles, California, USA;  
Department of Chemical Engineering & Materials Science, University  
of Southern California, Los Angeles, California, USA;  
Department of Quantitative & Computational Biology, University of  
Southern California, Los Angeles, California, USA; Department of  
Computer Science, Hood College, Frederick, Maryland, USA;  
Lawrence Berkeley National Laboratory, Berkeley, California, USA
- 05:20 - 05:40pm: Deep Learning Neural Network for Color and Volume Feature  
Extraction in Oral Cancer: Enhanced Co-occurrences  
Faiza Shabbir, Abeer Alsadoon, Mohammad Zavid Parvez,  
Muhammad Siddiqi, Thair Al-Dala'in, Fatima Furqaan,  
Razwan Mohmed Salah, Shayma Ismail Ali, Shahad Ahmed  
School of Computing Mathematics and Engineering, Charles Sturt  
University, Australia; School of Computer Data and Mathematical  
Sciences, Western Sydney University, Australia;  
Kent Institute Australia, Sydney, Australia;  
Asia Pacific International College (APIC), Sydney, Australia;  
The University of Duhok, Duhok, KRG, Iraq; Engineering Institute  
of Technology, Melbourne, Australia; Peter Faber Business School,  
Australian Catholic University, Melbourne, Australia
- 05:40 - 06:00pm: An ISR Asset Planning Application with Intelligent Agents  
Wilmuth Muller, Frank Reinert, Uwe Pfirrmann  
Fraunhofer IOSB Institute of Optronics, System Technologies and  
Image Exploitation, Karlsruhe, Germany
- 06:00 - 06:20pm: Human Activity Recognition Feature Extraction for Improved  
Classification Accuracy  
Roberto Vazquez Ferrer, Jeffrey L. Duffany, Alfredo Cruz  
Polytechnic University of Puerto Rico, Puerto Rico;  
Ana G. Mendez University, Puerto Rico



ALL DATES AND TIMES ARE GIVEN IN USA PACIFIC TIME ZONE (PT).

- SESSION 8-ZOOM: ---> HIMS-ICDATA-GCC-CSC**  
**CLOUD COMPUTING, SECURITY, HEALTH INFORMATICS,**  
**DATA SCIENCE AND APPLICATIONS**  
**Chairs: Nivedha Rajaram**  
**UST-GLOBAL INC,USA**  
**July 27, 2022 (Wednesday); 08:20am - 11:00am**  
**(ON-LINE / ZOOM)**
- 08:20 - 08:40am: External Key Brokerage for Security of Cloud Data  
 Gil Mazor, Asad Ali  
 Thales, Digital Identity & Security, Petach Tikva, Israel;  
 Thales, Digital Identity & Security, Austin, Texas, USA
- 08:40 - 09:00am: Healthcare Data Analytics: Application to Prostate Cancer  
 Alfadil Ahmed Hamdan, Fathe Jeribi, M-Tahar Kechadi,  
 Mohammed A. Fakhruddin, Mostafa M. Mehanawi  
 Department of Computer Science, College of CS & IT, Jazan  
 University, Jazan, Saudi Arabia; Department of Information  
 Technology and Security, College of CS & IT, Jazan University,  
 Jazan, Saudi Arabia; School of Computer Science, University  
 College Dublin, Dublin, Ireland; Department of Computer  
 Networks, College of CS & IT, Jazan University, Jazan,  
 Saudi Arabia
- 09:00 - 09:20am: Assessment of Trust Models in Supply Chain Traceability Data  
 Management  
 Oratile Leteane, Yirsaw Ayalew  
 Department of Computer Science, University of Botswana, Botswana
- 09:20 - 09:40am: Cloud-native RStudio on Kubernetes for Hopsworks  
 Gibson Chikafa, Sina Sheikholeslami, Salman Niazi, Jim Dowling,  
 Vladimir Vlassov  
 Hopsworks AB, Stockholm, Sweden;  
 KTH Royal Institute of Technology, Stockholm, Sweden
- 09:40 - 10:00am: Learning Sign Language Representation using CNN-LSTM, 3DCNN,  
 CNN.RNN.LSTM and CCN-TD  
 Koffka Khan, Nikita Louison, Wayne Goodridge  
 University of the West Indies, West Indies, Jamaica
- 10:00 - 10:20am: Covi-Care: Secure Covid-19 Vitals Diagnosis and Disease  
 Identification Application  
 Anurag Gorkar, Pranav Patil, Yogesh Kulkarni, Sarang Joshi  
 Pune Institute of Computer Technology, India
- 10:20 - 10:40am: An Ensemble Learning Augmentation Method for Concept Drift  
 Detection over Streaming Data  
 Ali Alizadeh Mansouri, Abbas Javadtalab, Nematollaah Shiri  
 Concordia University, Canada
- 10:40 - 11:00am: Educational Data Mining Using Python and Machine Learning Algorithms  
 May Alsofyani, Ali Jaber Almalki, Liqiang Wang  
 Department of Computer Science, University of Central Florida,  
 Orlando, Florida, USA

- SESSION 9-ZOOM: ---> FECS-HIMS-ICDATA-ICOMP-IKE  
FRONTIERS IN CS & CE EDUCATION + HEALTH INFORMATICS &  
MEDICAL SYSTEMS + DATA SCIENCE + INTERNET OF THINGS +  
INFORMATION & KNOWLEDGE ENGINEERING  
Chairs: Dr. Hong Qin  
University of Tennessee at Chattanooga, USA  
July 27, 2022 (Wednesday); 11:00am - 01:00pm  
(ON-LINE / ZOOM)**
- 11:00 - 11:20am: Virtual ABET Accreditation: Benefits and Challenges  
Mudasser F. Wyne, Shakil Akhtar  
College of Professional Studies, National University, USA;  
CS/IT Department, Clayton State University, USA
- 11:20 - 11:40am: Clinical Decision Support System an Easy Access to Streamline  
Basic Healthcare Services in Regional QLD  
Saad Masood Butt, Carmen Reaiche, Tracey Mahony, Stephen Boyle  
James Cook University, Australia
- 11:40 - 12:00pm: Cointegration of SARS-CoV-2 Transmission with Weather Conditions  
and Mobility during the First Year of the COVID-19 Pandemic in  
the United States  
Hong Qin, Syed Tareq, William Torres, Megan Doman, Cleo Falvey,  
Jamaree Moore, Meng Tsai, Yingfeng Wang, Azad Hossain,  
Mengjun Xie, Li Yang  
University of Tennessee at Chattanooga, Tennessee, USA
- 12:00 - 12:20pm: Blockchain-Based IoT-Enabled Fish Supply Chain Framework  
Shereen Ismail, Hassan Reza  
School of Electrical Engineering and Computer Science,  
University of North Dakota, Grand Forks, North Dakota, USA
- 12:20 - 12:40pm: Discretization of Multi-valued Categorical Data Attributes  
Ray R. Hashemi, Keith Galbraithy  
Department of Computer Science, Georgia Southern University,  
Savannah, Georgia, USA
- 12:40 - 01:00pm: Pandemic Equation and Waves of COVID-19 Evolution  
Michael Shur  
Rensselaer Polytechnic Institute, Troy, New York, USA;  
Electronics of the Future, Inc. Vienna, Virginia, USA
- SESSION 10-ZOOM: ---> IKE-ICWN-MSV-SAM  
INFORMATION & KNOWLEDGE ENGINEERING + SENSOR NETWORKS +  
SIMULATION AND MODELING + APPLICATIONS  
Chairs: TBA  
July 27, 2022 (Wednesday); 01:00pm - 02:20pm  
(ON-LINE / ZOOM)**
- 01:00 - 01:20pm: A Hybrid Algorithm to Enhance Wireless Sensor Networks Security  
on the IoT  
Ntebatseng Mahlke, Topside E. Mathonsi, Tonderai Muchenje,  
Deon Du Plessis  
Tshwane University of Technology, Pretoria, South Africa
- 01:20 - 01:40pm: Gas Turbine Performance Enhancement Utilizing Energy-Mix for  
Power Generation Reliability  
S. L. Braide, D. C. Idoniboyeobu  
Department of Electrical Engineering Rivers State University,  
Nigeria

- 01:40 - 02:00pm: Mississippi Multimodal Freight Analysis Model  
 Vivek Sunchu, Canhao Wang, Terrence Conley, Mercy Chebet,  
 Shihmiao Chin, Tzusheng Pei, Ali Abu-El Humos  
 Department of Electrical & Computer Engineering and Computer  
 Science, Jackson State University, Mississippi, USA;  
 Transportation Analytics & Decision Sciences Group,  
 Oak Ridge National Laboratory, Tennessee, USA
- 02:00 - 02:20pm: Temporal Accuracy, Fidelity and Time Representation in Complex  
 System Modeling and Simulation  
 Jeffrey Wallace  
 Rocket Technology Systems LLC, Virginia Beach, Virginia, USA
- SESSION 11-ZOOM: ---> SAM-MSV**  
**SECURITY AND MANAGEMENT + MODELING AND SIMULATION**  
**Chairs: Prof. Kenneth Hopkinson**  
**Air Force Institute of Technology, Dayton, Ohio, USA**  
**July 27, 2022 (Wednesday); 02:20pm - 03:20pm**  
**(ON-LINE / ZOOM)**
- 02:20 - 02:40pm: A New Approach for Deep Analysis and Prediction of Smart Grid  
 Stability and Theft Using Machine Learning  
 Hisham Albataineh, Viswas Kanumuri, Mais Nijim, Avdesh Mishra  
 Department of Physics and Geosciences, Texas A&M University-  
 Kingsville, Texas, USA; Department of Electrical Engineering  
 & Computer Science, Texas A&M University-Kingsville, Texas, USA
- 02:40 - 03:00pm: Fusion of Convolutional Neural Networks for Malware Detection  
 Yassine Belkhouche  
 Department of Computer Science, Missouri State University,  
 Springfield, Missouri, USA
- 03:00 - 03:20pm: Challenges and Opportunities Associated with Technology-Driven  
 Biomechanical Simulations  
 Zartasha Mustansar, Haider Ali, Lee Margetts, Saad Ahmad Khan,  
 Salma Sherbaz, Rehan Zafar Paracha  
 Department of Computational Engineering, School of Interdisciplinary  
 Engineering and Sciences, National University of Sciences and  
 Technology (NUST), Islamabad, Pakistan; Department of Mechanical  
 and Aerospace Engineering, University of Manchester, UK
- 03:20 - 03:40pm: FREE SLOT  
 03:40 - 04:00pm: FREE SLOT  
 04:00 - 04:20pm: FREE SLOT  
 04:20 - 04:40pm: FREE SLOT  
 04:40 - 05:00pm: FREE SLOT

<----- LOCATION: (Galleria Ballrooms D & E) ----->

**SESSION 23-IPCV: IMAGE PROCESSING, COMPUTER VISION, & PATTERN RECOGNITION + NOVEL APPLICATIONS IN HEALTH AND MEDICAL SCIENCE**

Chairs: Prof. Bahram Shafai\* and Jorge Juarez\*\*

\*Northeastern University, Boston, MA, USA

\*\* Astrophysics, Optics and Electronics National Institute, Mexico

July 28, 2022 (Thursday); 08:20am - 10:20am

(LOCATION: Galleria Ballrooms D & E)

