Final Program

DSDT (Data Science and Digital Transformation) workshop 2020

October 17, 2020
Soongsil University, Seoul, Korea

Sponsored by: International Association for Computer & Information Science (ACIS)
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Young Cheol Byun	Je Ju National University, Korea
Yong Pil Geum	Dean of Innovation Start-up Growth, Daegu Catholic University, Korea

Program at a Glance

Saturday October 17, 2020

Time	Activity	Location
8:00 – 5:00	Registration	Foyer
9:00 – 10:00	Opening Ceremony Keynote 1	Room 309 (100 people) Room 309
10:00 – 10:10	Coffee Break	Foyer
10:10 – 10:50	Keynote 2	Room 309
11:00 – 12:00	Session 1C Session 1D	Room 307 Room 308
12:00 – 1:00	Lunch (complementary)	
1:00 – 3:00	Session 2C Session 2D	Room 307 Room 308
3:00 – 3:30	Coffee Break	Foyer
3:30 – 5:30	Session 3C Session 4D	Room 307 Room 308
6:00 – 7:30	Award Presentation Dinner Banquet	Computer Science Institute

Keynote 1

New Business Models with ICBM

Hyun Yoe, Ph.D.

Director of AI based Smart Agriculture Grand ICT Research Center

Sunchon National University, Korea

Abstract

The opportunities of billions of people connected by mobile devices, with massive processing power, storage capacity, and access to knowledge, are unlimited. And these possibilities will be multiplied by emerging technology breakthroughs in the fields of ICBM such as the Internet of Things, Cloud Computing, Big Data Analytics, and Machine Learning.

ICBM has the potential to enhance world economic growths, raise global income levels and improve the quality of life for populations around the world. ICBM is shaking up old business models and presenting strategic options that enhance competitiveness and sustainability. On the supply side, developments in energy storage, grid technologies and real time processing of customer and asset performance are transforming business models. On the demand side, customers value and expect personalized interaction at all points of their consumer experience. Facing an exponential speed of change in technology, how can companies recognize adaptive challenges to their companies and build sustainability and resilience?

There is an urgent need to transform traditional business models with the emergence of ICBM. The most successful business model today, in terms of customer value, revenue growth rates and market valuation, is the digital platform business model. 70 % of the world's top most valuable companies (Amazon, Apple, Alibaba, Microsoft et al) and the 70 % of the $ 1 billion + Unicorn startups (Didi, Airbnb et al) operate this model.

Biography

Dr. Ha Jin Hwang received MBA (1986) and DBA (1990) from Mississippi State University, U.S.A.. He is currently Head and Professor at Department of Business Analytics, Sunway University Business School, Sunway University, Malaysia. Dr. Hwang taught at Minnesota State University (1989-1991), Mankato, Minnesota, U.S.A., Catholic University of Daegu (1991-2010), Korea, and KIMEP University, Kazakhstan (2010-2016). He served as President of Korea Association of Information Systems (2005) and President of Korea Internet Electronic Commerce Association (2008). He also served as Program Co-Chair for IEEE/SNPD International Conference (2018), Publicity Chair for IEEE/ACIS International Conference (2008), Portland, U.S.A., and Conference Chair for KAIS International Conference (2005), Daegu, Korea. Dr. Hwang's research interests include Internet of Things Applications, U-Healthcare systems, Social Media Analytics, Intelligent Supply Chain Management Systems.

Keynote 2

Smart Farming Technology

Hyun Yoe, Ph.D.

Director of AI based Smart Agriculture Grand ICT Research Center

Sunchon National University, Korea

Abstract

Smart Farming is a farming management concept using modern technology to increase the quantity and quality of agricultural products. And it is a new trend in Agriculture Technology. Like many other industries, technology is changing the ways farmers manage their operations. New developments in machinery, software and genetics are allowing farmers to have more control over how they plant and manage their crops. Smart Farming Technology has played a big role in developing the agricultural industry. In this keynote overall Smart Farming Technology is briefly introduced. Also, some examples of Smart Farm will be shown. Finally, standard activity about Smart Farming Technology is introduced.

Biography

Hyun Yoe is Director of AI based Smart Agriculture Grand ICT Research Center at Sunchon National University, Korea. He is a Professor of Dept. of Information and Communication engineering, Sunchon National University. His research interests are in Smart Farming Technology and related areas. He is a vice president of Korea Association of Smart-Farm Industry, which is an association of Smart-Farm companies in Korea. He is one of the premier speakers on Industrial approaches to Smart Farming Technology. He is deeply interested in the standardization of smart farming technology these days, and he is making a lot of effort to create new smart farming standards that industries will use.

Saturday October 17, 2020

8:00am-5:00pm – Registration	**Foyer**
9:00-9:20am – Opening Ceremony	**Room 309**
9:20-10:00am – Keynote 1	**Room 309**
10:00-10:10am – Coffee Break	**Foyer**
10:10-10:50am – Keynote 2	**Room 309**

Session 1c (DSDT 2020)		**Room 307**
Special Session: Data Science and Digital Transformation in the Fourth Industrial Revolution		
Session Chair: Gwangyong Gim		
11:00am-12:00pm		
11:00	A study on the intention to use Korean telemedicine: Focusing on the extended UTAUT model.	Ha Rim Byun, Jong Woo Park
11:15	Structural relationship between environmental uncertainty, dynamic capacity and business performance in Smart supply chain	Yong Muk Kim, Jong Woo Park
11:30	Analysis of the relative importance of coaching programs	Jin Young Yang, Hyo Boon Wang, Dong Hyuk Jo
11:45	Determinants of continuance intention in Technology-Based Self-Service	Seul Ki Lee, Dong Hyuk Jo

