

Younghee Park Assistant Professor Computer Engineering San Jose State University Google Scholar Site		Office: #263 in College of Engineering Phone: +1-(408)-924-7854 younghee.park@sjsu.edu
Research Interests	System Security, Network Security, Software Defined Networks, Network Functions Virtualization, Internet of Things, Big Data, Machin-learning and Deep Learning	
Education	Ph.D. in Computer Science , North Carolina State University, Raleigh, NC, USA, 2010 Ph.D. Thesis: Network and Host Based Countermeasures against Large-scale Networked Compromised Systems or Malicious Software	
Work Experience	Assistant Professor, Computer Engineering, San Jose State University, CA USA	08/2013 - Current
	Postdoctoral Researcher, Information Trust Institute, University of Illinois at Urbana-Champaign, IL USA	08/2012 - 06/2013
	Postdoctoral Research Scientist, Computer Science, Columbia University, New York, USA	01/2012 – 01/2013
	Researcher, National Security Research Institute, Electronics and Telecommunications Research Institute (ETRI), Daejeon, South Korea	02/2003 - 09/2003
Fund/Donation	PI, “i-Care: An Intelligent real-time monitoring system for firefighters,” supported by Red Line Safety.	11/20/2019 - Current
	Intel FPGA Board Donation Equipment donation	Spring 2019
	TrendMicro Deep Discovery Inspector Model 4000	Spring 2019
	Lead PI, “SaTC: Enhancing Security Education through Transiting Research on Security in Emerging Network Technologies,” funded by NSF, NSF DGE Award #1723804, (\$300,000 – My portion is \$120,832)	09/2017 – 08/2019
	Kordestani Endowed Chair, supported by College of Engineering at SJSU (\$80,000) – It is a distinguished research professor award. I received \$40,000 support for each year.	01/2016 – 12/2017
	Co-PI, “EAGER: Creating a Community Infrastructure for Interoperable Emergency Connectivity”, NSF Award ID: 1637371” (\$199,921)	08/15/16-12/31/18
	Senior Personnel, U.S. Army Research Office Summer Grant for High School Research Apprenticeship Program (HSAP) (\$10,000)	Summer, 2017
	PI, “SDN/NFV Security,” supported by Arista Networks, Inc. in CA (\$100,000)	01/2016-12/2017
	PI, “Software-defined Storage,” supported by Nexenta Systems, Inc. in CA (\$50,000)	01/2016 – 12/2016
	PI, “Data Privacy Protection in Internet of Things (IoT),” granted by GKeS Inc. (\$50,000)	01/2016 – 12/2016
	Faculty Mini Grant (\$10,000) from College of Engineering at SJSU	01/2016 – 12/2016
	Faculty mentor, Silicon Valley Innovation and Entrepreneurship Scholarship (Supported by NSF Award ID: 1458794, Serve as a mentor.)	02/2015 – 01/2019

	SJSU Undergraduate Research Awards (\$1,000)	07/2014 – 06/2017
	Research Grant from TCL Lab. (\$100,000)	02/2014 – 05/2015
	California State University RSCA(Research, Scholarship, and Creative Activity) Grant (\$5,000), San Jose State University Research Foundation	07/2014 – 05/2015
	Amazon Education Grant, USA (\$6,000)	Fall 2013
Awards & Honors		
	Faculty Award for Excellence in Scholarship in College of Engineering at SJSU (\$1,000 cash award)	05/2018
	Best Paper Award, In Proceedings of the 49th ACM Technical Symposium on Computer Science Education (SIGCSE 2018)	02/2018
	Award of Excellence, Distinguished Faculty Mentor for Kunal Goswami at 2017 SJSU student research competition.	04/2017
	Our team (Kunal Goswami, Keyur Golani, Kalgi Bhatt) on the 2 nd place on April 2017 in Juniper Networks - SDN and Network Automation Student Competition	02/2017
	College of Engineering Research Professor Award	2016 & 2017
	Best Paper Award-Honorable Mention Award (the 2 nd place) from the 21 st ACM Symposium on Access Control Models and Technologies (SACMAT).	06/2016
	Our team (Hitesh Padekar's team) got the first place in Juniper Network Competition. (The students got their internship opportunity and Apple iPad for each.)	04/2015
	Fellowship for NSF Career Award Workshop, Arlington, VA, USA (\$1,000) (Given to only 27 junior professors among 217)	03/2014
	Travel grant for Grace Hopper Celebration in Women in Computing, Atlanta, USA	10/2010
	Travel grant for 7 th ACM Conference on Computer Communications Security (CCS), Chicago, USA	11/2010
	Outstanding Teaching Assistant Award at North Carolina State University	04/25/2004
	President Award at Kyungshung University	02/2000
Publication		
Peer-reviewed Journal Papers (*This author is a corresponding author.)	[J12] Sang-Yoon Chang, Sristi L. S. Kumar, Yih-Chun Hu, Younghee Park , "Power-Positive Networking: Wireless-Charging-Based Networking to Protect Energy Against Battery DoS Attacks," accepted for ACM Transaction on Sensor Networks.	
