Final Program

24th IEEE/ACIS International Winter Virtual Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing

(SNPD2022-Winter)

07-08 December, 2022

National Chin-Yi University of Technology, Taichung

Taiwan

https://acisinternational.org/conferences/snpd-2022/

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Program at a Glance

Wednesday, 7 December, 2022

Time (GMT+8)	**Activity**	**Location**
9:00AM – 10:00AM	Regular Session 1	Virtual
10:00AM - 10:15AM	Break	
10:15AM - 11:15AM	Keynote (Prof. Simon Xu)	
11:15AM - 11:30AM	Break	
11:30AM - 12:00PM	Special Session 3	
12:00PM - 01:00PM	Break	
01:00PM - 02:00PM	Special Session 2	
02:00PM - 02:15PM	Break	
02:15PM-03:15PM	Regular Session 2	

Thursday, 8 December, 2022

Time (GMT+8)	Activity	Location
9:00AM – 10:00AM	Special Session 1	Virtual
10:00AM - 10:15AM	Break	
10:15AM - 11:15AM	Regular Session 3	
11:15AM - 11:30AM	Break	
11:30AM - 12:00PM	Special Session 4	
12:00PM - 01:00PM	Break	
01:00PM - 02:00PM	Regular Session 4	
02:00PM - 02:15PM	Break	
02:15PM-03:15PM	Regular Session 5	

Keynote

Cognitive Activities during Software Engineering Process

Simon Xu, Ph.D.
Professor, School of Computer Science and Technology
Algoma University, Canada
Simon.xu@algomau.ca

Abstract

Software engineering activities are to process a large amount of knowledge and therefore, the cognitive process is mainly involved. Studying the cognitive process involved in software engineering can greatly help us to understand the whole process and to improve software engineering research. In order to study the cognitive process, an empirical method and case studies are needed. In this talk, Dr. Xu will first introduce the empirical research method which includes dialog-based protocol and self-directed learning theory. The dialog-based protocol is based on the analysis of the dialog that occurs between programmers. The self-directed learning theory is based on the constructivist learning theory and the Bloom taxonomy. Then case studies on incremental software development and program debugging will be presented. The results of case studies will be provided, and the implications will be analyzed.

Biography

Dr. Simon Xu is a Full Professor in the School of Computer Science and Technology at Algoma University where he is faculty since 2002. He has been the Department Chair/School Director since 2009. Prior to that, he was working in the School of Computer Science of University of Windsor, Canada. He is also a guest professor at Wuhan University and the adjunct professor at China University of Mining and Technology, China. Dr. Xu received his Ph.D. degrees from Wayne State University, USA and University of Liege, Belgium. His research interests include software evolution, program comprehension, big data, and cognitive process during software development. Dr. Xu has published more than 90 articles in referred journals and conference proceedings and a few authored/co-authored books. He has also chaired seven IEEE international conferences and has been invited to give talks by IEEE international conferences. He is a senior member of IEEE and a member of ACM.

Program in Detail

Wednesday, 7 December, 2022

9:00AM - 10:00AM – Regular Session (1) Virtual
Chair: ***Hsiung-Cheng Lin (National Chin-Yi University of Technology)***

Machine Learning and Bayes Probability For Detecting Camouflaged Mini Pandemic at the Waves of Covid-19
Huber Nieto-Chaupis

Probabilistic Neural Synapse Based in Quantum Mechanics
Huber Nieto-Chaupis

Small Probability of Fatality from Theorem of Bayes at the Monkeypox Pandemic
Huber Nieto-Chaupis

Quantum Mechanics of Theorem of Bayes Modeled by Machine Learning Principles
Huber Nieto-Chaupis

Theory and Simulation for Systematic Depletion Viruses in Open Spaces Through 0.01eV Electric Fields
Huber Nieto-Chaupis

The Approach of Machine Learning to Optimize the Bank-Customer Interactio(Sai)n at Pandemic Epochs
Huber Nieto-Chaupis

IoT and Computer Vision Based Aquaponics System
Mohammad Rashedur Rahman

Prediction of Gestational Diabetes Using Data Mining Techniques
Mohammad Rashedur Rahman

10:00AM - 10:15AM –Break

10:15AM - 11:15AM – Keynote Speech Virtual
(Prof. Simon Xu)

11:15AM - 11:30AM –Break

11：30AM - 12:00PM – Special Session (3) Virtual
Chairs: ***Lei Zhang (Tongji University)***

Reusable Design and PAR Implementation of Graph Algorithms Family
Chen Lei, Rui Xuan and Haihe Shi

Independent Sets Extraction Graph Coloring Algorithm Using Beam Search
Ƙentaro Akashi

