

Cliff C. Zou  
Curriculum Vitae

**BIOGRAPHICAL DATA**

Cliff C. Zou (Legal name: Changchun Zou; US Citizen)  
Associate Professor  
Program Coordinator, Master of Science in Cyber Security and Privacy  
Program Coordinator, Master of Science in Digital Forensics  
Department of Computer Science  
University of Central Florida, HEC-243  
4328 Scorpius St,  
Orlando, FL 32816-2362  
Email: czou@cs.ucf.edu  
Web: <http://www.cs.ucf.edu/~czou/>

**Education**

**Ph.D.** in Electrical and Computer Engineering September 2005  
University of Massachusetts at Amherst Amherst, MA  
Advisors: Weibo Gong and Don Towsley

**M.S., and B.S.** in Electrical Engineering July 1999 & July 1996  
University of Science & Technology of China (USTC) Hefei, China

**Professional Positions**

**Program Coordinator** of Cyber Security and Privacy MS program February 2021 - Present  
Department of Computer Science  
University of Central Florida  
Orlando, FL

**Program Coordinator** of Digital Forensics MS program January 2016 - Present  
Department of Computer Science  
University of Central Florida  
Orlando, FL

**Associate Professor** August 2011 - Present  
Department of Computer Science  
University of Central Florida  
Orlando, FL

**Assistant Professor** August 2005 – July 2011  
School of Electrical Engineering and Computer Science  
University of Central Florida  
Orlando, FL

**RESEARCH**

*Total Google Scholar Citations (2002 ~ Mar. 2021): 7100+*  
*Google Scholar H-index: 32*

**Patents:**

- US Patent [7587761](#): “Adaptive Defense Against Various Network Attacks”, by Nicholas Duffield, Weibo Gong, Don Towsley, *Changchun Zou*. Granted on September 8, 2009.
- US Patent [10341263](#): “System and Method for Routing Network Frames Between Virtual Machines”, by *Changchun Zou* and Jim Bardgett. Granted on July 2, 2019.

**Grants and Contracts: (Total sponsored external funding for my share: \$2,052,052)**

- NSF Division of Graduate Education program **DGE- 2042996**: “CyberCorps Scholarship for Service: Workforce Training and Preparation in Cybersecurity and Privacy”, (\$2,885,353, **PI**, my share **\$1,096,434**, 02/15/2021 to 01/31/2026)
- Sophos Inc.: “Wifi-based IoT Device Profiling and User Privacy Attack/Defense” (\$30,000, **Co-PI**, my share **\$15,000**, 01/2020 to 12/2020)
- US Army PEO STRI: "Supporting the Development of the PCTE" (\$2,499,188, **Co-PI**, my share **\$139,873**, 09/2019 to 09/2022)
- NSF Division of Graduate Education program **DGE-1915780**: “SaTC: EDU: Collaborative: Building a Low-cost and State-of-the-art IoT Security Hands-on Laboratory”, (\$340,175, **PI**, my share **\$272,140**, 10/01/2019 to 09/30/2022)
- NSF REU supplement for DGE-1915780 (\$16,000, **Co-PI**, 04/2021 ~ 03/2022)
- NSF **DGE-1723587**: "SaTC: EDU: Online Digital Forensics Courses and Labs for Students and Professionals", (\$298,955, **Co-PI**, my share **\$152,000**, 09/2017 ~ 08/2020)
- NSF REU supplement for DGE-1723587 (\$16,000, **Co-PI**, my share **\$8,000**, 09/2018 ~ 08/2019)
- US Army PEO STRI: "Enhancing the Persistent Cyber Training Environment" (\$744,733, **Co-PI**, my share **\$74,477**, 09/2018 to 09/2019)
- NSF CNS-1560302: “REU Site: Research Experiences in the Internet of Things”. (\$359,912, **Co-PI**, my share **\$17,996**, 06/01/2016 ~ 05/31/2020)
- iSTEM Fellow award (**\$20,000**) from UCF STEM Office (08/2016-07/2017).
- Florida Center for Cybersecurity (FC2) seed grant: "Renewal: Smart Grid Security Protection through Cross Layer Approaches" (**Co-PI**, my share: **\$15,000**, 03/2016-05/2017).
- Florida Center for Cybersecurity (FC2) seed grant: "Smart Grid Security Protection through Cross Layer Approaches" (**Co-PI**, my share: **\$16,667**, 03/2015-05/2016).
- NSF REU supplement grant for CNS-0627318, single **PI** (**\$16,000**, 09/2009 - 08/2010).
- Intel Research Fund: “Automated Vulnerability Analysis: Leveraging Control Flow for Evolutionary Input Crafting,” single **PI**, **\$53,465** (2007 - 2010).
- NSF Cyber Trust program **CNS-0627318**: "Collaborative Research: CT-ISG: Modeling and Measuring Botnets". (single **PI**, **\$175,000**, Aug. 2006 - Aug. 2009).
- UCF In-House Research Grants, single **PI**, **\$7,500** (2005-2006).

