Final Program

23rd ACIS International Summer Virtual Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing

(SNPD2022-Summer)

4-6 July, 2022

Kyoto

Japan

http://acisinternational.org/conferences/snpd-2022-summer/

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Program at a Glance

Monday, 4 July, 2022

Time (GMT+9)	Activity	Location
09:30AM - 10:00AM	Opening Ceremony & Awards Presentation	Virtual
10:00AM - 11:00AM	Break	
11:00AM - 12:00PM	Keynote Address 2 (Prof. Haibin Zhu)	
12:00PM - 01:30PM	Lunch	
01:30PM - 03:10PM	Special Session 3	
03:10PM - 03:20PM	Break	
03:20PM - 04:35PM	Regular Session 1	

Tuesday, 5 July, 2022

Time (GMT+9)	Activity	Location
09:10AM - 10:10AM	Keynote Address 1 (Prof. Yeong-Tae Song)	Virtual
10:10AM – 10:20AM	Break	
10:20AM - 12:00PM	Regular Session 2	
12:00PM - 01:30PM	Lunch	
01:30PM - 03:10PM	Special Session 2a	
03:10PM - 03:20PM	Break	
03:20PM - 05:00PM	Special Session 2b	

Wednesday, 6 July, 2022

Time (GMT+9)	Activity	Location
09:20AM - 11:00AM	Regular Session 3	Virtual
11:00AM - 11:10AM	Break	
11:10AM - 12:25PM	Special Session 1a	
12:25PM - 01:50PM	Lunch	
01:50PM - 03:30PM	Special Session 1b	
03:30PM - 03:40PM	Break	
03:40PM - 04:55PM	Regular Session 4	

Keynote 1

Metaverse and Personal Healthcare

Yeong-Tae Song, Ph.D.

Dept. of Computer and Information Sciences
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Abstract

For the last couple of decades, modern society embraced digital platforms in lightning speed. Almost every aspect of human life has digital presence. For any modern society, Internet became not only major communication tool but also virtual community where people have their virtual presence – digital me or digital twin. The communities can range from gaming, education, healthcare, conference, or anything you can think of. However, healthcare industry is relatively slow in adopting virtual community due to many constraints such as security, policy, and regulations. In the US, major push of digitization of health records has started only about a decade ago. Ever since then, we have made remarkable progress including accessible personal health records where people can have access to their own records. In the metaverse, medical field - especially personal healthcare field - needs to solve plethora of issues such as storage, security, and communication, in order to be practical. In this talk, I'd like to introduce metaverse world in healthcare industry and propose potential solutions on how to resolve the issues.

Biography

Yeong-Tae Song is a Professor of Computer and Information Sciences Dept at Towson University. He received his Ph.D. from University of Texas at Dallas in 1999. His research interests include software engineering, enterprise architecture, and health information technology. He was involved in numerous projects on telemedicine, smart e-learning, electronic health record systems, and emergency medical as primary investigator. He has published numerous conference papers and journal papers.

Keynote 2

E-CARGO and Role-Based Collaboration

Haibin Zhu Ph. D.

Founder Director of Collaborative Systems Laboratory
Professor, Nipissing University, Canada
haibinz@nipissingu.ca

Abstract

Role-Based Collaboration (RBC) is a computational methodology to deal with collaboration issues. It consists of a set of concepts, principles, models, processes, and algorithms. RBC and its Environments - Classes, Agents, Roles, Groups, and Objects (E-CARGO) model have been developed to a powerful tool for investigating collaboration and complex systems. Related research has brought and will bring in exciting improvements to the development, evaluation, and management of systems including collaboration, services, clouds, productions, organizations, managements, and administrations. In this keynote, RBC and its model E-CARGO will be reviewed and discussed. As case studies, Group Role Assignment (GRA) and its related problem models are inspired by delving into the details of the E-CARGO components and the RBC process. The speaker welcomes questions and comments.

