# **Curriculum Vitae**

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# **Status:**

• **Associate Professor.** Department of Computer Science and Engineering, Sungkyunkwan University, Republic of Korea

- My main research area is Internet of Things (IoT). IoT is a networked system that interacts with physical, real environments, including Vehicular Networks, Security, Software-Defined Networking (SDN), Network Functions Virtualization (NFV), and the Future Internet. The current research includes (i) Vehicular networking: MAC protocols, routing protocols, transport protocols, driving safety protocols. (ii) The support of the safe and efficient navigation services in transportation systems (e.g., road networks); (iii) The efficient protection of pedestrians, drivers, and passengers in transportation systems (e.g., road networks and subways) in emergency situations (e.g., accidents and disasters); (iv) SDN-based security services in NFV environments (YANG data models and security policy translation in Interface to Network Security Functions (I2NSF)); (v) Indoor Positioning Service (IPS) based on smartphones for IoT devices; (vi) DNS name autoconfiguration of IoT devices; (vii) Security to make IoT more reliable and trustable under harsh conditions, such as IoT nodes' malfunction and adversaries' attacks.
- My recent reseach includes Intent-Based Networking (IBN) to enable the network and security services in SDN/NFV environments with the network and security policy translation technology. I am working for the network automation technology using IBN and Blockchain on top of the I2NSF framework.
- o I am leading IoT Lab at Sungkyunkwan University: http://iotlab.skku.edu/

# **Education:**

• University of Minnesota, Minneapolis, MN

Department of Computer Science and Engineering

Ph.D. – December 2009, GPA: 3.772/4.0

Thesis Title - Wireless Sensor Networking for Intelligent Transportation Systems

Advisor - Prof. David H.C. Du and Prof. Tian He

• Seoul National University, Seoul, Korea

School of Electrical Computer Engineering

M.S. – February 2001, GPA: 3.73/4.3

Thesis - Design and Implementation of One-way IP Performance Measurement Tool

Advisor - Prof. Yanghee Choi

Sungkyunkwan University, Suwon, Korea

Department of Information Engineering

B.S. – February 1999, GPA: 3.8/4.5 (Upper: 4.27/4.5)

Thesis - Location Management for Searching in Mobile Communication

Advisor - Prof. Youngik Eom

# **Research Experience:**

• 2012.9-2020.1: Sungkyunkwan University, Republic of Korea

- Research on Cloud Security: <u>Cloud-Based Security Service Systems</u>. In an IITP (Institute for Information & Communications Technology Promotion) project, I worked for the cloud-based security service systems in the cooperation with the IETF standardization for I2NSF (Interface to Network Security Systems). I have developed the framework and interfaces for the I2NSF system in NFV (Network Functions Virtualization) based on OpenStack. This I2NSF system facilitates the automation of security services according to a user's security policy through a security policy translator, which translators a high-level security policy into a low-level security policy. The network security functions (e.g., firewall, web filter, deep packet inspection, anti-virus, and DDoS attack mitigation) can be configured and managed by the security controller in the I2NSF system with a network configuration protocol called NETCONF and a data modeling language called YANG.
- O Research on Internet of Things (IoT): Configuration and Management of IoT Devices. I worked for the DNS-based name autoconfiguration of IoT devices for the remote control and monitoring of IoT devices in both IPv6 and IPv4 networks. Also, I worked for the secure DNS name autoconfiguration with NFC-based IoT device authentication. In addition, I researched on the indoor localization of IoT devices by using a user's smartphone as a mobile anchor and measuring the distance between the smartphone and an IoT device through wireless communication signal strength measurement. For an indoor localization and tracking system, I developed a BLE beacon-based localization scheme where a smartphone calculates the signal strength of the BLE beacon messages from the surrounding beacons. I worked also for the device-free human counting in indoor environments by measuring CSI (Channel State Information) of WiFi APs and receivers.
- O Research on Vehicular Networks: Vehicular Networking and Applications. In NRF (National Research Foundation of Korea) projects, I worked for the vehicular networking and applications for vehicular networks. The vehicular networking research includes MAC protocol, data forwarding systems, transport layer protocol, IPv6 neighbor discovery, and IPv6 mobility management. These vehicular networking protocols can be used to support the cooperation among self-driving vehicles for driving safety. The vehicular application research includes self-adaptive navigation systems, context-aware navigator, and pedestrian protection system for driving safety and efficiency. Also, I worked for the Internet Standardization for IPWAVE (IP Wireless Access in Vehicular Environments) in the IETF such as IPWAVE problem statement, vehicular neighbor discovery, and vehicular mobility management.

