

Curriculum Vitae

(Short Version)

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● Education and Training

09/2004-12/2009	Computer Science and Engineering, University of Minnesota, Minneapolis, US	Ph.D.
03/1999-02/2001	Computer Engineering, Seoul National University, Seoul, Korea	M.S.
03/1992-02/1999	Information Engineering, Sungkyunkwan University, Suwon, Korea	B.S.

● Academic and Industry Appointments

09/2012 – Present	Associate Professor, Department of Computer Science and Engineering, Sungkyunkwan University, Suwon, Korea
01/2010 – 07/2012	Software Engineer, Brocade Communications Systems, Plymouth, MN, US
02/2001 – 08/2004	Research Staff Member, Electronics and Telecommunications Research Institute (ETRI), Korea

● Research Interests

Intent-Based Networking (IBN), Internet of Things (IoT), Cyber-Physical Systems (CPS), Vehicular Networks, Wireless Sensor Networks (WSN), Cloud Computing, Software-Defined Networking (SDN), and Network Functions Virtualization (NFV).

● Professional Services

Conference TPC	International Workshop on Mobile Systems and Applications (MoSA 2011), IEEE International Workshop on Internet and Distributed Computing Systems (IDCS'09, IDCS'11).
Journal Reviewer	IEEE Transactions (TMC, TWC, TPDS, T-ITS, TVT), IEEE Communications Letters, Elsevier COMNET, SENSORS.
Conference Reviewer	ACM IMCOM'16, IEEE Infocom'12, IEEE WCNC'12, IEEE VTC'12 Spring, IEEE MASS'09, IEEE ICDCS'09, ACM/ IEEE IPSN'09, IEEE Infocom'09, ACM MobiHoc'08, IEEE ICDCS'08, IEEE MASS'08, IEEE Milcom'08, IEEE Globecom'08, IEEE ICNP'07, IEEE ICC'06.

● Publication (Journal, Conference & Internet Standard)

■ Journal Papers

1. J. Kim, E. Kim, J. Yang, J. Jeong, H. Kim, S. Hyun, H. Yang, J. Oh, Y. Kim, S. Hares, and L. Dunbar, "IBCS: Intent-Based Cloud Services for Security Applications", IEEE Communications Magazine, Vol. 58, No. 4, pp. 45-51, April 2020.
2. H. Shahwani, B. Mugabarigira, Y. Shen, J. Jeong, and J. Shin, "DAPF: Delay-Aware Packet Forwarding for Driving Safety and Efficiency in Vehicular Networks", IET Communications, January 2020.
3. K. Lee, S. Kim, J. Jeong, S. Lee, H. Kim, and J. Park, "A Framework for DNS Naming Services for Internet-of-Things Devices", Elsevier Future Generation Computer Systems, Vol. 92, March 2019.
4. J. Jeong, S. Yeon, T. Kim, H. Lee, S. Kim, and S. Kim, "SALA: Smartphone-Assisted Localization Algorithm for Positioning Indoor IoT Devices", Springer Wireless Networks, Vol. 24, No. 1, January 2018.
5. H. Shahwani, P. Chau, J. Jeong, and J. Shin, "APRA: Affinity Propagation-Based Resource Allocation Scheme in M2M for System Capacity Maximization", IETE Journal of Research, Vol. 64, Issue 1, January 2018.
6. S. Lee and J. Jeong, "Design and Implementation of DNS Name Autoconfiguration for Internet of Things Devices", Journal of KIISE, Vol. 42, No. 11, Best Paper, November 2015.

