

Curriculum Vitae

1. Personal Information

Name: **James Won-Ki Hong**

Citizenship: Canadian

Date of Birth: September 28, 1959

Current Employment:

Professor, Dept. of Computer Science and Engineering
Pohang University of Science and Technology (POSTECH)
77 Cheongamro, Namgu, Pohang, Korea 790-784

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Email: jwkhong@postech.ac.kr

Web: <http://dpm.postech.ac.kr/~jwkhong>

LinkedIn: <https://www.linkedin.com/in/james-won-ki-hong-0469927/>

Wiki: https://en.wikipedia.org/wiki/James_Won-Ki_Hong



2. Education

1991: PhD, University of Waterloo, Waterloo, Canada (Computer Science)

1985: MSc., University of Western Ontario, London, Canada (Computer Science)

1983: HBSc., University of Western Ontario, London, Canada (Computer Science)

3. Professional Experience

2021. 8 – present: Co-Founder & Technical Advisor, Kedutech, Korea

2019.11 – 2023.8: Director, Innovation Center for Education, POSTECH

2020. 2 – present: Co-Director, Center for Crypto Blockchain Research (CCBR), POSTECH

2012.3 – 2014.2: Chief Technology Officer & Senior Executive Vice President, Korea Telecom (KT)

2008. 12 – 2012.2: Head and Professor, Division of IT Convergence Engineering, POSTECH

2007. 3 – 2011.2 & 2014. 5 – 2019.10: Dean, Graduate School of Information Technology, POSTECH

2008. 12 – 2010.2: Head, Dept. of Computer Science and Engineering, POSTECH

2007. 9 – 2010.2: Director, POSTECH Information Research Laboratories, POSTECH

2006. 3 – present: Professor, Dept. of Computer Science and Engineering, POSTECH

1999. 3 – 2006.2: Associate Professor, Dept. of Computer Science and Engineering, POSTECH

2005. 9 – 2007.8: Associate Director, POSTECH Information Research Laboratories, POSTECH

2004. 9 – 2005.8: Visiting Professor, Dept. of Electrical and Computer Engineering, U. of Toronto

2000. 6 – 2002. 2: Co-Founder & Chief Technology Officer, Netstech, Inc., USA

2000. 1 – 2000. 5: Co-Founder & Chief Software Architect, Yute Systems, Pohang, Korea
 1998. 9 – 2000. 8: Associate Director, POSTECH Information Research Laboratories, POSTECH
 1998. 9 – 2000. 8: Associate Dean, Graduate School for Information Technology, POSTECH
 1995. 5 – 1999. 2: Assistant Professor, Dept. of Computer Science and Engineering, POSTECH
 1995. 5 – 2000.4: Adjunct Professor, Dept. of Computer Science, University of Western Ontario
 1992. 5 – 1995. 5: Research Professor, Dept. of Computer Science, University of Western Ontario
 1991. 9 – 1992. 4: Post-doc Fellow, Dept. of Computer Science, University of Waterloo
 1985. 1 – 1986. 8: Research Associate, Dept. of Computer Science, University of Western Ontario

4. Research Areas of Interest

Blockchain & Cryptocurrency, SDN, NFV, Network Intelligence, Internet of Things (IoT), Internet Traffic Monitoring & Analysis, Network and Systems Management, Network Security, ICT Convergence, Cloud Computing, Online Education, Personalized Learning, Educational Technology

5. Professional Activities

1. **General Chair**, IEEE Network Operations and Management Symposium (NOMS 2024), Seoul, Korea (2024.6. 6-10)
2. **Steering Committee Chair**, IEEE International Conference on Blockchain and Cryptocurrency (2019. 5 - present)
3. **General Chair**, 2019 IEEE International Conference on Blockchain and Cryptocurrency (ICBC 2019) Seoul, Korea (2019. 5. 15-17)
4. **General Chair**, IEEE Blockchain Summit Korea, Seoul, Korea (2018. 6. 7-8)
5. **Executive Director**, SDN//NFV Forum, Korea (2014.10 – 2019.4)
6. **Chair**, Research Division, Software Education Innovation Forum (2014.2 - 2014.12)
7. **Chairman** of National Intelligence Communication Enterprise Association of Korea (2013.1-2014.2)
8. **Chairman** of ICT Standardization Committee, Telecommunications Technology Association of Korea (2012.3 – 2014.2)
9. **Member of International Advisory Committee**, National Institute of Information and Communications Technology (NICT), Japan, (2012.6 – 2019.12)
10. **Editor-in-Chief**, International Journal of Network Management, Wiley & Sons (2012. 1-present)
11. **Editor-in-Chief**, IEEE ComSoc Technology News, IEEE (2012. 1-2013.12)
12. **Director of Online Content**, IEEE Communications Society Board of Governors (2010.1 – 2011.12)
13. **Chair**, IEEE Communications Society, Committee on Network Operations & Management (CNOM) (2005. 6 – 2009.5)
14. **Member**, IEEE NOMS/IM Steering Committee (2003. 7 – present)
15. **Advisory Committee Member**, Asia-Pacific Network Operations and Management Symposium (APNOMS) (2011 – present).
16. **Steering Committee Member**, Asia-Pacific Network Operations and Management Symposium APNOMS) (1997 – 2010).
17. **Member** of IEEE Future Directions Committee (FDC) Industry Advisory Board (IAB) (2013-2018)

18. **Member** of IEEE Blockchain Initiative (BCI) Steering Committee (2018. 1 – 2018.12)
19. **Member** of IEEE ComSoc Strategic Planning Committee (SPC) (2014.1 – 2016.12)
20. **Member** of IEEE ComSoc Emerging Technology Committee (ETC) (2014.1 – 2016.12))
21. **Member** of Private Enterprise Advisory Committee of Global Green Growth Initiative in Korea (2012. 6 – 2012.12)
22. **Editorial Board Member**, IEEE Transactions on Network and Service Management (2004-present)
23. **Editorial Advisory Board Member**, Journal of Network and Systems Management, Springer (2005-present)
24. **Advisory Board Member**, Wiley-IEEE Press Book Series on Network and Service Management (2018.2 – present)
25. **Associate Editor-in-Chief**, International Journal of Network Management, Wiley & Sons (2008. 2-2011.12)
26. **Editorial Board Member**, International Journal of Network Management, Wiley & Sons (1999.6–2008.2)
27. **Editorial Board Member**, Journal of Communications and Networks, KICS (Jan 2004 - present)
28. **Editorial Board Member**, Autonomic Systems Book Series, Birkhauser (Sept. 2009 - present)
29. **Guest Editor**, Journal of Communications and Networks, Special Issue on "Management Issues in the Future Internet," (Dec. Issue, 2011)
30. **Guest Editor**, Annals of Telecommunications Journal, Special Issue on "Next Generation Network and Service Management," (2007)
31. **Guest Editor**, International Journal of Network Management, Special Issue on "Operations Support Systems and Technologies for Broadband Convergence Networks and Services in Korea," (Nov./Dec. Issue, 2006)
32. **IF&E Committee Chair**, IEEE International Conference on Communications (ICC 2022), Seoul, Korea, May 16-20, 2022.
33. **DEP Chair**, IEEE International Conference on Cloud Networking, Tokyo, Japan, Oct 22-24, 2018
34. **General Co-Chair**, 2018 IEEE Network Operations and Management Symposium (NOMS 2018), Taipei, Taiwan, April 23-27, 2018.
35. **General Chair**, 2016 IEEE International Conference on Network Softwarization (NetSoft 2016), Seoul, Korea, June 06-10, 2016.
36. **General Co-Chair**, 2012 International Symposium on IT Convergence Engineering (ISITCE 2012), Seoul, Korea, July 12-13, 2012.
37. **General Co-Chair**, 2011 Asia-Pacific Network Operations and Management Symposium (APNOMS 2011), Taipei, Taiwan, Sept. 21-23, 2011.
38. **General Co-Chair**, 2011 International Symposium on IT Convergence Engineering (ISITCE 2011), Pohang, Korea, July 14-15, 2011.
39. **General Co-Chair**, 2010 International Symposium on IT Convergence Engineering (ISITCE 2010), Pohang, Korea, Aug. 19-20, 2010.
40. **General Co-Chair**, 2010 IEEE/IFIP Network Operations and Management Symposium (NOMS 2010), Osaka, Japan, April 19-23, 2010.
41. **Steering Committee**, The 8th IEEE International Workshop on the Management of Future Internet (ManFI 2016), Istanbul, Turkey, April 25, 2016.
42. **Steering Committee**, The 7th IEEE International Workshop on the Management of Future Internet (ManFI 2015), Ottawa, Canada, May 11, 2015.
43. **Steering Committee**, The 6th IEEE International Workshop on the Management of Future Internet (ManFI 2014), Krakow, Poland, May 5, 2014.

44. **Steering Committee**, The 5th IEEE International Workshop on the Management of Future Internet (ManFI 2013), Ghent, Belgium, May 27, 2013.
45. **Workshop Co-Chair**, The 4th IEEE International Workshop on the Management of Future Internet (ManFI 2012), Maui, Hawaii, USA, April 16, 2012
46. **Workshop Co-Chair**, The 3rd IEEE International Workshop on the Management of Future Internet (ManFI 2011), Dublin, Ireland, May 27, 2011
47. **Conference Operations Chair**, IEEE Global Communications Conference (Globecom 2009), Hawaii, USA, Nov. 30-Dec.4, 2009
48. **General Co-Chair**, 2009 International Symposium on IT Convergence Engineering (ISITCE 2009), Pohang, Korea, Oct. 16-17, 2009.
49. **General Co-Chair**, 2008 Asia-Pacific Network Operations and Management Symposium (APNOMS 2008), Beijing, China, Oct. 22-24, 2008.
50. **General Chair**, 2006 Asia-Pacific Network Operations and Management Symposium (APNOMS 2006), Busan, Korea, Sept. 27-29, 2006.
51. **Core Member**, TM Forum University Program (2003. 8 – present)
52. **Board Member**, Autonomic Communication Forum (ACF) (Jan 2007 - present)
53. **Editor-in-Chief**, KNOM Review Journal, (1998. 2 – 2012.2)
54. **Director of Online Content**, IEEE Communications Society Board of Governors (2004.1 – 2005.12)
55. **Board Member**, IEEE Communications Society, Marketing Board (2000. 1 – 2001. 12)
56. **Steering Committee & Technical Program Committee Member**, IFIP/IEEE International Symposium on Integrated Network Management (IM 2021), Bordeaux, France, May 17-21, 2021.
57. **Steering Committee & Technical Program Committee Member**, IFIP/IEEE International Symposium on Integrated Network Management (IM 2019), Washington DC, USA, April 8-12, 2019.
58. **Steering Committee & Technical Program Committee Member**, IFIP/IEEE International Symposium on Integrated Network Management (IM 2017), Lisbon, Portugal, May 8-12, 2017.
59. **Steering Committee & Technical Program Committee Member**, IFIP/IEEE International Symposium on Integrated Network Management (IM 2015), Ottawa, Canada, May 11-15, 2015.
60. **Steering Committee & Technical Program Committee Member**, IFIP/IEEE International Symposium on Integrated Network Management (IM 2013), Ghent, Belgium, May 27-31, 2013.
61. **Steering Committee & Technical Program Committee Member**, IFIP/IEEE International Symposium on Integrated Network Management (IM 2011), Dublin, Ireland, May 23-27, 2011.
62. **Finance Chair and Technical Program Committee Member**, IFIP/IEEE International Symposium on Integrated Network Management (IM 2009), New York, USA, June 1-6, 2009.
63. **Finance Chair**, IEEE/IFIP International Network Operations and Management Symposium (NOMS 2006), Vancouver, Canada, April 3-7, 2006.
64. **Finance Chair**, IFIP/IEEE International Symposium on Integrated Network Management (IM 2005), Nice, France, May 2005.
65. **Finance Chair and Head of Local Planning Committee**, IEEE/IFIP International Network Operations and Management Symposium (NOMS 2004), Seoul, Korea, April 19-23, 2004)
66. **Special Liaison for ComSoc Activities**, IEEE Comsoc Asia-Pacific Board (Jan. 2006 - Dec. 2007)
67. **Board Member**, IEEE Comsoc Sister Society Relations Board (Jan. 2006 - present)
68. **Board Member**, IEEE Comsoc On-Line Content Board (Jan. 2006 - Dec. 2007)
69. **Vice Chair**, IEEE Communications Society, Committee on Network Operations & Management (CNOM) (2003. 6 – 2005.5)
70. **Executive Director of International Affairs**, KICS (2007.1- 2009.12)
71. **Chair**, KICS KNOM (2003. 1 – 2004. 12)
72. **Vice Chair**, KICS KNOM (2000. 1 – 2002. 12)
73. **Advisory Board Member**, KCC (Korea Communications Commission) (2008-2012)
74. **Advisory Board Member**, KT Operations Support System Laboratory (2001-2004)

