Qian Han

9 Maynard St, Hanover, New Hampshire 03755 | (603) 858-7647
qian.han.gr@dartmouth.edu | qian-han.github.io/ | linkedin.com/in/qianhan/

Education	**Dartmouth College,** Department of Computer Science, Hanover, NH Ph.D. student in **Computer Science**	Sep. 2016 – Jun. 2021(*expected*)
	Telekom Innovation Labs, Be'er Sheva, Israel Research Intern	Jun. 2019 – Sep. 2019
	Tsinghua University, Department of Electronic Engineering, Beijing, China Bachelor of Engineering in Electronic Engineering	Aug. 2012 – July. 2016

Publications	**Generating Fake Documents using Probabilistic Logic Graphs** *Q. Han, C. Molinaro, A. Picariello, G. Sperlì, V.S. Subrahmanian, Y. Xiong* Submitted to IEEE Transactions on Dependable & Secure Computing	Jun. 2019
	Android Rooting Malware Detection via Robust Irreversible Feature Transformations *Q. Han, V.S. Subrahmanian and Y. Xiong* Submitted to IEEE Transactions on Information Forensics and Security	May. 2019
	Disclose or Exploit? A Game Theoretic Approach to Strategic Decision Making in Cyber Warfare *H. Chen, Q. Han, S. Jajodia, R. Lindelauf, V.S. Subrahmanian, Y. Xiong (authors listed in alphabetic order)* IEEE System Journals, 2019. To appear	Apr. 2019
	DBank: Predictive Behavioral Analysis of Recent Android Banking Trojans *C. Bai, Q. Han, G. Mezzour, F. Pierazzi, and V.S. Subrahmanian (authors listed in alphabetic order)* IEEE Transactions on Dependable & Secure Computing, 2019	Apr. 2019
	Frictio: Passive Kinesthetic Force Feedback for Smart Ring Output *T. Han, Q. Han, M. Annett, F. Anderson, D. Huang, and X. Yang* In Proceedings of the ACM Symposium on User Interface Software and Technology (UIST'17), Denver, CO	Jul. 2017
	Simultaneous Multi-Channel Reconstruction for TDS-OFDM Systems *Q. Han, W. Shen, and B. Wang* In Proceedings of the 2015 IEEE 82nd Vehicular Technology Conference (VTC2015-Fall)	Sept. 2015

Research Experience	**Generative Adversarial Malware Model for Android** *supervised by Yuval Elovici and Rami Puzis, Telekom Innovation Labs* ▪ Designed Android centric attack on well-known Android malware classifiers using static features; proposed a mechanism to harden the state-of-the-art classifiers including deep neural network to reduce the impact of the attack.
	Android Banking Malware Prediction and Analysis Using Machine Learning *supervised by Prof. V.S. Subrahmanian, Dartmouth College* ▪ Proposed novel *Suspicion Score* and *Suspicion Rank* features based on PageRank; enhanced the system's robustness around 300% in the face of adversary attack; achieved classification results with AUC over 99.5%; found 2 previously unlabeled Banking Trojans, as confirmed by ***Google Android Security Team***.
	ECC: Ensemble Clustering and Classification Algorithm for Unbalanced Dataset *supervised by Prof. V.S. Subrahmanian, Dartmouth College* ▪ Designed ECC algorithm synthesized training data to reduce the imbalance ratio on datasets; achieved around 10% and 20% higher AUC and Recall, respectively.
	Passive Kinesthetic Force Feedback for Smart Ring Output *supervised by Prof. Xing-Dong Yang, Dartmouth College* ▪ Designed 3D printed smart-ring prototype; used the prototype to play Angry Birds successfully.

Invited Talks	**Clustering & Classification Methods for Predicting Malicious Android Apps** Conference on Android Security, Local Research Day, **Google HQ**, Mountain View, CA *Q. Han and V.S. Subrahmanian*	Oct. 2018
	Behavioral Analysis and Automated Detection of Android Banking Trojans Android Security Team, **Google HQ**, Mountain View, CA *Q. Han and V.S. Subrahmanian*	Jul. 2018

Awards	Dartmouth College Graduate Alumni Research Award, 2019 Dartmouth College Neukom Prize for Outstanding Graduate Research, 2019 Tsinghua University Distinguished Undergraduates Thesis Award, 2016 First Prize of National College Students Science and Technology Innovation Project, 2015 Tsinghua University Science and Technology Innovation Scholarship, 2014

Tools	Python, MATLAB, Java, Linux, LATEX, Android, Git, Pandas, Scikit-learn, Networkx, PyTorch, Keras