Biography

Dr. Haibin Zhu is a Full Professor at Nipissing University, Canada. He has accomplished over 200 research works including 30+ IEEE Transactions articles. He is serving as a member of the Board of Governors, co-chair of the technical committee of Distributed Intelligent Systems, IEEE Systems, Man, and Cybernetics (SMC) Society, the Editor-in-Chief of IEEE SMC Magazine, an Associate Editor (AE) of IEEE Transactions on SMC: Systems, and IEEE Transactions on Computational Social Systems. He is the founding researcher of Role-Based Collaboration and Adaptive Collaboration and the creator of the E-CARGO model. He has offered 10+ keynote/plenary speeches for international conferences. His research has been sponsored by NSERC, IBM, and DNDC. For more details, please visit: https://uts.nipissingu.ca/haibinz/.

Program in Detail

Monday, 4 July, 2022

9:30AM - 10:00AM Opening Ceremony & Awards Presentation Virtual

10:00AM - 11:00AM Break

11:00AM - 12:00PM Keynote Address 2 Virtual

E-CARGO and Role-Based Collaboration
Haibin Zhu (Nipissing University, Canada)

12:00PM - 01:30PM Lunch

01:30PM - 03:10PM Special Session 3 Virtual
Theme: Wellbeing and Affective Engineering
Chair: ***Teruhisa Hochin (Kyoto Institute of Technology, Japan)***

Effects of Looking Back on Smartphone Photography on Positive Emotions
Akihiro Ogino and Reina Sato

Multimedia Positive Computing Through Transition in Affective and Impression Spaces
Teruhisa Hochin

Investigation of Musical Factors Affecting Walking Speed with the Same Tempo
Makoto Fukumoto and Sakura Ichikawa

Adjustment of Interval of Voices in Cognitive Shuffle Method by Body Movement Feedback with Binaural Sound
Makoto Fukumoto and Hirohisa Konishi

03:10PM - 03:20PM Break

03:20PM - 04:35PM Regular Session 1 Virtual

Chair: ***Satoshi Nakano (Meiji Gakuin University, Japan)***

Develop a horizontal virtual frame by adding field of view restrictions to reduce VR sickness
Hexi Huang

Factors Influencing Consumers' Online Grocery Shopping under the New Normal
Satoshi Nakano

Concurrency Control Program Generation in Genetic Programming Considering Depth of the Program Tree
Toshiyuki Fukui and Teruhisa Hochin

Tuesday, 5 July, 2022

09:10AM - 10:10AM Keynote Address 1 Virtual

Metaverse and Personal Healthcare
Yeong-Tae Song (Towson University, U.S.A.)

10:10AM - 10:20AM Break

10:20AM - 12:00PM Regular Session 2 Virtual
Chair: ***Atsushi Nunome (Kyoto Institute of Technology, Japan)***

Artificial Neural Network for Processing Fingerprint Image Noise
Ke Han

Facial Expression Intensity Estimation Considering Change Characteristic of Facial Feature Values for Each Facial Expression
Takanori Shiomi, Hiroki Nomiya and Teruhisa Hochin

Speed-up Single Shot Detector on GPU with CUDA
Chenyu Wang, Toshio Endo, Takahiro Hirofuchi and Tsutomu Ikegami

Construction and Evaluation of a Speech Emotion Classifier using LSTM
Yuki Izumi, Hiroki Nomiya and Teruhisa Hochin

12:00PM - 01:30PM Lunch

01:30PM - 03:10PM Special Session 2a Virtual
Theme: Analysis, Evaluation, and Usage of Web Information, System Behaviors, and Human Actions
Chair: ***Yuya Yokoyama (Kyoto Prefectural University, Japan)***

Image Inpainting using Automatic Structure Propagation with Auxiliary Line Construction
Yuto Urano, Irawati Nurmala Sari and Weiwei Du

Edge-enhanced GAN with Vanishing Points for Image Inpainting
Kei Masaoka, Irawati Nurmala Sari and Weiwei Du

Skeletal Muscle Segmentation at the Third Lumbar Vertebral Level in Radiotherapy CT Images
Xuzhi Zhao, Haizhen Yue, Yi Du, Shuang Hou, Weiwei Du and Yahui Peng

Automatic Detection of Microaneurysms in Fundus Images
Shuhei Yamada, Jes'us Eduardo Ochoa Astorga, Weiwei Du and Yahui Peng