7. H. Shahwani, B.A. Mugabarigira, Y. Shen, J. Jeong, and J. Shin, "DAPF: Delay-Aware Packet Forwarding for Driving Safety and Efficiency in Vehicular Networks", IET Communications, January 2020.
8. J. Kim, S. Kim, J. Jeong, H. Kim, J. Park, and T. Kim, "CBDN: Cloud-Based Drone Navigation for Efficient Battery Charging in Drone Networks", IEEE Transactions on Intelligent Transportation Systems, Vol. 20, Issue 11, November 2019.
9. J. Kim, J. Jeong, H. Kim, and J. Park, "Cloud-based Battery Replacement Scheme for Smart Electric Bus System", IETE Journal of Research, July 2018.
10. J. Jeong, Y. Shen, S. Jeong, S. Lee, H. Jeong, T. Oh, T. Park, M.U. Ilyas, S. Son, and D.H.C. Du, "STMAC: Spatio-Temporal Coordination-Based MAC Protocol for Driving Safety in Urban Vehicular Networks", IEEE Transactions on Intelligent Transportation Systems, Vol. 19, No. 5, May 2018.
11. Y. Shen, J. Lee, H. Jeong, J. Jeong, E. Lee, and D.H.C. Du, "SAINT+: Self-Adaptive Interactive Navigation Tool+ for Emergency Service Delivery Optimization", IEEE Transactions on Intelligent Transportation Systems, Vol. 19, No. 4, April 2018.
12. J. Jeong, T. Oh, S. Pack, and A. Petrescu, "Protocols and applications in vehicular sensor networks for driving safety, driving efficiency, and data services", SAGE International Journal of Distributed Sensor Networks, Vol. 13, No. 2, February 2017.
13. J. Jeong and T. Oh, SAGE International Journal of Distributed Sensor Networks, "Survey on Protocols and Applications for Vehicular Sensor Networks", Vol. 12, No. 8, August 2016.
14. J. Lee, J. Jeong, and D.H.C. Du, Elsevier Computer Networks, "Two-Way Traffic Link Delay Modeling in Vehicular Networks", Vol. 110, Best Paper, December 2016.
15. F. Kalim, J. Jeong, and M.U. Ilyas, "CRATER: A Crowd Sensing Application To Estimate Road Conditions", IEEE Access, Vol. 4, September 2016.
16. J. Jeong, H. Jeong, E. Lee, T. Oh, and D.H.C. Du, "SAINT: Self-Adaptive Interactive Navigation Tool for Cloud-Based Vehicular Traffic Optimization", IEEE Transactions on Vehicular Technology, Vol. 65, No. 6, June 2016.
17. J. Jeong, J. Kim, T. Hwang, F. Xu, S. Guo, Y. Gu, Q. Cao, M. Liu and T. He, "TPD: Travel Prediction-Based Data Forwarding for Light-Traffic Vehicular Networks", Elsevier Computer Networks, Vol. 93, December 2015.
18. J. Jeong, T. He and D.H.C. Du, "TMA: Trajectory-based Multi-Anycast forwarding for efficient multicast data delivery in vehicular networks", Elsevier Computer Networks, Vol. 57, Issue 13, May 2013.
19. J. Jeong and T. Oh, "Survey on Protocols and Applications for Vehicular Sensor Networks", SAGE International Journal of Distributed Sensor Networks, Vol. 12, No. 8, August 2016.
20. M. Firoozjaei, J. Jeong, H. Ko, and H. Kim, "Security Challenges with Network Functions Virtualization", Elsevier Future Generation Computer Systems, Vol. 67, February 2017.
21. J. Lee, J. Jeong, and D. Du, "Two-Way Traffic Link Delay Modeling in Vehicular Networks", Elsevier Computer Networks, October 2016.
22. J. Jeong, S. Yeon, T. Kim, H. Lee, S. Kim, and S. Kim, "SALA: Smartphone-Assisted Localization Algorithm for Positioning Indoor IoT Devices", Springer Wireless Networks, June, 2016.
23. J. Jeong, H. Jeong, E. Lee, T. Oh, and D. Du, "SAINT: Self-Adaptive Interactive Navigation Tool for Cloud-Based Vehicular Traffic Optimization", IEEE Transactions on Vehicular Technology, Vol. 65, No. 6, June 2016.
24. J. Jeong, J. Kim, T. Hwang, F. Xu, S. Guo, Y. Gu, Q. Cao, M. Liu, and T. He, "TPD: Travel Prediction-Based Data Forwarding for Light-Traffic Vehicular Networks", Elsevier Computer Networks (COMNET), Vol. 93, December 2015.
25. S. Park, J. Jeong, and C. Hong, "QoS-guaranteed Mobile IPTV Service in Heterogeneous Access Networks", Elsevier Computer Networks (COMNET), Vol. 69, May 2014.
26. J. Jeong, T. He, and D. Du, "TMA: Trajectory-based Multi-Anycast forwarding for efficient multicast data delivery in vehicular networks", Elsevier Computer Networks (COMNET), Vol. 57, Issue 13, May 2013.
27. S. Park, J. Jeong, and C. Hong, "DNS Configuration in IPv6: Approaches, Analysis, and Deployment Scenarios", IEEE Internet Computing, Vol. 17, Issue 4, July 2013.
28. J. Jeong, S. Guo, Y. Gu, T. He, and D. Du, "Trajectory-Based Statistical Forwarding for Multihop Infrastructure-to-Vehicle Data Delivery", IEEE Transactions on Mobile Computing (TMC), **Spotlight Paper**, Vol. 11, No. 10, October 2012.
29. J. Jeong, S. Guo, T. He, and D. Du, "Autonomous Passive Localization Algorithm for Road Sensor Networks", IEEE Transactions on Computers (TC), Vol. 60, No. 11, November 2011.
30. H. Kim and J. Jeong, "RAD: Recipient-Anonymous Data Delivery based on Public Routing Proxies", Elsevier Computer Networks, Vol. 55, Issue 15, October 2011.
31. J. Jeong, S. Guo, Y. Gu, T. He, and D. Du, "Trajectory-Based Data Forwarding for Light-Traffic Vehicular Ad-Hoc Networks", IEEE Transactions on Parallel and Distributed Systems (TPDS), **Spotlight Paper**, Vol. 22, No. 5, May 2011.
32. J. Jeong, Y. Gu, T. He, and D. Du, "Virtual Scanning Algorithm for Road Network Surveillance", IEEE Transactions on Parallel and Distributed Systems (TPDS), Vol. 21, No. 12, December 2010.