**List of Publications** (\*denote students advised by me)

*Referreed Chapters in Edited Book*

1. Zhen Ling, Yiling Xu, Yier Jin, Cliff Zou and Xinwen Fu, “New Variants of Mirai and Analysis”, In: Shen X., Lin X., Zhang K. (eds) *Encyclopedia of Wireless Networks*, Springer, First Online: 10 April 2020, DOI: [https://doi.org/10.1007/978-3-319-32903-1\\_174-1](https://doi.org/10.1007/978-3-319-32903-1_174-1).
2. Baber Aslam\*, Ping Wang\*, Cliff C. Zou, "An Economical, Deployable and Secure Architecture for the Initial Deployment Stage of Vehicular Ad-Hoc Network", Chang, Chip-Hong, Potkonjak, Miodrag (Eds.): *Secure System Design and Trustable Computing*, Springer, ISBN 978-3-319-14971-4, 2016.

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3. Ping Wang\*, Lei Wu\*, Baber Aslam\* and Cliff C. Zou, "Analysis of Peer-to-Peer Botnet Attacks and Defenses", to appear in Dariusz Krol, Damien Fay, Bogdan Gabrys (Ed): *Propagation Phenomena in Real World Networks*, Springer, ISSN: 1868-4394.
4. Steven Zittrower\* and Cliff C. Zou, "Encrypted Ranked Proximity and Phrase Searching in the Cloud", *Al-Sakib Khan Pathan (Ed): The State of the Art in Intrusion Prevention and Detection*, CRC Press, Taylor & Francis Group, USA, January 2014. (ISBN 9781482203516)
5. Sherri Sparks\*, Shawn Embleton\*, Cliff C. Zou. "Windows Rootkits - a Game of "Hide and Seek",” in *Y. Xiao, F.H. Li, and H. Chen (Eds): Handbook of Security and Networks*, Chapter 14, pp.345-369, World Scientific Publishing Co., ISBN-10: 9814273031, ISBN-13: 978-9814273039, 2011. pp. 345-368.
6. Ping Wang\*, Baber Aslam\*, Cliff C. Zou, "Peer-to-Peer Botnets: The Next Generation of Botnet Attacks", in *Stavroulakis, Peter; Stamp, Mark (Eds): Handbook of Information and Communication Security*, Chapter 18, Springer Press, 2010, pp. 335-350
7. Soyoung Park\*, Cliff C. Zou, Damla Turgut. "Reliable Traffic Information Propagation in Vehicular Ad hoc Networks,” in *R. Beyah, J. McNair, and C. Corbett (Eds): Security in Ad-hoc and Sensor Networks*, Chapter 9, World Scientific Press, 2009, pp. 261-291.

#### Referreed Journal Papers

1. Zhou, Hanxun; yang, xinlin; Pan, Hong; guo, wei; Zou, cliff. "A Worm Detection System Based on Deep Learning", *IEEE ACCESS*, 2020, DOI: 10.1109/ACCESS.2020.3023434.
2. Affraa Attiah\*, Faisal Amjad\*, Mainak Chatterjee, Cliff Zou, "An Evolutionary Routing Game for Energy Balance in Wireless Sensor Networks", in *Elsevier Computer Networks (COMNET)*, Volume 138, 19 June 2018, Pages 31-43. (IF:2.516)
3. Omar Nakhila\*, Muhmmad Faisal Amjad\*, Erich Dondyk\*, Cliff Zou, "Gateway independent user-side wi-fi Evil Twin Attack detection using virtual wireless clients", in *Elsevier Computers & Security*, Volume 74, May 2018, Pages 41-54 (IF: 2.849).
4. Muhammad Faisal Amjad\*, Mainak Chatterjee, Omar Nakhila\*, Cliff C. Zou, "Evolutionary Non-Cooperative Spectrum Sharing Game: Long Term Coexistence for Collocated Cognitive Radio Networks", *Wiley Journal of Wireless Communications and Mobile Computing (WCM)*, Vol. 16, Issue 15, October 2016. pp 2166–2178. (IF=1.2)
5. Hayoung Oh, Cliff C. Zou, Soyoung Park\*, "An Enhanced Community-based Reputation System for Vehicular Ad Hoc Networks", *International Journal of Engineering and Technology (IJET)*, pp 2272-2287, Oct-Nov 2016. (IF=0.77)
6. Faisal Amjad\*, Baber Aslam\*, Affraa Attiah\*, Cliff C. Zou, "Towards Trustworthy Collaboration in Spectrum Sensing for Ad hoc Cognitive Radio Networks", in *Springer Journal of Wireless Networks*, Vol. 22, Issue 3, pp 781-797, April 2016. (IF=0.961)
7. Faisal Amjad\*, Mainak Chatterjee, Cliff C. Zou, "Coexistence in Heterogeneous Spectrum Through Distributed Correlated Equilibrium in Cognitive Radio Networks", in *Elsevier Computer Networks (COMNET)*, Vol. 98, pp 109–122, April 2016. (IF=1.256)