75. Member, KCC Future Internet Steering Committee (May 2010 – Dec. 2012)
76. Member, KCC Mobile Internet Forum (Mar. 2010 – Dec. 2012)
77. Member, IEEE Comsoc Strategic Planning Committee (Jan. 2010 – Dec. 2011)
78. Member, IEEE Comsoc Conference Board (Jan. 2010 – Dec. 2011)
79. Member, IEEE Comsoc Ad-Hoc Committee on Smartphonomics (July 2010 – June 2012)
80. Steering Committee & Technical Program Committee Member, IEEE Conference on Network Softwarization (NetSoft 2022), Milan, Italy, June 27-July 1, 2022.
81. Steering Committee & Technical Program Committee Member, IEEE Conference on Network Softwarization (NetSoft 2021), Tokyo Japan, June 28-July 2, 2021.
82. Steering Committee & Technical Program Committee Member, IEEE Conference on Network Softwarization (NetSoft 2020), Ghent, Belgium, June 29-July 3, 2020.
83. Steering Committee & Technical Program Committee Member, IEEE Conference on Network Softwarization (NetSoft 2019), Paris, France, June 24-28, 2019.
84. Steering Committee & Technical Program Committee Member, IEEE Conference on Network Softwarization (NetSoft 2018), Montreal Canada, June 25-29, 2018.
85. Steering Committee & Technical Program Committee Member, IEEE Conference on Network Softwarization (NetSoft 2017), Bologna, Italy, July 3-7, 2017)
86. **General Chair & Steering Committee Member, IEEE Conference on Network Softwarization (NetSoft 2016)**, Seoul, Korea, June 6-10, 2016.
87. Steering Committee & Technical Program Committee Member, IEEE Conference on Network Softwarization (NetSoft 2015), London, UK, April 13-17, 2015.
88. Steering Committee & Technical Program Committee Member, IEEE Network Operations and Management Symposium (NOMS 2022), Budapest, Hungary, April 25-29, 2022.
89. Steering Committee & Technical Program Committee Member, IEEE Network Operations and Management Symposium (NOMS 2020), Budapest, Hungary, April 20-24, 2020.
90. Steering Committee & Technical Program Committee Member, IEEE Network Operations and Management Symposium (NOMS 2018), Taipei, Taiwan, April 23-27, 2018
91. Steering Committee & Technical Program Committee Member, IEEE Network Operations and Management Symposium (NOMS 2016), Istanbul, Turkey, April 25-29, 2016.
92. Steering Committee & Technical Program Committee Member, IEEE Network Operations and Management Symposium (NOMS 2014), Krakow, Poland, May 5-9, 2014.
93. Steering Committee & Technical Program Committee Member, IEEE Network Operations and Management Symposium (NOMS 2012), Maui, Hawaii, USA, April 16-20, 2012.
94. Steering Committee & Technical Program Committee Member, 18th International Conference on Network and Service Management (CNSM 2022), Thessaloniki, Greece, Oct. 31-Nov. 4, 2022.
95. Steering Committee & Technical Program Committee Member, 17th International Conference on Network and Service Management (CNSM 2021), Izmir, Turkey, Oct. 25-29, 2021.
96. Steering Committee & Technical Program Committee Member, 16th International Conference on Network and Service Management (CNSM 2020), Virtual Conference, November 2 - 6, 2020.
97. Steering Committee & Technical Program Committee Member, 15th International Conference on Network and Service Management (CNSM 2019), Halifax, Canada, October 21 - 25, 2019.
98. Steering Committee & Technical Program Committee Member, 14th International Conference on Network and Service Management (CNSM 2018), Rome, Italy, November 5 - 9, 2018.
99. Steering Committee & Technical Program Committee Member, 13th International Conference on Network and Service Management (CNSM 2017), Nov. 26-30, 2017, Tokyo, Japan.
100. Steering Committee & TPC Member, 12th International Conference on Network and Service Management (CNSM 2016), Oct. 31 - Nov. 4, 2016, Montreal, Quebec, Canada.
101. Steering Committee & TPC Member, 11th International Conference on Network and Service Management (CNSM 2015), November 09-13, 2015, Barcelona, Spain.
102. Technical Program Committee Member, 2nd International Workshop on Management of SDN and

- NFV Systems, November 09-13, 2015, Barcelona, Spain.
103. Steering Committee & TPC Member, 10th International Conference on Network and Service Management (CNSM 2014), November 2014, Rio de Janeiro, Brazil.
 104. Steering Committee & TPC Member, 9th International Conference on Network and Service Management (CNSM 2013), 14-18 October 2014, Zurich, Switzerland.
 105. Steering Committee & TPC Member, 8th International Conference on Network and Service Management (CNSM 2012), 22-26 October 2012, Las Vegas, USA.
 106. Steering Committee & Technical Program Committee Member, 7th International Conference on Network and Service Management (CNSM 2011), 24-28 October 2011, Paris, France
 107. Steering Committee & Technical Program Committee Member, 6th International Conference on Network and Service Management (CNSM 2010), Oct. 2010, Niagara Falls, Canada
 108. Technical Program Committee Member, 4th International Workshop on Distributed Autonomous Network Management Systems 2011 (DANMS11), May 27, 2011, Dublin, Ireland
 109. Technical Program Committee Member, Fifth IEEE International Conference on Self-Adaptive and Self-Organizing Systems (SASO 2011), Ann Arbor, Michigan, USA; October 3 - October 7, 2011
 110. Technical Program Committee Member, 3rd International Workshop on the Network of the Future (FutureNet III) Dec. 10, 2010, Miami, USA.
 111. Technical Program Committee Member, 4th International Workshop on the Network of the Future (FutureNet IV) June 5-9, 2011, Kyoto, Japan.
 112. Technical Program Committee Member, 1st Int'l Conf. on Energy-Efficient Computing and Networking (e-Energy 2010), April 12-14, 2010, University of Passau, Germany
 113. Steering Committee, 2nd IEEE/IFIP International Workshop on the Management of Future Internet, (ManFI 2010) April 19, 2010, Osaka, Japan
 114. Technical Program Committee Member, 1st IEEE/IFIP International Workshop on Management of Smart Grids (SmartGridMan 2010) April 23, 2010, Osaka, Japan
 115. Technical Program Committee Member, 1st Int'l Workshop on Smart Grid Communications, May 23-27, 2010, Cape Town, South Africa
 116. Technical Program Committee Member, First International Workshop on Green Communications (GreenComm'09), Dresden, Germany, June 2009
 117. **Workshop Co-Chair**, 1st IEEE International Workshop on the Management of Future Internet (ManFI 2009), New York, USA, June 5, 2009
 118. Technical Program Committee Member, 21st International Teletraffic Congress (ITC 2009), Sept 15-17 2009, Paris, France.
 119. Technical Program Committee Member, 6th Latin-American Network Operations and Management Symposium (LANOMS 2009), October, 2009, Punta del Este, Uruguay.
 120. Steering Committee Member, 5th International Week on Management of Networks and Services (Manweek 2009), 26-30 October 2009, Telecom Italia Future Centre, Venice, Italy.
 121. Steering Committee Member, 12th Asia-Pacific Network Operations and Management Symposium (APNOMS 2009), 23-25 Sept. 2009, Seoul, Korea.
 122. Technical Program Committee Member, IEEE Global Information Infrastructure Symposium 2009 (GIIS 2009), Hammamet, Tunisia, June 23-25 2009.
 123. Technical Program Committee Member, First International Workshop on Green Communications (GreenComm'09), Dresden, Germany, June 18, 2009.
 124. Advisory Committee Member, 4th IEEE Workshop on Broadband Convergence Networks (BcN 2009), New York, USA, June 5, 2009.
 125. Technical Program Committee Member, 3rd IEEE Workshop on Autonomic Communication and Network Management (ACNM 2009), June 5, 2009, New York, USA.
 126. Technical Program Committee Member, First International Workshop on Traffic Monitoring and Analysis (TMA 2009), Aachen, Germany, May 11 2009
 127. Technical Program Committee Member, Second IEEE International Conference on Self-Adaptive and Self-Organizing Systems (SASO 2008), Venice, Italy, October 20-24, 2008.
 128. Steering Committee & Technical Program Committee Member, IEEE Network Operations and