- 08:20 - 08:40am: ERGOGENIUS: An Integrative Framework for Preventing Work-related Upper Limbs Musculoskeletal Disorders through Image Analysis Techniques  
Cedrick Bamba Nsimba, Elie Fiogbe, Reijane Salazar Costa  
Computing Department, Federal University of Sao Carlos, Sao Carlos, SP, Brazil; Physical Therapy Department, Federal University of Sao Carlos, Sao Carlos, SP, Brazil; Educational Department, Federal University of Sao Carlos, Sao Carlos, SP, Brazil
- 08:40 - 09:00am: Deep Learning Convolutional Neural Networks for Brain Tumour Segmentation: Enhanced Classification Loss Function (ECLF)  
Komal Grover, Abeer Alsadoon, Mahmoud Bekhit, Nada Alsallami, Ahmed Dawoud, Muhammad Siddiqi, Razwan Mohmed Salah  
School of Computing Mathematics and Engineering, Charles Sturt University, Australia; School of Computer Data and Mathematical Sciences, Western Sydney University, Australia; Kent Institute Australia, Sydney, Australia; Asia Pacific International College (APIC), Australia; Computer Science Department, Worcester State University, MA, USA; The University of Duhok, Duhok, KRG, Iraq
- 09:00 - 09:20am: Skin Tone Benchmark Dataset for Diabetic Foot Ulcers and Machine Learning to Discover the Salient Features  
Masrur Sobhan, Kacie Kalie, Abdullah Al Mamun, Anuradha Godavarty, Ananda Mohan Mondal  
Computing and Information Science, Florida International University, Miami, Florida, USA; Biomedical Engineering, Florida International University, Miami, Florida, USA
- 09:20 - 09:40am: A Kalman Filter Approach to Eye-tracking Cursor Control for a Wheelchair Interface  
Matthew Teague, Joseph Lynch, Nick Bacskai, Ethan Blodgett, Eleanett Perez Cervera, Bahram Shafai, Thomas Consi  
Department of Electrical & Computer Engineering, Northeastern University, Boston, Massachusetts, USA
- 09:40 - 10:00am: Optimizing Binary Similarity Measures for Pattern Classification and Regression  
Lewis Westfall, Teryn Cha, Sung-Hyuk Cha  
Computer Science Department, Pace University, New York, USA; Computer Sciences, Essex County College, Newark, New Jersey, USA
- 10:00 - 10:20am: Compressively Sensed Super-Resolution Magnetic Resonance Image Reconstruction Algorithm Using Convolutional Neural Networks  
Krzysztof Malczewski  
Faculty of Applied Informatics and Mathematics, Warsaw University of Life Sciences, Warsaw, Poland
- 10:20 - 10:40: **BREAK**  
(LOCATION: Lotus Ballrooms 2 & 3)

July 28

**SESSION 24-IPCV: IMAGE PROCESSING, COMPUTER VISION, & PATTERN RECOGNITION + NOVEL ALGORITHMS**

**Chair: Prof. Bahram Shafai**

**Northeastern University, Boston, MA, USA**

**July 28, 2022 (Thursday); 10:40am - 11:40am**

**(LOCATION: Galleria Ballrooms D & E)**

10:40 - 11:00am: Optimizing Minkowski Distance for Pattern Classification and Regression  
Lewis Westfall, Teryn Cha, Sung-Hyuk Cha  
Computer Science Department, Pace University, New York, USA;  
Computer Sciences, Essex County College, Newark, New Jersey, USA

11:00 - 11:20am: Pothole Detection from Dash Camera Images using YOLOv5  
Ashit Patel, Lei Huang, Gustavo Vejerano  
Department of Electrical and Computer Engineering,  
Loyola Marymount University, Los Angeles, California, USA

11:20 - 11:40am: Plant Leaf Disease Detection with Deep Learning  
Heng Wu, Purushothaman Natarajan, Padma Nimmakayala, Umesh Reddy, Rui Wang, Thanh Le  
Department of Mathematics and Computer Science, West Virginia State University, Institute, West Virginia, USA; Department of Biology, West Virginia State University, Institute, West Virginia, USA; College of Medicine, University of Florida, Jacksonville, Florida, USA; Business Information Technology, University of Economics Ho Chi Minh, Ho Chi Minh City, Vietnam

**SESSION 25-ESCS: EMBEDDED SYSTEMS, CYBER-PHYSICAL SYSTEMS, & APPLICATIONS**

**Chairs: Jonathan Price\* and Sohrab Mokhtari\*\***

**\*Air Force Institute of Technology, USA**

**\*\* Florida International University, USA**

**July 28, 2022 (Thursday); 11:40am - 12:20pm**

**(LOCATION: Galleria Ballrooms D & E)**

11:40 - 12:00pm: On the Inclusion of Heterogeneous Agents in Unmanned Vehicle Swarms - A Review  
Abhishek Phadke, F. Antonio Medrano, Stanislav Ustymenko, Tianxing Chu  
Texas A&M University-Corpus Christi, Corpus Christi, Texas, USA;  
Department of Computer science, Texas A&M University-Corpus Christi, Corpus Christi, Texas, USA;  
Conrad Blucher Institute of for Surveying and Science,  
Texas A&M University-Corpus Christi, Corpus Christi, Texas, USA

12:00 - 12:20pm: Detecting Code Injections in Noisy Environments Through EM Signal Analysis and SVD Denoising  
Ekaterina Miller, Georgios Michail Makrakis, Kurt A. Vedros, Constantinos Kolias, Craig Rieger, Daniel Barbara  
Department of Computer Science, University of Idaho, Idaho Falls, Idaho, USA;  
Idaho National Lab, Idaho Falls, Idaho, USA;  
George Mason University, Fairfax, Virginia, USA

12:20 - 01:00pm: LUNCH (On Your Own)

July 28

**SESSION 26-HIMS-ICOMP: HEALTH INFORMATICS & MEDICAL SYSTEMS & DEVICES**

**Chair: Ms. Nadia Khalique**

**Sultan Qaboos University, Oman**

**July 28, 2022 (Thursday); 01:00pm - 03:00pm**

**(LOCATION: Galleria Ballrooms D & E)**

01:00 - 01:20pm: Engineering Puzzles: Designing a Data Collection Device for Cognitive Assessment  
R. J. Guncheon, N. M. J. Hince, D. B. Stewart, L. Zhan, Marcia R. Friesen  
Electrical and Computer Engineering, University of Manitoba, Winnipeg, Canada

01:20 - 01:40pm: Blockchain-Enabled Virtual Healthcare Applications using Mobile Edge Computing  
Janet Light-Thompson, Colin LeMesurier  
Department of Computer Science, University of New Brunswick, Saint John, NB, Canada

01:40 - 02:00pm: Quality Criteria Analysis in Process Models Discovered for Breast Cancer Therapy  
Marie Bommersheim, Patrick Philipp  
Fraunhofer Institute of Optronics, System Technologies and Image Exploitation IOSB Karlsruhe, Germany

02:00 - 02:20pm: Mobile Applications as Complementary to Traditional ADR Reporting: Encouraging Citizenship Participation and Performing Longitudinal Studies  
Marzia Di Filippo, Alessandro Avellone, Michael Belingheri, Maria Emilia Paladino, Michele Augusto Riva, Antonella Zambon, Dario Pescini  
Department of Statistics and Quantitative Methods, University of Milano-Bicocca, Milan, Italy; School of Medicine and Surgery, University of Milano-Bicocca, Milan, Italy

02:20 - 02:40pm: Four Things People Should Know about Migraines  
Mohammad S. Parsa, Lukasz Golab  
University of Waterloo, Waterloo, Ontario, Canada

02:40 - 03:00pm: Accessible Education: Using Augmented Reality for Hearing-Impaired Students  
Uday Upreti, Wazahat Attar, Mostafa Radwan, Fay Zhong  
California State University, East Bay, California, USA

**03:00 - 03:20pm: BREAK & POSTERS**  
**July 28, 2022 (Thursday)**  
**(LOCATION: Lotus Ballrooms 2 & 3)**

0. An Efficient Transmission Method of WSN in the Common Duct  
Jongkyu Choi, Ki Young Lee  
Department of Information and Telecommunications Engineering, Incheon National University, Incheon, Republic of Korea
0. Utilizing Explainable AI for Lightweight Ranging on UWB-enabled Mobile Devices  
Ji-Woong Park, Young-Bae Ko  
Department of AI Convergence Network, Ajou University, Suwon, South Korea

- 0. PlantNet: Recognition of Plant Species using Deep Convolutional Network  
Sitara Afzal, Imran Ullah Khan, Jong Weon Lee  
Mixed Reality and Interaction Lab, Department of Software,  
Sejong University, Seoul, Republic of Korea
- 0. Terrain Generation for Specified RMS Roughness Values  
Jeremy Mange  
US Army, Ground Vehicle Systems Center,  
DEVCOM GVSC - Analytical Methods, Warren, Michigan, USA
- 0. Physics Informed Neural Network based NPP Simulation Methods  
Young Ho Chae, Jungjin Bang, Poong Hyun Seong  
Department of Nuclear and Quantum Engineering, Korea Advanced  
Institute of Science and Technology, Daejeon,  
Republic of Korea; Future and Challenge Tech. Co. Ltd.,  
Giheung-gu, Yongin-si, Gyeonggi-do, Republic of Korea
- 0. Modeling and Simulation Setup for Kinematics and Compliance Analysis  
Sara Boyle  
Development Command (DEVCOM) Ground Vehicle System Center (GVSC),  
Warren, Michigan, USA
- 0. Cooling Power Waste Evaluation Resulting from Malicious Thermal Measurements in Multicore Processors  
Michael Kausch, Andrew Ibrahim, Mostafa Abdelrehim  
California State University, Bakersfield, California, USA
- 0. ...

**SESSION 27-ICAI: ARTIFICIAL INTELLIGENCE + NOVEL ALGORITHMS AND APPLICATIONS**

**Chair: TBA**

**July 28, 2022 (Thursday); 03:20pm - 06:20pm**

**(LOCATION: Galleria Ballrooms D & E)**

- 03:20 - 03:40pm: Efficient IoT Attack Detection in the Fog Layer with Machine Learning  
Edna M. Chaar Santana, Jeffrey Duffany  
Polytechnic University of Puerto Rico, Puerto Rico;  
Ana G. Mendez University, Puerto Rico
- 03:40 - 04:00pm: UAV Swarm Intelligence Simulation  
Natalia S. Martinez Ojeda, Jeffrey L. Duffany  
Polytechnic University of Puerto Rico, Puerto Rico;  
Ana G. Mendez University, Puerto Rico
- 04:00 - 04:20pm: Feature Engineering on Accelerometer Data for Human Activity Recognition Systems  
Carla A. Varela-Rosa, Jeffrey L. Duffany  
Polytechnic University of Puerto Rico, Puerto Rico;  
Ana G. Mendez University, Puerto Rico
- 04:20 - 04:40pm: brainIT: A Generic IT Core Mechanism for Continuous Growth-Flow in Dynamic Chaotic Context  
Muhammed Akif Agca  
Computer Engineering Department TOBB University of Economics and Technology, TOBB ETU, Ankara, Turkiye Luxembourg Institute of Science and Technology / LIST, Esch-Sur-Alzette, Luxembourg

**July 28**

- 04:40 - 05:00pm: Quantifying the Increase of Vegetation Area along the Brink of the Taklamakan Desert with Deep Learning Model and Satellite Image  
Zhiyi Li, Dali Wang, Daniel Riccuito  
Department of Computer Science, Virginia Tech, Blacksburg, Virginia, USA; Environmental Sciences Division, Oak Ridge National Lab, Oak Ridge, Tennessee, USA
- 05:00 - 05:20pm: Deep Neural Networks Based Algorithm Using Compressed Sensing for Butter Price Forecasting  
Jaroslaw Malczewski  
WSB University Poznan, Poland
- 05:20 - 05:40pm: Hybrid Convolutional Neural Networks and Modified GARCH Model Based the European Union's Emissions Trading Scheme Prices Forecasting  
Krzysztof Malczewski, Zbigniew Krysiak, Adrian Markiewicz  
Institute of Information Technology, Warsaw University of Life Sciences, Warsaw, Poland; Department of Corporate Finance Management, Warsaw School of Economics, Warsaw, Poland; Faculty of Management and Security Studies, University of Social Sciences, Warsaw, Poland
- 05:40 - 06:00pm: FREE SLOT
- 06:00 - 06:20pm: FREE SLOT
- 06:20 - 06:40pm: **CLOSING REMARKS**  
Professor Emeritus Hamid R. Arabnia (Chair, Steering Committee & Coordinator), School of Computing, University of Georgia, USA  
(LOCATION: Galleria Ballrooms D & E)



