● Map around DGIST

Parksukjin bridge

Hyunpoong IC ← Hyunpoong bridge → Cityhall

Dalseong police station

Jungang Police substation

Dalseong cultural center

DGIST
대구경북과학기술원
Daegu Gyeongbuk
Institute of Science & Technology

Hyunpoong IC

Hyunpoong IC - Dalseong police station
- Dalseong police station - Dalseong culturalcenter
- **DGIST**

Daegu Direction

Parksukjin bridge - Dalseong cultural center
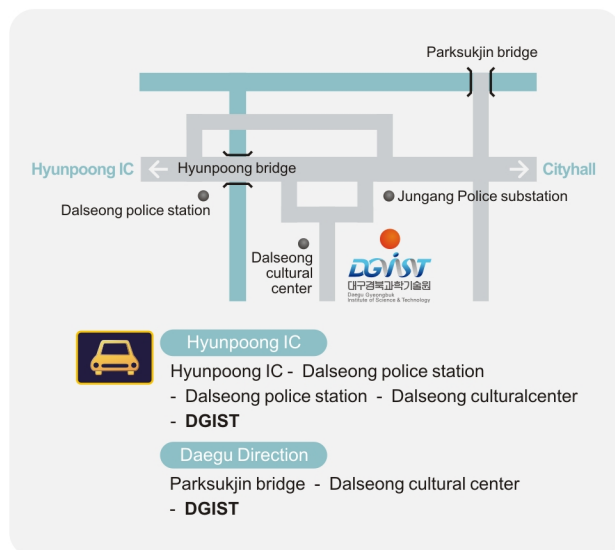- **DGIST**

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The World-Class Convergence-Research University DGIST

International Workshop
on Cyber Physical Systems 2012

● **Date : August 23 (Thu). 2012**
● **Venue : DGIST, Daegu, Korea**

Organized by

DGIST 대구경북과학기술원
Daegu Gyeongbuk
Institute of Science & Technology

General Chairs' Message

Welcome to the 2nd International Workshop on Cyber Physical Systems! The workshop provides a forum to exchange information on recent advances and developments in CPS. Following the first successful workshop in 2011, we are expecting another successful workshop this year at DGIST, Korea.

The term "Cyber-Physical Systems (CPS)" refers to the tight conjoining of and coordination between computational and physical entities. In CPS, computing, communication, and control capabilities are converged with all types of objects and structures in the physical world. Scientific applications with enormous societal impact would be available by understanding such capabilities and their interactions. Research advances in CPS promise to infuse our world with systems that respond more quickly and predictably to emergencies in more precise and highly efficient ways. CPS will enable large-scale and distributed coordination and enhance human capabilities to interact with physical entities. CPS will form the foundation for a wide variety of science domains and would enable scientific advances by providing a new paradigm for research. It is said that as the Internet has transformed how humans interact and communicate with each other, CPS will transform how we monitor and interact with (and possibly control) the physical world around us. Advances in CPS research are expected to have a major impact both in scientific development and economic payoffs. It is generally believed that CPS science will emerge as a critical component that is essential for national competitiveness.

The technical program for this year's workshop covers the latest research and development in CPS and various aspects of embedded systems, sensor networks, and their applications. We are fortunate to have Prof. Insup Lee to give the keynote speech at the workshop. Prof. Lee is the Cecilia Fitler Moore Professor in the Department of Computer and Information Science and Director of PRECISE Center at the University of Pennsylvania. He is a world renowned leader in the field of CPS, especially in medical CPS.

We invite you to participate in this workshop. If you need any help, please contact Prof. Taejoon Park at tjpark@dgist.ac.kr; 053-785-6313. We are confident that the workshop will be informative and you will enjoy high quality presentations and lively discussions with leading researchers at the workshop.

Welcome to DGIST!
Sang Hyuk Son, General Chair
Woo-Young Jung, General Co-Chair

Keynote Speaker

Insup Lee is Cecilia Fitler Moore Professor of Computer and Information Science and Director of PRECISE Center at the University of Pennsylvania. He also holds a secondary appointment in the Department of Electrical and Systems Engineering. His research interests include cyber physical systems (CPS), real-time embedded systems, formal methods and tools, high-confidence medical device systems, and trust management. He is IEEE fellow and received IEEE TC-RTS Outstanding Technical Achievement and Leadership Award in 2008. He also received the Edward M. Kennedy Award for Health Care Innovation in 2007. He has served on many program committees and chaired many international conferences. He has also served on various steering and advisory committees of technical societies, including CPSWeek, ESWeek, ACM SIGBED, IEEE TC-RTS, RV, ATVA. He has served on the editorial boards of the several scientific journals and is a founding co-Editor-in-Chief of KIISE Journal of Computing Science and Engineering (JCSE). He was Chair of IEEE Computer Society Technical Committee on Real-Time Systems (2003-2004) and an IEEE CS Distinguished Visitor Speaker (2004-2006). He received the best paper award in RTSS 2003. He was a member of Technical Advisory Group (TAG) of President's Council of Advisors on Science and Technology (PCAST) Networking and Information Technology (NIT), 2006-2007.

Workshop Overview

- When : August 23 Thu, 2012, 9:00 ~ 18:00
- Where : Auditorium, Advanced Convergence Research Center, DGIST

Executive Committee

- General Chair — Prof. Sang Hyuk Son
- General Co-Chair — Dr. Woo Young Jung
- Organizing Chair — Prof. Jae-Eun Jang
- Program Chair — Prof. Taejoon Park

Schedule

Time	Schedule	Note
09:00 ~ 09:30	**Welcome Ceremony** ○ Opening Remark, General Chair ○ Welcome Address, DGIST President ○ DGIST Introduction, Organizing Chair	
09:30 ~ 10:30	**Keynote Speech** ○ Prof. Insup Lee (University of Pennsylvania) Challenges and Research Directions in Medical Cyber-Physical Systems	
10:30 ~ 10:45	Coffee Break	
10:45 ~ 12:15	**Session I** ○ Prof. Steve Goddard (Univ of Nebraska) : Towards Stochastic Delay and Lifetime Guarantees in Cyber Physical Networks ○ Prof. Song Chong (KAIST) ○ Prof. Insik Shin (KAIST) ○ Prof. Hojung Cha (Yonsei Univ)	
12:15 ~ 13:15	Lunch (all attendees are cordially invited)	Lunchbox
13:15 ~ 14:45	**Session II** ○ Prof. Tatsuo Nakajima (Waseda Univ) Monitoring Linux Kernel Integrity on Light - Weighted Virtualization Layer for Embedded Systems ○ Prof. Sung-Soo Lim (Kookmin Univ) ○ Prof. Chang-Gun Lee (SNU) ○ Prof. Hyun-Wook Jin (Konkuk Univ)	
14:45 ~ 15:00	Coffee Break	
15:00 ~ 16:00	**Session III** ○ Prof. Tei-Wei Kuo (National Taiwan University) The Positioning of Non-Volatile Memory Management in the Memory Hierarchy ○ Prof. Junbeom Yoo (Konkuk Univ) ○ Dr. Hyun-Kyu Yu (ETRI)	
16:00 ~ 16:30	Coffee Break	
16:30 ~ 18:00	**Panel Discussion** The Secrets of Successful CPS Projects	