- Management Symposium (NOMS 2008), Salvador, Brazil, April 7-11, 2008
129. Advisory Committee Member, 3rd IEEE Workshop on Broadband Convergence Networks (BeN 2008), Brazil, April 7, 2008
 130. Steering Committee & Technical Program Committee Member, 5th IEEE Workshop on End-to-End Monitoring Techniques and Services (E2EMON), Brazil, April 7, 2008
 131. Technical Program Committee Member. 19th IFIP/IEEE International Workshop on Distributed Systems: Operations and Management (DSOM 2008), Samos Island, Greece, Sept. 22-26 2008
 132. Technical Program Committee Member, 3rd IEEE International Workshop on Modelling Autonomic Communications Environments (MACE 2008), Samos Island, Greece, Sept. 22-26 2008
 133. Technical Program Committee Member, 2nd IEEE Workshop on Autonomic Communication and Network Management (ACNM 2008), April 11, 2008, Salvador, Brazil
 134. Technical Program Committee Member, 5th Latin American Network Operations and Management Symposium Petropolis, Brazil, September 10-12, 2007
 135. Technical Program Committee Member, 18th IFIP/IEEE International Workshop on Distributed Systems: Operations and Management (DSOM 2007), Silicon Valley, CA October 29-31, 2007
 136. Technical Program Committee Member, 2nd IEEE International Workshop on Modelling Autonomic Communications Environments (MACE 2007), Silicon Valley, CA October 29-30, 2007 \
 137. Technical Program Committee Member, 2nd IEEE International Workshop on Distributed Autonomous Network Management Systems (DANMS), Washington, USA, 26-30 November 2007.
 138. Program Committee Member, IEEE International Conference on Self-Adaptive and Self-Organizing Systems (SASO 2007), Boston, USA, July 9-11, 2007
 139. Technical Program Committee Member, IEEE International Symposium on Integrated Management (IM 2007), Munich, Germany, May 21-25, 2007
 140. Technical Program Committee Member, IEEE International Design and Reliable Communication Networks (DCRN 2007) France, Oct. 7-10, 2007.
 141. Steering Committee & Technical Program Committee Member, 5th IEEE Workshop on End-to-End Monitoring Techniques and Services (E2EMON), May 21 2007, Munich, Germany
 142. Technical Program Committee Member, IEEE Global Information Infrastructure Symposium (GIIS 2007), Marrakech, Morocco on July 2-5, 2007
 143. Technical Program Committee Member, IEEE Int. Conference on Self-Adaptive and Self-Organizing Systems, Boston, Mass., USA, July 9-11, 2007
 144. Technical Program Committee Member, 17th IFIP/IEEE International Workshop on Distributed Systems (DSOM 2006), Dublin, Ireland, October 23-25, 2006.
 145. Technical Program Committee Member, 8th International Symposium on System and Information Security, Sao Paulo, Brazil, November 08-10, 2006
 146. Technical Chair, KICS KNOM (1996. 1 – 2000. 5)
 147. Technical Program Committee Member, 1st IEEE Workshop on Autonomic Communication and Network Management (ACNM 2007), Munich, Germany, May 25, 2006
 148. Technical Program Committee Member, 5th Latin American Network Operations and Management Symposium, Petropolis, Brazil, September 10-12, 2007
 149. Technical Chair, IEEE Communications Society, Committee on Network Operations & Management (CNOM) (1998. 6 – 2000. 6)
 150. Technical Program Co-Chair, 2000 IEEE/IFIP International Network Operations and Management Symposium (NOMS2000), Hawaii, USA, April 10-14, 2000.
 151. Technical Program Co-Chair, 1999 Asia-Pacific Network Operations and Management Symposium (APNOMS'99), Kyongju, Korea, Sept. 15-17, 1999.
 152. Technical Program Committee Member, IFIP/IEEE International Workshop on Distributed Systems Operations and Management (DSOM 2005), Barcelona, Spain, Oct. 24-26, 2005.
 153. Technical Program Committee Member, The 4th Latin American Network Operations and Management Symposium, Porto Alegre, Brazil, August 29-31, 2005.
 154. Technical Program Committee Member, The 3rd Latin American Network Operations and

- Management Symposium (LANOMS'03), Foz do Iguacu, Parana, Brazil, September 4-6, 2003.
155. Technical Program Committee Member, IEEE/IFIP International Symposium on Integrated Network Management (IM 2003), Colorado Springs, USA, March 2003.
 156. Technical Program Committee Member, IEEE/IFIP International Network Operations and Management Symposium (NOMS2002), Florence, Italy, April 15-19, 2002.
 157. Technical Program Committee Member, The 7th Annual Global Internet Symposium, Taipei, Taiwan, November 17-21, 2002.
 158. Technical Program Committee Member, IEEE/IFIP International Workshop on Distributed Systems Operations and Management (DSOM 2001), Nancy, France, October, 2001.
 159. Organizing Committee Member, 2001 Asia-Pacific Network Operations and Management Symposium (APNOMS 2001), Sydney, Australia, September 26-28, 2001.
 160. Technical Program Committee Member, IEEE/IFIP International Symposium on Integrated Network Management (IM 2001), Seattle, USA, May 2001.
 161. Technical Program Committee Member, 2000 IEEE/IFIP International Conference on Management of Multimedia Networks and Services (MMNS 2000), Fortaleza, Brazil, July 26-28, 2000.
 162. Technical Program Committee Member, 2000 IEEE Workshop on IP-oriented Operations & Management (IPOM 2000), Cracow, Poland, September 4-6, 2000
 163. Organizing Committee Member, 2000 Asia-Pacific Network Operations and Management Symposium (APNOMS 2000), Nara, Japan, September 2000.
 164. Technical Program Committee Member, IEEE/IFIP International Workshop on Distributed Systems Operations and Management (DSOM 2000), Austin, TX, USA, December, 2000.
 165. Technical Program Committee Member, IEEE/IFIP International Symposium on Integrated Network Management (IM'99), Boston, USA, May, 1999.
 166. Technical Program Committee Member, IEEE/IFIP International Workshop on Distributed Systems Operations and Management (DSOM'98), Delaware NJ, USA, Oct. 1998.
 167. Organizing Committee Member, 1998 Asia-Pacific Network Operations and Management Symposium (APNOMS'98), Sendai, Japan, Sept. 16-18, 1998.
 168. Technical Program Committee Member, IEEE/IFIP International Network Operations and Management Symposium (NOMS'98), New Orleans, USA, Feb., 1998.
 169. Technical Program Committee Member, IEEE/IFIP International Symposium on Integrated Network Management (IM'97), San Diego, CA, USA, May 12-16, 1997.
 170. International Liaison Chair, 1997 Asia-Pacific Network Operations and Management Symposium (APNOMS'97), Seoul Korea, Oct. 8-10, 1997.
 171. Technical Program Committee Member, IEEE/IFIP International Workshop on Distributed Systems Operations and Management (DSOM'97), Sydney Australia, Oct. 21-23, 1997.
 172. Technical Program Committee Member, IEEE/IFIP International Network Operations and Management Symposium, Kyoto, Japan, April 1996.
 173. Technical Program Member, 1996 IEEE International Workshop on Systems Management (SMW2), Toronto, Canada, June 1996.
 174. Technical Program Committee & Organizing Committee Member, 1996 IEEE International Symposium on Network Operations and Management (ISNOM'96), Seoul, Korea, October 1996.

6. Research Grants & Projects

1. Network Switch Anomaly Detection using Natural Language Processing, Samsung Electronics (April 2022 – March 2023), 64,125,000 KRW.
2. Development of an intelligent big data integrated platform for customized health management services for police officers, IITP (Feb. 2023-Dec. 2023), 90,000,000 KRW
3. Development of virtual network management technology based on artificial intelligence, IITP (Feb. 2023-Dec. 2023), 370,000,000 KRW
4. Future financial innovation leading cryptocurrency and blockchain technology development,

- Coinone, (March. 2022~ Dec.2022), 875,000,000 KRW
5. Development of big data integration platform that provides city management service, KIPoT (April. 2022~ Dec. 2022), 100,000,000 KRW
 6. Development of Internet Infrastructure System Technologies and R&D Human Resources, IITP (March 2022-Dec. 2022), 60,000,000 KRW
 7. Development of an intelligent big data integrated platform for customized health management services for police officers, IITP (Feb. 2022-Dec. 2022), 100,000,000 KRW
 8. Development of virtual network management technology based on artificial intelligence, IITP (Feb. 2022-Dec. 2022), 370,000,000 KRW
 9. Development of Travel Rule Compliance System for VASP, CODE (Sep. 2021~ Aug, 2022), 100,000,000 KRW.
 10. R&D on Central Bank Digital Currency (CBDC), Hana Financial Group (Jan. 2021 – Dec. 2021), 181,818,181 KRW.
 11. R&D on AI-based Student Learning Recognition using Vmeeting, NIA (May 2021 – Dec. 2021), 63,000,000 KRW.
 12. POSTECH-Stanford AI Joint Research and Education Program, IITP (June 2020 – Nov. 2021), 1,000,000,000 KRW.
 13. Development of Traffic Engineering Technology using AI, Samsung Electronics (April 2021 – March 2022), 64,125,000 KRW.
 14. Development of virtual network management technology based on artificial intelligence, IITP (Feb. 2021-Dec. 2021), 370,000,000 KRW.
 15. Development of Traffic Engineering Technology using AI, Samsung Electronics (April 2020 – March 2021), 64,125,000 KRW
 16. Development of virtual network management technology based on artificial intelligence, IITP (Feb. 2020-Dec. 2020), 370,000,000 KRW
 17. R&D on Blockchain Transaction Monitoring and Analysis, IITP (Jan. 2020-Dec. 2020), 90,000,000 KRW.
 18. Development of Core Technologies for Programmable Switch in Multi-Service Networks, IITP (Jan. 2020-Dec. 2020), 104,000,000 KRW
 19. Global SDN/NFV Open Source Software Core Module/Function Development, IITP (Feb. 2020-May. 2020), 30,000,000 KRW
 20. Development of virtual network management technology based on artificial intelligence, IITP (Feb. 2019-Dec. 2019), 370,000,000 KRW
 21. Development of Artificial Intelligence MOOC Education Map, Ministry of Education, (Oct. 2019 0 Nov. 2019), 20,000,000 KRW
 22. R&D on Blockchain Transaction Monitoring and Analysis, IITP (Jan. 2019-Dec. 2019), 90,000,000 KRW.
 23. Development of Core Technologies for Programmable Switch in Multi-Service Networks, IITP (Jan. 2019-Dec. 2019), 104,000,000 KRW
 24. Global SDN/NFV Open Source Software Core Module/Function Development, IITP (Feb. 2019-Dec. 2019), 50,000,000 KRW
 25. Development of virtual network management technology based on artificial intelligence, IITP (Jul. 2018-Dec. 2018), 170,000,000 KRW
 26. R&D on Blockchain Transaction Monitoring and Analysis, IITP (April, 2018-December 2018), 100,000,000 KRW.
 27. Development of Core Technologies for Programmable Switch in Multi-Service Networks, IITP (Jan. 2018-Dec. 2018), 100,000,000 KRW
 28. Global SDN/NFV Open Source Software Core Module/Function Development, IITP (April 2018-Janurary 2019), 90,000,000 KRW
 29. Development of Internet Infrastructure System Technologies and R&D Human Resources, IITP (March 2018-Dec. 2018), 60,000,000 KRW
 30. Development of Smart Mediator for Mashup Service and Information Sharing among ICBMS