**July 28**

**07:00a - 05:00p: REGISTRATION**  
**(LOCATION: Lotus Ballrooms 1; Registration Counter/Desk)**

**<----- LOCATION: (Galleria Ballroom A) ----->**

**SESSION 28-PDPTA-ICEQT: PARALLEL & DISTRIBUTED PROCESSING + EMERGENT  
QUANTUM TECHNOLOGIES**  
**Chairs: Dr. Pablo Rivas and Dr. Javier Orduz**  
**USA**  
**July 28, 2022 (Thursday); 08:20am - 10:20am**  
**(LOCATION: Galleria Ballroom A)**

**08:20 - 08:40am: A Cloud-Edge Compute Continuum Experimental Methodology  
Applied to a 5G Core Study**  
Samuel Rac, Rajarshi Sanyal, Mats Brorsson  
Interdisciplinary centre for Security, Reliability, and Trust,  
University of Luxembourg, Luxembourg;  
Proximus Luxembourg SA, Luxembourg

**08:40 - 09:00am: Billion Scale Tensors: Compression Methods and Parallel Computations**  
Sudhindra Gopal Krishna, Sridhar Radhakrishnan,  
Aditya Narasimhan, Richard Veras  
School of Computer Science, University of Oklahoma,  
Norman, Oklahoma, USA

**09:00 - 09:20am: Puzzles for Comparing Real-time Model Checkers**  
Mitchell L. Neilsen  
Department of Computer Science, Kansas State University,  
Manhattan, Kansas, USA

**09:20 - 09:40am: End-to-end Trusted Execution Environment (TEE) with Dynamic  
Holistic View Based Throughput Maximization Approach**  
Muhammed Akif Agca  
Computer Engineering Department TOBB University of Economics  
and Technology, TOBB ETU, Ankara, Turkiye Luxembourg Institute  
of Science and Technology / LIST, Esch-Sur-Alzette, Luxembourg

**09:40 - 10:00am: An Implementation of the Grover Unstructured Search Algorithm**  
Hugo J. Delgado-Martí, Alfredo Cruz  
Polytechnic University of Puerto Rico, Puerto Rico

**10:00 - 10:20am: FREE SLOT**

**10:20 - 10:40am: BREAK**  
**(LOCATION: Lotus Ballrooms 2 & 3)**

**SESSION 29-CSC-MSV-ICOMP: SCIENTIFIC COMPUTING + MODELING, SIMULATION  
& APPLICATIONS + AUGMENTED REALITY**

**Chair: Dr. William Dai**

**Senior Scientist, Los Alamos National Laboratory, USA**

**July 28, 2022 (Thursday); 10:40am - 12:20pm**

**(LOCATION: Galleria Ballroom A)**

- 10:40 - 11:00am: Developing Augmented Reality Based Learning Tools for Organic Chemistry  
Sankalp Kasale, Ashriel Waghmare, Tapasya Solu, Fay Zhong  
California State University East Bay, Hayward, California, USA
- 11:00 - 11:20am: Numerical Diffusion of Material in Numerical Simulations for Hydrodynamics  
William W. Dai, Jim M. Ferguson  
Los Alamos National Laboratory, Los Alamos, New Mexico, USA
- 11:20 - 11:40am: Tridiagonal Matrix Inversion on the GPU  
Peter Yoon  
Department of Computer Science, Trinity College,  
Hartford, Connecticut, USA
- 11:40 - 12:00pm: Validating an Agent-based Ecological Simulation of the Wolves and Moose of Isle Royale National Park  
Charles Eugene Knadler, Jr.  
Independent Researcher (formerly: IBM & Utah Valley University),  
Alpine, Utah, USA
- 12:00 - 12:20pm: A Tele-Monitoring of Chronic Heart Failure Patients using Wireless Body Area Networks: Data Transmission Time, Throughput and Reliability  
Ajay Thapa, Abeer Alsadoon, Muhammad Siddiqi, Benoy Varghese, Fatima Furqan, MD Rafiqul Islam, Shahad Ahmed, Shayma Ismail Ali  
Charles Sturt University, Australia; Western Sydney University, Australia; Kent Institute Australia, Australia; Asia Pacific International College, Australia; University of Duhok, KRG, Iraq
- 12:20 - 01:00pm: **LUNCH (On Your Own)**

**SESSION 30-FCS-FECS-SAM: SOFTWARE DEFINED NETWORKING + FOUNDATIONS OF COMPUTER  
SCIENCE + FRONTIERS IN CS & CE EDUCATION + STEM**

**Chair: TBA**

**July 28, 2022 (Thursday); 01:00pm - 03:00pm**

**(LOCATION: Galleria Ballroom A)**

- 01:00 - 01:20pm: Leveraging Software Defined Perimeter (SDP), Software Defined Networking (SDN), and Virtualization to Build a Zero Trust Testbed with Limited Resources  
Dwight Horne  
AT&T Center for Virtualization, Southern Methodist University,  
Dallas, Texas, USA
- 01:20 - 01:40pm: Partial Mirror Matrices and Symmetric Boolean Functions  
Peter M. Maurer  
Department of Computer Science, Baylor University, Waco, Texas, USA

- 01:40 - 02:00pm: Two New Exotic Symmetry Classes  
Peter M. Maurer  
Department of Computer Science, Baylor University, Waco, Texas, USA
- 02:00 - 02:20pm: Approximate Sorting and Sequence Analysis  
Aditya Narasimhan, Sridhar Radhakrishnan, C. R. Subramanian  
School of Computer Science, University of Oklahoma, Norman, Oklahoma, USA; The Institute of Mathematical Sciences, HBNI, Taramani, Chennai, India
- 02:20 - 02:40pm: The SPORT-C Intervention: An Integration of Sports, Case-Based Pedagogy and Systems Thinking Learning  
Jeffrey Basoah, William Scherer  
University of Virginia, Charlottesville, Virginia, USA
- 02:40 - 03:00pm: Detection and Classification of Dropout Behavior  
T. Duron, L. Gallon, P. Aniorte  
Universite de Pau et des Pays de l'Adour, LIUPPA, Mont de Marsan, France
- 03:00 - 03:20pm: **BREAK & POSTERS**  
**July 28, 2022 (Thursday)**  
**(LOCATION: Lotus Ballrooms 2 & 3)**
- 0. An Efficient Transmission Method of WSN in the Common Duct  
Jongkyu Choi, Ki Young Lee  
Department of Information and Telecommunications Engineering, Incheon National University, Incheon, Republic of Korea
  - 0. Utilizing Explainable AI for Lightweight Ranging on UWB-enabled Mobile Devices  
Ji-Woong Park, Young-Bae Ko  
Department of AI Convergence Network, Ajou University, Suwon, South Korea
  - 0. PlantNet: Recognition of Plant Species using Deep Convolutional Network  
Sitara Afzal, Imran Ullah Khan, Jong Weon Lee  
Mixed Reality and Interaction Lab, Department of Software, Sejong University, Seoul, Republic of Korea
  - 0. Terrain Generation for Specified RMS Roughness Values  
Jeremy Mange  
US Army, Ground Vehicle Systems Center, DEVCOM GVSC - Analytical Methods, Warren, Michigan, USA
  - 0. Physics Informed Neural Network based NPP Simulation Methods  
Young Ho Chae, Jungjin Bang, Poong Hyun Seong  
Department of Nuclear and Quantum Engineering, Korea Advanced Institute of Science and Technology, Daejeon, Republic of Korea; Future and Challenge Tech. Co. Ltd., Giheung-gu, Yongin-si, Gyeonggi-do, Republic of Korea
  - 0. Modeling and Simulation Setup for Kinematics and Compliance Analysis  
Sara Boyle  
Development Command (DEVCOM) Ground Vehicle System Center (GVSC), Warren, Michigan, USA

- O. Cooling Power Waste Evaluation Resulting from Malicious Thermal Measurements in Multicore Processors  
Michael Kausch, Andrew Ibrahim, Mostafa Abdelrehim  
California State University, Bakersfield, California, USA

O. ...

**SESSION 31-ICOMP-SAM-ICAI-ICDATA:**

**INTERNET COMPUTING & IOT + AI + DATA SCIENCE + SECURITY & MANAGEMENT**

**Chair: TBA**

**July 28, 2022 (Thursday); 03:20pm - 06:20pm**

**(LOCATION: Galleria Ballroom A)**

- 03:20 - 03:40pm: DRL-Driven Self Driving Network: Toward Optimized and Reinforced Forwarding Policies  
Talha Ahmed Khan, Afaq Muhammad, Wang-Cheol Song  
Department of Computer Engineering, Jeju National University, Jeju, Republic of Korea
- 03:40 - 04:00pm: OpenLabel: An Open-Source Media Labeling Web Browser Extension  
Jason VanTol, Maxim Nikitin, Noah Helzerman, Mark Allison, Matthew Spradling  
Computer Science and Information Systems, University of Michigan-Flint, Michigan, USA
- 04:00 - 04:20pm: IoT, from Collection, to Data Processing, Edge Computing, to Smart Applications  
Hassan Rajaei  
Computer Science Department, Bowling Green State University, Bowling Green, Ohio, USA
- 04:20 - 04:40pm: Monitoring Integrity of IoT Network Topography using a Blockchain Network  
Naresh Adhikari, Mahalingam Ramkumar  
Department of Computer Science, Slippery Rock University of Pennsylvania, Slippery Rock, Pennsylvania, USA;  
Department of Computer Science, Mississippi State University, Mississippi, USA
- 04:40 - 05:00pm: A Comparative Study of the Various Key Bit Sizes on RSA Algorithm with CUDA  
Kwame Assa-Agyei, Funminiyi Olajide, Temitope Alade, Ahmad Lotfi  
Nottingham Trent University Nottingham, United Kingdom (UK)
- 05:00 - 05:20pm: Improved Sample Type Identification for Multi-Class Imbalanced Classification with Real-World Applications  
Jiawen Kong, Wojtek Kowalczyk, Kees Jonker, Stefan Menzel, and Thomas Baeck  
Leiden University, Leiden, Netherlands

**July 28**

- 05:20 - 05:40pm: Knowledge Transfer in e-Learning on Student Performance in Higher Education  
Abeer Alsadoon, Gregory Crease, Srujal Patel  
Kent Institute Australia, Sydney, Australia
- 05:40 - 06:00pm: Detection of Virus Integration Sites in Tumor Genomes Using Deep Convolutional Neural Networks  
Vibhuti Gupta, Emirrah Sanders  
School of Applied Computational Sciences, Meharry Medical College, Nashville, Tennessee, USA; School of Graduate Studies and Research, Meharry Medical College, Nashville, Tennessee, USA
- 06:00 - 06:20pm: FREE SLOT
- 06:20 - 06:40pm: **CLOSING REMARKS**  
Professor Emeritus Hamid R. Arabnia (Chair, Steering Committee & Coordinator), School of Computing, University of Georgia, USA  
(LOCATION: Galleria Ballrooms D & E)

**LIST OF OTHER PAPERS & POSTERS (OPTIONS 0, 3, or NR):**

Due to challenges with the Coronavirus pandemic, authors and speakers were given the following options:

**OPTION 0:** Not presenting;

**OPTION 1:** Presenting the paper on site at the congress.

**OPTION 2:** Presenting the paper remotely: using Zoom (interactive).

**OPTION 3:** Presenting the paper remotely (non-interactive).

The link to these pre-recorded presentations will later be included in the "Book of Abstracts" and will be made available on the CSCE 2022 web site at ( <https://american-cse.org/csce2022/> ).