	[J11] Sang-Yoon Chang, Younghee Park* , Bhavana Babu Ashok Babu, "Fast IP Hopping Randomization to Secure Hop-by-Hop Access in SDN," IEEE Transactions on Network and Service Management, December 27, 2018. (Impact factor: 3.286)	
	[J10] Jiangzhou Deng, Yong Wang, Junpeng Guo, Yongheng Deng, Jerry Gao, Younghee Park , "A similarity measure based on Kullback–Leibler divergence for collaborative filtering in sparse data," Journal of Information Science, November 2018. (Impact factor: 1.372)	
	[J9] Shikha Verma, Younghee Park , Mihui Kim, "Predicting Flu-Rate Using Big Data Analytics Based on Social Data and Weather Conditions," Advanced Science Letters (ISSN 1936-6612), Volume 23, Number 12, December, 2017.	
	[J8] Kunal Goswami, Younghee Park* , Chungsik Song, "Impact of Reviewer Social Interaction on Online Consumer Review Fraud Detection," Journal of Big Data (Springer), May, 2017.	
	[J7] Mihui Kim, Younghee Park* , Rohit Kotalwar, "Robust and Agile System against	

	Fault and Anomaly Traffic in Software Defined Networks,” Journal of Applied Sciences, March 2017. (Impact factor: 1.855)
	[J6] Mason Itkin, Mihui Kim, Younghee Park* , “Development of Cloud-based UAV Monitoring and Management System,” in Journal of Sensors, November 2016. (Impact factor: 2.4753)
	[J5] Jerry Gao, Chungsik Song, Younghee Park , “Mobile Clouds Empowering Future Healthcare Services using Big Data,” International Journal of Enhanced Research in Medicines and Dental Care (IJERMDC), ISSSN 2349-1590, 2016. (Impact factor: 1.102)
	[J4] Sayali Deshpande, Younghee Park , Mark Stamp, “Eigenvalue Analysis for Metamorphic Detection,” in Journal of Computer Virology and Hacking Techniques, Feb. 2014.
	[J3] Younghee Park* , Douglas Reeves, Mark Stamp, “Deriving Common Malware Behavior through Graph Clustering, " The International Journal of Computer and Security, Elsevier, volume 39 November, 2013. (Impact Factor: 2.862).
	[J2] Young June Pyun, Younghee Park* , Douglas S. Reeves, Peng Ning, Xinyan Wang, “Interval-based watermarking for tracing interactive traffic," in the International Journal of Computer Networks, Vol. 56, Pages 1646-1665, Elsevier. Feb. 2012. (*This author is a corresponding author.)(Impact Factor: 2.589)
	[J1] Young Hee Park , Byungchun Chung, et al., “Scalable Hierarchical Group Key Establishment using Die-Hellman Key Exchange”, in Korea Institute of Information Security and Cryptology (KIISC) Journal , December, 2003.
Peer-reviewed Conference Papers. (*This author is a corresponding author.)	[C29] Paul Merrill, Thomas H. Austin, Jenil Thakker, Younghee Park , Justin Rietz, "Lock and Load: A Model for Free Blockchain Transactions through Token Locking," IEEE International Conference on Decentralized Applications and Infrastructures (DAPPCON), San Fransico USA, April 4-9, 2019.
	[C28] Younghee Park* , Nikhil Vijayakumar Kengalahalli, Sang-Yoon Chang, “Distributed Security Network Functions against Botnet Attacks in Software-defined Networks,” IEEE Conference on Network Function Virtualization and Software Defined Networks (NFV-SDN), Verona Italy in November 2018.