33. Z. Zhong, J. Jeong, T. Zhu, S. Guo, and T. He, "Node Localization in Wireless Sensor Networks", Handbook on Sensor Networks, World Scientific Publishing Co. (Book Chapter), July 2010.

■ Conference Papers

1. C. Chung and J. Jeong, "A Design of IoT Device Configuration Translator for Intent-Based IoT-Cloud Services", The 22nd International Conference on Advanced Communications Technology (ICACT 2020), February 2020.
2. Z. Xiang, Y. Shen, and J. Jeong, "IPv6 Neighbor Discovery with Multi-hop Communication for IP-Based Vehicular Networks", International Conference on ICT Convergence (ICTC 2019), Jeju, Korea, October 16-19, 2019.
3. J. Jeong, "Cloud-Based Security Service System for User's Security Intent Support", US-Korea Conference (UKC 2019), Chicago, US, August 2019.
4. J. Yang and J. Jeong, "An Automata-based Security Policy Translation for Network Security Functions", International Conference on ICT Convergence (ICTC 2018), Jeju, Korea, October 2018.
5. D. Hyun, J. Kim, J. Jeong, H. Kim, J. Park, and T. Ahn, "SDN-Based Network Security Functions for VoIP and VoLTE Services", International Conference on ICT Convergence (ICTC 2016), Jeju, Korea, October, 2016.
6. K. Lee, H. Kang, J. Jeong, H. Kim, and J. Park, "Secure DNS Name Autoconfiguration for IPv6 Internet-of-Things Devices", International Conference on ICT Convergence (ICTC 2016), Jeju, Korea, October, 2016.
7. J. Jeong, Y. Shen, Y. Jo, and J. Jeong, "IPv6 Neighbor Discovery for Prefix and Service Discovery in Vehicular Networks", International Conference on ICT Convergence (ICTC 2016), Jeju, Korea, October, 2016.
8. J. Jun, S. Yeon, T. Kundu, D. Agrawal, and J. Jeong, "CACA: Link-based Channel Allocation Exploiting Capture Effect for Channel Reuse in Wireless Sensor Networks", IEEE ICDCS'16, Nara, Japan, June 27-30, 2016.
9. S. Lee, J. Jeong, and J. Park, "DNSNA: DNS Name Autoconfiguration for Internet of Things Devices", The 18th International Conference on Advanced Communications Technology (ICACT 2016), **Outstanding Paper**, Phoenix, Korea, Jan 31-Feb 3 2016.
10. J. Lee, J. Jeong, and D. Du, "Link Delay Modeling for Two-way Traffic Road Segment in Vehicular Networks", International Conference on Internet of Vehicles (IOV 2015), Best Paper, Chengdu, China, December 2015.
11. T. Hwang and J. Jeong, "SANA: Safety-Aware Navigation Application for Pedestrian Protection in Vehicular Networks", International Conference on Internet of Vehicles (IOV 2015), Chengdu, China, December 2015.
12. J. Kim, Y. Jo, and J. Jeong, "Design and Evaluation of a Smartphone-based Alarming System for Pedestrian Safety in Vehicular Networks", International Conference on Internet of Vehicles (IOV 2015), Chengdu, China, December 2015.
13. M. Lee, J. Song, J. Jeong, and T. Kwon, "DOVE: Data Offloading through Spatio-temporal Rendezvous in Vehicular Networks", International Conference on Computer Communications and Networks (ICCCN 2015), Las Vegas, United States, August 3-6, 2015.
14. F. Xu, S. Guo, J. Jeong, Y. Gu, Q. Cao, M. Liu, and T. He, "Utilizing Shared Vehicle Trajectories for Data Forwarding in Vehicular Networks", IEEE Infocom'11 Miniconference, Shanghai, China, April 2011.
15. J. Jeong, S. Guo, Y. Gu, T. He, and D. Du, "TSF: Trajectory-based Statistical Forwarding for Infrastructure-to-Vehicle Data Delivery in Vehicular Networks", IEEE ICDCS'10, June 2010.
16. J. Jeong, S. Guo, Y. Gu, T. He, and D. Du, "TBD: Trajectory-Based Data Forwarding for Light-Traffic Vehicular Networks", IEEE ICDCS'09, June 2009.
17. J. Jeong, Y. Gu, T. He, and D. Du, "VISA: Virtual Scanning Algorithm for Dynamic Protection of Road Networks", IEEE Infocom'09, April 2009.
18. J. Jeong, S. Guo, T. He, and D. Du, "APL: Autonomous Passive Localization for Wireless Sensors Deployed in Road Networks", IEEE Infocom'08, April 2008.
19. J. Jeong, T. Hwang, T. He, and D. Du, "MCTA: Target Tracking Algorithm based on Minimal Contour in Wireless Sensor Networks", IEEE Infocom'07 Minisymposia, May 2007.
20. J. Jeong, S. Sharafkandi, and D. Du, "Energy-Aware Scheduling with Quality of Surveillance Guarantee in Wireless Sensor Networks", The 2nd ACM/SIGMOBILE Workshop on Dependability Issues in Wireless Ad Hoc Networks and Sensor Networks (DIWANS), September 2006.
21. D. Du, D. He, C. Hong, J. Jeong, V. Kher, Y. Kim, Y. Lu, A. Raghuvver, and S. Sharafkandi, "Experiences in Building an Object-Based Storage System based on the OSD T-10 Standard", IEEE Conference on Mass Storage Systems and Technologies (MSST), March 2006.
22. Y. Kim, S. Ahn, Y. Lee, J. Jeong, and J. Lee, "Design and Implementation of IPv6 Address Autoconfiguration for AODV in Mobile Ad Hoc Networks", The 2005 US-Korea Conference on Science, Technology & Entrepreneurship (UKC 2005), University of California at Irvine, August 2005.
23. J. Jeong, J. Park, and H. Kim, "Name Directory Service based on MAODV and Multicast DNS for IPv6 MANET", IEEE VTC 2004-Fall, Los Angeles, CA, USA, September 2004.