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8. Jiangyu Zheng, Xiaobin Tan, Cliff Zou, Yukun Niu, "Pseudonym-based Privacy-preserving Scheme for Data Collection In Smart Grid", to appear in *International Journal of Ad Hoc and Ubiquitous Computing (IJAHUC)*. (IF=0.554)
9. Sheng Wen, Wei Zhou, Jun Zhang, Yang Xiang, Wanlei Zhou, Weijia Jia, Cliff C. Zou, "Modeling and Analysis on the Propagation Dynamics of Modern Email Malware", in *IEEE Transactions on Dependable and Secure Computing*, Vol. 11, No. 4, pp. 361-374, July-Aug., 2014. (IF=1.351)
10. Erich Dondyk\*, Louis Rivera\*, and Cliff C. Zou, "Wi-Fi Access Denial of Service Attack to Smartphones", *Int. J. Security and Networks*, Vol. 8, No. 3, pp.117–129, 2013.
11. Shawn Embleton\*, Sherri Sparks\*, Cliff C. Zou, "SMM Rootkit: A New Breed of OS Independent Malware", *Wiley Journal of Security and Communication Networks*, Vol. 6, No. 12, December 2013, pp. 1590-1605. (IF=0.72)
12. Baber Aslam\*, Ping Wang\*, Cliff C. Zou, "Extension of internet access to VANET via satellite receive-only terminals". *International Journal of Ad Hoc and Ubiquitous Computing (IJAHUC)* Vol. 14, No. 3, 2013, pp. 172-190. (IF=0.554)
13. Soyoung Park\*, Baber Aslam\*, Damla Turgut, Cliff C. Zou, "Defense against Sybil Attack in the Initial Deployment Stage of Vehicular Ad hoc Network based on Roadside Unit Support", *Wiley Journal of Security and Communication Networks*, Vol. 6, No. 4, 2013, pp. 523-538. (IF=0.72)
14. Corey McCall\*, Branden Maynes\*, Cliff C. Zou, Ning J. Zhang, "An automatic medication self-management and monitoring system for independently living patients", *Elsevier Journal of Medical Engineering & Physics*, Vol. 35, No. 4, 2013, pp. 505-514. (IF=1.825)
15. Lei Wu\*, Jerome Harrington\*, Corey Kuwanoe\*, Cliff C. Zou, "Harnessing the Power of BitTorrent for Distributed Denial-of-Service Attacks", *Wiley Journal of Security and Communication Networks*, 4(8), p.860-870, 2011. (IF=0.72)
16. Ping Wang\*, Sherri Sparks\*, Cliff C. Zou. "An Advanced Hybrid Peer-to-Peer Botnet", in *IEEE Transactions on Dependable and Secure Computing*, 7(2), 113-127, April-June, 2010. (IF=1.351)
17. Baber Aslam\*, Soyoung Park, Cliff Zou, and Damla Turgut. "Secure Traffic Data Propagation in Vehicular Ad hoc Networks", in *International Journal of Ad Hoc and Ubiquitous Computing (IJAHUC)*, 6(1), 24-39, 2010. (IF=0.554)
18. Ping Wang\*, Lei Wu\*, Ryan Cunningham\*, Cliff C. Zou. "Honeypot Detection in Advanced Botnet Attacks", *International Journal of Information and Computer Security (IJICS)*, 4(1), 30–51, 2010.
19. Cliff C. Zou, Don Towsley, Weibo Gong. "Modeling and Simulation Study of the Propagation and Defense of Internet Email Worm," *IEEE Transactions on Dependable and Secure Computing*, 4(2), 105-118, April-June 2007. (IF=1.351)
20. Cliff C. Zou, Nick Duffield, Don Towsley, Weibo Gong. "Adaptive Defense Against Various Network Attacks," *IEEE Journal on Selected Areas in Communications: High-Speed Network Security (J-SAC)*, 24(10), 1877-1888, October 2006. (IF=3.453)
21. Cliff C. Zou, Don Towsley, and Weibo Gong. "On the Performance of Internet Worm Scanning Strategies," *Elsevier Journal of Performance Evaluation*, 63(7), 700-723, July 2006. (IF=1.25)