	[C27] Rakesh Datta, Sean Choi, Anurag Chowdhary, Younghee Park* , “P4Guard: Designing P4 Based Firewall,” IEEE Military Communications, LA, CA USA October 29-31, 2018.
	[C26] Younghee Park* , Hongxin Hu, Xiaohong Yuan and Hongda Li, “Enhancing Security Education Through Designing SDN Security Labs in CloudLab,” In Proceedings of the 49th ACM Technical Symposium on Computer Science Education (SIGCSE 2018), Baltimore, Maryland, USA, February 21-24, 2018. (Best Paper Award)
	[C25] Nikhil Vijayakumar Kengalahalli, Suhas Janardhan, Younghee Park, “Implementing Lightweight Intrusion Detection Systems Based on Network Function Virtualization,” in the 22nd Colloquium for Information System Security Education (CISSE), New Orleans, USA June 11-13, 2018.
	[C24] Keyur Golani, Kunal Goswami, Kalgi Bhatt, Younghee Park, “Fault Tolerant Traffic Engineering in Software-defined WAN,” IEEE Symposium on Computers and Communications (ISCC), Natal, Brazil, June 25 -28, 2018.
	[C23] Younghee Park* , Chungsik Song, Keyur Golani, Youngsoo Kim, Kalgi Bhatt, Kunal Goswami, “Machine-learning based Threat-aware System in Software Defined Networks,” The 26th International Conference on Computer Communications and Networks (ICCCN 2017), July 31-August 3, 2017, Vancouver, Canada. (Acceptance rate: 25%)
	[C22] Sang-Yoon Chang, Sristi Lakshmi Sravana Kumar, Bao Anh N. Tran, Sreejaya Viswanathan, Younghee Park , and Yih-Chun Hu, “Power-Positive Networking Using Wireless Charging: Protecting Energy Against Battery Exhaustion Attacks,” In Proceedings of ACM Conference on Security and Privacy in Wireless and Mobile

Networks (WiSec), 2017, Boston, MA, USA.
[C21] Meenu Ganesh, Priyanka Pednekar, Pooja Prabhuswamy, Divyashri Sreedharan Nair, Younghee Park , Hyeran Jeon, "CNN-based Android Malware Detection," The 3rd IEEE International Conference on Software Security and Assurance (ICSSA), Altoona, PA, Jul 2017.
[C20] Chungsik Song, Kunal Goswami, Younghee Park* , Sang-Yoon Chang, Euijin Choo, "Graphic Model Analysis of Frauds in Online Consumer Reviews," Second International Conference on Internet of Things Data, and Cloud Computing (ICC), March 2017
[C19] Younghee Park* , Shruti Daftari, Pratik Inamdar, Snehal Salavi, Aniket Savanand, Youngsoo Kim, "IoTGuard: Scalable and Agile Safeguards for Internet of Things," IEEE MILCOM, November 2016.
[C18] Younghee Park* , Hitesh Padekar, Hongxin Hu, Sang-Yoon Chang, "Enabling Dynamic Access Control for Controller Applications in Software-Defined Networks," the 21 st ACM Symposium on Access Control Models and Technologies (SACMAT), June, 2016. (*This author is a corresponding author.) (Best Paper Honorable Award)
[C17] Debasis Dash, Juthika Dash, Younghee Park* , Jerry Gao, "Integrated Data Management System for Datacenter," in the 28 th international conference on Software Engineering and Knowledge Engineering (IEEE SEKE), July, 2016.
[C16] Sang-Yoon Chang, Younghee Park , Akshaya Muralidharan, "Fast Address Hopping at the Switches: Securing Access for Packet Forwarding in SDN," IEEE Network Operations and Management Symposium (NOMS), Turkey, April, 2016.
[C15] Younghee Park , Sang-Yoon Chang, Lavanya M. Krishnamurthy, "Watermarking for Detection Freeloader Misbehavior in Software-Defined Networks," IEEE International Conference on Computing, Networking and Communications, Hawaii, USA, February 2016.
[C14] Juan Deng, Hongxin Hu, Hongda Li, Zhizhong Pan, Kuang-Ching Wang, Gail-Joon Ahn, Jun Bi, Younghee Park , "VNGuard: An NFV/SDN Combination Framework for Provisioning and Managing Virtual Firewalls," IEEE Conference on Network Function Virtualization & Software Defined Networks (NFV-SDN), San Francisco, USA November 2015.