The list that appears below includes all those papers and posters whose authors selected OPTION 0, OPTION 3, or did "Not Report" their OPTION selections.

**The 6th International Conference on Applied Cognitive Computing  
(ACC'22: July 25-28, 2022, USA)  
<https://american-cse.org/csce2022/conferences-ACC>**

- 0. Classification Method and its Effective Use for Web Advertisements Based on Pupil Fluctuations  
Ryuta Yamashita, Tadaaki Shimizu, Natsuki Yoshinaka  
Graduate School of Engineering, Tottori University, Tottori, Japan;  
Cross-informatics Research Center, Tottori University, Tottori, Japan;  
Department of Engineering, Graduate School of Sustainability Science,  
Tottori University, Tottori, Japan
- 0. DGAN: A Novel Dynamic Graph Attention Networks for Accurately Traffic Prediction  
Renyi Chen, Huaxiong Yao  
Central China Normal University, Hubei, P. R. China
- 0. Creating the Dictionary of Abstract Nouns: A Comparison with Machine Ranking Data  
Yulia A. Volskaya  
Kazan Federal University, Kazan, Russian Federation

**The 23rd International Conference on Bioinformatics &  
Computational Biology  
(BIOCOMP'22: July 25-28, 2022, USA)  
<https://american-cse.org/csce2022/conferences-BIOCOMP>**

- 0. Efficient Prediction of Tumor Gene Association using Machine Learning and Statistical Methods  
Surabhi Mishra, Abhishek Garain, Mahua Bhattacharya  
Department of Information Technology, ABV-Indian Institute of Information Technology and Management, Gwalior, India
- 0. Two-level Classification of Mental Stress Using DenseNet  
Yu-Hung Tsai, Sheng-Kuang Wu, Shyr-Shen Yu, Meng-Hsiun Tsai  
Department of Computer Science and Engineering, National Chung Hsing University, Taichung City, Taiwan; Department of Sport Performance, National Taiwan University of Sport, Taichung City, Taiwan; Department of Management Information Systems, National Chung Hsing University, Taichung City, Taiwan

**The 8th International Conference on Biomedical  
Engineering & Sciences  
(BIOENG'22: July 25-28, 2022, USA)  
<https://american-cse.org/csce2022/conferences-BIOENG>**

- 0. Deep Learning-Based MR Image Re-parameterization  
Abhijeet Narang, Abhigyan Raj, Mihaela Pop, Mehran Ebrahimi  
Indian Institute of Technology (ISM), Dhanbad, India;  
Sunnybrook Research Institute, Toronto, Ontario, Canada;  
Faculty of Science, Ontario Tech University, Oshawa, Ontario, Canada
- 0. An Experimental Comparison of Voxel Processing Algorithms for Automatic Cephalometric Landmarking on CBCT Volumes  
Jesus Montufar Trujillo, Ernesto Hernandez Rosales, Rogelio J. Scougall-Vilchis  
Universidad Politecnica de Oztolotepec, Mexico;  
Universidad Autonoma del Estado de Mexico, Mexico

**The 20th International Conference on Scientific Computing  
(CSC'22: July 25-28, 2022, USA)  
<https://american-cse.org/csce2022/conferences-CSC>**

- 0. Maximum Match Subsequence Alignment Algorithm - Finely Grained (MMSAA - FG)  
Bharath Reddy, Richard Fields  
Process Automation R&D, Schneider-Electric, Lake Forest, California, USA
- 0. Analysis of all Local Pairwise Sequence Alignment Algorithms  
Bharath Reddy, Richard Fields  
Process Automation R&D, Schneider-Electric, Lake Forest, California, USA
- 0. Photogrammetry Software  
Daniel L. Bowen, Tina V. Johnson, Catherine V. Stringfellow  
Department of Computer Science, Midwestern State University Texas,  
Wichita Falls, Texas, USA

- 0. On Customizing Activation Functions in Neural Networks  
Fuchang Gao, Boyu Zhang  
Department of Mathematics and Statistical Science, University of Idaho,  
Idaho, USA; Institute for Modeling Collaboration and Innovation,  
University of Idaho, Idaho, USA
- 0. Transmission Range Test for a LoRa-based in-situ Water Assessment System  
in the Vaal Region  
Christian N. Ejike, Tebello Mathaba, George Ochieng, Marcel O. Odhiambo  
Department of Electrical Engineering, Vaal University of Technology,  
Vanderbijlpark, South Africa; Postgraduate School of Engineering Management,  
University of Johannesburg, South Africa; Faculty of Engineering,  
Mangosuthu University of Technology, Durban, South Africa
- 0. Antecedents of Performative Action from Social Media Exchanges  
Michael D. Workman, Michael Councilman  
Thomas School of Business, University of North Carolina at Pembroke,  
North Carolina, USA
- 0. How to Extend the Abstraction Refinement Model for Systems with Emergent  
Behavior?  
Mohamed Toufik Ailane, Christoph Knieke, Andreas Rausch  
Clausthal University of Technology, Institute for Software and Systems  
Engineering, Clausthal-Zellerfeld, Germany
- 0. Behavioral Player Rating in Competitive Online Shooter Games  
Arman Dehpanah, Muheeb Faizan Ghorri, Jonathan Gemmell, Bamshad Mobasher  
School of Computing, DePaul University, Chicago, Illinois, USA
- 0. ARIMA Model Analysis for Portfolio Selection  
Pei-Chun Lin, Nureize Arbaiy, Shamshul Bahar Yaakob, Qu-Kai Lin, Ching-Hung Chiu  
Department of Information Engineering and Computer Science, Feng Chia University,  
Taichung, Taiwan; Faculty of Computer Science and Information Technology,  
Universiti Tun Hussein Onn Malaysia, Batu Pahat, Malaysia; Fakulti Teknologi  
Kejuruteraan Elektrik, Universiti Malaysia Perlis, Perlis, Malaysia
- 0. Differentially Private Synthetic Health Data  
Joseph Pedersen, Kristin P. Bennett  
Rensselaer Polytechnic Institute, Troy, New York, USA
- 0. Ae<sup>2</sup>I: A Double Autoencoder for Imputation of Missing Values  
Fuchang Gao  
Department of Mathematics and Statistical Science, University of Idaho,  
Moscow, Idaho, USA
- 0. Network Connectivity Knowledge Graph using DWave Quantum Hybrid Solvers  
Nivedha Rajaram  
UST-GLOBAL, USA
- 0. The New Clustering Organization Enabling Fast Search of High Dimensional Big Data  
Zohreh Safari, Yu Zhuang  
Department of Computer Science, Texas Tech University, Lubbock, Texas, USA



**The 21st International Conference on e-Learning,  
e-Business, Enterprise Information Systems, & e-Government  
(EEE'22: July 25-28, 2022, USA)  
<https://american-cse.org/csce2022/conferences-EEE>**

- 0. Determinants of Behavioral Intention to e-Learning during the COVID-19:  
System Factors and Risk Perception  
Hyeon Jo  
Department of Strategic Planning, RealSecu, Busan, South Korea
- 0. Automatic Dynamic and Adaptive Playout of Competency-Based Learning Units Based  
on Data in Learners' Competency and Qualification Profile  
Ramona Srbecky, Michael Winterhagen, Andre Hedderoth, Ivo Ochsendorf,  
Felix Fischman, Matthias Then, Benjamin Wallenborn, Binh Vu, Wieland Fraas,  
Jan Dettmers, Matthias Hemmje  
Department of Multimedia & Internet Applications, FernUniversität Hagen, Germany;  
New York Institute of Technology, USA; Department of Work and Organizational  
Psychology, FernUniversität Hagen, Germany;  
Zentrum für Digitalisierung und IT (ZDI), FernUniversität Hagen, Germany
- 0. A Study on Commerce Channel Characteristics and Strategies: Focus on Domestic  
Department Stores in Korea  
Chan Uk Jung, Hyeon Jo, Won Jun Lee  
SKK Business School, SungKyunKwan University, Seoul, Republic of Korea;  
RealSecu Inc., Busan, Republic of Korea
- 0. 5GD2Chain: A Blockchain Marketplace Direct to Consumer  
Sergio Luis Ribeiro, Ingrid Alves de Paiva Barbosa,  
Suzana Cristina Pereira de Oliveira  
Security and Privacy, CPQD, Campinas, Brazil
- 0. Mobile Report Card GUI Design Strategy to Improve the Achievement Goal  
Song-Hee Kang  
Hanyang University, South Korea
- 0. A Systematic Review on Mobile Application Accessibility for Low Vision Learners  
Sobihatun Nur Abdul Salam, Nur Amirah, Nurulnadwan  
School of Multimedia Technology and Communication, Universiti Utara Malaysia,  
Malaysia; Pusat Internet Kg Tala, Kampung Tala, Jeneri, Sik, Kedah, Malaysia;  
Faculty of Business & Management, Universiti Teknologi MARA (UiTM) Terengganu,  
Malaysia
- 0. Types of Crowdsourcing and their Characteristics  
Hodaka Nakanishi, Yuko Syozugawa  
Teikyo University, Itabashi-ku, Tokyo, Japan;  
Tokoha University, Shizuoka-Shi, Shizuoka, Japan
- 0. Supply Chain Risk Management for Dining Restaurants During the COVID-19 Pandemic  
Yu Luo  
Management Information System of Lerner College of Business and Economics,  
University of Delaware, Newark, Delaware, USA

**The 20th International Conference on Embedded Systems,  
Cyber-physical Systems, & Applications  
(ECS'22: July 25-28, 2022, USA)  
<https://american-cse.org/csce2022/conferences-ECS>**

- 0. Side Channel Attacks Based on Convolutional Neural Network with Inception Module  
Feng Ni, Junnian Wang, Fanliang Hu, Wan Wang  
School of Physics and Electronic Science, Hunan University of Science and Technology, Xiangtan, P. R. China
- 0. EverGreen - An Off-Grid Automated Vertical Farming: Design, Development, and Lessons Learned  
Bahram Asiabanpour  
Ingram School of Engineering, Texas State University, San Marcos, Texas, USA
- 0. Initial Study of the Effectiveness by Using Coral USB Accelerator to Accelerate Goal Recognition on CanSat  
Miho Akiyama, Hiroshi Ninomiya, Takuya Saito  
Graduate School of Electrical and Information Engineering, Shonan Institute of Technology, Fujisawa, Japan; Department of Information Science, Faculty of Engineering, Shonan Institute of Technology, Fujisawa, Japan; Department of Informatics, Faculty of Informatics, Tokyo University of Information Science, Chiba, Japan

**The 18th International Conference on Foundations  
of Computer Science  
(FCS'22: July 25-28, 2022, USA)  
<https://american-cse.org/csce2022/conferences-FCS>**

- 0. On the Most Popular Package Design  
Yangjun Chen, Bobin Chen  
Department of Applied Computer Science, University of Winnipeg, Canada

**The 18th International Conference on Frontiers in  
Education: Computer Science & Computer Engineering  
(FECS'22: July 25-28, 2022, USA)  
<https://american-cse.org/csce2022/conferences-FECS>**

- 0. Multiple Fault Diagnosis in Digital Circuits using Critical Path Tracing and Enhanced Deduction Algorithm  
Mohamed Mahmoud, Hussain Al-Asaad  
Department of Electrical and Computer Engineering,  
University of California Davis, California, USA
- 0. Undergraduate Research Experience in Internet of Things and its Impact on Academic Experience  
Hassan Salmani, Mohsen Mosleh  
Department of Electrical Engineering and Computer Science, Howard University, Washington, DC, USA; Department of Mechanical Engineering,  
Howard University, Washington, DC, USA