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22. Cliff C. Zou, Don Towsley, Weibo Gong, Songlin Cai. "Advanced Routing Worm and Its Security Challenges," *Simulation: Transactions of the Society for Modeling and Simulation International*, 82(1), 75-85, 2006. (IF=1.2)
23. Cliff C. Zou, Weibo Gong, Don Towsley, and Lixin Gao. "The Monitoring and Early Detection of Internet Worms," *IEEE/ACM Transactions on Networking*, 13(5), 961-974, October 2005. (IF=2.186)

Referreed Conference and Workshop Papers

1. Hossein Rezaeighaleh\*, Cliff Zou, "Multilayered Defense-in-Depth Architecture for Cryptocurrency Wallet", in *6th IEEE International Conference on Computer and Communications (ICCC)*, Dec. 11-14, 2020.
2. Raghu Avula\*, Cliff Zou, "Performance Evaluation of TPC-C Benchmark on Various Cloud Providers", in *11th IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (UEMCON)*, Oct. 28 - 31, 2020.
3. Hossein Rezaeighaleh\*, Cliff Zou, "Efficient Off-Chain Transaction to Avoid Inaccessible Coins in Cryptocurrencies", in *3rd International Workshop on Blockchain Systems and Applications (BlockchainSys)*, held with the 19th IEEE International Conference on Trust, Security and Privacy in Computing and Communications (TrustCom 2020), Dec. 29, 2020-Jan. 1, 2021.
4. Bryan Pearson\*, Cliff Zou, Yue Zhang, Zhen Ling, Xinwen Fu, "SIC2: Securing Microcontroller Based IoT Devices with Low-cost Crypto Coprocessors", in *IEEE International Conference on Parallel and Distributed Systems (ICPADS)* 2-4 December 2020.
5. Kunpeng Liu, Xiaolin Li, Cliff C. Zou, Haibo Huang and Yanjie Fu, "Ambulance Dispatch via Deep Reinforcement Learning", in *28th ACM International Conference on Advances in Geographic Information Systems (SIGSPATIAL)*, Nov. 3-6, 2020.
6. Lan Luo\*, Yue Zhang, Cliff Zou, Xinhui Shao, Zhen Ling, Xinwen Fu, "On Runtime Software Security of TrustZone-M based IoT Devices", in *IEEE Global Communications Conference (Globecom)*, Dec. 7-11 2020.
7. Anne M. Tall\*, Cliff C. Zou, and Jun Wang, "Generating Connected Synthetic Electronic Health Records and Social Media Data for Modeling and Simulation", in *Interservice/Industry Training, Simulation and Education Conference (IITSEC)*, Nov. 30- Dec. 4, 2020, Orlando, USA.
8. Christopher Thompson\*, Gabriel A. Bearden\*, Ty Sloan, Roy Laurens\*, Cliff Zou, Bruce Caulkins, "Create and Host Cyber Competition Using the Preliminary Persistent Cyber Training Environment (PCTE)", in *Interservice/Industry Training, Simulation and Education Conference (IITSEC)*, Nov. 30- Dec. 4, 2020, Orlando, USA.
9. Hossein Rezaeighaleh\*, Cliff Zou, "New Secure Approach to Backup Cryptocurrency Wallets", in *IEEE Global Communications Conference (Globecom)*, 9-13 December 2019.
10. Anne M. Tall\*, Cliff C. Zou, and Jun Wang, "Access Control in the Era of Big-Data Driven Models and Simulations", in *Interservice/Industry Training, Simulation and Education Conference (IITSEC)*, Dec. 2, 2019.