24. [J. Jeong](#), J. Park, and H. Kim, "Auto-Networking Technologies for IPv6 Mobile Ad Hoc Networks", ICOIN 2004, Busan, Korea, February 18-20, 2004. Reprinted in Lecture Notes in Computer Science (LNCS), Vol. 3090, October 2004.
25. [J. Jeong](#), J. Park, and H. Kim, "Name Service in IPv6 Mobile Ad-hoc Network connected to the Internet", IEEE PIMRC 2003, Beijing, China, September 2003.
26. [J. Jeong](#), J. Park, and H. Kim, "Service Discovery based on Multicast DNS in IPv6 Mobile Ad-hoc Networks", IEEE VTC 2003-Spring, Jeju, Korea, April 2003.
27. [J. Jeong](#), J. Park, H. Kim, and K. Park, "Name Service in IPv6 Mobile Ad-hoc Network", ICOIN 2003, Jeju, Korea, February 2003. Reprinted in Lecture Notes in Computer Science (LNCS), Vol. 2662, August 2003.
28. [J. Jeong](#) and J. Park, "Autoconfiguration Technologies for IPv6 Multicast Service in Mobile Ad-hoc Networks", IEEE ICON 2002, Singapore, August 2002.
29. [J. Jeong](#), J. Park, and H. Kim, "Dynamic Tunnel Management Protocol for IPv4 Traversal of IPv6 Mobile Network", IEEE VTC 2004-Fall, Los Angeles, CA, USA, September 2004.
30. [J. Jeong](#), K. Lee, J. Park, and H. Kim, "Route Optimization for Mobile Nodes in Mobile Network based on ND-Proxy", IEEE VTC 2004-Spring, Milan, Italy, May 2004.
31. [J. Jeong](#), K. Lee, J. Park, H. Lee, and H. Kim, "The Autoconfiguration of Recursive DNS Server and the Optimization of DNS Name Resolution in Hierarchical Mobile IPv6", IEEE VTC 2003-Fall, Orlando, USA, October 2003.
32. [J. Jeong](#), S. Lee, Y. Kim, and Y. Choi, "Design and Implementation of One-way IP Performance Measurement Tool", ICOIN 2002, Jeju, Korea, January 2002. Reprinted in Lecture Notes in Computer Science (LNCS), Vol. 2343, July 2002.