# • 2010.1-2012.7: Brocade Communications Systems, Plymouth, MN, USA

- o **Engineering:** IPsec Design and Implementation. In this project, I worked for the design and implementation of IPsec in IPv4 and IPv6. Especially, I worked on the Cavium network protocol stacks to efficiently support the Internet Key Exchange for IPsec. Also, I worked for the Internet Standardization for IPv6 DNS Configuration in the IETF.
- Research: Vehicular Cyber-Physical Systems for Road Networks. I researched on Vehicular Cyber-Physical Systems for Road Networks, such as Road Sensor Networks and Vehicular Networks. Especially, I worked for the trajectory-based multicast protocol for the efficient data sharing in vehicular networks. Traffic Control Center maintains the trajectories of the vehicles moving in road networks for the localization of vehicles. It allows the infrastructure nodes (i.e., APs and Relay Nodes) to be able to forward data packets to the moving multicast group vehicles with their trajectory information. Also, I worked for the delay-bounded-and-reliable data dissemination architecture for vehicular networks, using the trajectories of vehicles and Relay Nodes as temporary packet holders.

# • 2004.9-2009.12: Department of Computer Science, University of Minnesota, USA

O 2008.5-2009.12: Data Forwarding in Vehicular Ad-hoc Networks (VANET) - funded by National Science Foundation (NSF). In this project, I researched on a data forwarding in vehicular networks. I investigated a data forwarding using both individual vehicle trajectory and vehicular traffic statistics in road networks. This work was published in IEEE ICDCS'09 and IEEE Transactions on Parallel and Distributed Systems (TPDS) as Spotlight Paper. I worked for a data forwarding scheme for the infrastructure-to-vehicle

- data delivery, considering vehicle trajectory and vehicular traffic statistics. This work was published in IEEE ICDCS'10 and IEEE Transactions on Mobile Computing (TMC) as Spotlight Paper.
- 2006.5-2008.4: Sensor Networking Project for Intelligent Transportation Systems funded by Digital Technology Center (DTC), University of Minnesota and National Science Foundation (NSF). In this project, I have researched on the sensor networking for the intelligent transportation systems, such as road networks. I designed and published the Autonomous Passive Localization system (called APL) for wireless sensors deployed on road networks. I proposed and published a vehicle tracking algorithm using minimal tracking area (called minimal contour) in order to save sensor energy. I also researched on a road surveillance system (called VISA) for the road networks using the characteristics of road networks. These three projects were published in IEEE Infocom conferences.
- 2005.5-2006.5: Intelligent Storage based on Object-based Storage Device (OSD), DISC Project funded by US Industry (such as Sun Microsystems and StorageTek) and Korean Government Research Institute (i.e., ETRI). In this project, I implemented the communications and security modules (such as the security manager and policy manager) for OSD based on ISO T10 specification. The implementation has been publicly released in SourceForge.net (http://sourceforge.net/projects/disc-osd/) in 2007 and the paper related to the implementation has been published to a storage conference called MSST in 2006.
- 2004.8-2006.5: Simulation and Modeling for Storage Area Network (SIMON), SIMON Project funded by US Navy. In this project, I designed and implemented a simple version of SIMON simulator in 2004. With the simulation and real experiment, we proved the validity of the SIMON concept. We also worked for the hybrid simulation approach for the SIMON simulator.
- 2001.2-2004.8: Electronics and Telecommunications Research Institute (ETRI), Korea Research Staff Member Next Generation Internet Standards Research Team
  - O 2002.1-2004.8: Project titled IPv6 Auto-Configuration Networking Technology Standardization (6ANTS). In this project, we developed and implemented basic routing protocol and auto-configuration technology for auto-networking in IPv6 mobile environments, such as IPv6 mobile ad hoc network (MANET) and mobile network (NEMO). The auto-configuration technology consists of the IPv6 unicast address auto-configuration, IPv6 multicast allocation, multicast DNS, and service discovery. Especially, I have led in the development of the auto-configuration technology and ad hoc routing protocols for IPv6 mobile ad hoc networks. Also, I have developed wireless mobile router based on MPC855T board and embedded linux with other company called CREWAVE for MANET testbed. The results of this project have been being standardized in IETF (Internet Engineering Task Force).
  - 2001.2-2001.12: Project titled <u>IPv6 Network and Application Testbed (6NEAT)</u>. In this project, we implemented IPv6 applications, such as videoconferencing tools and tested them over Trans-Eurasia Information Network (TEIN) with several European countries such as University College London (UCL). Also, we participated in 6WINIT project as one of the international partners, of which the purpose is to validate the introduction of the new mobile wireless internet in Europe. I designed and implemented <u>Active Measurement Tool (AMTv6)</u> for measuring one-way IP performance metrics in IPv6 network. I also managed the nation-wide IPv6 testbed network called 6Bone-KR and performed the test of our prototype implementation in this network.
- 1999-2000: Department of Computer Engineering, Seoul National University, Korea Research Assistant Multimedia & Computer Communications Lab., Prof. Yanghee Choi
  - 2000.5-2000.11: Project titled <u>Development of One-way IP Performance Measurement Tool, Active Measurement Tool (AMT)</u>. In this project, we developed and implemented one-way IP performance measurement tool for Korea Telecom commercial Internet, KORNET. I designed and implemented main modules of control and measurement systems of AMT.