- 0. Do Students Perceive the Benefits of e-Learning Higher When They Feel Mentally Challenged?  
Hyeon Jo  
Department of Strategic Planning, RealSecu, Busan, South Korea
- 0. A Top-Down Approach for Teaching Programming Language - Teaching Python via an Open-Source ERP Framework  
Ning Chen  
Department of Computer Science, California State University, Fullerton, California, USA
- 0. A Cross-Discipline Capstone Project Experience  
Li Yang  
Department of Computing and Mathematics, University of West Georgia, Carrollton, Georgia, USA
- 0. Team-Based Online Learning in Multidisciplinary Research and Instruction  
Matthias K. Gobbert, Jianwu Wang  
Department of Mathematics and Statistics, University of Maryland, Baltimore County, Maryland, USA; Department of Information Systems, University of Maryland, Baltimore County, Maryland, USA
- 0. A Study on the Utilization of Mobile Education System to Improve the Achievement Goal  
Song-Hee Kang  
Hanyang University, South Korea
- 0. Critical Factors for Recruiting Women in Computer Science in the US Virgin Islands and Beyond  
Michael T. Francois, Rebecca Hoffart, Marc Boumedine  
University of the Virgin Islands, St. Thomas, Virgin Islands, USA
- 0. Teaching Parallel Computing to a Lower-Level Programming Course  
Xiaoyuan Suo  
Department of Math and Computer Science, Webster University, USA
- 0. For Process-Oriented Evaluation - A Comparative Study on the Education Evaluation System  
Song-Hee Kang  
Hanyang University, Republic of Korea
- 0. Integrating Mobile App Development in Computing Education: Our Experience  
Weidong Liao, Osman Guzide  
Department of Computer Science, Mathematics and Engineering, College of STEM, Shepherd University, Shepherdstown, West Virginia, USA
- 0. Obsolescence of Computer Science Education  
Joel Weymouth, Ramesh K. Karne  
Computer and Information Sciences, Towson University, Towson, Maryland, USA

**The 18th International Conference on Grid, Cloud,  
& Cluster Computing  
(GCC'22: July 25-28, 2022, USA)  
<https://american-cse.org/csce2022/conferences-GCC>**

- 0. Cloud-native RStudio on Kubernetes for Hopsworks  
Gibson Chikafa, Sina Sheikholeslami, Salman Niazi, Jim Dowling,  
Vladimir Vlassov  
Hopsworks AB, Stockholm, Sweden;  
KTH Royal Institute of Technology, Stockholm, Sweden

**The 8th International Conference on Health Informatics  
& Medical Systems  
(HIMS'22: July 25-28, 2022, USA)  
<https://www.himscsce.org/hims22>  
<https://american-cse.org/csce2022/>**

- 0. Recent Applications of Deep Learning in Health Informatics: A Review  
Farzan Shenavarmasouleh, Farid Ghareh Mohammadi, Khaled M. Rasheed,  
Hamid R. Arabnia  
School of Computing, University of Georgia, USA;  
Institute of Artificial Intelligence, University of Georgia, USA
- 0. Design and Developing an Accurate and Low-Cost Automated Reader System for  
Rapid HIV Testing Kits  
Ali Elkateeb  
Electrical and Computer Engineering, University of Michigan, Michigan, USA
- 0. Introduction of Heart Rate Measurement by Facial Video to Hugging-Type System  
Wang Chao, Takehiko Ogawa, Ho Yihsin, Jun Hasegawa, Naoki Oshima  
Mechanical and Electronic Systems Engineering Course, Takushoku University,  
Tokyo, Japan; Department of Electronics and Computer Systems, Takushoku  
University, Tokyo, Japan;  
Department of Design, Takushoku University, Tokyo, Japan
- 0. Development of Tracking System for Welfare Facility Using iBeacon  
Kenichi Takahashi, Takao Kawamura  
Graduate School of Sustainability Science, Cross-informatics Research Center,  
Tottori University, Tottori, Japan
- 0. Self-Monitoring Diabetic Lungs Pre and Post Physical Activity Through Deep  
Learning/AI Techniques  
Hoda Salsabili, Miad Faezipour  
School of Engineering Technology, Electrical and Computer Engineering  
Technology, Digital/Biomedical Embedded Systems and Technology (D-BEST) Lab,  
Purdue University, West Lafayette, Indiana, USA
- 0. A Fusion of Transformers for Automatic Interpretation of Biomedical Images in  
Scientific Literature  
Md Mahmudur Rahman, Oyebisi F. Layode  
Computer Science Department, Morgan State University, Baltimore, Maryland, USA

- 0. Machine Learning Applied to the Analysis of Information on Infectious Diseases Type Covid-19 in the Mlabnarino Project  
Colombia Sixto Enrique Campaña Bastidas, Ana Isabel Vallejo,  
Rigoberto Roberto Rosero  
Universidad Nacional Abierta y a Distancia - UNAD, Colombia;  
Hospital Universitario Departamental de Narino - HUDN, Colombia

**The 24th International Conference on Artificial Intelligence  
(ICAI'22: July 25-28, 2022, USA)  
<https://american-cse.org/csce2022/conferences-ICAI>**

- 0. An Automated Deduction of the Halting Problem  
Jack K. Horner  
Independent Researcher, Lawrence, Kansas, USA
- 0. An Automated Equational Logic Derivation of "I avoid kangaroos" in Lewis Carroll's Symbolic Logic  
Jack K. Horner  
Independent Researcher, Lawrence, Kansas, USA
- 0. A Novel CNN for Low-Grade Gliomas Classification On MRI  
Jun Liu, Wenbin Zhang, Geng Yuan, Xue Lin, Xiaolin Xu, Yanzhi Wang  
Robotics Institute, School of Computer Science, Carnegie Mellon University,  
Pittsburgh, PA, USA; Heinz College, Carnegie Mellon University, Pittsburgh,  
PA, USA; Department of Electrical & Computer Engineering, College of Engineering,  
Northeastern University, Boston, Massachusetts, USA
- 0. Reservoir Computing and Echo State Networks: Heuristics for Architecture, Parameters, and Initialization  
B. Weborg, G. Serpen, R. A. M. Arnest  
Electrical Engineering & Computer Science Department, University of Toledo,  
Toledo, Ohio, USA;  
National Aeronautics and Space Administration (NASA), USA
- 0. Effects of Technology Acceptance Factors on Satisfaction with Virtual Personal Assistants  
Hyeon Jo  
Department of Strategic Planning, RealSecu, Busan, Republic of Korea
- 0. Comparing Recurrent Neural Network Types in a Music Genre Classification Task: Gated Recurrent Unit Superiority Using The GTZAN Dataset  
Eric Odle, Taukir Alam, Pei-Chun Lin, Amin Farjudian  
Faculty of Information Engineering and Computer Science,  
Feng Chia University, Taiwan;  
School of Computer Science, University of Nottingham, Ningbo P. R. China
- 0. Research on Intelligent Classification of Aggregate Based on Graph-based Image Segmentation  
Weimin Qian, Caichao Zou, Jingen Yao, Renlei Liao, Xi Peng, Yanchao Wu,  
Haodong Zhan  
Huzhou Xinkaiyuan Crushed Stones Co., Ltd, Huzhou, P. R. China;  
School of Information Engineering, HuZhou University, Huzhou, P. R. China;  
Zhejiang Province Key Laboratory of Smart Management & Application of  
Modern Agricultural Resources, Huzhou, P. R. China

- 0. Optimism vs Skepticism in the Use of Intelligent Personal Assistant (IPA)  
Hyeon Jo  
Department of Strategic Planning, RealSecu, Busan, South Korea
- 0. Exploring the Irish Healthcare: Identifying Needs for Services by Decision Tree Modelling  
Anatoli Nachev  
Business Information Systems, J.E. Cairnes School of Business & Economics, National University of Ireland, Galway, Ireland
- 0. Emotion Contagion by Geospatial Event Detection  
Harshini Dutt Kuditipudi, Devinder Kaur  
EEES Department, University of Toledo, USA
- 0. Proposal for a System to Automatically Create the Plot of a Novel and a Discussion of the Elements of Humanistic Writing  
Misako Imono, Seiji Tsuchiya, Hirokazu Watabe  
Department of Information Systems, Daido University, Nagoya, Japan;  
Department of Intelligent Information Engineering and Science, Doshisha University, Kyotanabe, Kyoto, Japan
- 0. Empirical Robustness Analysis of Learning to Incentivize Other Self-Interested Agents  
Bengisu Guresti, Abdullah Vanlioglu, Nazim Kemal Ure  
Istanbul Technical University, Sariyer Istanbul, Turkey
- 0. A Collaborative Approach to Robocup Rescue Challenge  
Abhijot Bedi, Shelley Zhang, Eugene Chabot  
Computer and Information Science, University of Massachusetts Dartmouth, North Dartmouth, Massachusetts, USA;  
US Naval Undersea Warfare Center (NUWC), Division Newport, RI, USA
- 0. Machine Learning-based Cyber Threat Anomaly Detection in Virtualized Application Processes  
Jayesh Soni, Nagarajan Prabakar, Himanshu Upadhyay, Leonel Lagos  
Knight School of Computing and Information Sciences, Florida International University, Miami, Florida, USA; Applied Research Center, Florida International University, Miami, Florida, USA
- 0. Posture Estimation of Hugging-Type System by Motion Sensor Using Quaternion Neural Network  
Chao Wang, Takehiko Ogawa  
Mechanical and Electronic Systems Engineering Course, Takushoku University, Tokyo, Japan; Department of Electronics and Computer Systems, Takushoku University, Tokyo, Japan
- 0. Semantic Enrichment of XAI Explanations for Healthcare  
Luca Corbucci, Anna Monreale, Cecilia Panigutti, Michela Natilli, Simona Smiraglio, Dino Pedreschi  
Department of Computer Science, University of Pisa, Pisa, Italy; ISTI-CNR Pisa, Italy
- 0. Evolutionary Algorithms for Automated Federated Learning  
M. Hadi Amini, Ahmed Imteaj, Yasaman Saadati, Farid Ghareh Mohammadi  
Knight Foundation School of Computing and Information Sciences, Florida International University, Miami, Florida, USA;  
Sustainability, Optimization, and Learning for InterDependent networks laboratory (solid lab), Florida International University, Miami, Florida, USA;  
School of Computing, University of Georgia, USA

- 0. Non-Atomicity Detection of Natural Language Requirements Based on Transfer Learning  
Shaobin Li, Yihan Cai, Qinggu Li, Bo Wang, Xinggong Yang, Weidong Yang  
Data Science Research Institute, City University of Macau, Macau, P. R. China;  
School of Computer Science, Fudan University, Shanghai, P. R. China;  
Big Data Centers Gree Electric Appliances, Inc. of Zhuhai, Zhuhai, P. R. China
- 0. Considering the Story Generation Method Using Coloring Techniques Included in a Story  
Jumpei Ono, Takashi Ogata  
Faculty of Software & Information Technology, Aomori University, Tokyo, Japan;  
Faculty of Software & Information Science, Iwate Prefectural University, Japan
- 0. Approach to the Narrative Transformation Through Cultural Love and Sex Knowledge  
Takashi Ogata  
Faculty of Software and Information Science, Iwate Prefectural University, Japan
- 0. Enhanced Dengue Outbreak Prediction in Tamilnadu using Meteorological and Entomological Data  
Varalakshmi M, Daphne Lopez  
VIT Vellore, TamilNadu, India

**XXII Technical Session on Applications of Advanced AI Techniques  
to Information Management for Solving Company-Related Problems  
Co-Chairs: Dr. David de la Fuente and Dr. Jose A. Olivas  
University of Oviedo, Spain; University of Castilla - La Mancha, Spain**

- 0. Solving Rescheduling Problems in Dynamic Permutation Flow-Shop Environments with Genetic Algorithm  
P. Valledor, A. Gomez, J. Puente, J. Parreno  
Escuela Politecnica de Ingenieria Gijon, Campus de Viesques s/n,  
Gijon (Asturias), Spain
- 0. Industry 4.0 as a Driver of Financial and Non-financial Performance  
OAL. Garcia, I. Fernandez, R. Pino, B. Ponte  
Escuela Politecnica de Ingenieria Gijon, Campus de Viesques s/n,  
Gijon (Asturias), Spain

