



## **Prof. James (Jong Hyuk) Park**

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### **Research Areas:**

Internet of Things, Human-centric Ubiquitous Computing, Information Security, Digital Forensics and Computer Security, Vehicular Cloud Computing, Multimedia Security, Blockchain, ICT Intelligent Applications and Services

### **Academic Qualifications:**

- **Ph.D.** (2nd) in Human Science, Waseda University, Japan, 2012
- **Ph.D.** (1st) in Information Security, Korea University, Korea, 2007
- **M.S.**, Korea University, Korea, 2003
- **B.S.**, Soonchunhyang University, Korea, 2001

### **Professional Experience:**

- **September 2009 ~ Present**, Professor, Department of Computer Science and Engineering, Seoul National University of Technology, Korea
- **September 2007 ~ August 2009**, Professor, Department of Computer Science and Engineering, Kyungnam University, Korea
- **December 2002 ~ July 2007**, Senior Researcher, R&D Institutes, Hanwha S&C Co., Ltd., Korea
- **March 2001 ~ February 2003**, Researcher at Center for Information and Security Technologies (CIST) in Korea University, Korea
- **March 2001 ~ January 2002**, Part-time Job Engineer, Ahn lab., Korea

### **Professional Activities:**

- ***International Conference***
  - Steering Chair, The International Conference on Ubiquitous Information Technologies and Applications (CUTE)
  - Steering Chair, The International Conference on Computer Science and its Applications (CSA)
  - Steering Chair, The MUE International Conference on Multimedia and Ubiquitous Engineering (MUE)
  - Steering Chair, The International Conference on Future Information Technology (FutureTech)
  - Steering Chair, The World Congress on Information Technology Applications and Services (World IT)
  - Steering Chair, The International Conference on Big Data, IoT, and Cloud Computing (BIC)
- ***Journal Editor-in-Chief***
  - Editor-in-Chief, Human-centric Computing and Information Sciences (HCIS), Springer (indexed by SCIE, IF: 1.967)
  - Editor-in-Chief, Journal of Information Processing Systems (JIPS), (indexed by SCOPUS)
- ***Executive Board***
  - JoC-KIPS CSWRG, <http://kips-cswrg.org>
- ***Selected Editorships***
  - ***Associate Editor/ Editorial Board***
    - The Journal of Supercomputing (JoS) - Springer (indexed by SCI, IF: 1.532)
    - IJCS - John Wiley (indexed by SCIE, IF: 1.717)
    - International Journal of Ad Hoc and Ubiquitous Computing (IJAHUC) – InderScience (indexed by SCIE, IF: 0.648)

- Journal of Ambient Intelligence and Humanized Computing (JAIHC) – Springer (indexed by SCIE, IF: 1.423)
- Journal of Internet Technology (JIT) - NATIONAL DONG HWA UNIV, TAIWAN (indexed by SCIE, IF: 1.301)
- IJCNDIS – InderScience (indexed by SCOPUS)
- IET Networks (indexed by SCOPUS)
- **Guest Editor**
  - IJCS- Wiley (indexed by SCIE, IF:1.717), Special Issue on “Emerging ICT Applications and Service - Big Data, IoT, and Cloud Computing,” 2019
  - CEE-Elsevier (indexed by SCIE, IF: 1.781), Special issue on “Artificial Intelligence-based Information Security, 2018
  - IEEE Internet of Things Journal (indexed by SCIE, IF: 5.863), Special Issue on “Advanced Computational Technologies in Mobile Edge Computing for Internet of Things”, 2018
  - IEEE Transactions on Industrial Informatics (indexed by SCI, IF: 4.708), Special Issue on “Applied Cryptography, Security, and Trust Computing for Industrial Internet-of-Things,” 2017
  - JPDC-Elsevier (indexed by SCIE, IF: 1.320), Special Issue on “Advanced Algorithms and Applications for IoT Cloud Computing Convergence,” 2017
  - CEE-Elsevier (indexed by SCIE, IF: 1.084), Special issue on “Recent Advances in Machine Learning and Artificial Intelligence Paradigms,” 2017