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11. Bryan Pearson\*, Lan Luo\* Cliff Zou, Jacob Brian, Yier Jin, Xinwen Fu, "Building a Low-cost and State-of-the-art IoT Security Hands-on Laboratory", *2nd IFIP International Internet of Things (IoT) Conference*, Oct.31-Nov. 1, 2019. (invited paper)
12. Hossein Rezaeighaleh\*, Cliff Zou, "Deterministic Sub-Wallet for Cryptocurrencies", in *IEEE International Conference on Blockchain*, July 14-17, 2019. (Symposium paper)
13. Arati Banerjee\*, Cliff Zou, Damla Turgut, "Automatic Creation of Fine-Grained Vulnerable Windows System for Penetration Testing Education", *ASEE Annual Conference and Exposition*, June 16-19, 2019.
14. Roy Laurens\*, Hossein Rezaeighaleh\*, Cliff Zou, Jusak Jusak, "Using Disposable Domain Names to Detect Online Card Transaction Fraud", *IEEE International Conference on Communications (ICC)*, 20-24 May 2019.
15. Afraa Attiah\*, Mainak Chatterjee and Cliff Zou, "A Game Theoretic Approach to Model Cyber Attack and Defense Strategies", in *IEEE International Conference on Communications (ICC)*, 20-24 May 2018.
16. Hossein Rezaeighaleh\*, Roy Laurens\*, Cliff Zou, "Secure Smart Card Signing with Time-based Digital Signature", to appear in *Workshop on Computing, Networking and Communications (CNC)*, in conjunction with the International Conference on Computing, Networking and Communications (ICNC), Hawaii, Mar. 2018.
17. Kutalmis Akpınar, Fereshteh Jafariakinabad, Kien Hua, Omar Nakhila\*, Jun Ye, Cliff Zou, "Fault-Tolerant Network-Server Architecture for Time-Critical Web Applications", *IEEE 15th Intl Conf on Dependable, Autonomic and Secure Computing (DASC)*, Nov. 2017.
18. Dean Wasil\*, Omar Nakhila\*, Salih Safa Bacanlı, Cliff Zou and Damla Turgut, "Exposing Vulnerabilities in Mobile Networks: A Mobile Data Consumption Attack", *Fourth National Workshop for REU Research in Networking and Systems* (co-located with IEEE MASS), October 22, 2017, Orlando, FL.
19. Roy Laurens\*, Cliff C. Zou, Jusak Jusak. "Invariant Diversity as Proactive Fraud Detection Mechanism for Online Merchant", *IEEE Globecom*, 4-8 December, 2017.
20. Omar Nakhila\*, Cliff C. Zou, "Circumvent Wi-Fi Traffic Shaping Using Virtual Wireless Clients in IEEE 802.11 Wireless Local Area Networks", *IEEE MILCOM*, Nov., 2017.
21. Heather Lawrence\*, Andrew Hughes, Robert Tonic, Cliff Zou, Yier Jin, "D-miner: A Framework for Mining, Searching, Visualizing, and Alerting on Darknet Events", in *IEEE Conference on Communications and Network Security (CNS)*, 9-11 October 2017, Las Vegas, NV USA.
22. Amirfarhad Nilizadeh, Wojciech Mazurczyk, Cliff Zou, Gary Leavens, "Information Hiding in RGB Images using an Improved Matrix Pattern Approach", to appear in *Bright and Dark Sides of Computer Vision (CV-COPS 2017)*. In conjunction with the CVPR. Hawaii Convention Center, Honolulu, Hawaii, July 21, 2017.
23. Afraa Attiah\*, Cliff C. Zou, Mainak Chatterjee, "A Game Theoretic Approach for Energy-Efficient Clustering in Wireless Sensor Networks", *IEEE Wireless Communications and Networking Conference (WCNC)*, March 2017.
24. Omar Nakhila\*, Cliff C. Zou, "User-Side Wi-Fi Evil Twin Attack Detection Using Random Wireless Channel Monitoring", *IEEE MILCOM*, Nov., 2016.

