

## Final Program



# 18th IEEE/ACIS International Virtual Conference on Software Engineering, Management and Applications (SERA 2021)



**June 21-22, 2021**

**Kanazawa, Japan**

<http://acisinternational.org/conferences/sera-2021/>

## Conference Organizing Committee Members

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## Program at a Glance

**Monday, June 21, 2021** in Japan Standard Time (GMT+9)

<b>Time</b>	<b>Activity</b>
10:00-10:30	Opening
10:30 – 11:30	Keynote
11:30 – 13:00	Lunch Break
13:00 – 14:00	Session 1: Machine Learning
14:00 – 14:20	Break
14:20 – 16:20	Session 2: Software Development Activities

**Tuesday, June 22, 2021** in Japan Standard Time (GMT+9)

<b>Time</b>	<b>Activity</b>
10:30 – 11:30	Session 3: Project Management
11:30 – 13:00	Lunch Break
13:00 – 14:40	Session 4: System Design
14:40 – 15:00	Break
15:00 – 16:40	Session 5: Security

**Keynote**

# **Modern Code Review for Improving Software Quality**

**DongGyun Han**

**Research Scientist**

**Singapore Management University**

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## **Abstract**

Modern code review is a lightweight and asynchronous process of auditing code changes that is done by a reviewer other than the author of the changes. Code review is widely used in both open source and industrial projects because of its diverse benefits, which include defect identification, code improvement, and knowledge transfer. This talk describes the recent practice in code review, especially focusing on empirical studies and automated techniques to support code review.

## **Biography**

Dr. DongGyun Han is a research scientist at Singapore Management University (SMU). He is working under the supervision of Prof. Debin Gao and Prof. David Lo. Before joining SMU, he was a software development engineer at Amazon Web Services. He completed his PhD at University College London (UCL). He was supervised by Prof. Jens Krinke, Prof. Mark Harman, and Prof. Federica Sarro. He received his MPhil. at the Hong Kong University of Science and Technology (HKUST) under the supervision of Prof. Sunghun Kim. His main research interests are code review, empirical study, and binary analysis.

## Program in Detail

**Monday, June 21, 2021** in Japan Standard Time (GMT+9)

**10:00am - 10:30am – Opening**

**10:30am - 11:30am – Keynote**

**Chair: *Eunjong Choi***

**11:30am - 1:00pm – Lunch break**

**1:00pm - 2:00pm – Session 1: Machine Learning**

**Chair: *Masanari Kondo***

A Comparative Study of Vectorization Approaches for Detecting Inconsistent Method Names [**Best Student Award**]  
*Tomoya Minehisa, Hirohisa Aman, Tomoyuki Yokogawa and Minoru Kawahara*

Analysis of Focused Under-Sampling Techniques with Machine Learning Classifiers  
*Ankita Bansal and Abha Jain*

Significance of Emphasized Features for Effective Representation on Deep Metric Learning  
*Shozo Saeki, Minoru Kawahara and Hirohisa Aman*

**2:00pm - 2:20pm – Coffee Break**

**2:20pm - 4:20pm – Session 2: Software Development Activities**

**Chair: *Emanuel S. Grant***

Coverage-Guided Fairness Testing [**Best Student Award**]  
*Daniel Perez Morales, Takashi Kitamura and Shingo Takada*

Accessible Programming Language for Visually Impaired Students  
*Sajeban Antonyrex*

Supporting Software Development Task Understanding by Visualizing Operation History  
*Takayuki Omori and Atsushi Ohnishi*

Generating Functional Requirements Based on Classification of Mobile Application User Reviews  
*Tanutcha Panthum and Twittie Senivongse*

Classification of Database Technology Problems on Stack Overflow  
*Nuttanai Suwonchoochit and Twittie Senivongse*

Measuring Software Change Impact Using Requirement Dependencies [**Best Paper Award**]  
*Job Champagne and Doris Carver*

**Tuesday, June 22, 2021** in Japan Standard Time (GMT+9)

**10:30am - 11:30am – Session 3: Project Management**

**Chair: Santoso Wibowo & Gopi Akella**

A New Process Model of Incremental Asset Building for Software Project Management  
*Farzana Sadia, Mahady Hasan, Nuzhat Nahar and M Rokonuzzaman*