03:10PM - 03:20PM Break

03:20PM - 05:00PM Special Session 2b Virtual

Theme: Analysis, Evaluation, and Usage of Web Information, System Behaviors, and Human Actions

Chair: ***Teruhisa Hochin (Kyoto Institute of Technology, Japan)***

Application of 2-gram to English Q&A Statements To Obtain Factor Scores
Yuya Yokoyama, Teruhisa Hochin and Hiroki Nomiya

Conversation Topic Collection and Selection Support System Using Context/Physiological Information
Keiko Yamamoto, Shunya Furuta and Yoshihiro Tsujino

Coronal Curved Planar Reformation for Vertebra Localization in Pelvic Radiotherapy CT Images
Shuang Hou, Xuzhi Zhao, Yi Du, Haizhen Yue, Weiwei Du and Yahui Peng

ARGO: Projects' Time-Series Data Fetching and Visualizing Tool for GitHub
Kaito Kaide and Haruaki Tamada

Wednesday, 6 July, 2022

09:20AM - 11:00AM Regular Session 3 Virtual

Chair: ***Hiroaki Hirata (Kyoto Institute of Technology, Japan)***

Represent Score as the measurement of user influence on Twitter
Yuto Noji, Ryotaro Okada and Takafumi Nakanishi

Developing a Gamification Method Based on Motivation Subscales for Lifelogging Applications
Aoi Nagatani, Sinan Chen and Masahide Nakamura

Preliminary Study of Reasoning Existing Projects' Descriptions Based on Classname Word Elements
Kohei Terakawa, Sinan Chen and Masahide Nakamura

Study of Service to Assist Platform Deployment of Heterogeneous IoT
Tomoro Nakahashi, Sinan Chen and Masahide Nakamura

11:00AM - 11:10AM Break

11:10AM - 12:25PM Special Session 1a Virtual

Theme: Organization of Innovative Computer System for Large-scale and Flexible Computing
Chair: ***Atsushi Nunome (Kyoto Institute of Technology, Japan)***

Comparison of reinforcement learning in game AI
Jintaro Nogae, Kanemitsu Ootsu, Takashi Yokota and Shun Kojima

Data Structures for Routing Table of the Distributed Key-Value Store Based on Order Preserving Linear Hashing and Skip Graph with the Load Balancing Method
Ken Higuchi, Ami Miyazaki, Kenya Hasegawa and Tatsuo Tsuji

Enhancing the Performance of an Autonomous Distributed Storage System in a Large-Scale Network
Atsushi Nunome and Hiroaki Hirata

12:25PM - 01:50PM Lunch

01:50PM - 03:30PM Special Session 1b Virtual

Theme: Organization of Innovative Computer System for Large-scale and Flexible Computing

Chair: ***Atsushi Nunome (Kyoto Institute of Technology, Japan)***

Reconfiguration Cost for Reconfigurable Computing Architectures
Shigeyuki Takano and Hideharu Amano

Assembly code translation from ARM64 to RISC-V
Tatsuya Tsuchiya, Kanemitsu Ootsu, Takashi Yokota and Shun Kojima

An Implementation of Interactive Simulation on the Sensable Simulation System:Scube – Case Study I –
Ryohei Horiguchi, Satoshi Mizutani, Shinji Fukuma and Shin-ichiro Mori

Parallel Binary Search Tree Construction Inspired by Thread-Level Speculation
Hiroaki Hirata and Atsushi Nunome

03:30PM - 03:40PM Break

03:40PM - 04:55PM Regular Session 4 Virtual

Chair: ***Shuichi Oikawa (Advanced Institute of Industrial Technology, Japan)***

The Experience of Developing a FAT File System Module in the Rust Programming Language
Shuichi Oikawa

TETRIS: Automatic UAF Exploit Generation by Manipulating Layout based on Reactivated Paths
Zhang Bin and Fenglei Deng

A-IDE: a non-intrusive cross-platform development environment for AVR programming in assembly
Antoine Bossard

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 Scopus.

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

ACIS Official Website
http://www.acisinternational.org