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25. Omar Nakhila\*, Cliff C. Zou, "Parallel Active Dictionary Attack on IEEE 802.11 Enterprise Networks", *IEEE MILCOM*, Nov., 2016.
26. Roy Laurens\*, Cliff Zou, "Using Credit/Debit Card Dynamic Soft Descriptor as Fraud Prevention System for Merchant", *IEEE GLOBECOM*, Dec., 2016.
27. Afraa Attiah\*, Faisal Amjad\*, Mainak Chatterjee, Cliff Zou, "An Evolutionary Game for Efficient Routing in Wireless Sensor Networks", *IEEE GLOBECOM*, Dec., 2016.
28. Afraa Attiah\*, Faisal Amjad\*, Omar Nakhila\*, Cliff Zou, "Energy Efficient Movement of Wireless Sensors with Adjustable Sensing Ranges for Mending Barrier Gaps", to appear in 2016 International Conference on Computing, Networking and Communications (ICNC), *Workshop on Computing, Networking and Communications (CNC)*, February 2016.
29. Graham Fleener, Marco Mayor, Cliff Zou, "Risk Management Framework (RMF) Transition Impacts in Training Simulation Systems", in *Interservice/Industry Training, Simulation and Education Conference (I/ITSEC)*, Nov.30 - Dec.4, 2015, Orlando, USA.
30. Omar Nakhila\*, Afraa Attiah\*, Yier Jin, Cliff C. Zou, "Parallel Active Dictionary Attack on WPA2-PSK Wi-Fi Networks", to appear in *IEEE Military Communications Conference (MILCOM)*, October 26-28, Tampa, FL, 2015.
31. Kien Hua, Ning Jiang, Jason Kuhns, Vaithyanathan Sundaram, Cliff C. Zou, "Redundancy Control through Traffic Deduplication", in *IEEE INFOCOM*, 2015. (Acceptance rate: 316/1640=19.3%)
32. Erich Dondyk\*, Omar Nakhila\*, Cliff C. Zou, "SPS: an SMS-based Push Service for Energy Saving in Smartphone's Idle State", in *12th Annual IEEE Consumer Communications and Networking Conference (CCNC)*, Jan. 9-12, Las Vegas, 2015.
33. Omar Nakhila\*, Erich Dondyk\*, Faisal Amjad\*, Cliff C. Zou, "User-Side Wi-Fi Evil Twin Attack Detection Using SSL/TCP Protocols", in *12th Annual IEEE Consumer Communications and Networking Conference (CCNC)*, Jan. 9-12, Las Vegas, 2015.
34. Faisal Amjad\*, Mainak Chatterjee, Omar Nakhila\*, Cliff C. Zou, "An Evolutionary Game Theoretic Framework for Coexistence in Cognitive Radio Networks", in *IEEE Global Conference on Signal and Information Processing (GlobalSIP)*, Atlanta, Georgia, Dec. 3-5, 2014.
35. Graham Fleener\*, Cliff C. Zou, Jason Eddy, "Cybersecurity Impacts of a Cloud Computing Architecture in Live Training", in *Interservice/Industry Training, Simulation and Education Conference (I/ITSEC)*, Dec. 1-5, 2014, Orlando, USA.
36. Xiaobin Tan, Zifei Zhou, Cliff Zou, Yukun Niu, Xin Chen, "Copyright Protection in Named Data Networking", in *International Conference on Wireless Communications and Signal Processing (WCSP)*, Hefei, China, Oct., 2014.
37. Faisal Amjad\*, Mainak Chatterjee, Cliff C. Zou, "Inducing Cooperation for Optimal Coexistence in Cognitive Radio Networks: A Game Theoretic Approach", in *IEEE Military Communications Conference (MILCOM)*, Baltimore, Oct. 6-8, 2014.
38. Roberto Alberdeston\*, Erich Dondyk\*, Cliff C. Zou, "Click-Tracking Blocker: Privacy Preservation by