- Platform, IITP (Mar. 2017-Feb. 2018), 170,000,000 KRW
31. Development of Core Technologies for Programmable Switch in Multi-Service Networks, IITP (April 2017-Dec. 2017), 90,000,000 KRW
 32. Global SDN/NFV Open Source Software Core Module/Function Development, IITP (June 2017-May 2018), 60,000,000 KRW
 33. Research and Development of SDN-based Multi-protocol support network virtualization and virtual network snapshot technologies, IITP (June 2017-Dec. 2018), 50,000,000 KRW
 34. Development of Internet Infrastructure System Technologies and R&D Human Resources, IITP (June 2017-Dec. 2017), 60,000,000 KRW
 35. Korea-US Collaborative Research on SDN/NFV Security/Network Management and Testbed Build, IITP (June 2016-May 2017), 200,000,000 KRW
 36. Global SDN/NFV Open Source Software Core Module/Function Development, IITP (June 2016-May 2017), 90,000,000 KRW
 37. Research and Development of ICBMS Smart Mediator, IITP (Mar. 2015-Feb. 2016), 200,000,000 KRW.
 38. Research and Development of Open Source Networking Software, IITP (June 2015-May 2016), 90,000,000 KRW.
 39. Korea-US Collaborative Research on SDN/NFV Security/Network Management and Testbed Build, IITP (June 2015-May, 2016), 200,000,000 KRW.
 40. Global SDN/NFV Open Source Software Core Module/Function Development, IITP (June 2015-May 2016), 90,000,000 KRW
 41. Research on Increasing Privacy and Reliability using Multiple Cloud Systems, Microsoft (Oct. 2014 – June. 2015), 60,000,000 KRW
 42. Research on 4G and IMS Network Architecture in an IPv6 Environment, KISA (Sept. 2014 – Jan. 2015), 45,000,000 KRW.
 43. Research on Use Cases of LISP, KT (June 2014 – Dec. 2014), 70,000,000 KRW
 44. Research on A Study of Korean version of Co-op Program, MSIP (June 2014 – Dec. 2014), 30,000,000 KRW
 45. Research on Embedded Software Technology for Network Convergence Mobile Platforms (ITRC, IITA) (Mar. 2013 – Dec. 2013), 32,000,000 KRW
 46. IT Convergence for Ubiquitous Autonomic Systems, WCU Project (MEST) (Sept. 2012 – Aug. 2013), 4,150,000,000 KRW
 47. Design and Implementation of Mobile Traffic Classification Methodology, Microsoft (Oct. 2011 – June 2012), 60,000,000 KRW
 48. IT Convergence for Ubiquitous Autonomic Systems, WCU Project (MEST) (Sept. 2011 – Aug. 2012), 4,150,000,000 KRW
 49. Research on Embedded Software Technology for Network Convergence Mobile Platforms (ITRC, IITA) (Mar. 2012 – Dec. 2012) 55,000,000 KRW
 50. IT Convergence for Ubiquitous Autonomic Systems, WCU Project (MEST) (Oct. 2010 – Aug. 2011), 4,150,000,000 KRW
 51. Research on Security Issues in Mobile Cloud Service Environment, KT (June 2011 – Dec. 2011) 100,000,000 KRW
 52. HiMang Future Internet Project, ETRI (Mar. 2011 – Feb. 2012) 80,000,000 KRW
 53. Research on Embedded Software Technology for Network Convergence Mobile Platforms (ITRC, IITA) (Jan. 2011 – Dec. 2011) 54,000,000 KRW

54. Semantic-based Movie Recommender System, KT (June 2010 – Nov. 2010)
100,000,000 KRW
55. Self-Organizing Network Expert System (SONES), Samsung Electronics (May 2010 – Oct. 2010)
60,000,000 KRW
56. HiMang Future Internet Project, ETRI (Mar. 2010 – Feb. 2011) 150,000,000 KRW
57. Research on Embedded Software Technology for Network Convergence Mobile Platforms (ITRC, IITA) (Jan. 2010 – Dec. 2010) 60,000,000 KRW
58. Cognitive Network Management System, KIAT (Nov. 2009 – Oct. 2010) 20,000,000 KRW
59. IT Convergence for Ubiquitous Autonomic Systems, WCU Project (MEST) (Nov. 2009 – Sep. 2010), 4,150,000,000 KRW
60. Research on Embedded Software Technology for Network Convergence Mobile Platforms (ITRC, IITA) (Jan. 2009 – Dec. 2009) 40,000,000 KRW
61. CASFI (Collect, Analyze, and Share for Future Internet): High-Precision Measurement and Analysis Research (MKE) (Jan. 2009 - Dec.2009) 75,000,000 KRW
62. IT Convergence for Ubiquitous Autonomic Systems, WCU Project (MEST) (Dec. 2008 – Oct. 2009), 4,274,000,000 KRW
63. Research on Traffic Control of Interconnection area among ISPs (KT) (Jul. 2008 – Nov. 2008)
35,000,000 KRW
64. CASFI (Collect, Analyze, and Share for Future Internet): High-Precision Measurement and Analysis Research (MKE) (Mar. 2008 - Dec.2008) 60,000,000 KRW
65. Research on Embedded Software Technology for Network Convergence Mobile Platforms (ITRC, IITA) (Jan. 2008 – Dec. 2008) 40,000,000 KRW
66. Fault Detection and Prediction of POSCO Control Networks (POSCO) (Feb. 2007 – Jan. 2008)
200,000,000 KRW
67. Research on Embedded Software Technology for Network Convergence Mobile Platforms (ITRC, IITA) (Sept. 2007 – Dec. 2008) 60,000,000 KRW
68. Research on Effective Planning of All-IP Networks (POSCO) (Jan. 2007 – Dec. 2007)
272,840,000 KRW
69. Traffic Analysis of Access Networks for Triple Play Service (KT) (June 2007 – Nov. 2007)
39,000,000 KRW
70. Research on SNMP-based Management of Tactical Networks (Samsung Thales) (Jan. 2007 – Dec. 2007) 50,000,000 KRW
71. Integrated Remote Fault Analysis of POSCO Control Networks (POSCO) (Jun. 2006 – May 2007)
250,000,000 KRW
72. Realization of TSA using Web Services from NGOSS TNA (KT) (Apr. 2006 – Nov. 2006)
50,000,000 KRW
73. Research on Embedded Software Technology for Network Convergence Mobile Platforms (ITRC, IITA) (Sept. 2005 – Aug. 2007) 100,000,000 KRW
74. Implementation of Manager for Broadband Power Line Communication Network Management System (KEPCO) (Sept. 2005 – Aug. 2008) 165,000,000 KRW
75. KT Operations Support System Laboratory (September 2005 – December 2005), Internet Application Traffic Identification, 30,000,000 KRW
76. Electronics and Telecommunications Research Institute (ETRI), (May 2005 – Oct. 2005)

- A Performance Evaluation Study on WBEM Implementations, 30,000,000 KRW
77. Korea Industrial Technology Foundation (KOTEF), (Dec. 2003 – Aug. 2005) “Internet Traffic Monitoring, Analysis and Control” 200,000,000 KRW
 78. Electronics and Telecommunications Research Institute (ETRI), (May 2004 – Nov. 2004)
“Development of CIM/WBEM-based Systems Management Framework” 50,000,000 KRW
 79. National Security Research Institute (NSRI), (Apr. 2004 – Nov. 2004)
“Analysis of Internet Worm Traffic” 20,000,000 KRW
 80. KTF (Oct. 2003 - Apr. 2004) “Research on KTF New Generation Integrated OSS Architecture”, 45,000,000 KRW.
 81. Electronics and Telecommunications Research Institute (ETRI), (Aug. 2003 - Dec. 2003),
“Development of Secure Internet Router for Detecting DDoS Attacks”, 28,500,000 KRW.
 82. KT (June 2003 - Dec. 2003), “Research on Network Security Attack Detection Methods Based on Internet Traffic Monitoring and Analysis”, 29,400,000 KRW.
 83. DACOM (Apr. 2003 - Nov. 2003), “Development and Deployment of Network Monitoring and Analysis System”, 40,000,000 KRW.
 84. PIRL, POSTECH (Dec. 2002 - Nov. 2003), “Research on High-Speed Network Monitoring and Analysis Methods”, 12,000,000 KRW.
 85. HY-SDR Research Center (Aug. 2002 - July 2003), “Research on Detecting Methods for Internet Security Attacks via Traffic Monitoring”, 20,000,000 KRW.
 86. KT (Aug. 2002 – Nov. 2002) “A Study on Value-Added Services for High-Speed Broadband Internet Service Providers”, 27,000,000 KRW.
 87. Ifeelnet Inc., (Feb. 2002 – Feb. 2003), “Research on Efficient IP Network Traffic Monitoring and Analysis Methods”, 30,000,000 KRW.
 88. POSCO, (Jan. 2000 - June 2001), “Development of Internet Server Technology Supporting Differentiated QoS Services”, 342,396,933 KRW.
 89. Electronics and Telecommunications Research Institute (ETRI), (Apr. 2000 - Oct. 2000),
“Development of Resource Management Server System for QoS Routing and Resource Monitoring”, 40,000,000 KRW.
 90. POSCO, (Jan. 2000 - Dec. 2000), “Research on LAN Configuration, Traffic Monitoring and Control in High-Speed Switching LANs”, 288,215,499 KRW.
 91. POSCO, (Jan. 2000 - Dec. 2000), “Research on Voice, Video and Data Integration for POSCO Network”, 310,667,662 KRW.
 92. POSCO, (Jan. 1999 - Dec. 1999), “Research on POSCO Enterprise Network Planning”, 253,463,000 KRW.
 93. POSCO, (Jan. 1999 - Dec. 1999), “Development of Lightweight and High-Performance Web Cache Server”, 15,675,000 KRW.
 94. Korea Telecom, (Jan. 1999 - Dec. 1999), “TMN-based Integrated Network Management Using Web Technology (II), 63,243,000 KRW.

95. POSDATA, (Oct. 1998 - May 1999), "Development of PC-based Multimedia Applications", 43,600,000 KRW.
96. OpenTech, (May 1998 - Oct. 1998), "DCE Management Subsystem Development", 10,234,000 KRW.
97. Korea Telecom, (Feb. 1998 - Dec. 1998), "TMN-based Integrated Network Management Using Web Technology (I)", 43,600,000 KRW.
98. ETRI, (Apr. 1998 - Nov. 1998), "Research on Service Management Using Distributed Object-Oriented Technology", 20,000,000 KRW.
99. System Engineering Research Institute (SERI), (Nov. 1997 - June 1998), "Development of UNIX Workstation-based Remote Research Collaboration Platform", 50,000,000 KRW.
100. SERI, (May 1997 - Mar. 1998), "A Study on Developing QoS MIB for Managing Application Services", 20,000,000 KRW.
101. ETRI, (Mar. 1997 - Nov. 1997), "A Study on Management of Internet Application Services", 30,000,000 KRW.
102. POSCO, (Oct. 1996 - Aug. 1997), "Planning for Efficient Utilization of POSCO Computing Resources", 199,626,000 KRW.
103. Samsung Electronics, (Sept. 1996 - Aug. 1998), "Development of DMI-based Samsung PC Server Management System", 230,000,000 KRW.
104. ETRI, (Apr. 1996 - Nov. 1996), "A Study on the Standardization of Distributed Systems Software", 30,000,000 KRW.
105. Korea Research Foundation, (Dec. 1995 - Nov. 1997), "Management of Distributed Multimedia Systems and Applications", 30,000,000 KRW.
106. Pohang University of Science and Technology, (Sept. 1995 - Aug. 1996), "Management of Distributed Systems and Applications", 30,000,000 KRW.
107. POSTECH Information Research Laboratories, (Sept. 1995 - Aug. 1996), "A Study on Support for Distributed Management of Networks and Systems", 20,000,000 KRW.