12:00PM - 01:00PM – Break

01:00PM - 02:00PM – Special Session (2) Virtual
Chair: ***Ming-te Chen (National Central University, Asia University)***

A Non-normal Warning System for Dam Operation Using Machine Learning
Meng-Wei Chang,I-Hsien Liu, Chuan-Kang Liu,Wei-Min Lin, Zhi-Yuan Su, Jung-Shian Li

Intelligent Magnetic Particle Inspection of Magnetic Conductive Material
Chun-Lung Chang, Wei-Chen Li, Chun-Lung Chang, Wei-Chen Li, Yu-Ting Lin

Thermal Deformation Prediction in Machine Tool Based on History Signal Analysis
Chien Wei Liao, Yu Chi Liu

Undeniable Vaccine Production Protocol with Blockchain and IPFS
Ming-Te Chen, Jih-Ting Wang

02:00PM - 02:15PM – Break

02:15PM - 03:15PM – Regular Session (2) Virtual

Chair: ***Chi-Chun Chen (National Chin-Yi University of Technology)***

On-Site Monitoring of Forging Press: An Application of Volapu IIoT Suite
Po-Hsun Chueh, Dashuai Guo, Deyang Liu and Joseph Wang

Stepwise regression machine learning models for in-hospital mortality prediction in patients after ST-segment elevation myocardial infarction (STEMI)
Chi-Yung Cheng, I-Min Chiu, Chun-Hung Richard Lin, Xin-Hong Lin, Fu-Cheng Chen and Ting-Yu Hsu

Goal-Driven Context-Aware Service Recommendation for Mashup Development
Xihao Xie, Jia Zhang, Rahul Ramachandran, Tsengdar Lee and Seungwon Lee

A Deep Learning Model for Predict Damaging Points via random Vibration Signal Analysis
Matthew Sands, Jongyeop Kim, Jinki Kim and Seongsoo Kim

Ensemble Deep Learning Model for Damage Identification via Output-Only Signal Analysis
Matthew Sands, Jongyeop Kim, Jinki Kim and Seongsoo Kim

Attention Mechanism, Linked Networks and Pyramid Pooling Enabled 3D Biomedical Image Segmentation
Pooja Ravi, Srijarko Roy and Indira Dutta

Advanced Quantum Inspired Evolutionary Algorithm for Multivariate Optimization
Omprakash Patel, Vivek Dhir Rangoju and Neha Bharill

Thursday, 8 December, 2022

9：00AM - 10:00AM – Special Session (1) Virtual

Chair: ***Hsiung-Cheng Lin (National Chin-Yi University of Technology)***

Design and implementation of AI aided Fruit Grading using image recognition
Hang Hong Kuo, Daiby Sunandan Barik, Jun You Zhou, Yi Kai Hong, Jun Juh Yan, Meng Hua Yen

Developing Low-Cost Mobile Immersive System MA-VRIOT with Physical Activity Interactions by Integrating IOT Technology
Pai-Hsun Chen

Modified Coronavirus Herd Immunity Optimizer for Permutation Scheduling Problems
Yu-Ping Gao, Ruey-Maw Chen

Real-time traffic sign detection for self-driving and energy-saving driving based on YOLOv4 neural network
Chi-Chun Chen, Yuan-Hong Guan, Nabila Rizqia Novianda, Chung-Chen Teng, Meng-Hua Yen

Combining OpenPose with BiLSTM for Violence Detection in Long-Term Care
Shao-Wei Chu, Chuin-Mu Wang

Deep Learning used to detect gear inspection
Jia-Xian Jian, Chuin-Mu Wang

10:00AM - 10:15AM –Break

10:15AM - 11:15AM – Regular Session (3) Virtual

Chair: ***Cheng-Yu Peng (National Chin-Yi University of Technology)***

Cause-effect graphing technique: A survey of available approaches and algorithms
Ehlimana Krupalija, Emir Cogo, Šeila Bećirović, Irfan Prazina and Ingmar Bešić

Classification and Characterization of Memory Reference Behavior in Machine Learning Workloads
Seogmin Kwon and Hyokyung Bahn

Multi-Agent Reinforcement Learning Reward Engineering via Stochastic Game Evaluation
Ajay Kattepur

The Role of Organizational Factors and Trust on FinTech Adoption in Indian Financial Organizations
Lakshmi Grandhi, Santoso Wibowo, Marilyn Wells and Srimannarayana Grandhi

Using Mixed Reality Technology for Teaching a New Language: A Study from Teachers' Perspectives
Noura Tegoan, Srimannarayana Grandhi, Santoso Wibowo and Robin Yang