1999.3-1999.12: Project titled <u>A High-quality Multimedia Distribution Service over the Internet (SmartNET)</u>. In this project, we implemented a high-quality multimedia distribution service based on MPEG-1 video/audio over the Internet, namely VoD service. I implemented the user interface based on MFC in this project.

# **Intern:**

- 2007.5.14-2007.8.31: SGI, Eagan, MN, USA
  - Engineering Work: CXFS Project for the SGI's Cluster File System for High-Performance Computing. In this project, I extended the Wireshark that is one of popular network analysis tools. Given Interface Description Language (IDL) files for CXFS message protocol, the Wireshark is required to be automatically updated in order to capture packets related to new interfaces specified in the IDL files. I designed and implemented Parsers based on Lex/Yacc to allow both the automation of Wireshark update and the display of IDL interface parameters, given the IDL files.
- 2006.6.1-2006.8.31: McData, Plymouth, MN, USA
  - Engineering Work: Dana Project for the McDATA second generation switch (called iWSM) for SAN Internetworking. In this project, I set up the testbed and extended the testing tool program for testing the iWSM boxes. The first work was to set up the testbed for testing the IPsec implementation in the iWSM using Ixia's IxANVL that is one of the most popular protocol testing tools. Also, I designed the extension of the IxANVL tool for the iWSM IPsec testing. The second work was to extend the windows-based testing program (called MessageBox) for testing the iWSM box. The program is implemented using Visual C++ and WinBatch. Especially, I extended the user-interface functions (such as the window resizing and text-coloring for debugging) and the character caret control in the terminal that is used to provide Command Line Interface (CLI).

# **Teaching:**

- Lecturer: **Introduction to Computer Engineering (ICE2010)**, Department of Software, Sungkyunkwan University, Spring 2013. Undergraduate level course to introduce computer science, such as computer hardware and software.
- Lecturer: **Introduction to Algorithms** (**SWE3001-41**), Department of Software, Sungkyunkwan University, Fall 2012. Undergraduate level course to cover the design and analysis of algorithms, such as Dynamic Programming and Greedy Algorithms.
- Teaching Assistant: **Introduction to Computer Networks (CSCI-4211)**, Computer Science and Engineering, University of Minnesota, Fall 2009. Undergraduate level course on the introduction to the computer networking from Data-link layer to Application layer.
- Teaching Assistant: **Wireless Sensor Networks** (CSCI-5980), Computer Science and Engineering, University of Minnesota, Spring 2006. Graduate level course on the introduction to the wireless sensor networks.
- Teaching Assistant: **Data Communications and Computer Networks (CSCI-5211)**, Computer Science and Engineering, University of Minnesota, Fall 2005. Graduate level course on the introduction to the data communication and computer network for understanding the Internet.
- Teaching Assistant: **Electronic Circuit 1**, Computer Engineering, Seoul National University, Fall 2000. Sophomore level course on introduction to the Electronic Circuit.
- Lecturer: Windows Programming (MFC) and UNIX Network Programming, BIT Training Center (BTC) (<a href="http://www.bit.co.kr/english/product/441.htm">http://www.bit.co.kr/english/product/441.htm</a>), 1999-2000. BTC is a subsidiary IT Institute of BIT Computer (<a href="http://www.bit.co.kr/english/Index.htm">http://www.bit.co.kr/english/Index.htm</a>) to educate and deliver highly skilled programmers to the industry.