*** For details on these projects, please visit my research lab homepage (<http://dpnm.postech.ac.kr>)**

7. Refereed Publications

A. International Journal Papers

1. Khizar Abbas, Ali Nauman, Muhammad Bilal, Jae-Hyoung Yoo, James Won-Ki Hong, Wang-Cheol Song, "AI-Driven Data Analytics and Intent-Based Networking for Orchestration and Control of B5G Consumer Electronics Services", *Transactions on Consumer Electronics*, 2023. (Accepted to appear).
2. Khizar Abbas, Jibum Hong, Nguyen Van Tu, Jae-Hyoung Yoo, James Won-Ki Hong, "Autonomous DRL-based energy efficient VM consolidation for cloud data centers", *Physical Communication*, vol.55, December 2022.
3. Suman Pandey, Minji Choi, Jae-Hyoung Yoo, and James Won-Ki Hong, "RNN-EdgeQL: An Auto-Scaling and Placement Approach for SFC", *International Journal of Network Management (IJNM) (SCIE)*, September 2022.
4. Tu Van Nguyen, Jae-Hyoung Yoo, James Won-Ki Hong, "PPTMon: Real-time and Fine-grained Packet Processing Time Monitoring in Virtual Network Functions", *IEEE Transactions on Network and Service Management (TNSM) (SCIE)*, December, 2021.
5. Doyoung Lee, Seyeon Jeong, Kyungchan Ko, Jae-Hyoung Yoo, James Won-Ki Hong, "Deep Q-network-based auto scaling for service in a multi-access edge computing environment", *International Journal of Network Management (IJNM) (SCIE)*, June 2021.
6. Hee-Gon Kim, Suhyun Park, Stanislav Lange, Doyoung Lee, Dongnyeong Heo, Heeyoul Choi, Jae-Hyoung Yoo, James Won-Ki Hong, "Graph neural network-based virtual network function deployment optimization", *International Journal of Network Management (IJNM) (SCIE)*, May 2021.
7. Stanislav Lange, Doyoung Lee, Nguyen Van Tu, Heegon Kim, Seyeon Jeong, Ji-Bum Hong, Jae-Hyoung Yoo, James W. Hong, "A Network Intelligence Architecture for Efficient VNF Lifecycle Management", *IEEE Transactions on Network and Service Management (TNSM) (SCIE)*, August 2020.
8. Nguyen Van Tu, Jae-Hyoung Yoo, and James Won-Ki Hong, "Accelerating Virtual Network Functions with Fast-Slow Path Architecture using eXpress Data Path", *IEEE Transactions on Network and Service Management (TNSM) (SCIE)*, June 2020.
9. Jonghwan Hyun, Nguyen Van Tu, Jae-Hyoung Yoo and James Won-Ki Hong, "Real-time and fine-grained network monitoring using in-band network telemetry", *International Journal of Network Management (IJNM) (SCIE)*, Vol. 29, Issue 6, November 2019.
10. Woojoong Kim, James Won-Ki Hong, Young-Joo Suh, "T-DCORAL: A Threshold-based Dynamic Controller Resource Allocation for Elastic Control Plane in Software-Defined Data Center Networks", *IEEE Communications Letters*, Vol. 23, Issue 2, Feb. 2019, pp. 198-201.
11. Woojoong Kim, Jian Li, Young-Joo Suh and James Won-Ki Hong, "HeS-CoP: Heuristic Switch-controller Placement Scheme for Distributed SDN Controllers in Data Center Networks", *International Journal of Network Management (IJNM) (SCIE)*, Vol. 28, Issue 3, May, 2018.
12. Yoonseon Han, Thomas Vachuska, Ali Al-Shabibi, Jian Li, Huibai Huang, William Snow and James Won-Ki Hong, "ONVisor: Towards a Scalable and Flexible SDN-based Network Virtualization Platform on ONOS", *International Journal of Network Management (IJNM) (SCIE)*, Vol. 28, Issue 2, March 2018.
13. Filip De Turck, Joon-Myung Kang, Hyunseung Choo, Myung-Sup Kim, Baek-Young Choi, Remi Badonnel and James Won-Ki Hong, "Softwarization of networks, clouds, and internet of things", *International Journal of Network Management (IJNM) (SCIE)*, Vol. 27, Issue 2, March 2017.
14. Jian Li, Jae-Hyoung Yoo, and James Won-Ki Hong, "Dynamic Control Plane Management for Software-Defined Networks", *International Journal of Network Management (IJNM)*. vol. 26, no.2, Mar./Apr., 2016, pp. 111-130. (SCIE)
15. Jaeyoon Chung, Youngjoon Won, Byungchul Park, and James Won-Ki Hong, "Mass-Count Disparity in Mobile Traffic", *IEEE Communications Letters*, vol. 20, no. 1, Jan., 2016, pp. 65-68. (SCI)
16. Taeyeol Jeong, Jian Li, Jonghwan Hyun, Jae-Hyoung Yoo, and James Won-Ki Hong, "LISP controller: a centralized LISP management system for ISP networks", *International Journal of Network*

- Management (IJNM), vol. 25, no. 6, Nov./Dec., 2015, pp. 507-525. (SCIE)
17. Jae Yoon Chung, Sangtae Ha, and James Won-Ki Hong, "A Management Architecture for Client-defined Cloud Storage Services", *International Journal of Network Management (IJNM)*, vol. 25, no. 6, Nov./Dec., 2015, pp. 435-453. (SCIE) (NIPA support)
 18. Sin-seok Seo, Joon-Myung Kang, Alberto Leon-Garcia, Yoonseon Han, and James Won-Ki Hong, "User-centric Context Data Collection and Provision Harnessing Content-Centric Networking Paradigm", *International Journal of Network Management (IJNM)*, vol. 24, no. 1, Jan./Feb., 2014, pp. 48-69. (SCIE)
 19. Sungsu Kim, Joon-Myung Kang, Sin-seok Seo, and James Won-Ki Hong, "A Cognitive Model based Approach for Autonomic Fault Management in OpenFlow Networks", *International Journal of Network Management (IJNM)*, vol. 23, no. 6, Nov./Dec., 2013, pp. 383-401. (SCIE)
 20. Byungchul Park, Youngjoon Won, JaeYoon Chung, Myung-sup Kim, and James Won-Ki Hong, "Fine-grained Traffic Classification based on Functional Separation", *International Journal of Network Management (IJNM)*, vol. 23, no. 6, Sept./Oct, 2013, pp. 350-381. (SCIE)
 21. Seong-Cheol Hong, Hong-Taek Ju, and James Won-Ki Hong, "Network Reachability-based IP Prefix Hijacking Detection", *International Journal of Network Management (IJNM)*, Volume 23, Issue 1, pp. 1-15, Jan./Feb. 2013. (SCIE)
 22. Filip De Turck, Yoshiaki Kiriha and James Won-Ki Hong, "Management of the Future Internet: Status and Challenges - A Report on the 4th IEEE/IFIP International Workshop on Management of the Future Internet (ManFI 2012)", *Journal of Network and Systems Management*, Springer, Vol 20, No. 4, December, 2012, pp. 616-624 (SCIE)
 23. Youngjoon Won, Mi-Jung Choi, Byungchul Park, and James Won-Ki Hong, "An Approach for Failure Recognition in IP-Based Industrial Control Networks and Systems", *International Journal of Network Management (IJNM)*, Volume 22, Issue 6, pp. 477-493, Nov./Dec. 2012. (SCIE)
 24. Yoonseon Han, Yeongrak Choi, and James Won-Ki Hong, "Experience on the Development of ComSoc Application for Smart Phones", *IEEE Communications Magazine*, vol. 50, no. 4, April, 2012. pp. 106-112 (SCI)
 25. James Won-Ki Hong, Yuan-Kuang Tu, Choong Seon Hong, Shian-Shyong Tseng, Yoshiaki Kiriha, Han-Chieh Chao, Marat Zhanikeev and Wang-Cheol Song, "Managing Clouds, Smart Networks and Services: A Report on APNOMS 2011", *Journal of Network and Systems Management*, Vol 20, No. 1, March, 2012, pp. 134-142 (SCIE)
 26. Sungsu Kim, Jame Won-Ki Hong, John Strassner, and Taesang Choi, "A Report on the 3rd IFIP/IEEE International Workshop on Management of the Future Internet (ManFI 2011)", *Journal of Network and Systems Management*, Vol 19, No. 4, December, 2011, pp. 549-554 (SCIE)
 27. Taesang Choi, Tae-Ho Lee, Nodir Kodirov, Jaegi Lee, Doyeon Kim, Joon-Myung Kang, Sungsu Kim, John Strassner, and James Won-Ki Hong, "HiMang: Highly Manageable Network and Service Architecture for New Generation", *Journal of Communications and Networks*, Vol. 13, pp. 552-566, Dec. 2011, (SCI).
 28. Joon-Myung Kang, Sin-seok Seo and James Won-Ki Hong, "Personalized Battery Lifetime Prediction for Mobile Devices based on Usage Patterns", *Journal of Computing Science and Engineering*, vol. 5, no. 4, pp. 338-345, Dec. 2011.
 29. Byungchul Park, Young J. Won, and James Won-Ki Hong, "Toward Fine-grained Traffic Classification", *IEEE Communications Magazine*, vol. 49, Issue 7, July, 2011. pp. 104-111 (SCI).
 30. Joon-Myung Kang, John Strassner, Sin-seok Seo, James Won-Ki Hong, "Autonomic Personalized Handover Decisions for Mobile Services in Heterogeneous Wireless Networks", *Computer Networks*. Volume 55, Issue 7, May 2011, Pages 1520-1532 (SCIE).
 31. Suman Pandey, Mi-Jung Choi, Young J. Won, James Won-Ki Hong, "SNMP-based Enterprise IP Network Topology Discovery," *International Journal of Network Management (IJNM)*, vol. 21, issue 3, pp. 169-184, May 2011 (SCIE)
 32. Suman Pandey, Young J. Won, James Won-Ki Hong, and John Strassner, "Dimensioning Internet Protocol Television Video on Demand Services", *International Journal of Network Management*