**Session: Innovation Technology and Theory for Metaverse Transformation  
Chairs: Prof. Young-Ae Jung and Prof. Charlie (Seungmin) Rho  
Sunmoon University, Asan, Republic of Korea  
Sejong University, Gwangjin-gu, Seoul, Republic of Korea**

- 0. Blockchain-Based Regional Energy Internet Information Transmission Model  
Junho Kim, Mucheol Kim  
School of Computer Science and Engineering, Chung-Ang University, Seoul, Korea
- 0. Deep Learning based Effective Energy Prediction Model in HPC  
Hyunwook Yu, Mincheol Shin, Mucheol Kim  
School of Computer Science and Engineering, Chung-Ang University, Seoul, Korea
- 0. Research on the Structure of a Development Environment Corresponding to the Color Reproduction Pipeline of the Headset Display for Virtual Reality  
Hyun Suh Kim, Jung Yoon Kim  
School of Photography and Video, Kyung-il University, Gyeongsan, Korea;  
Graduate School of Game, Gachon University, Seongnam, Korea

- 0. Adaptive Data Management based on Data Usage Pattern for Large-scale Distributed Storage System on WAN  
Jaehwan Lee, Kyoungchan Kim, Sangoh Park  
School of Computer Science and Engineering, Chung-Ang University,  
Dongjak-gu, Seoul, Korea
- 0. A Survey on Fault Tolerance Architectures in Cloud Systems  
Mingyu Jo, Sangoh Park  
School of Computer Science and Engineering, Chung-Ang University,  
Dongjak-gu, Seoul, Korea
- 0. A Video-based Person Re-identification Using an Optimized-Deep Learning Model and Pseudo Labeling  
Eliza Batoool, Muazzam Maqsood, Maryam Bukhari, Seungmin Rho  
Department of Computer Science, COMSATS University Islamabad, Attock Campus, Pakistan; Department of Industrial Security, Chung-Ang University,  
Seoul, South Korea
- 0. Crawling Analysis of Industrial Technology Leakage in the Darknet  
Youngjae Kong, Hangbae Chang  
Department of Security Convergence, Graduate School, Chung-Ang University;  
Department of Industrial Security, Chung-Ang University, Seoul, South Korea
- 0. Efficient Security-level Text Classification Method with Small Imbalanced Dataset Using RNN Model  
Yuna Han, Hangbae Chang  
Department of Convergence Security, College of Business and Economics,  
Chung-Ang University, Seoul, South Korea;  
Department of Industrial Security, Chung-Ang University, Seoul, South Korea
- 0. A Case Study on the Industrial Security Expert Education  
Harang Yu, Hangbae Chang  
Department of Convergence Security, College of Business and Economics,  
Chung-Ang University, Seoul, South Korea;  
Department of Industrial Security, Chung-Ang University, Seoul, South Korea
- 0. Research on Security Management Strategies of Core Technology Leakage due to Brain Drain  
Yurim Choi, Hangbae Chang  
Department of Convergence Security, College of Business and Economics,  
Chung-Ang University, Seoul, South Korea;  
Department of Industrial Security, Chung-Ang University, Seoul, South Korea
- 0. A Study on Estimation of Spatial Structure Using Hole Restoration of Indoor Floor Point Cloud  
Jaeseok Yoo, Jeongha Lee, Sanghyun Seo  
Graduate School of Advanced Imaging Sciences, Multimedia and Film,  
Chung-Ang University, Seoul, South Korea; School of Computer Art,  
Chung-Ang University, Anseong, South Korea;  
College of Art & Technology, Chung-Ang University, Anseong, South Korea
- 0. Irregular Quadrilateral Region Tracking using ARIMA for Dynamic Projection Mapping  
Bumsoo Kim, Changhun Jung, Yonghoon Jung, Sanghyun Seo  
School of Computer Art, Chung-Ang University, Anseong, South Korea;  
Graduate School of Advanced Imaging Sciences, Multimedia and Film,  
Chung-Ang University, Seoul, South Korea;  
College of Art & Technology, Chung-Ang University, Anseong, South Korea



- 0. Retinal Optical Coherence Tomography Image Classification based on Hybrid Ensemble Deep Learning  
Kuntha Pin, Jung Woo Han, Yunyoung Nam  
Department of ICT Convergence, Soonchunhyang University, Asan, South Korea;  
Department of Ophthalmology, Bucheon Hospital, Soonchunhyang University  
College of Medicine, Bucheon, South Korea; Department of Computer Science  
and Engineering, Soonchunhyang University, Asan, South Korea

**The 18th International Conference on Data Science  
(ICDATA'22: July 25-28, 2022, USA)  
<https://icdata.org>  
<https://american-cse.org/csce2022/>**

- 0. An Integrated Dataset of Public Natural Language Requirements with Labels of Defects  
Yihan Cai, Jian Cao, Xin Qian, Weidong Yang  
School of Computer Science, Fudan University, Shanghai, P. R. China;  
XAC Commercial Aircraft Co.,Ltd, Xi'an, P. R. China
- 0. A Graph Convolutional Network with Recurrent Neural Network Structure for Heterogeneous Financial Fraud Data  
Sicheng Shen  
Mathematics and Economics Department, Oberlin College, Oberlin, Ohio, USA
- 0. Population Density, Health, Education and Dwelling Quality Effects on Social Lag Status of Mexican Localities  
Ana Sofia Landeros Basurto, Crhys Lorena Amelia Torres Bautista,  
Eitan Arakanchi Weil  
School of Engineering and Science, Tecnologico de Monterrey, Monterrey, Mexico
- 0. Deep Latent Similarity Model for Online Data Categorization  
Shuanglu Dai, Hong Man  
Stevens Institute of Technology, New Jersey, USA
- 0. High-Level Synthesis Parallelization and Optimization of Vectorized Self-Organizing Maps  
Omar Rivera Morales, Lutz Hamel  
University of Rhode Island, Rhode Island, USA
- 0. Improving Debt Collection Forecasting Models using Gradient Boosting Machines and Neural networks based on the Impact of the COVID-19 Pandemic  
Teo Curcic, Cristian Rodriguez Rivero, Allard de Winter  
University of Amsterdam, Amsterdam, Netherlands
- 0. Unsupervised Twitter Sentiment Analysis using Emoji and Context-Based Analysis  
Aksht Jain, Apoorva NaN, Aiman Siddiqua, Trasha Gupta  
Delhi Technological University, India
- 0. Accident Severity Prediction: A Comparative Case Study  
Nassim Sohaee  
University of North Texas, Texas, USA
- 0. Using Machine Learning to Enhance Win Ratio for College Ice Hockey Teams  
Sadixa Sanjel, Zelalem Deneke, Ahmed Sadek, Naseef Mansoor  
Minnesota State University, Mankato, Minnesota, USA

- 0. Understanding the Health Consequences of Air Quality using Machine Learning  
Kevin Williams, Mohammad Pourhomayoun  
California State University, Los Angeles, California, USA
- 0. Robust Generalized High-Order SVD for Images with Outliers and Correlated Noises  
Jionghua Jin, Yaser Zerehsaz  
the university of Michigan, USA
- 0. High-Resolution Spatiotemporal PM2.5 Prediction with Deep Convolutional LSTM  
using Atmospheric and Ground-level Data  
Pratyush Muthukumar, Dawn Comer, Jeanne Holm, Mohammad Pourhomayoun,  
Shaurya Pathak, Kabir Nagrecha, Navid Amini  
California State University, Los Angeles, California, USA
- 0. Application of Linear Regression and Random Forest Models in Predicting Bus  
On-Time Performance  
William Noonan, Andrew Trombly, Jeong Yang  
Department of Computing and Cyber Security,  
Texas A&M University-San Antonio, Texas, USA
- 0. When to Publish on Twitter in Mexico  
Jose Manuel Tapia Avitia, Carlos Alonzo Lopez-Castaneda  
Tecnologico de Monterrey, Mexico
- 0. Automatic Generation of Class Diagrams using Deep Learning and Candidate Recall  
Eric Xu  
Zhuhai Fudan Innovation Institute, P. R. China

**The International Conference on Emergent Quantum Technologies**  
**(ICEQT'22: July 25-28, 2022, USA)**  
<https://baylor.ai/iceqt/>  
<https://american-cse.org/csce2022/>

- 0. A Brief Summary of Quantum Computing Research  
Curtis Busby-Earle  
Department of Computing, The University of the West Indies, Mona, Jamaica
- 0. A Quantum Search Algorithm for Classical Proof-of-Work  
Fabiola Canete-Leyva, Carlos A. Perez-Delgado, Salvador E. Venegas-Andraca  
Faculty of Physical and Mathematical Sciences, Benemerita Universidad  
Autonoma de Puebla, Mexico; School of Computing, University of Kent,  
Canterbury, England, UK; Computer Science Department, Tecnologico de  
Monterrey Campus Santa Fe, Mexico
- 0. Kernels and Quantum Machine Learning  
Bikram Khanal  
School of Engineering and Computer Science, Department of  
Computer Science, Baylor University, Texas, USA

The 23rd International Conference on Internet Computing & IoT  
(ICOMP'22: July 25-28, 2022, USA)  
<https://american-cse.org/csce2022/conferences-ICOMP>

- 0. Modbus to IEC61850 Converter: Integrating Configuration Tool with Run-time  
Abdelaziz Said Abdelaziz, Hassan Bedour, Hoda K. Mohamed  
Faculty of Engineering, Computers and Systems Department,  
Ain Shams University, Cairo, Egypt
- 0. The Implementation of the IoT Smart Home Devices' Security, Privacy,  
and Firmware Labeling System  
Naif Waheb Rajkhan, Jia Song  
Computer Science Department, University of Idaho, Moscow, Idaho, USA
- 0. Reusable Test-Ready Models of Smart Home Systems  
Afnan Albahli, Anneliese Andrews, Ahmed Al Haddad  
University of Denver, Denver, Colorado, USA; Princess Nourah Bint Abdul  
Rahman University, Riyadh, Saudi Arabia;  
United Technology (U-Tech), Riyadh, Saudi Arabia
- 0. Sequential Recommender System for IoT Ontologies based on Graph  
and Semantic Embedding  
Yuexian Li, Chuantao Yin, Xi Wang, Si Wu, Lan Wang  
Sino-French Engineer School, Beihang University, Beijing, P. R. China;  
Orange R&D Beijing Company Limited, Orange Company Limited, Beijing, P. R. China
- 0. Stable Operation of Redundant Traffic Reduction System with Packet Cache by  
Relay Point Designation  
Hiroto Hoshiba, Kenji Ichijo, Akiko Narita  
Graduate School of Science and Technology, Hirosaki University, Aomori, Japan
- 0. IoT Avatar Retrieval Augmentation Based on Graph Neural Network  
Xi Wang, Chuantao Yin, Yuexian Li, Si Wu, Lan Wang  
Sino-French Engineer School, Beihang University, Beijing, P. R. China;  
Orange R&D Beijing Company Limited, Beijing, P. R. China
- 0. Delay-based IoT Clustering Method for Massive IoT Systems  
Yunseok Chang, Seo J. Chang, Boyeon Kim  
Department of Computer Engineering, Daejin University, Republic of Korea;  
Department of Computer Science, University of California, Irvine, California;  
AI Academy, ICT Innovation Square, Republic of Korea
- 0. Analysis of a Formal Model for Social Groups  
Emanuele Covino, Giovanni Pani  
Dipartimento di Informatica, Universita di Bari, Italy
- 0. Creating a Virtual Reality Based Shopping System  
Khadija Hasta, Harsh Jobanputrua, Pravesh Jain, Fay Zhong  
California State University East Bay, Hayward, California, USA
- 0. Performance Improvement Scheme of Hyperledger Fabric Blockchain Using  
Parallel Preprocessing  
Ho-Se Moon, Jae Geun Song, Ju Won Kim, Cheol Hun Park, Ju Wook Jang  
Department of Electronic Engineering, Sogang University, Seoul, Republic of Korea
- 0. Efficient Visualization for Precise 3D Modelling of Large-Scale Scenes in  
Virtual Reality Using Photogrammetry  
Krish Vora, Aditya Badhe, Tushar Pawar, Fay Zhong  
California State University East Bay, Hayward, California, USA