# **Related Courses:**

• Graduate Courses

- O Ph.D. Courses: Data Communications and Computer Networks (CSCI-5211), Advanced Algorithms and Data Structures (CSCI-5421), Advanced Computer Networks and Their Applications (CSCI-8211), Numerical Analysis (CSCI-5302), Artificial Intelligence I (CSCI-5511), Probability and Statistics Theory (MATH-5651), New Trends in Database Systems (CSCI-5980), Prediction and Filtering Theory (MATH-5654), Machine Learning (CSCI-5525), Introduction to Stochastic Processes (MATH-5652), Graph Theory and Non-Enumerative Combinatorics (MATH-5707), Statistical Analysis (STAT-5021).
- M.S. Courses: Advanced Multimedia, Computer Communication Networks, Security in Computer Systems, Advanced Computer System Performance Evaluation, Topics in Internet, Advanced Operating Systems, Advanced Database, Advanced Programming Language.

# • Undergraduate Courses

o Simulation Engineering, Theory of Computation, Computer Networks, Electronics Circuits, Communication Theory, Information Theory I & II, Data Communications, Signal and Systems, Digital Signal Processing, Introduction to Statistics, etc.

# **Technical/Special Skills:**

- **OS:** Cavium, Windows, Unix (Solaris, Linux, FreeBSD).
- **Programming:** C/C++, Perl, MFC, Java, Java Script, Tcl/Tk, Lisp, Scheme, Lex/Yacc, Fortran, Latex and HTML.
- Network Simulation and Math Package: ns-2, SMPL, Matlab, Statistix (Statistics Tool).
- Protocols:
  - 1. **Network:** NETCONF/YANG, IEEE 802.11 a/b/g/p, Cloud Computing, TCP/IP, IPv6, IPsec, MIPv6, NEMO, MANET, MPLS, ATM, etc.
  - 2. **Storage:** Cloud Storage, FCIP, iSCSI, OSD, FC-AL, CXFS, etc.

### **Professional Activities:**

- 2002.1-Present: IETF Standardization, especially in I2NSF WG, IPWAVE WG, IPv6 WG (Working Group), 6MAN WG, and DNSOP WG
- **2001.1-2001.12:** Secretariat in IPv6 Forum Korea
- 2001.3-2001.12: Chair of Measurement WG in APAN-KR
- 1999.1-2000.12: Member of Video WG and Measurement WG in APAN-KR

### **Professional Services:**

- **Technical Program Committee:** International Workshop on Mobile Systems and Applications (MoSA 2011), IEEE International Workshop on Internet and Distributed Computing Systems (IDCS'09, IDCS'11)
- University Committee Service: UMN Computer Science DGS Advisory Committee (2007.9-2008.4)
- Conference Paper Review: ICOIN'13, IEEE Infocom'12, IEEE WCNC'12, IEEE VTC'12 Spring, IEEE MASS'09, IEEE ICDCS'09, ACM/ IEEE IPSN'09, IEEE Infocom'09, IEEE ICOIN'09, ACM MobiHoc'08, IEEE ICDCS'08, IEEE MASS'08, IEEE Milcom'08, IEEE Globecom'08, IEEE ICNP'07, IEEE ICC'06, IEEE Workshop on Wireless Local Networks'05.
- Journal Paper Review: Ad Hoc Networks'11, IEEE Transactions on Vehicular Technology (TVT), IEEE Transactions on Wireless Communications (TWC), IEEE Transactions on Mobile Computing (TMC), IEEE Transactions on Intelligent Transportation Systems (T-ITS), IEEE Intelligent Transportation Systems Magazine, WINET'10, Ad Hoc Networks'10, SENSORS'10, IEEE Communications Letters'09, IJOPCM'09, COMNET'09, SENSORS'09, TIIS'09, IJSNet'06.