- (IJNM). Online available, February 9, 2011 (SCIE).
33. Lisandro Zambenedetti Granville, Deep Medhi, Yoshiaki Kiriha, James Won-Ki Hong, Nobuo Fujii, "Towards Management of Future Networks and Services: A Report on IEEE/IFIP NOMS 2010", *Journal of Network and Systems Management*, Springer, June. 12, 2010
 34. Chang-Keun Park, Joon-Myung Kang, Mi-Jung Choi, James Won-Ki Hong, Yong-hun Lim, Seongho Ju, and Moon-suk Choi, "Development and Testing of an SNMP-based Integrated Management System for Heterogeneous Power Line Communication Networks," *International Journal of Network Management*. Vol. 20, Issue 1, pp. 35-55, Jan./Feb. 2010. (SCIE)
 35. Iris Hochstatter, James Won-Ki Hong, and Gabi Dreo Rodosek, "Is the Management of the Future Internet Ignored? A Report on ManFI 2009", *Journal of Network and Systems Management*, Springer, Dec. 5, 2009.
 36. Joon-Myung Kang, Hong-Taek Ju, Mi-Jung Choi, James Won-Ki Hong, and Jun-Gu Kim, "OMA DM-based Remote Software Fault Management for Mobile Devices", *International Journal of Network Management*, Vol. 19, Issue 6, pp. 491-511, Nov./Dec. 2009. (SCIE)
 37. James Won-Ki Hong , Luoming Meng , Young-Tak Kim Hiroshi Uno , Shingo Ata , Yan Ma, Deokjai Choi, " Challenges for Next Generation Network Operations and Service Management: a Report on APNOMS 2008," *Journal of Network and Systems Management*, Springer, Vol. 17, No. 1, Feb. 28, 2009, pp. 91-98.
 38. Young J. Won, Mi-Jung Choi, James W. Hong, Chan-Kyu Hwang, and Jae-Hyoung Yoo, "Measurement of Download and Play and Streaming IPTV Traffic," *IEEE Communications Magazine*, Vol. 46, No. 10, October, 2008, pp. 154-161. (SCI)
 39. Young J. Won, Mi-Jung Choi, James Won-Ki Hong, Myung-Sup Kim, Hwawon Hwang, Jun-Hyub Lee, and Sung-Gyoo Lee, "Fault Detection and Diagnosis in IP-based Mission Critical Industrial Process Control Networks," *IEEE Communications Magazine*, Vol. 46, No. 5, May 2008, pp. 172-180. (SCI)
 40. Mi-Jung Choi, Hong-Taek Ju, James Won-Ki Hong and Dong-Sik Yun, "Desing and Implementation of Web Services-based NGOSS Technology Specific Architecture," *Annals of Telecommunications*, Special Issue on Next Generation Network and Service Management, Vol. 63, No. 3-4, April 2008, pp. 195-206 (SCI)
 41. Mi-Jung Choi and James Won-Ki Hong, "Towards Management of Next Generation Networks," *IEICE Transactions on Communications*, Vol. E90-B, No. 11, November 2007, pp. 3004~3014. (SCI)
 42. Jae-Jo Lee, Choong Seon Hong, Joon-Myung Kang, and James Won-Ki Hong, "Power line communication network trial and management in Korea," *International Journal of Network Management (IJNM)*, Vol. 13, Issue 6, Special Issue, November/December 2006, pp 443-457
 43. James Won-Ki Hong, Hiroshi Kuriyama, Young-Tak Kim, Makoto Takano, "Management of Convergence Networks and Services: A Report on APNOMS 2006," *Journal of Network and Systems Management*, Springer, Vol. 14, No. 4, September 2006, pp. 603-608.
 44. Myung-Sup Kim, Young J. Won, and James W. Hong, "Characteristic Analysis of Internet Traffic from the Perspective of Flows," *Computer Communications*, Volume 29, Issue 10, June 19 2006, pp. 1639-1652 (SCI).
 45. Yu Cheng, Ramy Farha, Myung Sup Kim, Alberto Leon-Garcia, and James Won-Ki Hong, "A Generic Architecture for Autonomic Service and Network Management," *Computer Communications*, Vol. 29, Issue 18, Nov. 2006, pp. 3691-3709 (SCI).
 46. Yu Cheng, Ramy Farha, Ali Tizghadam, Myung Sup Kim, Massoud Hashemi, Alberto Leon-Garcia, and James Won-Ki Hong, "Virtual Network Approach to Scalable IP Service Deployment and Efficient Resource Management," *IEEE Communications Magazine*, Vol. 43, No. 10, Oct. 2005, pp. 76-84 (SCI)
 47. Ramy Farha, Myung Sup Kim, Alberto Leon-Garcia, and James Won-Ki Hong, "Toward Autonomic Service Architecture", *Lecture Notes in Computer Science*, vol. 3751, Operations and Management

- in IP-Based Networks, 5th IEEE Workshop on IP Operations and Management (IPOM 2005), Barcelona, Spain, Oct., 2005, pp. 58-67. (SCIE)
48. Sun-Mi Yoo, Hong-Taek Ju, and James Won-Ki Hong, "Web Services Based Configuration Management for IP Network Devices", Lecture Notes in Computer Science, vol. 3754, Management of Multimedia Networks and Services, 8th International Conference on Management of Multimedia Networks and Services (MMNS 2005), Barcelona, Spain, Oct., 2005, pp. 254-265. (SCIE)
 49. Myung-Sup Kim, Young J. Won, and James Won-Ki Hong, "Application-Level Traffic Monitoring and Analysis on IP Networks," ETRI Journal, Vol.27, No.1, Feb. 2005, pp.22-42. (SCI)
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 55. Mi-Joung Choi and James Won-Ki Hong, "A Secure Web-based Global Management System for Firewall/VPN Devices", Journal of Communications and Networks (JCN), Vol. 4, No. 1, March 2002, pp. 71-78 (SCIE).
 56. Jae-Young Kim and James Won-Ki Hong, "Distributed QoS Monitoring and Edge-to-Edge QoS Aggregation to Manage End-to-End Traffic Flows in Differentiated Services Networks", Journal of Communications and Networks (JCN) Special Issue on Management of New Networking Infrastructure and Services, Vol. 3, No. 4, December 2001, pp. 324-333 (SCIE).
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 58. Jae-Young Kim, James Won-Ki Hong, and Tae-Sang Choi, "Managing Edge-to-Edge Traffic Aggregates in Differentiated Services Networks", Journal of Network and Systems Management, Plenum Press, September 2001, pp.266-291.
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D. Patents

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 14. James Won-Ki Hong and Joon-Myung Kang, "Method for Predicting Available Time Remaining on Battery in Mobile Devices Based on Usage Patterns," Patent No.:5175242(2009-118340), Japan, 2013.01.11(2009.05.26) (Applicant: POSTECH)
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 40. James Won-Ki Hong, Myung-Sup Kim, and Young J. Won, "Traffic Analysis Apparatus in IP Network Environments," Patent No.: 10-0710047, Korea, 2007.04.16 (Applicant: POSTECH)
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46. James Won-Ki Hong, Young J. Won, and Sung-Su Kim, "Network Autonomic Management System," Patent No.: 10-2010-0006325, Korea, 2010.01.25 (Applicant: POSTECH) (FILED)
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8. Invited Talks and Tutorials

1. James Won-Ki Hong, "Blockchain Theory and Applications", Asian Institute of Technology, Thailand, January 18, 2023 (Invited Seminar).
2. Won-Ki Hong, "Blockchain Technology and Applications", Daegu Science High School, May 27, 2022 (Invited Seminar)
3. James Won-Ki Hong, "SDN/NFV Open Networking", Naresuan University, Thailand, Mar. 22, 2022, (Invited Seminar).
4. James Won-Ki Hong, "AI-Based Network Management", University of Zurich, Switzerland, Nov. 17, 2021, (Invited Seminar).
5. James Won-Ki Hong, "AI-Based Network Management", ITRC Workshop, May 27, 2021, (Invited Seminar).
6. James Won-Ki Hong, "Recent Trends in Blockchain Technology and Business Applications", POSCO, Seoul, Korea, April 9, 2020. (Invited Industry Seminar)
7. James Won-Ki Hong, "Blockchain Research at POSTECH", Hochimin University of Science and Technology, Vietnam, January 17, 2020. (Invited Seminar)
8. James Won-Ki Hong, "Blockchain Research at POSTECH", Hanoi University of Science and Technology, Vietnam, January 16, 2020. (Invited Seminar)
9. James Won-Ki Hong, "Blockchain Monitoring and Analysis", IEEE ICC 2019, Shanghai, China, May 21, 2019. (Invited Industry Seminar)
10. James Won-Ki Hong, "Softwarization of the Internet", APRICOT 2019, Feb.28, 2019, Daejeon, Korea (Keynote Speech)
11. James Won-Ki Hong, "Towards Telco Network Virtualization & Applications", IMCOM 2018, Langkawai, Malaysia, Jan. 5, 2018 (Keynote)
12. James Won-Ki Hong, "Moving Frontiers in Network Softwarization", NetSoft 2017 Distinguished Experts Panel, Bologna, Italy, July 6, 2017
13. James Won-Ki Hong, "SDN/NFV & Open Networking Ecosystem", CyberC 2016 SDN Summit, Chengdu, China, Oct. 13, 2016 (Keynote Speech)
14. James Won-Ki Hong, "SDN 2.0 for Carrier Networks", The 7th International Conference on Cyber-enabled Distributed Computing and Knowledge Discovery (CyberC 2015), Xian, China, Sep 17, 2015. (Keynote Speech)
15. James Won-Ki Hong, "Shaping the Future with ICT & IoT", IEEE/CIC International Conference on Communications in China (ICCC 2014), Shanghai, China, Oct. 14, 2014. (Keynote Speech)

16. James Won-Ki Hong, "Shaping the Future with ICT Convergence", Canada-Korea Conference on Science and Technology (CKC 2014), Niagara Falls, Canada, Aug. 4, 2014. (Keynote Speech)
17. James Won-Ki Hong, "Shaping the Future with ICT Convergence", Invited talk, Dept. of Software Design and Management, Gachon University, Sungnam, Korea, May. 16, 2014
18. James Won-Ki Hong, "Shaping the Future with ICT Convergence", Invited talk, Division of International Studies (DIS), Korea University, Seoul, Korea, March. 17, 2014.
19. James Won-Ki Hong, "Video Traffic Explosion in All-IP Era," Invited talk, CTO Group Meeting at ITU Telecom World 2013, Bangkok Thailand, Nov. 18–20, 2013.
20. James Won-Ki Hong, "Shaping the Future Society with ICT Convergence", Invited talk, Dept. of ECE, Sogang University, Seoul Korea, Nov. 13, 2013
21. James Won-Ki Hong, "Towards Mobile Video Traffic Optimization", Keynote, 15th Asia-Pacific Network Operations and Management Symposium (APNOMS 2013), Hiroshima Japan, Oct. 27, 2013
22. James Won-Ki Hong, "Global ICT Convergence Leader: KT's Vision and Strategy", Invited talk, International Presidential Forum for Global Research Universities. Seoul Korea, Oct. 15, 2013.
23. James Won-Ki Hong, "What does 'Computer Science and Engineering' mean to Telcos?", School of Computer Science and Engineering, Seoul National University, Seoul, Korea, Oct. 10, 2013.
24. James Won-Ki Hong, "Shaping the Future Society with ICT Convergence", Invited talk, School of ECE, Seoul National University, Seoul Korea, Sept. 11, 2013
25. James Won-Ki Hong, "Shaping the Future Society with ICT Convergence", Invited talk, Dept. of ECE, Yonsei University, Seoul Korea, Sept. 24, 2013
26. James Won-Ki Hong, "Shaping the Future Society with ICT Convergence", Invited talk, Dept. of ECE, Univ. of Toronto, Toronto, Canada, May 23, 2013
27. James Won-Ki Hong, "Shaping the Future Society with ICT Convergence", Invited talk, Laboratory for Information and Decision Systems (LIDS), MIT, Cambridge, MA, USA, May 21, 201
28. James Won-Ki Hong, "Shaping the Future Society with ICT Convergence", Invited talk, Dept. of EE, Princeton Univ., Princeton, NJ, USA, May 20, 2013
29. James Won-Ki Hong, "The Fall of Telcos and The Rise of Internet Content Providers", Keynote, The 23rd High-Speed Networking, Busan, Korea, Jan. 24, 2013.
30. James Won-Ki Hong, "What Does Computer Science and Engineering Mean to Today's Telcos?", Keynote, The 13th KOCSEA Symposium, Atlanta GA, Dec. 14, 2012.
31. James Won-Ki Hong, "Challenges in Today's Telco R&D", Keynote, The 18th Asia-Pacific Conference on Communications 2012 (APCC 2012), Jeju Island, Korea, Oct. 16, 2012
32. James Won-Ki Hong, "Smartphonomics: Convergence using Smart Phones and Devices", Faculty of IT Convergence and Engineering, Pyongyang University of Science and Technology, Pyongyang, North Korea, October 5, 2011.
33. James Won-Ki Hong, "Traffic Monitoring & Analysis: Methods, Challenges and Experiences", Invited Talk, Harbin Institute of Technology, Harbin, China, May 12, 2011.
34. James Won-Ki Hong, "Traffic Monitoring & Analysis: Methods, Challenges and Experiences", Invited Talk, Shanghai Jiao Tong University, Shanghai, China, May 10, 2011
35. James Won-Ki Hong, "Smartphonomics: Convergence using Smart Phones and Devices," Hochimin City University of Science, Hochimin City, Vietnam, Jan. 10, 2011
36. James Won-Ki Hong, "Smartphonomics: Convergence using Smart Phones and Devices," Hochimin City University of Technology, Hochimin City, Vietnam, Jan. 11, 2011
37. James Won-Ki Hong, "Traffic Measurement: Methods, Challenges and Experiences", Tutorial, International Conference on Autonomic Infrastructure, Management and Security (AIMS 2008), Bremen, Germany, July 1, 2008.
38. James Won-Ki Hong, "PLC Network Management Technology," Invited Talk, KERI (Korea Electrotechnology Research Institute), Euwangsi, Korea, March 16, 2007.
39. James Won-Ki Hong, "4G Network Operations and Management," Invited Talk, Dept. of Electrical and Computer Engineering, University of Toronto, Toronto, Canada, July 6, 2005.
40. James Won-Ki Hong, "Internet Traffic Monitoring and Analysis: Methods and Applications", Tutorial, 2004 IEEE Globecom, Dallas, USA, Dec 3, 2004