## Honors:

### • **Patents**

- 박종혁, 주재웅, 강원민, “감정인식 위치 추적 장치 및 방법”, 출원번호:10-2015-0187582, 2015.12
- 박종혁, 임형진, 이정규, “스마트 디바이스에서의 어플리케이션 접근 제어 방법 및 장치”, 출원번호: 10-2015-0187590, 2015.12
- 박종혁, 주재웅, 임형진, 오대명, “사용자행동이벤트 수집을 통한 클라우드 컴퓨팅 기반의 모바일 보안 시스템”, 출원번호:10-2015-0133978, 2015.09
- 박종혁, 문창현, 임형진, 윤식, 김도균, “드래그 입력 기반의 사용자 인증 방법 및 장치”, 출원번호: 10-2015-0073134, 2015.05
- 박종혁, 신철호, 이재동, “웹에서의 콘텐츠 관리 방법 및 장치”, 대한민국 특허청, 출원번호: 10-2014-0160240, 2014.11
- 박종혁,문창현,이재동,윤식,강원민, "디바이스 잠금 제어 방법 및 장치",대한민국 특허청,등록번호: 10-2014-0146332, 2014.10.27
- 박종혁, 강수영, 김도현, 오요시, 박지수, 이재웅, "휴대 단말기에서 프라이버스 보호를 위한 보안 솔루션 시스템", 대한민국 특허청, 등록번호: 10-1324919, 2013. 10. 28.
- 박종혁, 강수영, 홍성혁, 박해철, "알에프 아이디를 이용하여 프라이버시를 보호하기 위한 동물 통합관리 방법 및 시스템", 대한민국 특허청, 등록번호: 10-1051770, 2011. 7.19.

### • **Awards**

- 29th IEEE AINA 2015 Best Paper Award, IEEE, 2015
- Korea Information Processing Society 2015 Spring Conference Excellent Paper, KIPS, 2015
- The outstanding research award, SeoulTech, 2014
- IEEE APSCC-11 Outstanding Leadership Award as General Co-chair, IEEE CS, FTRA, May, 2011
- PDCAT-11 Outstanding Leadership Award as General Co-chair, IEEE, FTRA, May, 2011
- IEEE ISPA-11 Outstanding Leadership Award as General Co-chair, IEEE CS, FTRA, May, 2011
- ICA3PP-10 Outstanding Leadership Award as General Co-chair, LNCS, FTRA, May, 2010
- IEEE HPCC-09 Outstanding Leadership Award as General Co-chair, IEEE CS, June, 2009
- Binod Vaidya, Jong Hyuk Park, Joel J. P. C. Rodrigues: HOTP-Based User Authentication Scheme in Home Networks, ISA 2009, Springer-CCIS, Best Paper Award, ISA-09, June, 2009.
- Jong Hyuk Park, IEEE HPCC-09 Outstanding Leadership Award, IEEE CS, June, 2009

## Graduate Supervision:

- 9 M.S.'s completed
- 6 Ph.D.'s, 5 M.S.'s in progress

### Selected Research Projects (as Principal Investigator):

- “소환현실기반 콘텐츠 제작을 위한 실감형 인터랙션 NUI/NUX 플랫폼 기술 개발,” Ministry of Science, Korea, 2017.07.01~2018.12.31.
- “주요 도메인별 네트워크 보안 취약점 분석도구 요구사항 연구,” ETRI, Korea, 2017.01.01~2017.11.31.
- “차세대 IoT 환경을 위한 그린 스마트 홈 보안 프레임 워크 개발,” Ministry of Science, Korea, 2017.17.01~ Present.
- 2008.3 ~2009.2: “웰니스 삶을 위한 WellTEC 코칭서비스 및 콘텐츠 개발,” Ministry of Science, Korea, 2017.01.01~2018.12.31.
- “신종 APT 공격의 동적 대응을 위한 분석 기법 및 대응 방안 연구,” ETRI, Korea, 2016.06.01~2016.11.31.
- “APT 공격 방지를 위한 사용자 행동기반 지능형 보안기법 및 방안 연구,” ETRI, Korea, 2015.07.01~2015.12.31.
- “APT 공격의 동적 대응을 위한 다양한 분석기법 및 방안 연구,” ETRI, Korea, 2014.07.01~2014.12.31.
- “감성 UX 지원을 위한 감성정보처리 기술 연구,” Ministry of Science, Korea, 2014.03.01~2015.02.28.
- “신뢰성 있는 모바일 플랫폼 운영체제를 위한 보안기술에 관한 연구,” National Research Foundation, Korea, 2011.09.01~2014.08.31.