Session 1d (DSDT 2020)		**Room 308**
Special Session: Data Science and Digital Transformation in the Fourth Industrial Revolution		
Session Chair: Jong Woo Park		
11:00am-12:00pm		
11:00	Develop a business model for technology-intensive companies	Chulhwan Kwon, Yong Muk Kim
11:15	The Effect of Experience Value of Smart TV Customers on Customer Satisfaction and Loyalty	Park Min Young, Ha Rim Byun
11:30	Development of a model for predicting demand for bilingual teachers in elementary schools to support multicultural families - Based on NEIS data	Jin-Myung Choi, Doo-Yeon Kim

11:45	A Study on NEIS Service Intelligence Method for Reducing Teachers' Work	Jin-Myung Choi, Doo-Yeon Kim

12:00-1:00 pm – Lunch

Session 2c (DSDT 2020)		**Room 307**
Special Session: Data Science and Digital Transformation in the Fourth Industrial Revolution		
Session Chair: Dea-woo Park		
1:00pm-3:00pm		
1:00	3D Printing Signboard Production using 3D Modeling Design	Jung-kyu Moon, Dea-woo Park
1:15	Search and Seizure Problems of Remote Cloud Information and Digital Forensics Forensic Investigation	Sang-hyeon Lee, Dea-woo Park
1:30	AI-based 3D Food Printing using Standard Composite Materials	Hyun-ju Yoo, Dea-woo Park
1:45	Cybersecurity of 5G Communication-based Internet of Things and Cloud Computing	Hyeong-do Im, Dea-woo Park
2:00	Telemedicine AI App for Prediction of Pets Joint Diseases	Su-yeon Han, Dea-woo Park
2:15	IoT-Connected Scientific Microscope Design for Water Larva Removal	Jae-kook Yoon, Dea-woo Park
2:30	Design of Artificial Intelligence for Smart Risk Pre-Review System at the KC EMC	Young-joo Oh, Dea-woo Park
2:45	AI Analysis of Illegal Parking Data at Seocho City Office	Dong-hyun Lim, Dea-woo Park

Session 2d (DSDT 2020)		**Room 308**
Special Session: Data Science and Digital Transformation in the Fourth Industrial Revolution		
Session Chair: Jong-Bae Kim		
1:00pm-3:00pm		
1:00	AI TTS Smartphone App for Communication of Speech Impaired People	Han-young Lee, Dea-woo Park
1:15	A Study on Auditing Method of Big Data Technology Applied System	Hyeong-do Im, Dea-woo Park
1:30	Pre-verification of Data in Electronic Trade Blockchain Platform	Sae Yong Oh, Sang hyun Cho, Sung Hwa Han, Gwangyong Gim
1:45	Study on Security and Privacy of E-Government Services	Sang Hyun Cho, Sae Yong Oh, Ho Gyun Rhu, Gwangyong Gim
2:20	Applying Hofstede's Culture Theory in the Comparison between Vietnam and Korean E-government Adoption	Hung-Trong Van, Simon Gim, Lim Eun Taek
2:15	Business Strategy Quantification using Topic Modeling and Word Embedding : Focusing on 'Virtual Reality' and 'Augmented Reality'	Si Young Lee, Sung Woong Seo, Hyun Jae Rhu, Gwangyong Gim
2:30	Union Filesystem Protect Techniques	Sung Hwa Han
2:45	Research on implementation of user authentication based on gesture recognition of human	Jungseon Oh, Joongyoung Choi, Kwansik Moon, Kyoungho Lee

3:00-3:30pm – Coffee Break **Foyer**

Session 3c (DSDT 2020)		**Room 307**
Special Session: Data Science and Digital Transformation in the Fourth Industrial Revolution		
Session Chair: Gwangyong Gim		
3:30pm-5:30pm		
3:30	Regularized Categorical Embedding for Effective Demand Forecasting of Bike Sharing System	Sangho Ahn, Hansol Ko, Juyoung Kang
3:45	Rental Demand Forecasting for Bike Sharing System using Satellite Imagery	Sehyeong Kim, Jaehyeong Park, Sangho Ahn, Juyoung Kang
4:00	Frequency acquisition method for measuring strain of vibration wire sensor	Sung-Kwang Kim, Young-Hwan Im
4:15	Accuracy evaluation of NRTK at close range using ZED-F9P and NTRIP	Sung-Kwang Kim, Young-Hwan Im
4:30	A Study on Improvement of Deep Learning Performance for Similarity Based Image Analysis	SANG-KWON YUN, Hye-Joeng Kwon, Jong-Bae Kim
4:45	Suggestions for Defense Cloud Strategy and Development Plan	SANG-KWON YUN, Hye-Joeng Kwon, Jong-Bae Kim
5:00	Design and Implementation of IoTPlatForm Education System Based on Open Source Hardware	Sun-O Choi, Jong-Bae Kim
5:15	Smart Black Box DVR System in ICT-based vehicle emergency rescue environment	Sun-O Choi, Jong-Bae Kim

Session 4d (DSDT 2020)		**Room 308**
Special Session: Data Science and Digital Transformation in the Fourth Industrial Revolution		
Session Chair: Jong-Bae Kim		
3:30pm-5:30pm		
3:30	Cloud Computing Transformation : Considering Operational Efficiency	Jung Ji Young, Yong-tai Shin
3:45	Https blocking and issue of internet censorship	Jung Ji Young, Yong-tai Shin

6:00-7:30pm – Award Presentation/ Dinner Banquet **Room** Computer Science Institute

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.

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.

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