41. James Won-Ki Hong, "Internet Traffic Monitoring and Analysis: Methods and Applications", Tutorial, 2004 IEEE Conference on Communications (ICC), Paris, France, June 20, 2004.
42. James Won-Ki Hong, "Internet Traffic Monitoring and Analysis using NG-Mon", Seminar, Dept. of Computer Science, Purdue University, West Lafayette, USA, Oct. 22, 2004.
43. James Won-Ki Hong, "Internet Traffic Monitoring and Analysis using NG-Mon", Seminar, Dept. of Electrical and Computer Engineering, Univ. of Toronto, Toronto, Canada, Feb. 26, 2004.
44. James Won-Ki Hong, "Internet Traffic Monitoring and Analysis using NG-Mon", Invited Keynote Talk, ICACT 2004, Pheonix Park, Korea, Feb. 9, 2004.
45. James Won-Ki Hong, "Internet Traffic Monitoring and Analysis: Methods and Applications", Tutorial, 2003 IEEE Globecom, San Francisco, USA, Dec. 5, 2003.
46. James Won-Ki Hong, "Internet Traffic Monitoring and Analysis using NG-Mon", Seminar, HP Labs, Palo Alto, CA, USA, Dec. 4, 2003.
47. James Won-Ki Hong, "Internet Traffic Monitoring and Analysis using NG-Mon", Seminar, Sprint Labs, Burlingame, CA, USA, Dec. 2, 2003.
48. James Won-Ki Hong, "Internet Traffic Monitoring and Analysis: Methods and Applications", Tutorial, 2003 IEEE/IFIP International Symposium on Integrated Network Management (IM 2003), Colorado Springs, USA, March 24, 2003.
49. J. Won-Ki Hong, "Traffic Measurement for High-Speed Internet", 2003 ICAT Workshop, Seoul, Korea, April 30, 2003. J. Won-Ki Hong, "Internet Traffic Monitoring and Analysis", Changwon University, Changwon, Korea, May 2, 2003
50. J. Won-Ki Hong, "Internet Traffic Monitoring and Analysis", Samsung Electronics, Suwon, Korea, May 13, 2003.
49. J. Won-Ki Hong, "Internet Traffic Monitoring and Analysis", KT OSS Labs, Daejeon, Korea, July 4, 2003.
50. J. W. Hong, "Network Monitoring and Analysis for SLA Management", 2002 KNOM Tutorial, June 21, 2002.
51. J. W. Hong, "Personal Service Platform for Enabling Value-Added Services in the Broadband Internet", KT Telecommunication Network Research (TNR) Lab. Seminar, May 14, 2002.
52. J. W. Hong, "IP Network Traffic Monitoring and Analysis", KT Operations Support Systems (OSS) Lab. Seminar, April 16, 2002.
53. J. W. Hong, "Web-based Network and Systems Management", Tutorial, APCC 2000, Oct. 30, 2000, Seoul, Korea.
54. J. W. Hong, "Recent R&D Activities in Web-based Network and Systems Management", IBM T. J. Watson Center, Hawthorne, NY, USA, January 5, 2000.
55. J. W. Hong, "Recent R&D Activities in Web-based Network and Systems Management", Lucent Bell Labs, Holmdel, New Jersey, USA, January 7, 2000.
56. J. W. Hong, "Recent R&D Activities in Web-based Network and Systems Management", Dept of Computer Science, North Carolina State University, Raleigh, North Carolina, USA, January 11, 2000.
57. J. W. Hong, "Recent R&D Activities in Web-based Network and Systems Management", AT&T Research, Floham Park, New Jersey, USA, January 14, 2000.
58. J. W. Hong, "Policy-based Network Management", NETSECKR 2000, Seoul Korea, May 2000.
59. J. W. Hong, "Web-based Network and Systems Management", Tutorial, IEEE/IFIP 1999 International Symposium on Integrated Network Management, Boston MA, May 1999.
60. J. W. Hong, "Web-based Network and Systems Management", Tutorial, IEEE International Conference on Communications, June, 1999, Vancouver, Canada.
61. J. W. Hong, "Computer Networking, Internet & Home Networking", Seminar, LG Electronics, Seoul, Korea, October 23, 1999.
62. J. W. Hong, "Internet/Intranet Network Monitoring, Analysis and Reporting using Web Technology", KEPRI, Taejeon, Korea, March 13, 1998.
63. J. W. Hong, "Web-based Enterprise Network Management", Korea Telecom, Taejeon, Korea, April 8, 1998.
64. J. W. Hong, "Web-based Network and Systems Management" Tutorial, APNOMS'98, Sendai Japan, Sept. 1998.

65. J. W. Hong, "Web-based Network Management" Daewoo Telecom, Seoul, December 2, 1998.
66. J. W. Hong, "Web-based Network and Systems Management", Tutorial, APNOMS'97, Seoul, Korea, October 8, 1997.

9. Student Supervisions

A. PhD Thesis

1. Seyeon Jeong, PhD Thesis
 "Dynamic Service Placement in Edge Computing Environment using Reinforcement Learning-based Live Migration", POSTECH, Pohang, Korea
 Completed, Aug. 2022.
2. Doyoung Lee, PhD Thesis
 "Auto-scaling of Network Services in Multi-access Edge Computing Environment"
 Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
 Completed, Aug. 2021
3. Jonghwan Hyun, PhD Thesis
 "End-to-End Latency Measurement in a Multi-access Edge Computing Environment"
 Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
 Completed, Aug. 2019
4. Taeyeol Jeong, PhD Thesis
 "A Platform for Distributed Fog Computing"
 Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
 Completed, Feb. 2018
5. Yoonseon Han, PhD Thesis
 "A Framework for Development, Operations, and Management of SDN-based Virtual Networks"
 Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
 Completed, Aug. 2017
6. Jian Li, PhD Thesis
 "CPMan: Control Plane Management for SDN"
 Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
 Completed, Feb. 2016
7. Jaeyoon Chung, PhD Thesis
 "A Management Architecture for Client-defined Cloud Storage Services"
 Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
 Completed, Aug. 2015
8. Sinseok Seo, PhD Thesis
 "Dynamic Traffic Engineering for Improving Energy Efficiency and Network Utilization of Data Center Networks"
 Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
 Completed, Feb. 2014
9. Sungsu Kim, PhD Thesis
 "Cognitive Model-Based Autonomic Fault Management in SDN"
 Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,

- Completed, Aug. 2013
Byungchul Park, PhD Thesis
- "Fine-grained Traffic Classification based on Functional Separation"
Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
Completed, Feb. 2012
10. Seong-Cheol Hong, PhD Thesis
- "Network Reachability based IP Prefix Hijacking Detection"
Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
Completed, Feb. 2012
11. Joon-Myung Kang, PhD Thesis
- "Autonomic Management for Personalized Handover Decisions in Heterogeneous Wireless Networks"
Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
Completed, Dec. 2010.
12. Young J. Won, PhD Thesis
- "Fault Detection, Diagnosis, and Prediction for IP-based Industrial Control Networks",
Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
Completed, Nov. 2009.
13. Myung-Sup Kim, PhD Thesis
- "Application-Level Traffic Monitoring and Analysis on IP Networks",
Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
Completed, June 2004.
14. Mi-Jung Choi, PhD Thesis
- "An Architectural Framework for XML-based Network Management",
Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
Completed, December 2003.
15. Jae-Young Kim, PhD Thesis
- "Distributed Edge-to-Edge QoS Monitoring Methods to Manage Traffic Flows in IP Networks Supporting Differentiated Services",
Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
Completed, October 2001.
16. Hong-Taek Ju, PhD Thesis
- "Embedded Web Server Architecture for Web-based Element Management and Network Management",
Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
Completed, October 2001.

B. MS Thesis

1. Jungsoo Han, MS Thesis
- "Design and Implementation of Central Bank Digital Currency using Blockchain"
Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,

- Completed, Feb. 2022
2. Sukhyun Nam, MS Thesis
 “Virtual Machine Failure Prediction using Log Analysis”
 Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
 Completed, Feb. 2021
 3. Suhyun Park, MS Thesis
 “Machine Learning-based VNF Deployment”
 Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
 Completed, Feb. 2021
 4. Jiyeon Lim, MS Thesis
 “Reinforcement learning based load balancing for data center networks”
 Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
 Completed, Feb. 2021
 5. Sajan Maharjan, MS Thesis
 “Design and Implementation of Blockchain-based Central Bank Digital Currency”
 Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
 Completed, Aug. 2020
 6. Chaehyun Lee, MS Thesis
 “Machine Learning based Bitcoin Address Classification”
 Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
 Completed, Feb. 2020
 7. Jibum Hong, MS Thesis
 “A Machine Learning based Anomaly Detection Method for NFV Management”
 Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
 Completed, Feb. 2020
 8. Tu Van Nguyen, MS Thesis
 “INTCollector: A High-performance Collector for In-band Network Telemetry”
 Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
 Completed, Aug. 2018
 9. DongHo Son, MS Thesis
 “Design and Implementation of an Incentive System for Sharing Distributed Computing Resources”
 Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
 Completed, February 2018
 10. KyungChan Ko, MS Thesis
 “Design and Implementation of SDN-based Virtual Network Snapshotting”
 Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
 Completed, February 2018
 11. Seyeon Jeong, MS Thesis
 “Design and Implementation of Virtual TAP for Software-Defined Networks”
 Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
 Completed, February 2018
 12. Bernard Niyonteze
 “Provider-Side VoD Content Delivery Using OpenFlow Multicast”
 Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
 Completed, August, 2014
 13. Taehyun Kim, MS Thesis
 “Anomaly Detection in Wireless Body Area Networks”
 Division of IT Convergence Engineering, POSTECH, Pohang, Korea,