### Selected Refereed Publications:

- **Edited Volumes**
  - Leading Editor, LNEE-Springer series of Intl' conferences: CSA, MUE, CUTE, FutureTech
  - Advanced Multimedia and Ubiquitous Engineering, MUE/FutureTech 2017, edited by Jong Hyuk Park; Chen, Shu-Ching.; Raymond Choo, Kim-Kwang;
  - Ubiquitous Computing Application and Wireless Sensor, UCAWSN-14, 2015, edited by Jong Hyuk Park; Pan, Y.; Chao, H-C.; Yi, G.;
  - Grid and Pervasive Computing, 8th International Conference, GPC 2013, and Colocated Workshops, Seoul, Korea, May 9-11, 2013, Proceedings, edited by Jong Hyuk Park; Yen, N.; Kim, C.; Shi, W.; Gil, J-M.;
  - Information Technology Convergence, Secure and Trust Computing, and Data Management, ITCS 2012 & STA 2012, edited by Jong Hyuk Park; Kim, J.; Zou, D.; Lee, Y.S.;
  - Future Information Technology, Application, and Service, FutureTech 2012 Volume 2, edited by Jong Hyuk Park; Leung, V.C.; Wang, C-L.; Shon, T.;
  - Future Information Technology, Application, and Service, FutureTech 2012 Volume 1, edited by Jong Hyuk Park; Leung, V.C.; Wang, C-L.; Shon, T.;
  - Computer Science and Convergence, CSA 2011 & WCC 2011 Proceedings, 2012, edited by Jong Hyuk Park; Chen, H.-C.; Obaidat, M.S.; Kim, J.
- **Selected Journal Papers (Since, 2016)**
  - Sharma, P. K., Kumar, N., & **Park, J. H.** “Blockchain-based Distributed Framework for Automotive Industry in a Smart City,” *IEEE Transactions on Industrial Informatics*, Accepted 2018.
  - Sharma, P. K., Rathore, S., Jeong, Y. S., & **Park, J. H.** “SoftEdgeNet: SDN Based Energy-Efficient Distributed Network Architecture for Edge Computing,” *IEEE Communications Magazine*, 56(12), 104-111, 2018
  - Kang, W. M., Lee, J. D., & **Park, J. H.**, “SLP-MCAF: Multiple Clusters of Connected Vehicles Authentication Framework in a Smart Life Platform,” *IEEE Communications Magazine*, 56(10), 44-49, 2018
  - Sharma, P. K., Chen, M. Y., & **Park, J. H.**, “A software defined fog node based distributed blockchain cloud architecture for IoT,” *IEEE Access*, 6, 115-124, 2018
  - Rathore, S., Sharma, P. K., Sangaiah, A. K., & **Park, J. H.**, “A Hesitant Fuzzy Based Security Approach for Fog and Mobile-Edge Computing,” *IEEE Access*, 6, 688-701, 2018
  - Yi, G., Kim, H. W., **Park, J. H.**, & Jeong, Y. S., “Job Allocation Mechanism for Battery Consumption Minimization of Cyber-Physical-Social Big Data Processing Based on Mobile Cloud Computing,” *IEEE Access*, 6, 21769-21777, 2018