● Internet Standards

1. S. Hares, D. Lopez, M. Zarny, C. Jacquenet, R. Kumar, and [J. Jeong](#), "Interface to Network Security Functions (I2NSF): Problem Statement and Use Cases", RFC 8192, July 2017.
2. [J. Jeong](#), S. Park, L. Beloeil, and S. Madanapalli, "IPv6 Router Advertisement Options for DNS Configuration", RFC 8106, March 2017.
3. [J. Jeong](#), S. Park, L. Beloeil, and S. Madanapalli, "IPv6 Router Advertisement Options for DNS Configuration", RFC 6106, September 2010.
4. [J. Jeong](#), S. Park, L. Beloeil, and S. Madanapalli, "IPv6 Router Advertisement Option for DNS Configuration", RFC 5006, September 2007.
5. [J. Jeong](#), "IPv6 Host Configuration of DNS Server Information Approaches", RFC 4339, February 2006.

● Internet Drafts

1. S. Hares, [J. Jeong](#), J. Kim, R. Moskowitz, and Q. Lin, "I2NSF Capability YANG Data Model", draft-ietf-i2nsf-capability-data-model-06, Submitted to IESG, July 2020.
2. [J. Jeong](#), C. Chung, T. Ahn, R. Kumar, and S. Hares, "I2NSF Consumer-Facing Interface YANG Data Model", draft-ietf-i2nsf-consumer-facing-interface-dm-09, July 2020.
3. J. Kim, [J. Jeong](#), J. Park, S. Hares, and Q. Lin, "I2NSF Network Security Function-Facing Interface YANG Data Model", draft-ietf-i2nsf-nsf-facing-interface-dm-09, May 2020.
4. [J. Jeong](#), C. Chung, S. Hares, L. Xia, and H. Birkholz, "I2NSF NSF Monitoring YANG Data Model", draft-ietf-i2nsf-nsf-monitoring-data-model-03, May 2020.
5. S. Hyun, [J. Jeong](#), T. Roh, S. Wi, and J. Park, "I2NSF Registration Interface YANG Data Model", draft-ietf-i2nsf-registration-interface-dm-08, March 2020.
6. [J. Jeong](#), J. Yang, C. Chung, and J. Kim, "Security Policy Translation in Interface to Network Security Functions", draft-yang-i2nsf-security-policy-translation-06, May 2020.
7. [J. Jeong](#), S. Hyun, T. Ahn, S. Hares, and D. Lopez, "Applicability of Interfaces to Network Security Functions to Network-Based Security Services", draft-ietf-i2nsf-applicability-18, Approved as an Informational RFC, September 2019.
8. [J. Jeong](#), "IPv6 Wireless Access in Vehicular Environments (IPWAVE): Problem Statement and Use Cases", draft-ietf-ipwave-vehicular-networking-19, Submitted to IESG, July 2020.
9. [J. Jeong](#), Y. Shen, Z. Xiang, and S. Cespedes, "Vehicular Neighbor Discovery for IP-Based Vehicular Networks", draft-jeong-ipwave-vehicular-neighbor-discovery-09, May 2020.
10. [J. Jeong](#), Y. Shen, and Z. Xiang, "Vehicular Mobility Management for IP-Based Vehicular Networks", draft-jeong-ipwave-vehicular-mobility-management-03, May 2020.
11. [J. Jeong](#), Y. Shen, and J. Park, "Basic Support for Security and Privacy in IP-Based Vehicular Networks", draft-jeong-ipwave-security-privacy-01, May 2020.

12. J. Jeong, B. Mugabarigira, Z. Xiang, and Y. Shen, "Context-Aware Navigator Protocol for IP-Based Vehicular Networks", draft-jeong-ipwave-context-aware-navigator-01, May 2020.
13. J. Jeong, S. Lee, and J. Park, "DNS Name Autoconfiguration for Internet-of-Things Devices in IP-Based Vehicular Networks", draft-jeong-ipwave-iot-dns-autoconf-08, May 2020.