# **Community Services:**

- 2018.1-2020.1: Advisor of SKKU Sungmoohui (Taekwondo Club), The 5th Dan Black Belt, Republic of Korea.
- 2008.3-2012.7: Teacher at Taekwondo (Korean Martial Art) Class, The 3rd Dan Black Belt, MN, USA.
- 2009.8: Coach at Commonwealth Terrace Cooperative (CTC) Youth Soccer Class, MN, USA.
- 2007.9-2008.6: Teacher at Sunday School of Catholic Church, Saint Andrew Kim, MN, USA
- 1996.2-2001.1: Teacher at Sunday School of Catholic Church, Chang4-dong, Seoul, Korea
- **1993.11-1996.1:** Military Service in Korea Army

# **Grants:**

- Research Grant from Daegu Gyeongbuk Institute of Science and Technology (DGIST) in Korea: December 2012 May 2013, "Vehicular Networking in Cyber-Physical Systems for Intelligent Transportation Systems".
- **Research Grant** from Electronics and Telecommunications Research Institute (ETRI) in Korea: December 2012 June 2013, "Research on e-Bus Routing Scheme in Smart e-Bus Framework".
- Travel Grant for Illinois Wireless Summer School: UIUC, Illinois, August 2009.
- NSF Travel Grant for INFOCOM'07: Anchorage, Alaska, May 2007.

# Awards:

- IETF Hackathon I2NSF Project: IETF-97 (Best Group Work Award), IETF-99 (Best University Work Award), IETF-100 (Best Student Project Award), IETF-103 (Best Overall Award).
- Outstanding Paper in International Conference on Advanced Communications Technology (ICACT 2016), January 2016, "DNSNA: DNS Name Autoconfiguration for Internet of Things Devices".
- Best Paper in Journal of Korean Institution of Information Scientists and Engineerers (KIISE), November 2015, "Design and Implementation of DNS Name Autoconfiguration for Internet of Things Devices".
- Best Paper in International Conference on Internet of Vehicles (IOV 2015), December 2015 "Link Delay Modeling for Two-way Traffic Road Segment in Vehicular Networks".
- Spotlight Paper in IEEE Transactions on Mobile Computing, October 2012, "Trajectory-Based Statistical Forwarding for Multihop Infrastructure-to-Vehicle Data Delivery".
- Spotlight Paper in IEEE Transactions on Parallel and Distributed Systems, May 2011, "Trajectory-Based Data Forwarding for Light-Traffic Vehicular Ad-Hoc Networks".
- Computer Engineering Scholarship: Seoul National University, 1999.
- Information Engineering Scholarship: Sungkyunkwan University, 1997-1998.

#### **Publications:**

- Network Security and Privacy
  - "IBCS: Intent-Based Cloud Services for Security Applications", Jinyong (Tim) Kim, Eunsoo Kim, Jinhyuk Yang, Jaehoon (Paul) Jeong, Hyoungshick Kim, Sangwon Hyun, Hyunshik Yang, Jaewook Oh, Younghan Kim, Susan Hares, and Linda Dunbar, IEEE Communications Magazine, Vol. 58, No. 4, pp. 45-51, April 2020.
  - 2. "A Design of IoT Device Configuration Translator for Intent-Based IoT-Cloud Services", Chaehong Chung and Jaehoon (Paul) Jeong, The 22nd International Conference on Advanced Communications Technology (ICACT 2020), February 2020.
  - "Cloud-Based Security Service System for User's Security Intent Support", Jaehoon Jeong, US-Korea Conference (UKC 2019), Chicago, US, August 2019.