- Kim, D. Y., Kim, S., & **Park, J. H.**, “Remote software update in trusted connection of long range iot networking integrated with mobile edge cloud,” *IEEE Access*, 6, 66831-66840, 2018
- Rathore, S., Loia, V., & **Park, J. H.**, “SpamSpotter: an efficient spammer detection framework based on intelligent decision support system on facebook,” *Applied Soft Computing*, 67, 920-932, 2018
- Jang, J., Jung, I. Y., & **Park, J. H.**, “An effective handling of secure data stream in IoT,” *Applied Soft Computing*, 68, 811-820, 2018
- Rathore, S., & **Park, J. H.**, “Semi-supervised learning based distributed attack detection framework for IoT,” *Applied Soft Computing*, 72, 79-89, 2018
- Kim, S., Kim, D. Y., & **Park, J. H.**, “Traffic management in the mobile edge cloud to improve the quality of experience of mobile video,” *Computer Communications*, 118, 40-49, 2018
- Sharma, P. K., Rathore, S., & **Park, J. H.**, “DistArch-SCNet: Blockchain-Based Distributed Architecture with Li-Fi Communication for a Scalable Smart City Network,” *IEEE Consumer Electronics Magazine*, 7(4), 55-64, 2018
- Kim, S., Kim, D. Y., & **Park, J. H.**, “Traffic management in the mobile edge cloud to improve the quality of experience of mobile video,” *Computer Communications*, 118, 40-49, 2018
- Sharma, P. K., Singh, S., & **Park, J. H.**, “OpCloudSec: Open cloud software defined wireless network security for the Internet of Things,” *Computer Communications*, 122, 1-8, 2018
- Sharma, P. K., & **Park, J. H.**, “Blockchain based hybrid network architecture for the smart city,” *Future Generation Computer Systems*, 86, 650-655, 2018
- Kim, H. W., **Park, J. H.**, & Jeong, Y. S., “Human-intelligence workflow management for the big data of augmented reality on cloud infrastructure,” *Neurocomputing*, 279, 19-26, 2018
- Sharma, P. K., Jeong, Y. S., & **Park, J. H.**, “EH-HL: Effective Communication Model by Integrated EH-WSN and Hybrid LiFi/WiFi for IoT,” *IEEE Internet of Things Journal*, 5, 1719-1726, 2018
- **Park, J. H.**, Yen, N. Y., “Advanced algorithms and applications based on IoT for the smart devices,” *J. Ambient Intelligence and Humanized Computing* 9(4): 1085-1087, 2018
- **Park, J. H.**, “Practical Approaches Based on Deep Learning and Social Computing,” *JIPS* 14(1): 1-5, 2018
- Choo, K. K. R., Gritzalis, S., & **Park, J. H.**, “Cryptographic Solutions for Industrial Internet-of-Things: Research Challenges and Opportunities,” *IEEE Transactions on Industrial Informatics*, 14, 3567-3569, 2018