A Distributed Large-Scale Agile Software Development for Multiple Products and Its Practical Evaluation  
*Masayuki Tanaka and Mikio Aoyama*

Quality Assurance Guidelines for Successful Startups  
*Shatadru Shikta, H. M. Mahir Shahriyar, Sowvik Kanti Das, Somania Nur Mahal, Kazi Bushra Al Jannat and Sabrina Alam*

**11:30am - 1:00pm – Lunch break**

**1:00pm - 2:40pm – Session 4: System Design**

**Chair: Sungchul Hong**

Operating System Framework for Transparent Execution on a CPU and FPGA  
*Shuichi Oikawa*

Design of a blockchain-based decentralized architecture for sustainable agriculture  
*Gopi Krishna Akella, Santoso Wibowo, Srimannarayana Grandhi and Sameera Mubarak*

Integration Challenges for a Web-based Personalized Query Suggestions System in Information Retrieval  
*Ioan Badarinza, Adrian Sterca, Darius Bufnea and Virginia Niculescu*

Energy-efficient Design of Many-cores: An Off-line Scheduling-based Flow  
*Ammar Manel*

An MDE-based design methodology for Rapid Design Space Exploration of Multicore Embedded Systems  
*Ammar Manel*

**2:40pm - 3:00pm – Break**

**3:00pm - 4:40pm – Session 5: Security**

**Chair: Wen-Chen Hu**

Improvement of Legitimate Mail Server Detection Method using Sender Authentication  
*Shuji Sakuraba, Minami Yoda, Yuichi Sei, Yasuyuki Tahara and Akihiko Ohsuga*

Automatic Security Inspection Framework for Trustworthy Supply Chain  
*Yuto Nakano, Toru Nakamura, Yasuaki Kobayashi, Takashi Ozu, Masahito Ishizaka, Masayuki Hashimoto, Hiroyuki Yokoyama, Yutaka Miyake and Shinsaku Kiyomoto*

Application of partial differential equation method in fingerprint image enhancement  
*Ke Han and Xiaojun Li*

Plugins to Detect Vulnerable Plugins: An Empirical Assessment of the Security Scanner Plugins for WordPress  
*Daniel Murphy, Minhaz Zibran and Farjana Eishita*

Choosing the Weapon: A Comparative Study of Security Analyzers for Android Applications  
*Ryan Joseph, Minhaz Zibran and Farjana Eishita*

## 2021 Conference Schedule

<b>Dates</b>	<b>Location</b>	<b>Conference Name</b>	<b>Acronym</b>
Jan 28-30	Hochiminh City Vietnam	21 <sup>st</sup> ACIS International Winter Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing	SNPD 2021 Winter
June 23-25	Shanghai China	20 <sup>th</sup> IEEE/ACIS International Summer Conference on Computer and Information Science  1 <sup>st</sup> ACIS International Conference on Artificial Intelligence (co-located with CIS 2021)	ICIS 2021 Summer  IAI 2021
Sept. 13-15	Zhohai China	6 <sup>th</sup> IEEE/ACIS International Conference on Big Data, Cloud Computing, and Data Science Engineering  *Technically sponsored by IEEE 8 <sup>th</sup> ACIS International Conference on Computational Science/Intelligence & Applied Informatics (co-located with BCD 2021)	BCD 2021  CSII 2021
June 20-22	Kanezawa Japan	18 <sup>th</sup> IEEE/ACIS International Conference on Software Engineering, Management and Applications  8 <sup>th</sup> ACM/ACIS International Conference on Applied Computing & Information Technology (co-located with SERA 2021)	SERA 2021  ACIT 2021
Nov. 24-26	Taichung Taiwan	22 <sup>nd</sup> IEEE/ACIS International Summer Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing	SNPD 2021 Summer
Oct 13-15	Xi'An China	21 <sup>st</sup> IEEE/ACIS International Fall Conference on Computer and Information Science	ICIS 2021 Fall

## **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/ijn/dc/>

### **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 (IJBDA)**

IJBDA is a world-class international journal. IJBDA Journal has been indexed in Scopus.

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

## **ACIS International Official Website**

<http://www.acisinternational.org>