- Completed, February 2013
14. Jian Li, MS Thesis
"Application-Aware Wi-Fi Energy Management on Smart Mobile Devices"
Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
Completed, August, 2012
 15. YongFeng Huang, MS Thesis
"Correlating Video Quality Metrics to User Experience: an Event-based Approach"
Division of IT Convergence Engineering, POSTECH, Pohang, Korea,
Completed, August, 2012
 16. Le Quoc Do, MS Thesis
"Graph-based Detection of Anomalous Network Traffic"
Division of IT Convergence Engineering, POSTECH, Pohang, Korea,
Completed, August, 2012
 17. Arum Kwon, MS Thesis
"The Impact of Network Performance on Perceived Video Quality and User Experience in H.264/AVC",
Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
Completed, February, 2012.
 18. Yeongrak Choi, MS Thesis
"An Automated Classifier Generation System for Application-Level Mobile Traffic Identification",
Division of IT Convergence Engineering, POSTECH, Pohang, Korea,
Completed, August 2011.
 19. Hyuksoo Choi, MS Thesis
"Energy Efficient Active Sensor Selection Scheme for U-healthcare in WBAN",
Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
Completed, December 2010.
 20. Jin Kim, MS Thesis
"An Ontology Model and Reasoner to Build an Autonomic System for U-Health Smart Home",
Dept. of Computer and Communications Engineering, POSTECH, Pohang, Korea,
Completed, December 2009.
 21. Suman Pandey, MS Thesis,
"Dimensioning IPTV VoD Services," Dept. of Computer Science and Engineering, POSTECH,
Pohang, Korea, Completed, August 2009
 22. Sung-Joo Lee, MS Thesis,
"A Study On Real-Time Traffic Information Analysis using WiBro in Intelligent Transportation
System," Dept. of Computer and Communications Engineering, POSTECH, Pohang, Korea,
Completed, December 2008.
 23. Chang-Keun Park, MS Thesis
"An SNMP-based Integrated Management Method for Heterogeneous Power Line Communication
Networks," Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea, Completed,
June 2008.
 24. Kwang-Bon Jung, MS Thesis,
"Application-Level Classification for Internet Traffic based on ML Algorithms," Dept. of Computer
Science and Engineering, POSTECH, Pohang, Korea, Completed, December 2007.
 25. Eun-Hee Kim, MS Thesis,
"Design and Implementation of Enterprise IP Network Connectivity Information Management
System," Dept. of Computer and Communications Engineering, POSTECH, Pohang, Korea,
Completed, December 2006.
 26. Deepali Agrawal, MS Thesis,

- “Cause Analysis of Packet Loss in Underutilized Enterprise Network Links,” Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea, Completed, December 2004.
27. Young-Joon Won, MS Thesis,
“A Hybrid Approach for Accurate Application Traffic Identification,” Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea, Completed, December 2005.
 28. Sun-Mi Yoo, MS Thesis,
“Performance Improvement Methods for NETCONF-based Configuration Management,” Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea, Completed, December 2005.
 29. LONGQUAN ZHAO, MS Thesis,
“A Real-Time Detection Method for Internet Worms on Enterprise Networks,” Dept. of Computer and Communications Engineering, POSTECH, Pohang, Korea, Completed, December 2005.
 30. Hyung-Jo Lee, MS Thesis,
“IP Traffic based Accounting for Internet Services,” Dept. of Computer and Communications Engineering, POSTECH, Pohang, Korea, Completed, December 2005.
 31. Sojung Lee, MS Thesis,
“Design and Implementation of WBEM/SNMP Gateway,” Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea, Completed, December 2005.
 32. Seunghwa Chung, MS Thesis,
“Detection and Analysis of Packet Loss in Underutilized Links” Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea, Completed, December 2004.
 33. Dong-Hyun Kim, MS Thesis,
“Web Services based Configuration Management for IP Network Devices,” Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea, Completed, December 2004.
 34. Hyun-Mi Choi, MS Thesis,
“XML-based Configuration Management for IP Network Devices”, Graduate School for Information Technology, POSTECH, Pohang, Korea, Completed, December 2003.
 35. Yoon-Jung Oh, MS Thesis,
“Interaction Translation Methods for XML/SNMP Gateway”, Graduate School for Information Technology, POSTECH, Pohang, Korea, Completed, December 2002.
 36. Hun-Jeong Kang, MS Thesis,
“Multimedia Service Traffic Monitoring and Analysis Methods”, Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea, Completed, December 2002.
 37. Se-Hee Han, MS Thesis,
“Design and Implementation of NG-MON Throughput Analyzer for Large Volume Network Traffic with Real-Time On-Line Analysis”, Graduate School for Information Technology, POSTECH, Pohang, Korea, Completed, December 2002.
 38. Hyo-Jin Lee, MS Thesis,
“QoS Parameters to Network Performance Metrics Mapping for SLA Monitoring”, Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea, Completed, December 2002
 39. In Hur, MS Thesis,
“Design and Implementation of a Web-based Manager System for Process Control Windows NT/2000 Servers in POSCO”, Graduate School for Information Technology, POSTECH, Pohang, Korea, Completed, December 2001.
 40. Jung-Hyuk Yoon, MS Thesis,
“Design and Implementation of SNMP Gateway for XML-based Network Management”, Graduate School for Information Technology, POSTECH, Pohang, Korea, Completed, December 2001.
 41. Bum-Rae Cho, MS Thesis,

- "Test Data Generation for Evaluating Intrusion Detection System based on Functionality and Quality", Graduate School for Information Technology, POSTECH, Pohang, Korea, Completed, December 2001.
42. Soon-Hwa Hong, MS Thesis,
"Network Traffic Monitoring and Analysis using Load Distribution Methodology",
Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
Completed, December 2001.
 43. Soo-Hyun Ryu, MS Thesis,
"Approaches to Support Differentiated Quality of Web Service",
Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
Completed, December 2000.
 44. Hyun-Jun Cha, MS Thesis,
"Design and Implementation of Embedded Linux System for Networking Devices",
Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
Completed, December 2000.
 45. Jae-Hyun Ham, MS Thesis,
"A Method for Measuring the User-Perceived Performance of Web Service",
Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
Completed, December 2000.
 46. Sang-Tae Ha, MS Thesis,
"Design and Implementation of High-Speed Internet Gateway",
Graduate School for Information Technology, POSTECH, Pohang, Korea,
Completed, December 2000.
 47. Jung-Seok Ha, MS Thesis,
"Design and Implementation of SNMP Agent Simulator",
Graduate School for Information Technology, POSTECH, Pohang, Korea,
Completed, December 2000.
 48. Myung-Sup Kim, MS Thesis,
"Adaptive Application-Level QoS Management Techniques for Multimedia Traffic",
Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
Completed, December 1999.
 49. Mi-Jeong Choi, MS Thesis,
"Design and Implementation of a Lightweight and Efficient Embedded Web Server for Web-based Network Element Management",
Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
Completed, December 1999.
 50. Sook-Hyang Kim, MS Thesis,
"A Statistical, Batch and Proxy-Initiated Web Prefetching Scheme for Efficient Internet Bandwidth Usage",
Graduate School for Information Technology, POSTECH, Pohang, Korea,
Completed, December 1999.
 51. Tae-Sun Hwang, MS Thesis,
"A High-Available and Scalable Intrusion Detection and Tracking System for Enterprise Networks",
Graduate School for Information Technology, POSTECH, Pohang, Korea,
Completed, December 1999.
 52. Yun-Kyu Park, MS Thesis,
"Automatic Configuration and Reconfiguration of a Web-based Network Traffic Monitoring System",

- Graduate School for Information Technology, POSTECH, Pohang, Korea,
Completed, December 1999.
53. Young-Mi Shin, MS Thesis,
"A CORBA-based Secure Session Service for Distributed Multimedia Collaborative Environments",
Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
Completed, December 1998.
 54. Sook-Kyong An, MS Thesis,
"Design and Implementation of a TMN-based Centralized Intelligent Network Number Portability Service Management System Using CORBA",
Graduate School for Information Technology, POSTECH, Pohang, Korea,
Completed, December 1998.
 55. Seung-Duk Lim, MS Thesis,
"Design and Implementation of a TMN-based Alarm Surveillance System Using CORBA",
Graduate School for Information Technology, POSTECH, Pohang, Korea,
Completed, December 1998.
 56. Soon-Sun Kwon, MS Thesis,
"WebTrafMon: Web-based Internet/Intranet Network Traffic Monitoring and Analysis System",
Graduate School for Information Technology, POSTECH, Pohang, Korea,
Completed, December 1998.
 57. Yun-Soo Park, MS Thesis,
"A Component Access Control Method in a Bridge-based Integrated DCOM and CORBA Environment",
Graduate School for Information Technology, POSTECH, Pohang, Korea,
Completed, December 1998.
 58. Young-Min Kang, MS Thesis,
"An Implementation Methodology of a Gateway for Inter-Domain Management Between CORBA and SNMP"
Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
Completed, December 1998.
 59. Ji-Young Kong, MS Thesis,
"A Management Framework for CORBA-based Distributed Services and Applications",
Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
Completed, December 1997.
 60. Tae-Hyung Yun, MS Thesis,
"Communication Service for Distributed Multimedia Applications",
Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
Completed, December 1997.
 61. Sung-Pil Son, MS Thesis,
"Design and Implementation of a Generic Management Information Repository Service for Network and System Management",
Dept. of Computer Science and Engineering, POSTECH, Pohang, Korea,
Completed, December 1997.
 62. Sung-Uk Park, MS Thesis,
"Web-based Enterprise Network Traffic Monitoring and Analysis",
Graduate School for Information Technology, POSTECH, Pohang, Korea,
Completed, December 1997.
 63. Jong-Seo Kim, MS Thesis,

- "Design and Implementation of a PC Server Management System Using DMTF DMI 2.0",
Graduate School for Information Technology, POSTECH, Pohang, Korea,
Completed, December 1997.
64. Yong-Jin Park, MS Thesis,
"A Migration Methodology for 2-tier to 3-tier Architected Client/Server Systems",
Graduate School for Information Technology, POSTECH, Pohang, Korea,
Completed, December 1997.
 65. Won-Dae Lee, MS Thesis,
"Approximate Matching Algorithms for ODP Trader",
Graduate School for Information Technology, POSTECH, Pohang, Korea,
Completed, December 1997.
 66. Jae-Seung Lee, MS Thesis,
"CORBA-Based Object Trader Service in the World-Wide Web",
Graduate School for Information Technology, POSTECH, Pohang, Korea,
Completed, December 1996.
 67. Yong-Hoi Joo, MS Thesis,
"An ODP-Based Type Manager for Trading Services",
Graduate School for Information Technology, POSTECH, Pohang, Korea,
Completed, December 1996.
 68. Chang-Hwi Kim, MS Thesis,
"Enterprise Information Repository Service System Using X.500 and WWW",
Graduate School for Information Technology, POSTECH, Pohang, Korea,
Completed, December 1996.
 69. Graeme Perrow, MS Thesis,
"The Design of a Generic Management Agent",
University of Western Ontario, London, Canada, Co-supervision with
Dr. M. A. Bauer, Completed, September 1994.
 70. Warren Pratten, MS Thesis,
"Design and Implementation of Resource Manager Using the ODP Trader",
University of Western Ontario, London, Canada,
Co-supervision with Dr. J. M. Bennett, Completed, September 1994.
 71. Hasina M. Abdu, MS Thesis,
"Managing Distributed Applications",
University of Western Ontario, London, Canada,
Co-supervision with Dr. M. A. Bauer, Completed, October 1993.
 72. Danny L. Silver, MS Thesis,
"Management and Propagation of the X.500 Schema",
University of Western Ontario, London, Canada,
Co-supervision with Dr. M. A. Bauer, Completed, September 1993.