- Sharma, P. K., Ryu, J. H., Park, K. Y., Park, J. H., & **Park, J. H.**, “Li-Fi based on security cloud framework for future IT environment,” *Human-centric Computing and Information Sciences*, 8(1), 23, 2018
- Sharma, P. K., Singh, S., Jeong, Y. S., & **Park, J. H.**, “Distblocknet: A distributed blockchains-based secure sdn architecture for iot networks,” *IEEE Communications Magazine*, 55(9), 78-85, 2017
- Sharma, P. K., Moon, S. Y., Moon, D., & **Park, J. H.**, “DFA-AD: a distributed framework architecture for the detection of advanced persistent threats,” *Cluster Computing*, 20(1), 597-609, 2017
- Kim, D. Y., Kim, S., Hassan, H., & **Park, J. H.**, “Radio resource management for data transmission in low power wide area networks integrated with large scale cyber physical systems,” *Cluster Computing*, 20(2), 1831-1842, 2017
- Li, Y., Jeong, Y. S., Shin, B. S., & **Park, J. H.**, “Crowdsensing Multimedia Data: Security and Privacy Issues,” *IEEE MultiMedia*, 24(4), 58-66, 2017
- Singh, S., Sharma, P. K., & **Park, J. H.**, “SH-SecNet: An Enhanced Secure Network Architecture for the Diagnosis of Security Threats in a Smart Home,” *Sustainability*, 9(4), 513, 2017
- Sharma, P. K., Moon, S. Y., & **Park, J. H.**, “Block-VN: A distributed blockchain based vehicular network architecture in smart City,” *Journal of Information Processing Systems*, 13(1), 84, 2017
- Kang, J., & **Park, J. H.**, “A secure-coding and vulnerability check system based on smart-fuzzing and exploit,” *Neurocomputing*, 256, 23-34, 2017
- Yin, C., Wang, J., & **Park, J. H.**, “An improved recommendation algorithm for big data cloud service based on the trust in sociology,” *Neurocomputing*, 256, 49-55, 2017
- Rathore, S., Sharma, P. K., Loia, V., Jeong, Y. S., & **Park, J. H.**, “Social network security: Issues, challenges, threats, and solutions,” *Information Sciences*, 421, 43-69, 2017
- Park, J. H., & **Park, J. H.**, “Blockchain security in cloud computing: Use cases, challenges, and solutions,” *Symmetry*, 9(8), 164, 2017
- Lee, J. K., Moon, S. Y., & **Park, J. H.**, “CloudRPS: a cloud analysis based enhanced ransomware prevention system,” *The Journal of Supercomputing*, 73(7), 3065-3084, 2017
- **Park, J. H.**, Sung, Y., Sharma, P. K., Jeong, Y. S., & Yi, G., “Novel assessment method for accessing private data in social network security services,” *The journal of supercomputing*, 73(7), 3307-3325, 2017
- Singh, S., Jeong, Y. S., & **Park, J. H.**, “A survey on cloud computing security: Issues, threats, and solutions,” *Journal of Network and Computer Applications*, 75, 200-222, 2016