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- Disabling Search Engines' Click-Tracking", in *IEEE GLOBECOM*, Dec. 2014.
39. Jianguy Zheng, Xiaobin Tan, Cliff C. Zou, Yukun Niu, Jin Zhu, "A Cloaking-Based Approach to Protect Location Privacy in Location-Based Services", to appear in *33rd Chinese Control Conference (CCC)*, Nanjing, China, July 28-30, 2014.
  40. Baber Aslam\*, Faisal Amjad\*, Cliff C. Zou, "PMTR: Privacy-enhancing Multilayer Trajectory-based Routing Protocol for Vehicular ad hoc Networks", *IEEE Military Communications Conference (MILCOM)*, San Diego, Nov. 18-20, 2013.
  41. Faisal Amjad\*, Baber Aslam\*, Cliff C. Zou, "Reputation Aware Collaborative Spectrum Sensing for Mobile Cognitive Radio Networks", *IEEE Military Communications Conference (MILCOM)*, San Diego, Nov. 18-20, 2013.
  42. Faisal Amjad\*, Baber Aslam\*, Cliff C. Zou, "DS3: A Dynamic and Smart Spectrum Sensing Technique for Cognitive Radio Networks Under Denial of Service Attack", *IEEE Globecom*, Atlanta, Dec. 9-13, 2013. (Acceptance rate: 37.0%)
  43. \*Erich Dondyk, Cliff C. Zou, "Denial of Convenience Attack to Smartphones Using a Fake Wi-Fi Access Point," in *10th Annual IEEE Consumer Communications and Networking Conference (CCNC)*, Las Vegas, Jan. 11-14, 2013, pp. 164-170.
  44. \*Faisal Amjad, \*Baber Aslam, Cliff C. Zou, "Transparent Cross-Layer Solutions for Throughput Boost in Cognitive Radio Networks," in *10th Annual IEEE Consumer Communications and Networking Conference (CCNC)*, Las Vegas, Jan. 11-14, 2013, pp. 580-586.
  45. Rung-Ching Chen, Wei-Lung Chang, Chia-Fen Shieh, Cliff C. Zou, "Using Hybrid Artificial Bee Colony Algorithm to Extend Wireless Sensor Network Lifetime," *Third International Conference on Innovations in Bio-Inspired Computing and Applications (IBICA)*, Sept. 26-28, 2012. pp. 156-161.
  46. \*Steven Zittrower, Cliff C. Zou, "Encrypted Phrase Searching in the Cloud," *IEEE Global Communications Conference (GLOBECOM)*, Dec. 3-7, 2012. pp. 764-770.
  47. \*Baber Aslam, \*Faisal M. Amjad, Cliff C. Zou, "Optimal Roadside Units Placement in Urban Areas for Vehicular Networks," in *17th IEEE Symposium on Computers and Communications (ISCC)*, Turkey, Jul. 1-4, 2012. pp. 423-429.
  48. \*Jim Bardgett, Cliff C. Zou, "nSwitching: Virtual Machine Aware Relay Hardware Switching to improve intra-NIC Virtual Machine Traffic", in *IEEE International Conference on Communications (ICC)*, Ottawa, Canada, Jun. 10-15, 2012. pp. 2700-2705.
  49. Huy D. Truong\*, Christopher F. Turner, Cliff C. Zou, "iCAPTCHA: The Next Generation of CAPTCHA Designed to Defend Against 3rd Party Human Attacks", to appear in *IEEE International Conference on Communications*, (ICC), Kyoto, Japan, Jun. 5-9, 2011.
  50. Soyoung Park, Baber Aslam\*, Cliff C. Zou, "Long-term Reputation System for Vehicular Networking based on Vehicle's Daily Commute Routine", in *8th Annual IEEE Consumer Communications and Networking Conference (CCNC)*, Las Vegas, Jan. 9-12, 2011. (Acceptance ratio: 95/305 = **31.1%**)
  51. Baber Aslam\*, Cliff C. Zou, "One-way-linkable Blind Signature Security Architecture for VANET", in *8th Annual IEEE Consumer Communications and Networking Conference (CCNC)*, Las Vegas, Jan.



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- 9-12, 2011. (Acceptance ratio: 95/305 = **31.1%**)
52. Corey McCall\*, Branden Maynes\*, Cliff C. Zou, Ning Zhang. "RMAIS: RFID-based Medication Adherence Intelligence System", in *32nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Buenos Aires, Argentina, Aug.31-Sept. 4, 2010, pp. 3768–3771.
  53. Baber Aslam\*, Lei Wu\*, Cliff C. Zou. "PwdIP-Hash: A Lightweight Solution to Phishing and Pharming Attacks", in *IEEE International Symposium on Network Computing and Applications (NCA)*, 15-17 July, 2010, pp. 198-203.
  54. Peter Matthews\*, Cliff C. Zou. "Scene Tagging: Image-Based CAPTCHA Using Image Composition and Object Relationships", in *ACM Symposium on Information, Computer and Communications Security (ASIACCS)*, Beijing, China, 13-16 Apr. 2010, pp. 345-350. (6-page short paper, Acceptance ratio: 38/166=**23%**)
  55. Baber Aslam\*, Cliff C. Zou. "Distributed Certificate and Application Architecture for VANETs", *IEEE Military Communications Conference (MILCOM)*, pp. 1-7, Boston, Oct. 18-21, 2009.
  56. Soyoung Park\*, Baber Aslam\*, Damla Turgut, Cliff C. Zou. "Defense against Sybil Attack in Vehicular Ad-Hoc Network based On Roadside Units Support", *IEEE Military Communications Conference (MILCOM)*, pp. 1-7, Boston, Oct. 18-21, 2009.
  57. Baber Aslam\*, Ping Wang\*, Cliff C. Zou. "Pervasive Internet Access by Vehicles through Satellite Receive-only Terminals", *International Conference on Computer Communications and Networks (ICCCN)*, pp. 1-6, San Francisco, Aug. 2-6, 2009. (Acceptance ratio: 114/387 = **29.5%**)
  58. Ping Wang\*, Lei Wu\*, Baber Aslam\*, Cliff C. Zou. "A Systematic Study on Peer-to-Peer Botnets", *International Conference on Computer Communications and Networks (ICCCN)*, pp. 1-8, San Francisco, Aug. 2-6, 2009. (Acceptance ratio: 114/387 = **29.5%**)
  59. Sherri Sparks\*, Shawn Embleton\*, Cliff C. Zou. "A Chipset Level Network Backdoor: Bypassing Host-Based Firewall & IDS", to appear in *Proceedings of ACM Symposium on Information, Computer and Communications Security (ASIACCS)*, pp. 125-134, Sydney, Australia, 10-12 Mar 2009. (Acceptance ratio: 33/147 = **22.5%**)
  60. Baber Aslam\*, Ping Wang\*, Cliff C. Zou. "An Economical, Deployable and Secure Vehicular Ad hoc Network", in *Proceedings of IEEE Military Communications Conference (MILCOM'08)*, pp. 1-7, San Diego, November 17-19, 2008.
  61. Shawn Embleton\*, Sherri Sparks\*, Cliff C. Zou. "SMM Rootkits: A New Breed of OS Independent Malware", in *Proceedings of 4th International Conference on Security and Privacy in Communication Networks (SecureComm)*, Istanbul, Turkey, Sept. 22-25, 2008. (Acceptance ratio: 26/123=**21%**)
  62. Soyoung Park\*, Cliff C. Zou. "Reliable Traffic Information Propagation in Vehicular Ad-Hoc Networks," *IEEE Sarnoff Symposium*, Apr. 28-30, NJ, 2008 (invited paper).
  63. Sherri Sparks\*, Ryan Cunningham\*, Shawn Embleton\*, Cliff C. Zou. "Automated Vulnerability Analysis: Leveraging Control Flow for Evolutionary Input Crafting", *23rd Annual Computer Security Applications Conference (ACSAC)*, p. 477-486, Miami Beach, Florida, Dec. 10-14, 2007. (Acceptance ratio: 40/191=**21%**) **Best Student Paper Award**