- "An Automata-based Security Policy Translation for Network Security Functions", Jinhyuk Yang and Jaehoon Jeong, International Conference on ICT Convergence (ICTC 2018), Jeju, Korea, October 2018.
- 5. "Interface to Network Security Functions for Cloud-Based Security Services", Sangwon Hyun, Jinyong (Tim) Kim, Hyoungshick Kim, Jaehoon (Paul) Jeong, Susan Hares, Linda Dunbar, and Adrian Farrel, IEEE Communications Magazine, Vol. 56, Issue 1, January 2018.
- "Security Challenges with Network Functions Virtualization", Mahdi Daghmehchi Firoozjaei, Jaehoon Jeong, Hoon Ko, and Hyoungshick Kim, Elsevier Future Generation Computer Systems, Vol. 67, February 2017.
- 7. "RAD: Recipient-Anonymous Data Delivery based on Public Routing Proxies", Hyoungshick Kim and Jaehoon Jeong, Elsevier Computer Networks, Vol. 55, Issue 15, October 2011.
- 8. "DNS Name Service based on Secure Multicast DNS for IPv6 Mobile Ad Hoc Networks", Jaehoon Jeong, Jungsoo Park and Hyoungjun Kim, International Conference on Advanced Communications Technology (ICACT 2004), Phoenix Park, Korea, February 2004.

### • Vehicular Networking

- "DAPF: Delay-Aware Packet Forwarding for Driving Safety and Efficiency in Vehicular Networks", Hamayoun Shahwani, Bien Aime Mugabarigira, Yiwen Shen, Jaehoon (Paul) Jeong, and Jitae Shin, IET Communications, January 2020.
- 2. "IPv6 Neighbor Discovery with Multi-hop Communication for IP-Based Vehicular Networks", Zhong Xiang, Yiwen Shen, and Jaehoon Jeong, International Conference on ICT Convergence (ICTC 2019), Jeju, Korea, October 16-19, 2019.
- 3. "CBDN: Cloud-Based Drone Navigation for Efficient Battery Charging in Drone Networks", Jinyong Kim, Seokhwa Kim, Jaehoon Jeong, Hyoungshick Kim, Jung-Soo Park, and Taeho Kim, IEEE Transactions on Intelligent Transportation Systems, Vol. 20, Issue 11, November 2019.
- 4. "Cloud-based Battery Replacement Scheme for Smart Electric Bus System", Jinyong Kim, Jaehoon Jeong, Hyoungshick Kim, and Jung-Soo Park, IETE Journal of Research, July 2018.
- "STMAC: Spatio-Temporal Coordination-Based MAC Protocol for Driving Safety in Urban Vehicular Networks", Jaehoon Jeong, Yiwen Shen, Sangsoo Jeong, Sejun Lee, Hwanseok Jeong, Tae (Tom) Oh, Taejoon Park, Muhanmmad U. Ilyas, Sang Hyuk Son, and David H.C. Du, IEEE Transactions on Intelligent Transportation Systems, Vol. 19, No. 5, May 2018.
- 6. "SAINT+: Self-Adaptive Interactive Navigation Tool+ for Emergency Service Delivery Optimization", Yiwen Shen, Jinho Lee, Hohyeon Jeong, Jaehoon Jeong, Eunseok Lee, and David H.C. Du, IEEE Transactions on Intelligent Transportation Systems, Vol. 19, No. 4, April 2018.
- "Protocols and applications in vehicular sensor networks for driving safety, driving efficiency, and data services", Jaehoon Jeong, Tae (Tom) Oh, Sangheon Pack, and Alexandre Petrescu, SAGE International Journal of Distributed Sensor Networks, Vol. 13, No. 2, February 2017.
- 8. "Survey on Protocols and Applications for Vehicular Sensor Networks", Jaehoon Jeong and Tae (Tom) Oh, SAGE International Journal of Distributed Sensor Networks, Vol. 12, No. 8, August 2016.
- 9. "Two-Way Traffic Link Delay Modeling in Vehicular Networks", Jinho Lee, Jaehoon Jeong, and David H.C Du, Elsevier Computer Networks, Vol. 110, **Best Paper**, December 2016.
- 10. "CRATER: A Crowd Sensing Application To Estimate Road Conditions", Faria Kalim, Jaehoon Jeong, and Muhammad U. Ilyas, IEEE Access, Vol. 4, September 2016.
- 11. "SAINT: Self-Adaptive Interactive Navigation Tool for Cloud-Based Vehicular Traffic Optimization", Jaehoon Jeong, Hohyeon Jeong, Eunseok Lee, Tae (Tom) Oh, and David H.C. Du, IEEE Transactions on Vehicular Technology, Vol. 65, No. 6, June 2016.
- 12. "TPD: Travel Prediction-Based Data Forwarding for Light-Traffic Vehicular Networks", Jaehoon Jeong, Jinyong Kim, Taehwan Hwang, Fulong Xu, Shuo Guo, Yu Gu, Qing Cao, Ming Liu and Tian He, Elsevier Computer Networks, Vol. 93, December 2015.
- 13. "TMA: Trajectory-based Multi-Anycast forwarding for efficient multicast data delivery in vehicular networks", Jaehoon Jeong, Tian He and David Du, Elsevier Computer Networks, Vol. 57, Issue 13, May 2013.
- 14. "Trajectory-Based Statistical Forwarding for Multihop Infrastructure-to-Vehicle Data Delivery", Jaehoon Jeong, Shuo Guo, Yu Gu, Tian He and David Du, IEEE Transactions on Mobile Computing (TMC), **Spotlight Paper**, Vol. 11, No. 10, October 2012.
- 15. "Vehicle Trajectory-Based Data Forwarding Schemes for Vehicular Ad Hoc Networks", Jaehoon (Paul) Jeong, KICS Information and Communications Magazine, Survey Paper, August 2012.