- Yi, G., **Park, J. H.**, & Choi, S., “Energy-efficient distributed topology control algorithm for low-power IoT communication networks,” *IEEE Access*, 4, 9193-9203, 2016
- Sung, Y., Jeong, Y. S., & **Park, J. H.**, “Beacon-based active media control interface in indoor ubiquitous computing environment,” *Cluster Computing*, 19(1), 547-556, 2016
- Choi, M., Lee, J., Kim, S., Jeong, Y. S., & **Park, J. H.**, “Location based authentication scheme using BLE for high performance digital content management system,” *Neurocomputing*, 209, 25-38, 2016
- Hao, F., Park, D. S., Min, G., Jeong, Y. S., & **Park, J. H.**, “k-Cliques mining in dynamic social networks based on triadic formal concept analysis,” *Neurocomputing*, 209, 57-66, 2016
- Lee, J. K., Moon, S. Y., & **Park, J. H.**, “Hb-dipm: human behavior analysis-based malware detection and intrusion prevention model in the future internet,” *J Inf Process Syst*, 12(3), 489-501, 2016
- Guo, M. H., Deng, D. J., Liaw, H. T., & **Park, J. H.**, “An efficient route scheduling mechanism for WiMAX network–ERRATUM,” *The Knowledge Engineering Review*, 31(2), 205-205, 2016
- Chu, H. C., Yin, M. H., Hsu, C. H., & **Park, J. H.**, “The disclosure of evaporating digital trails respecting the combinations of Gmail and IE for pervasive multimedia,” *Multimedia Tools and Applications*, 75(22), 14039-14055, 2016
- Jeong, Y. S., Kim, H. W., & **Park, J. H.**, “An effective locking scheme of smart multimedia devices with convenience and enhanced security,” *Multimedia Tools and Applications*, 75(23), 15171-15183, 2016
- Jung, S. W., **Park, J. H.**, & Jeong, Y. S., “All-in-focus and multi-focus color image reconstruction from a database of color and depth image pairs,” *Multimedia Tools and Applications*, 75(23), 15493-15507, 2016
- **Park, J. H.**, Gritzalis, S., Cheng, B. C., & Zhang, N., “Challenges and opportunities in next-generation cyberspace security,” *Security and Communication Networks*, 9(6), 455-456, 2016
- **Park, J. H.**, Kim, D., Park, J. S., & Lee, S., “An enhanced security framework for reliable Android operating system,” *Security and Communication Networks*, 9(6), 528-534, 2016
- Kang, J., Kim, M., & **Park, J. H.**, “A reliable TTP-based infrastructure with low sensor resource consumption for the smart home multi-platform,” *Sensors*, 16(7), 1036, 2016
- Lee, J., Sung, Y., & **Park, J. H.**, “Lightweight sensor authentication scheme for energy efficiency in ubiquitous computing environments,” *Sensors*, 16(12), 2044, 2016
- Choi, S., & **Park, J. H.**, “Minimum interference channel assignment algorithm for multicast in a wireless mesh network,” *Sensors*, 16(12), 2056, 2016
- Byun, H., **Park, J. H.**, & Jeong, Y. S., “Optional frame selection algorithm for adaptive symmetric service of augmented reality big data on smart devices,” *Symmetry*, 8(5), 37, 2016
- **Park, J. H.**, Kim, H., & Kang, J., “Security scheme based on parameter hiding technic for mobile communication in a secure cyber world,” *Symmetry*, 8(10), 106, 2016
- Miranda Lopez, E., Moon, S. Y., & **Park, J. H.**, “Scenario-Based Digital Forensics Challenges in Cloud Computing,” *Symmetry*, 8(10), 107, 2016
- Kang, J., Chung, H., Lee, J., & **Park, J. H.**, “The Design and Analysis of a Secure Personal Healthcare System Based on Certificates,” *Symmetry*, 8(11), 129, 2016
- Jeong, H. Y., Yi, G., & **Park, J. H.**, “A service composition model based on user experience in Ubi-cloud comp,” *Telecommunication Systems*, 61(4), 897-907, 2016
- Choi, C. R., Jeong, H. Y., **Park, J. H.**, Jang, H. J., & Jeong, Y. S., “Relative weight comparison between virtual key factors of cloud computing with analytic network process,” *The Journal of Supercomputing*, 72(5), 1694-1714, 2016
- Moon, D., Lee, J. D., Jeong, Y. S., & **Park, J. H.**, “RTNSS: a routing trace-based network security system for preventing ARP spoofing attacks,” *The Journal of Supercomputing*, 72(5), 1740-1756, 2016
- Kim, H. W., **Park, J. H.**, & Jeong, Y. S., “Human-centric storage resource mechanism for big data on cloud service architecture,” *The Journal of Supercomputing*, 72(7), 2437-2452, 2016
- Im, H., Lee, J. K., & **Park, J. H.**, “A rhythm-based access control system for secure wellness services,” *The Journal of Supercomputing*, 72(7), 2860-2873, 2016
- Kang, J., Park, G., & **Park, J. H.**, “Design of secure authentication scheme between devices based on zero-knowledge proofs in home automation service environments,” *The Journal of Supercomputing*, 72(11), 4319-4336, 2016
- Kim, H. W., **Park, J. H.**, & Jeong, Y. S., “Efficient resource management scheme for storage processing in cloud infrastructure with internet of things,” *Wireless Personal Communications*, 91(4), 1635-1651, 2016
- Moon, D., Kim, I., Joo, J. W., Im, H. J., **Park, J. H.**, & Jeong, Y. S., “Intelligent security model of smart phone based on human behavior in mobile cloud computing,” *Wireless Personal Communications*, 91(4), 1697-1710, 2016

\*\* For more details, you can find them from DBLP, [https://dblp.org/pers/hd/p/Park:Jong\\_Hyuk](https://dblp.org/pers/hd/p/Park:Jong_Hyuk)