- 0. Performance Analysis of Hyperledger Fabric Version 2.2  
Cheol Hun Park, Ho-Se Moon, Ju Won Kim, Jae Geun Song, Ju Wook Jang  
Department of Electronic engineering, Sogang University, Seoul, Republic of Korea

**The 21st International Conference on Wireless Networks  
(ICWN'22: July 25-28, 2022, USA)  
<https://american-cse.org/csce2022/conferences-ICWN>**

- 0. Selection Criteria for Cost-Effective Network Technologies for Rapid Expansion of Telecommunication Services in Rural Areas of South Africa  
Marcel Ohanga Odhiambo, Weston Mwashita  
Mangosuthu University of Technology, Durban, South Africa;  
Vaal University of Technology, Pretoria, South Africa
- 0. Hybrid Modulation Scheme for Reducing Peak to Average Power Ratio in 5G Based on Spatial CE-OFDMA Signal  
Bertille Auyane Ngouessy ep Ovono, Temitayo Otunniyi, Marcel O. Odhiambo  
Vaal University of Technology, Gauteng, South Africa;  
Mangosuthu University of Technology, Durban, South Africa
- 0. Minimal Sleep Delay Driven Aggregation Tree Construction in IoT Sensor Networks  
Van-Vi Vo, Duc-Tai Le, Hyunseung Choo  
Department of Electrical and Computer Engineering, Sungkyunkwan University,  
Suwon, South Korea;  
College of Computing & Informatics, Sungkyunkwan University, Suwon, South Korea
- 0. Calculation of Existence Probability of a Tracking Target for Agent-based Human Tracking  
Kozo Tanigawa, Masaru Shiozuka, Kenichi Takahashi  
Development Department B, Mitsubishi Electric Software Corporation, Kube, Japan;  
Graduate School of Sustainability Science, Cross-informatics Research Center,  
Tottori University, Tottori, Japan
- 0. Detect DDoS Attacks and Botnet Sharing Attacks Information's Across Cross-Planes in the Network: A Conceptual Security Framework  
H.D.N.S Priyankara, Sureswaran Ramadass  
Institute of Postgraduate Studies, Malaysia University of Science and Technology, Selangor, Malaysia
- 0. Mobile Botnets on Wireless Network  
H.D.N.S Priyankara, Sureswaran Ramadass  
Institute of Postgraduate Studies, Malaysia University of Science and Technology (MUST), Selangor, Malaysia

**The 21st International Conference on Information &  
Knowledge Engineering  
(IKE'22: July 25-28, 2022, USA)  
<https://american-cse.org/csce2022/conferences-IKE>**

- 0. Investigating Collaboration for Software Reverse Engineering  
Allison Wong, Wayne Henry  
Department of Electrical and Computer Engineering,  
Air Force Institute of Technology, Wright-Patterson AFB, USA
- 0. Ensemble Models for Classification  
John Tsiligaridis, Manuel Anaya  
Math and Computer Science Department, Heritage University,  
Toppenish, Washington, USA
- 0. System Dynamics Applications in Emergency Department (ED) for Waiting Time  
Improvement for Medical Care  
Stephane Copin, Selmin Nurcan, Tamim Hammadi  
University of Paris 1 Pantheon, Sorbonne Paris, France
- 0. X-PoSURE: Pollution Super Resolution for Finegrained Inference using Multimodal  
Data Fusion and Deep Learning  
Srinivas Devarakonda, Senthil Chittaranjan, Badri Nath  
Rutgers University, New Brunswick, New Jersey, USA;  
Anna University, Chennai, India
- 0. Traffic Light Control Using Fuzzy Logic  
Rudy Argueta, Brian Duenas, Andy Osorio, Giovanni Sandoval Ochoa, Ruting Jia  
Electrical and Computer Engineering, California State University Northridge,  
Northridge, California, USA
- 0. Comparative Analysis of Linguistic Processors based on Machine Learning to  
Predict Suicidal Sentiments on Twitter  
Lizethe Guadalupe Reyna Moran, Francisco Javier Luna Rosas,  
Julio Cesar Martinez Romo, Ivan Castillo Zuniga, Marco Antonio Hernandez Vargas,  
Ricardo Mendoza Gonzalez  
Computer Science Department, Inst. Tec. Aguascalientes, Mexico;  
Computer and Systems Department, Inst. Tec. Aguascalientes, Mexico;  
Electrical & Electronic Engineering Department, Inst. Tec. Aguascalientes, Mexico
- 0. Promoting the Flow of Knowledge in Project-based Academic Organizations  
based on the Zachman Framework  
Azam Ranjbar, Peyman Akhavan, Raheleh Khatami, Lila Rajabion, Reza Hosnavi  
Malek Ashtar University of Technology, Tehran, Iran; Qom University of  
Technology, Qom, Iran; Iran Knowledge Management Association, Tehran, Iran;  
State University of New York, New York, USA
- 0. AAGCGN: An Attention-Based Adaptive Graph Convolutional Gating Network for  
Traffic Prediction  
Renyi Chen, Huaxiong Yao  
Central China Normal University, Hubei, P. R. China
- 0. The Role of Predictive Analytics in Individual and Public Healthcare  
Amitava Karmaker  
University of Wisconsin-Stout, Menomonie, Wisconsin, USA
- 0. Unsupervised Reference Correction Methods for a Data Washing Machine  
Fumiko Kobayashi, John R. Talburt  
Donaghey College of Science, Technology, Engineering, and Mathematics,  
The University of Arkansas at Little Rock, Arkansas, USA

- 0. Data-Centric Content Classification of Smart City Residential Services  
Ding Li, Jincheng Sun, Yan Liu, Wenjie Du  
Department of Electrical and Computer Engineering, Concordia University,  
Montreal, Canada
- 0. Database Intrusion Detection and Prevention Using Query Rewrites and  
Execution Plans  
Aspen Olmsted  
Simmons University, Boston, Massachusetts, USA
- 0. Multitenant Database Security with Shared Data Policy  
Aspen Olmsted  
Simmons University, Boston, Massachusetts, USA
- 0. Representative Sampling: Deriving Accurate Data Insights from Noisy  
Data Distributions  
Neil Palleti, Saigopal Thota, Mridul Jain, Rijul Magu  
Walmart Global Tech, Cupertino, California, USA; Walmart Global Tech,  
Sunnyvale, California, USA; Walmart Global Tech, San Jose, California, USA;  
Walmart Global Tech, Atlanta, Georgia, USA

**The 26th International Conference on Image Processing,  
Computer Vision, & Pattern Recognition  
(IPCV'22: July 25-28, 2022, USA)  
<https://american-cse.org/csce2022/conferences-IPCV>**

- 0. A New Approach for Liver and Its Tumor Segmentation in CT Image by an Improved  
TransUNet with Cbam  
Yaqi Hu, Xiaoniu Yang, Xiaolin Tian  
Faculty of Information Technology, Macau University of Science and Technology,  
Macau SAR, P. R. China
- 0. Neural Network Based Color Pixel Classification Using Random Negative Examples  
DongKeun Kim  
Department of Computer Engineering, Kongju National University, Republic Korea
- 0. Order Statistics Distributions Around Edges  
Ahmed Raji  
Laboratory of Images, Signals and Intelligent Systems,  
Paris Est Creteil University, France
- 0. Predicting Pandemic Development using Convolutional Neural Networks and  
Decentralized Federated Learning  
Ole Werger, Pinar Bisgin, Ole Meyer, Volker Gruhn  
Department for Software Engineering, University of Duisburg-Essen,  
Schuttenbahn, Essen, Germany; HealthCare Department, Fraunhofer Institute for  
Software and Systems Engineering (ISST), Dortmund, Germany
- 0. Multi-Modality Image Inpainting using Generative Adversarial Networks  
Aref Abedjooy, Mehran Ebrahimi  
Faculty of Science, Ontario Tech University, Oshawa, Ontario, Canada

- 0. Invariant Features for Multi-Component Shapes  
Mohamed B. H. Rhouma, Mohamed A. Khabou  
Department of Mathematics, Qatar University, Doha, Qatar;  
Department of Electrical and Computer Engineering, University of  
West Florida, Florida, USA
- 0. Palm Vein Identification and Verification Using Deep Metric Learning  
Aung Si Min Htet, Hyo Jong Lee  
Division of Computer Science and Engineering, Jeonbuk National,  
Jeonju, Republic of Korea
- 0. A Review of UAV Visual Detection and Tracking Methods  
Raed Abu Zitar, Mohammad Al-Betar, Sofian Kassaymeh  
Sorbonne Center of Artificial Intelligence, Sorbonne University-Abu Dhabi,  
Abu Dhabi, United Arab Emirates (UAE); Artificial Intelligence Research  
Center (AIRC), Ajman University, Ajman, United Arab Emirates (UAE);  
Artificial Intelligence Research Center (AIRC), College of Engineering and  
Information Technology, Ajman University, Ajman, United Arab Emirates (UAE)
- 0. Face Recognition Using Fuzzy Inference System  
Krysel Altarejos, Tracy Pham, Ruting Jia  
Electrical and Computer Engineering Department, California State  
University Northridge, Northridge, California, USA
- 0. Handwritten Text Recognition Using Fuzzy Inference System  
Aqibur Rahman, Juan Carlos Atilano, Ruting Jia  
Department of Electrical and Computer Engineering, California State  
University Northridge, Northridge, California, USA
- 0. Resolving User(s) of Interest in the Context of a Multi-Party Collaborative  
HRI Setting Using Active Speaker and Facing State Estimation  
Shuvo Kumar Paul, Pourya Hoseini, Mircea Nicolescu, Monica Nicolescu  
Department of Computer Science & Engineering, University of Nevada, Reno, USA
- 0. Video Dehazing Using Encoder-Decoder Based Deep Neural Networks  
Hsing-Che Wu, Jin-Jang Leou  
Department of Computer Science and Information Engineering, National Chung  
Cheng University, Chiayi, Taiwan, Republic of China
- 0. Multi-focus Image Fusion Using Deep Neural Networks  
Meng-Che Chung, Jin-Jang Leou  
Department of Computer Science and Information Engineering, National Chung  
Cheng University, Chiayi, Taiwan, Republic of China
- 0. Split Security Quantum Resistant Solutions for Video  
Gideon Samid  
Electrical, Computer and System Engineering, Computer and Data Sciences,  
Case Western Reserve University, Cleveland, Ohio, USA
- 0. Shadow Removal based on Graph Cut  
Shijun Tang, Daniel Wu  
Department of Computer and Information Science, Cabrini University, Radnor,  
Pennsylvania, USA

**The 19th International Conference on Modeling,  
Simulation & Visualization Methods  
(MSV'22: July 25-28, 2022, USA)  
<https://american-cse.org/csce2022/conferences-MSV>**

- 0. Optimal Shipping Strategy of Materials Using Traditional and Newly Developed Method Initial Basic Feasible Solution of Russell and Vogel Method  
Chandrasekhar Putcha, Rakeshkumar Mahto, Isaiah Chitica, Aycan Kara, Zana Haddad  
Department of Civil and Environmental Engineering, California State University, Fullerton, California, USA; Computer Engineering Program, California State University, Fullerton, California, USA
- 0. High Quality UAV-Based Geo-Localization Matching Study  
Zihan Lin  
Adelson Educational Campus, Las Vegas, Nevada, USA