- 16. "Utilizing Shared Vehicle Trajectories for Data Forwarding in Vehicular Networks", Fulong Xu, Shuo Guo, Jaehoon Jeong, Yu Gu, Qing Cao, Ming Liu and Tian He, IEEE Infocom'11 Miniconference, Shanghai, China, April 2011.
- 17. "TSF: Trajectory-based Statistical Forwarding for Infrastructure-to-Vehicle Data Delivery in Vehicular Networks", Jaehoon Jeong, Shuo Guo, Yu Gu, Tian He and David Du, IEEE ICDCS'10, June 2010.
- "Trajectory-Based Data Forwarding for Light-Traffic Vehicular Ad-Hoc Networks", Jaehoon Jeong, Shuo Guo, Yu Gu, Tian He and David Du, IEEE Transactions on Parallel and Distributed Systems (TPDS), Spotlight Paper, Vol. 22, No. 5, May 2011.
- 19. "TBD: Trajectory-Based Data Forwarding for Light-Traffic Vehicular Networks", Jaehoon Jeong, Shuo Guo, Yu Gu, Tian He and David Du, IEEE ICDCS'09, June 2009.

### Internet of Things

- "A Framework for DNS Naming Services for Internet-of-Things Devices", Keuntae Lee, Seokhwa Kim, Jaehoon Jeong, Sejun Lee, Hyoungshick Kim, and Jung-Soo Park, Elsevier Future Generation Computer Systems, Vol. 92, pp. 617-627, March 2019.
- "SALA: Smartphone-Assisted Localization Algorithm for Positioning Indoor IoT Devices", Jaehoon Jeong, Solchan Yeon, Taemoon Kim, Hyunsoo Lee, Song Min Kim, and Sang-Chul Kim, Springer Wireless Networks, Vol. 24, No. 1, January 2018.
- "APRA: Affinity Propagation-Based Resource Allocation Scheme in M2M for System Capacity Maximization", Hamayoun Shahwani, Phuc Chau, Jaehoon Jeong, and Jitae Shin, IETE Journal of Research, Vol. 64, Issue 1, January 2018.
- "DNSNA: DNS Name Autoconfiguration for Internet of Things Devices", Sejun Lee, Jaehoon Jeong, and Jung-Soo Park, The 18th International Conference on Advanced Communications Technology (ICACT 2016), Outstanding Paper, Phoenix Park, PyeongChang, Korea, Jan 31-Feb 3 2016.
- "Design and Implementation of DNS Name Autoconfiguration for Internet of Things Devices", Sejun Lee and Jaehoon Jeong, Journal of KIISE, Vol. 42, No. 11, Best Paper, November 2015.