Detecting Design Patterns in UML Class Diagram Images using Deep Learning
Xun Zhang, Hironori Washizaki, Nobukazu Yoshioka and Yoshiaki Fukazawa

Artificial Intelligence of Things Enabled Fungiculture in Shipping Container
Wee Boon Siong, Chin Cheng Siong and Anurag Sharma

11:15AM - 11:30AM –Break

11:30AM - 12:00PM –Special Session (4) Virtual

Chairs: ***Wencai Du (City University of Macau)***

StyleFormerGAN-VC:Improving effect of few shot cross-lingual voice conversion using VAE-StarGAN and Attention-AdaIN
Dengfeng Ke, Wenhan Yao, Ruixin Hu, Liangjie Huang, Qi Luo and Wentao Shu

A Full-reference Video Quality Assessment Method for 4K UHD Video based on Multi-Feature Fusion
Geng Yi, Shi Ping and Pan Da

12:00PM - 01:00PM –Break

01:00PM - 02:00PM – Regular Session (4) Virtual

Chair: *Meng-Hua Yen (National Chin-Yi University of Technology)*

Reinforcement Learning and Action Space Shaping for a Humanoid Agent in a Highly Dynamic Environment
Jyun-Ting Song, Guilherme Christmann, Jaesik Jeong and Jacky Baltes

The Study on Security Online Judge System Applied Sandbox Technology
Jong-Yih Kuo, Zhi-Jia Wen, Han-Xuan Huang and I-Ting Guo

Realization of laser object vaporization locating based on low-cost 2D LiDAR
Meng-Sheng Tsai, Yuan-Hong Guan, You-Xuan Lin and Meng-Hua Yen

Color-SIFT Features for Histopathological Image Analysis
Ghada Ouddai, Ines Hamdi and Henda Ben Ghezala

Human Factors for the Adoption of Blockchain Technology: A Case of the Australian Retail Sector
Ashim Nikunj Chapagain, Srimannarayana Grandhi and Jahan Hassan

Time-Series Multidimensional Dialogue Feature Visualization Method for Group Work
Rikito Ohnishi, Yuki Murakami, Takafumi Nakanishi, Ryotaro Okada, Teru Ozawa, Kosuke Fukushima, Taichi Miyamae, Yutaka Ogasawara, Kei Akiyama and Kazuhiro Ohashi

Instructions with complex control-flow entailing machine learning
Saurabh Shinde and Harneet Singh Bali

02:00PM - 02:15PM –Break

02:15PM - 03:15PM – Regular Session (5) Virtual

Chair: *Meng-Hua Yen (National Chin-Yi University of Technology)*

Graph Database-modelled Public Transportation Data for Geographic Insight Web Application
Marielet Guillermo, Maverick Rivera, Ronnie Concepcion II, Robert Billones, Argel Bandala, Edwin Sybingco, Alexis Fillone and Elmer Dadios

Towards Cooperative Games for Developing Secure Software in Agile SDLC
Mithun Vaidhyanathan, Weisheng Si, Bahman Javadi and Seyit Camtepe

Development and Validation of an Explainable Deep Learning model to predict adverse event during hospital admission in patients with sepsis
I-Min Chiu, Yu-Ping Chuang, Chi-Yung Cheng and Chun-Hung Richard Lin

Optimal Network Models for Reconstructing 3D Point Cloud from a Single 2D Image
Chen Huan-Yu, Lin Chuen-Horng and Lin Yan-Yu

Balance Graphs: An Aid For Studying Convolutional Neural Networks
Lyell Embery, Eva Ignatious, Sami Azam, Mirjam Jonkman and Friso DeBoer

Formal Specification and Verification of Drone System using TLA+ : A Case Study
Madhusmita Das, Biju R. Mohan and Ram Mohana Reddy

Automatic Piano Accompaniment Generation Method by Drum Rhythm Features with Selectable Difficulty Level
Kazuma Komiya, Ryotaro Okada, Ayako Minematsu and Takafumi Nakanishi

ACIS Journal Information

International Journal of Networked and Distributed Computing (IJNDC)
IJNDC is a world-class international journal. IJNDC Journal has been indexed in ESCI and Scopus and will ultimately be indexed in SCI **approximately** within one year or so.

http://www.atlantis-press.com/publications/ijndc/

International Journal of Software Innovation (IJSI)
IJSI is a world-class international journal. IJSI Journal has been indexed in ESCI and Scopus and will ultimately be indexed in SCI **approximately** within one year or so.

http://www.igi-global.com/ijsi

International Journal of Big Data Intelligence and Applications (IJBDIA)
IJBDIA is a world-class international journal. IJBDIA Journal has been indexed in DBLP and will soon be index in Scopus.

http://www.igi-global.com/ijbdia

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