[C13] Sanket Desai, Younghee Park* , Jerry Gao, Sang-Yoon Chang, Chungsik Song, "Improving Encryption Performance using MapReduce," The IEEE International Symposium on Big Data Security on Cloud (BigDataSecurity), New York, USA August 2015. (*This author is a corresponding author.)
[C12] Chungsik Song, Younghee Park* , Jerry Gao and Sri Kinnera Nanduri, "Favored Encryption Techniques and Evaluation for Big Data in a Cloud", in Proceedings of IEEE International Conference on Big Data Computing Service and Applications, San Francisco, USA, April 2015. (*This author is a corresponding author.).
[C11] Shuyu Li, Jerry Gao, and Younghee Park , "A Sticky Policy Framework for Big Data Security", in Proceedings of IEEE International Conference on Big Data Computing Service and Applications, San Francisco, USA, April 2015.
[C10] Younghee Park , Akshay Wattal, Manish Mandlik, Xiao Su, "SOMA: Self-resilient Switches against Denial-of-Service Attacks," In the International Conference on Electronics, Communications and Networks (CECNet), December, 2014.
[C9] Younghee Park , David M. Nicol, et. al. "Prevention of Malware Propagation in AMI ", in the IEEE International Conference on Smart Grid Communications (SmartGridComm), Vancouver, Canada, October 2013.
[C8] Younghee Park , David M. Nicol, "Design of Policy Engine to Prevent Malware Propagation in AMI", in the conference of Team for Research in Ubiquitous Secure Technology(TRUST), Washington DC, USA, October 2013.
[C7] Younghee Park , Salvatore J. Stolfo, "Software Decoys for Insider Threat ", in the 7th ACM Symposium on Information, Computer and Communications Security(ASIACCS), Seoul, South Korea, May 2012.

	[C6] Younghee Park , Douglas Reeves, "Deriving common malware behavior through graph clustering ", Proceedings of the 6th ACM Symposium on Information, Computer and Communications Security(ASIACCS), Hong Kong, China, March 2011.
	[C5] Younghee Park , Qinghua Zhang, Douglas Reeves, Vikram Mulukutla, "AntiBot: Clustering Common Semantic Patterns for Bot Detection ", Proceedings of 34th Annual IEEE Computer Software and Applications Conference (COMPSAC), Seoul, South Korea, July 2010. (Acceptance ratio: 20%(25/193 for Full Papers))
	[C4] Younghee Park , Douglas R. Reeves, "Identification of Bot Commands By Runtime Execution Monitoring ", Proceedings of 25th Annual Computer Security Applications Conference (ACSAC 2009), Hawaii, USA, December 2009. (Acceptance Ratio: 19.6%(44/224)).
	[C3] Young Hee Park and D. S. Reeves, "Adaptive Watermarking Against Deliberate Random Delay for Attack Attribution Through Stepping Stones ", Proceedings of 9th International Conference on Information and Communications Security (ICICS 2007) December 2007.
	[C2] Y. J. Pyun, Young Hee Park , X. Y. Wang, D. S. Reeves, and P. Ning, "Tracing Traffic Through Intermediate Hosts that Repacketize Flows ", Proceedings of 26th Annual IEEE Conference on Computer Communications (INFOCOM 2007), May 2007. (Acceptance Ratio: 18%)
	[C1] Young Hee Park , B. Chung, and H. Yoon, "Efficient Group Key Agreement Protocol using a Tree", Proceedings of Korea Institute of Information Security and Cryptology Conference, November, 2002.
Peer-reviewed Workshops and Others	[W7] Sang-Yoon Chang, Younghee Park* , "Silent Timestamping for Blockchain Mining Pool Security," International Workshop on Computing, Networking and Communications (CNC) in conjunction with International Conference on Computing, Networking and Communications (ICNC 2019), Honolulu, Hawaii, USA, February 18-21, 2019.
	[W6] Kamran Naseem Kalokhe, Younghee Park* , Sang-Yoon Chang, "Resilient SDN-based Communication in Vehicular Network," The International Workshop on Security and Privacy Assurance Technologies for Emerging Networks (SPATEN), June 22, 2018 in conjunction with the 13 th International Conference on Wireless Algorithms, Systems, and Applications (WASA) June 20-22, 2018.
