Newsletter No. 27
July 2013

The 3rd International Workshop on Machine-to-machine (M2M) Technology

Foreword

This issue briefly reports on the annual event of the center, the 3rd International Workshop on M2M Technology. It successfully connects the innovations of M2M technology from overseas with the domestic development in Taiwan. The keynote speakers delivered insightful ideas and had fruitful discussions with the attendees. Feedbacks from participants were positive in terms of technical contents and operational aspects of the workshop.

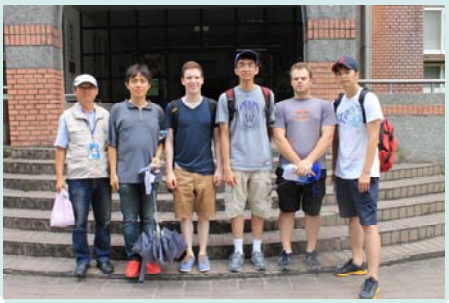
This month, Intel-NTU Center hosted a summer intern program starting on July 1st. Students from England, New Zealand, Korea, United States and China explore their future research directions and cultivate the capability to the in-depth thinking.

Intel-NTU Connected Context Computing Center (Intel-NTU Center) held an annual workshop on machine-to-machine (M2M) Technology on June 23-24. This third international workshop aims to provide a platform for world-leading M2M researchers to share their latest findings and an opportunity to stimulate the professional conversations in Taiwan. This year, the main themes of workshop include ubiquitous sensing, mobile computing and intelligent transportation. Twelve speakers are invited from overseas and domestics, including 5 IEEE fellows and 3 lab researchers from the industries. In addition, three speakers from Intel-NTU Center gave talks on the M2M innovation and the ongoing projects at the center. A poster session is arranged as an independent demonstration for the attendees to interact with the members from each project individually.

The invited speakers delivered lots of insightful ideas and

Monthly Events

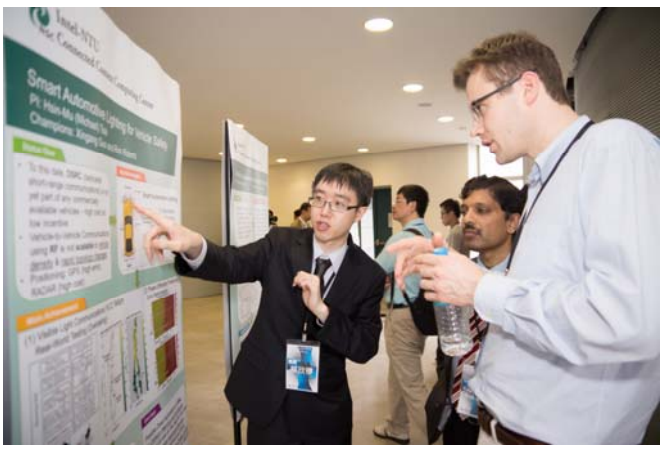
- Speech on July 3rd, Fuqiang Liu, a professor of Tongji University China—"Wireless Communication and Sensing Technologies in Internet of Vehicles"
- Speech on July 4th, S. S. Iyengar, ACM Fellow, IEEE Fellow, AAAS Fellow/Director and Ryder Professor, Florida International University—"Mob icon (Mobicon-A Mobile Context-Monitoring Platform)"
- Speech on July 11th, Wantanee Viriyasitavat, research scientist of Carnegie Mellon University—"Modeling Vehicular Traffic in Urban Areas: A Cellular Automata Approach"
- Summer Intern Program begins on July 1st. Interns had a campus tour on National Taiwan University.