#### Wireless Sensor Networks

- "CACA: Link-based Channel Allocation Exploiting Capture Effect for Channel Reuse in Wireless Sensor Networks", Junghyun Jun, Solchan Yeon, Titir Kundu, Dharma P Agrawal, Jaehoon Jeong, IEEE ICDCS'16, Nara, Japan, June 27-30, 2016.
- "Node Localization in Wireless Sensor Networks", Ziguo Zhong, Jaehoon Jeong, Ting Zhu, Shuo Guo and Tian He, Handbook on Sensor Networks, World Scientific Publishing Co., July 2010.
- 3. "Virtual Scanning Algorithm for Road Network Surveillance", Jaehoon Jeong, Yu Gu, Tian He and David Du, IEEE Transactions on Parallel and Distributed Systems (TPDS), Vol. 21, No. 12, December 2010.
- "VISA: Virtual Scanning Algorithm for Dynamic Protection of Road Networks", Jaehoon Jeong, Yu Gu, Tian He and David Du, IEEE Infocom'09, April 2009.
- "Autonomous Passive Localization Algorithm for Road Sensor Networks", Jaehoon Jeong, Shuo Guo, Tian He and David Du, IEEE Transactions on Computers (TC), Vol. 60, No. 11, November 2011
- "APL: Autonomous Passive Localization for Wireless Sensors Deployed in Road Networks", Jaehoon Jeong, Shuo Guo, Tian He and David Du, IEEE Infocom'08, April 2008.
- "MCTA: Target Tracking Algorithm based on Minimal Contour in Wireless Sensor Networks", Jaehoon Jeong, Taehyun Hwang, Tian He and David Du, IEEE Infocom'07 Minisymposia, May 2007.
- "Energy-Aware Scheduling with Quality of Surveillance Guarantee in Wireless Sensor Networks", Jaehoon Jeong, Sarah Sharafkandi and David Du, The 2nd ACM/SIGMOBILE Workshop on Dependability Issues in Wireless Ad Hoc Networks and Sensor Networks (DIWANS), September 2006.

#### Mobile Ad Hoc Networks

 "Design and Implementation of IPv6 Address Autoconfiguration for AODV in Mobile Ad Hoc Networks", Youngmin Kim, Sanghyun Ahn, Youngju Lee, Jaehoon Jeong and Jaehwoon Lee, The 2005 US-Korea Conference on Science, Technology & Entrepreneurship (UKC 2005), University of California at Irvine, August 2005.

- "Name Directory Service based on MAODV and Multicast DNS for IPv6 MANET", Jaehoon Jeong, Jungsoo Park and Hyoungjun Kim, IEEE VTC 2004-Fall, Los Angeles, CA, USA, September 2004.
- 3. "Auto-Networking Technologies for IPv6 Mobile Ad Hoc Networks", Jaehoon Jeong, Jungsoo Park and Hyoungjun Kim, ICOIN 2004, Busan, Korea, February 18-20, 2004. Reprinted in Lecture Notes in Computer Science (LNCS), Vol. 3090, October 2004.
- "Name Service in IPv6 Mobile Ad-hoc Network connected to the Internet", Jaehoon Jeong, Jungsoo Park and Hyoungjun Kim, IEEE PIMRC 2003, Beijing, China, September 2003.
- "Service Discovery based on Multicast DNS in IPv6 Mobile Ad-hoc Networks", Jaehoon Jeong, Jungsoo Park and Hyoungjun Kim, IEEE VTC 2003-Spring, Jeju, Korea, April 2003.
- "Name Service in IPv6 Mobile Ad-hoc Network", Jaehoon Jeong, Jungsoo Park, Hyoungjun Kim and Kishik Park, ICOIN 2003, Jeju, Korea, February 2003. Reprinted in Lecture Notes in Computer Science (LNCS), Vol. 2662, August 2003.
- "NDR: Name Directory Service in Mobile Ad-Hoc Network", Jaehoon Jeong, Jungsoo Park and Hyoungjun Kim, ICACT 2003, Korea, January 2003.
- 8. "Autoconfiguration Technologies for IPv6 Multicast Service in Mobile Ad-hoc Networks", Jaehoon Jeong and Jungsoo Park, IEEE ICON 2002, Singapore, August 2002.
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