	[W5] Roop K. Sriramulu, Younghee Park* , Sang-Yoon Chang, KaiKai Liu, "Dynamic Cost-effective Emergency Network Provision," The Workshop on ICT Tools for Emergency Networks and Disaster Relief (I-TENDER), in conjunction with the 13 th International Conference on Emerging Networking Experiments and Technologies (CoNext), December 2017.
	[W5] Younghee Park* , Pritesh Chandaliya, Akshaya Muralidharan, Nikash Kumar, Hongxin Hu, "Dynamic Defense Provision via Network Functions Virtualization," ACM International Workshop on Security in Software Defined Networks & Network Function Virtualization (SDN-NFV Security 2017) in conjunction with ACM CODASPY, Scottsdale, Arizona, USA 2017.
	[W4] Nuyun Zhang, Hongda Li, Hongxin Hu, Younghee Park , "Towards Effective Virtualization of Intrusion Detection Systems," ACM International Workshop on Security in Software Defined Networks & Network Function Virtualization (SDN-NFV Security 2017) in conjunction with ACM CODASPY, Scottsdale, Arizona, USA 2017.
	[W3] William Zegers, Sang-Yoon Chang, Younghee Park* , Jerry Gao, "A Lightweight Encryption and Secure Protocol for Smartphone Cloud", 7th International Workshop of Internet-based Virtual Computing Environments, co-located with IEEE Service-Oriented Systems Engineering, 2015. (*This author is a corresponding author.)
	[W2] Euijin Choo, Younghee Park* , Huzefa, "Identifying Malicious Metering Data in Advanced Metering Infrastructure", in the international Workshop on Cyber Security and Cloud Computing, conjuncted with , London, UK April, 2014. (*This author is a corresponding author.)

	[W1] Younghee Park , Douglas S. Reeves, "Fast Malware Classification by Automated Behavioral Graph Matching ", Proceedings of 6th ACM Annual Cyber Security and Information Intelligence Research Workshop (CSIIRW), Oak Ridge National Lab., TN, USA, April, 2010.	
Professional Services	Off-Campus Academic Program Coordinator (APC) for Cybersecurity Programs at SJSU and Cisco Cybersecurity Programs.	08/2018-current
	Panel Speaker and invited speaker, "Data Science for Cybersecurity", at the event of Data Science and beyond: Technical, economical and societal challenges at SJSU with ZHAW school of Engineering.	10/25/2018
	Panel Speaker, Women in Cybersecurity at Cisco	09/11/2018
	Center Executive at the research center of STTCS(Smart Technology, Computer and Complex System) at SJSU. Website: http://smart-city-sjsu.net/Smartcenter/	01/2016 - current
	Cybersecurity certificate coordinator in Computer Engineering	04/2016 - current
	Invited talk, Medical Device Security Workshop at Stanford Health Care	01/2016
	Undergraduate Studies Committee Chair for Computer Engineering in College of Engineering at SJSU	02/2015
	Undergraduate/Graduate Studies Committee in College of Engineering at SJSU	01/2015 – 05/2015
	Faculty mentor of Summer Research for Gavilan College, Gilroy, CA USA	09/2013 - current
	Faculty Member of Cyber Security and Big Data Initiative at SJSU	October 2014
	Judges for Student Competition of Juniper Networks	09/2013
	Curriculum Development for CMPE 210 SDN/NFV	11/2014
	IEEE/ACM Journal/Conference Reviewers	08/2013 - current
	Chair Services	<ul style="list-style-type: none"> - PC chair, IEEE International Conference on Decentralized Applications and Infrastructures (DAPPCON), San Francisco, USA 2019. - Workshop chair, IEEE International workshop on Big Data Security and Services in conjunction with IEEE Bigdataservice, 2017 & 2018. - Session chair for IEEE Bigdataservice 2017. - Session chair, Cybersecurity in the Silicon Valley Women in Engineering Conference (WiE) at SJSU 2016 & 2018. - Session chair, ACM International Workshop on Security in Software Defined Networks & Network Function Virtualization (SDN-NFV Security 2017) In conjunction with ACM CODASPY, Scottsdale, Arizona, USA 2017. - Session chair, the 27th International conference on computer communication and networking (ICCCN), Vancouver, Canada, August 2017. - Workshop co-chair, DESWeb 2017, co-located with IEEE ICDE (International Conference on Data Engineering), April 2017 - Session Chair, IEEE MILCOM 2013/2018