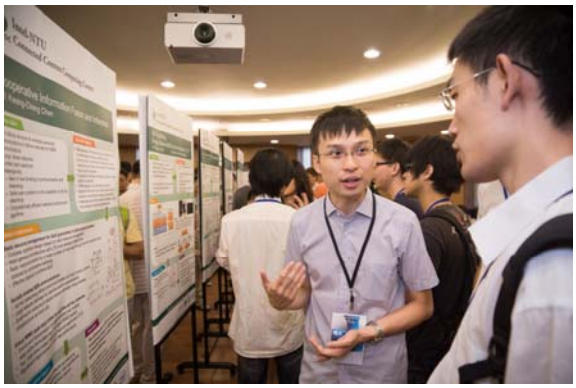
aroused vigorous conversations. The event opened up with Present Pan-Chyr Yang's remark. He was impressed with the energy of the team of faculty and students at the center and happy to see excellent research results including, a low-cost PKC on a chip for M2M applications, an intelligent reconfigurable middleware for M2M device management, self-organizing energy efficient M2M communications in LTE, visible light communication to improve motorcycle safety and wireless sensor networks for smart greenhouse, with media coverage by BBC News and Discovery on the emerging ICT to ignites agricultural revolution in Taiwan. He was looking forward to more upcoming development and achievement in M2M technology.

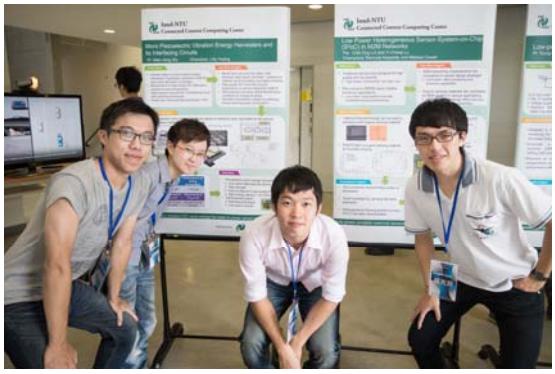
Professor Ramesh Govindan (University of Southern California), an ACM Fellow and Editor-in-Chief of IEEE Transactions on Mobile Computing, mentioned the imperative trend of mobile computing and the security issues raised by the mass mobile devices and applications. He suggested a common framework to deal with those issues on his talk of "Privacy and Mobile Revolution." Professor Raj Rajkumar (Carnegie Mellon University), an IEEE Fellow, pointed out that "intelligent transportation systems led by innovations like vehicular communications and automation in the form of self-driving vehicles promise to dramatically alter th(e) autoscape." He then informatively predicted on the future development of such intelligent transportation systems. In accordance with Professor Rajkumar's observation, Massimo Osella, the Electrical Control Lab Manager at General Motors Research and Development, showed the future needs and applications of M2M technology in vehicles and addressed its deployment into vehicular networks in terms of reliability, scalability, safety, and security. Another highlight of the sensing session is Dr. Feng Zhao's (Microsoft Research Asia) talk on "Planet-Scale Sensing: From Lab to the Real World." Dr. Zhao, an IEEE Fellow, ACM Distinguished Engineer and Assistant Managing Director of Microsoft Research Asia, first gave an overview of the major advances in sensor networks to date. He then covered major applications of planet-scale sensing, including saving energy in Internet data centers, mapping out noise in the environment, and understanding human mobility patterns for better urban planning.

In the poster session and during three talks from Intel-NTU Center, the attendees all showed highly interests in the researches and innovations of the center. Moreover, the participants including speakers and attendees were glad to take part in and were satisfied with both contents and operation of the workshop. One of the invited speakers, Dr. Nicolas Lane, a senior researcher at Microsoft Research Asia, praised the workshop as a well-organized event. The attendees of the two-day-event were at the average around 190 people. According the response of effective questionnaires, 98% of people would attend the workshop next year and 80% of people would recommend this workshop to others.



The 3rd International Workshop on M2M Technology was a success to connect the latest innovations of M2M technology from overseas with the researches development of local communities. The Intel-NTU Center was glad to be an initiator to participate in this energetic development in M2M technology.





Intel-NTU Connected Context Computing Center

BL-7C, Barry Lam Hall,
1 Roosevelt Road, Sec. 4
National Taiwan University
Taipei, 10617 Taiwan
Tel: +886-2-3366-1467

http://ccc.ntu.edu.tw

About the Author

Ching-Yu Wu

In-house Editor, Intel-NTU Connected Context Computing Center

Ming-Yi Wang, Charles Tsai

Photographers, Intel-NTU Connected Context Computing Center

Acknowledgments

This work was jointly supported by National Science Council, National Taiwan University and Intel Corporation under Grants NSC101-2911-I-002-001 and NTU101R7501-1.