**The 28th International Conference on Parallel &  
Distributed Processing Techniques & Applications  
(PDPTA'22: July 25-28, 2022, USA)  
<https://american-cse.org/csce2022/conferences-PDPTA>**

- 0. Implementing Server-side Direct Memory Transfer Communication for Efficient Interprocess Ray-tracing Queries on High Performance Computing (HPC) Systems  
Barry C. White, Abdias I. Santiago-Lugo, R. Harrison Hunter, Reena R. Patel  
U.S. Army Corps of Engineers, Engineer Research and Development Center, Vicksburg, Mississippi, USA
- 0. Towards Runtime Support for Domain-Specific Languages of Adaptive and Irregular Applications  
Polykarpos Thomadakis, Nikos Chrisochoides  
Department of Computer Science, Old Dominion University, Norfolk, Virginia, USA
- 0. Precise FEM and Cutting Simulation of Deformable Bodies on GPU  
Harshvardhan Das, Subodh Kumar  
Indian Institute of Technology Delhi, New Delhi, India
- 0. Benchmarking Performance of Deep Learning Model for Material Segmentation on Two HPC Systems  
Warren R. Williams, S. Ross Glandon, Luke L. Morris, Jing-Ru C. Cheng  
Information Technology Laboratory, US Army Engineer Research and Development Center, Vicksburg, Mississippi, USA; Department of Computer and Information Science & Engineering, University of Florida, Gainesville, Florida, USA
- 0. A Link Lifetime-based Min Cost Max Flow Routing in a Multi-Layer Edge Cloud Network Environment  
Sayed Chhattan Shah  
Department of Information Communication Engineering, Hankuk University of Foreign Studies, Republic of Korea
- 0. Performance of Linear Hashing and Spiral Hashing  
Arockia David Roy Kulandai, Thomas Schwarz  
Department of Computer Science, Marquette University, Milwaukee, Wisconsin, USA



- 0. Optimized Bidirectional Message Passing for Pregel In GraphX  
Sarrah Bouhenni, Said Yahiaoui, Hamamache Kheddouci  
CERIST Research Center on Scientific and Technical Information, Ben Aknoun,  
Algeria;  
Universite de Lyon, Universite Lyon 1, LIRIS CNRS, Villeurbanne, France
- 0. Consideration on Automatic Generation of Injection Attacks using Neural Networks  
Takeshi Matsuda, Michio Sonoda  
Graduate School of Management Information, Hannan University, Amami, Japan;  
Higashi, Matsubara, Osaka, Japan

**The 21st International Conference on Security & Management  
(SAM'22: July 25-28, 2022, USA)  
<http://sam.udmercy.edu/sam22>  
<https://american-cse.org/csce2022/>**

- 0. Evaluation of an Information Security Management System at a Mexican Higher Education Institution  
Rusbel Dominguez Dominguez, Omar Flores Laguna, Jair A. del Valle Lopez  
Facultad de Ciencias Empresariales y Juridicas, Universidad de Morelos,  
Morelos, Mexico
- 0. Effects of the COVID-19 Pandemic on Organizations' Security Policies  
Kathryn Southard, Lila Rajabion  
State University of New York (SUNY), Empire State College, New York, USA
- 0. A Bayesian Deep Learning Regularization for Detecting Zero-Day Attacks  
Raaid Wilson, Farid Shirazi  
Data Science and Analytics, Toronto Metropolitan University, Toronto,  
Ontario, Canada; Ted Roger School of Information Technology Management,  
Toronto Metropolitan University, Toronto, Ontario, Canada
- 0. Autonomous Penetration Testing System Command Specification  
Jack Hance, Jeremy Straub  
Department of Computer Science, North Dakota State University, North Dakota, USA
- 0. Secure Ad Log Storage using Integrated Blockchain and IPFS  
Nahid Ebrahimi Majd, Yash Shah  
Department of Computer Science and Information Systems, California State  
University San Marcos, California, USA
- 0. Consideration of the Use of Quantum Fuzzing for Defense Applications  
Dominic Rosch-Grace, Jeremy Straub  
Department of Computer Science, North Dakota State University, North Dakota, USA
- 0. Advance-Fee Scam Email Classification using Machine Learning  
Nahid Ebrahimi Majd, Jorge Sanchez  
Department of Computer Science and Information Systems, California State  
University San Marcos, California, USA
- 0. Blockchain Project Workflow Execution for Trustless Operations  
Samuel Ashaolu, Lei Chen  
Georgia Southern University Statesboro, Georgia, USA

- 0. NTRU Encryption Algorithm to Enhance Secure Data Transmission for SCADA Systems  
Sheng-Tzong Cheng, Po Jung Lai, Hsin Hung Lin, Jia-Ling Li, Gwo-Jiun Horng  
Department of Computer Science and Information Engineering, National  
Cheng Kung University, Tainan, Taiwan; Regional Industry Service Division,  
Institute of Information Industry, Nantou, Taiwan; Department of Computer  
Science and Information Engineering, Southern Taiwan University of Science  
and Technology, Tainan, Taiwan
- 0. Security Applications Track Controlling User Fields of View for Safe  
Smartphone Walking  
Kenichi Takahashi, Takao Kawamura  
Tottori University, Tottori, Japan
- 0. Space Efficient Secret Sharing Using Repeatable Random Sequence Generators  
Arvind Srinivasan, Chien-Chung Chan  
SplitByte Inc., Los Gatos, California, USA;  
University of Akron, Akron, Ohio, USA
- 0. Improving Security in Smart Cities using Adaptive Age Invariant Face  
Recognition Model  
Kennedy Okokpujie, Okokpujie Imhade P., Agoha Benedict, Osemwegie Omoruyi,  
Odumuyiwa Ayomikun  
Covenant University, Ota, Ogun State, Nigeria; Department of Mechanical  
and Mechatronics Engineering, Afe Babalola University, Ado Ekiti, Nigeria;  
Department of Mechanical and Industrial Engineering Technology,  
University of Johannesburg, Johannesburg, South Africa
- 0. A Framework for Hybrid Threat Analysis  
Maryna Zharikova, Marina Alonso Villota, Volodymyr Sherstjuk,  
Rainer Jungwirth, Stefan Pickl  
Kherson National Technical University, Kherson, Ukraine; Universitat der  
Bundeswehr Muenchen, Germany;  
Joint Research Centre - European Commission, Ispra, Italy
- 0. LS-AODV: A Routing Protocol Based on Lightweight Cryptographic Techniques  
for a Network of Nano Drones  
Cody W. Vernon, Preetha Thulasiraman  
Department of Electrical and Computer Engineering,  
Naval Postgraduate School, Monterey, California, USA
- 0. Evaluation of User Perception on Biometric Fingerprint System  
Jones Yeboah, Victor Adewopo, Sylvia Azumah, Izunna Okpala  
University of Cincinnati, USA
- 0. A Survey of the Insider Threat Mitigated Systems Using Blockchain  
Wonseok Yoon, Hangbae Chang  
Department of Security Convergence, Chung-Ang University, Seoul, South Korea;  
Department of Industrial Security, Chung-Ang University, Seoul, South Korea
- 0. Using Data Lineage for Evaluating Damage to Critical Infrastructure Data  
Ian Moncur, Brajendra Panda  
Computer Science and Computer Engineering Department, University of Arkansas,  
Fayetteville, Arkansas, USA
- 0. Security Algorithms for Identifying Malicious E-mail  
Woo Young Park, Sang Hyun Kim, Duy-Son Vu, Chang Han Song,  
Hee Soo Jung, Hyeon Jo  
RealSecu, South Korea

0. Study on Content-based Information Security Classification using Information Network  
Giwan Hong, Hangbae Chang  
Department of Security Convergence, Chung-Ang University, Seoul, Korea;  
Department of Industrial Security, Chung-Ang University, Seoul, Korea
0. A Temporal and Contextual Deep Learning Intrusion Detection System for Securing Intra-vehicle Networks  
Samar Bayan, Mohammad Ali Mokhadder, Utayba Mohammad, Mohamed Nafea  
University of Detroit Mercy, Michigan, USA
0. Determinants of Trust in Information Security of Artificial Intelligence Assistant  
Hyeon Jo  
Department of Strategic Planning, RealSecu, South Korea
0. Taxonomy of Bots from a Cybersecurity Perspective  
Innocent Mbona, Jan Eloff  
Department of Computer Science, University of Pretoria, South Africa
0. Physical Memory Attacks and a Memory Safe Management System for Memory Defense  
Alon Hillel-Tuch, Aspen Olmsted  
New York University Tandon School of Engineering, Brooklyn, New York, USA;  
Simmons University, Boston, MA, USA
0. Cluster-based Sampling Algorithm for Lightweight IoT Intrusion Detection System  
Suzan Hajj, Rayane El Sibai, Adam Barada, Jacques Bou Abdo, Jacques Demerjian, Christophe Guyeux, Abdallah Makhoul, Dominique Ginhac  
ImViA, Universite de Bourgogne Franche-Comte, Dijon, France; Faculty of Sciences, Al Maaref University, Beirut, Lebanon; LaRRIS, Faculty of Sciences, Lebanese University, Fanar, Lebanon; College of Business and Technology, University of Nebraska at Kearney, Kearney, Nebraska, USA; FEMTO-ST Institute, Universite de Bourgogne Franche-Comte, CNRS, Besancon, France; FEMTO-ST Institute, Universite de Bourgogne Franche-Comte, CNRS, Montbéliard, France
0. Right to Digital Privacy: An International Perspective  
Esther Nehme<sup>1</sup>, Moufid El Khoury  
Notre Dame University, Faculty of Law and Political Science, Zouk Mosbeh, Lebanon; Sultan Qaboos University, College of Law, Muscat, Oman

The 20th International Conference on Software Engineering  
Research & Practice  
(SERP'22: July 25-28, 2022, USA)  
<https://american-cse.org/csce2022/conferences-SERP>

- 0. Towards Systematic Software Design  
Devon M. Simmonds, Emanuel S. Grant  
University of North Carolina Wilmington, Wilmington, North Carolina, USA;  
University of North Dakota, Grand Forks, North Dakota, USA
- 0. Test Minimization for Mobile App Testing with FSMApp  
Zeinab Abdalla, Anneliese Andrews, Ahmed Alhaddad  
Computer Science Department, University of Denver, Denver, Colorado, USA
- 0. AR-Extractor: Automatically Extracting Constraints from Android  
Documentation using NLP Techniques  
Preethi Santhanam, Padmapriya Sakthivel, Zhiyong Shan  
School of Computing, Wichita State University, Wichita, Kansas, USA
- 0. A Cognitive Model for Supporting Software Functional Sizing Automation from  
Requirements Written as Triplets  
Brael Gerancon, Roger Nkambou, Sylvie Trudel, Serge Robert  
Department of Computer Science, Universite du Quebec a Montreal (UQAM),  
Montreal, Canada
- 0. Framework for the Discipline of Software Engineering  
Jones Yeboah, Izunna Okpala, Sylvia Azumah, Victor Adewopo  
University of Cincinnati, Cincinnati, USA
- 0. A Requirement Tracking Method Based on Information Retrieval and Source  
Code Structure  
Tangyu Wang, Yun Wang, Zehan Tan, Weidong Yang, Hao Zhu, Shaobin Li  
College of Computer Science and Technology, Fudan University, P. R. China;  
Data Science Research Institute, City University of Macau, P. R. China;  
Shanghai Fujia Information and Science Co. Ltd., P. R. China
- 0. Stack-Based Buffer Overflow Implementation Using Python 3  
Jewel Donkor Apeko, Claude Turner  
National Society of Black Engineers (NSBE), USA;  
Department of Computer Science, Norfolk State University, Norfolk, Virginia, USA