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### Curriculum Vitae

64. Jerome Harrington\*, Corey Kuwanoe\*, Cliff C. Zou. "A BitTorrent-Driven Distributed Denial-of-Service Attack", *3rd International Conference on Security and Privacy in Communication Networks (SecureComm)*, Nice, France, Sept. 17-20, 2007. (Acceptance ratio 31/119=**26%**)
65. Ping Wang\*, Sherri Sparks\*, and Cliff C. Zou, "An Advanced Hybrid Peer-to-Peer Botnet", *USENIX Workshop on Hot Topics in Understanding Botnets (HotBots)*, Cambridge, MA, April 10th, 2007. (Acceptance ratio: 11/32=**34.4%**)
66. Jingfei Kong, Cliff C. Zou, and Huiyang Zhou, "Improving Software Security via Runtime Instruction-Level Taint Checking", *Workshop on Architectural and System Support for Improving Software Dependability (ASID)*, October, 2006.
67. Cliff C. Zou and Ryan Cunningham\*. "Honey-pot-Aware Advanced Botnet Construction and Maintenance," in the *International Conference on Dependable Systems and Networks (DSN)*, June 25-28, Philadelphia, 2006 (Acceptance ratio: 34/187=**18.2%**).
68. David Dagon, Cliff C. Zou, and Wenke Lee. "Modeling Botnet Propagation Using Time Zones," in *Proceedings of 13th Annual Network and Distributed System Security Symposium (NDSS)*, p. 235-249, Feb. 2-5, 2006. San Diego, CA, U.S. (Acceptance ratio: 17/127 = **13.4%**).
69. Cliff C. Zou, Nick Duffield, Don Towsley, and Weibo Gong. "Adaptive Defense Against Various Network Attacks," in *Proceedings of SRUTI: Steps to Reducing Unwanted Traffic on the Internet*, p. 69-75, July 7-8, 2005. Boston, MA, U.S. (Acceptance ratio: 13/35=**37.1%**).
70. Cliff C. Zou, Don Towsley, Weibo Gong, and Songlin Cai. "Routing Worm: A Fast, Selective Attack Worm based on IP Address Information," in *Proceedings of 19th ACM/IEEE/SCS Workshop on Principles of Advanced and Distributed Simulation (PADS'05)*, p. 199-206, June 1-3, 2005. Monterey, CA, U.S. (**Best Paper Runner-up**, Acceptance ratio: 22/46=**48%**).
71. Cliff C. Zou, Don Towsley, and Weibo Gong. "Email Worm Modeling and Defense," in *Proceedings of 13th International Conference on Computer Communications and Networks (ICCCN'04)*, p. 409-414, Oct. 11-13, 2004. Chicago, IL, U.S. (**Best Paper Runner-up**, Acceptance ratio: 73/207=**35.3%**).
72. Cliff C. Zou, Lixin Gao, Weibo Gong, and Don Towsley. "Monitoring and Early Warning for Internet Worms," in *Proceedings of 10th ACM Conference on Computer and Communication Security (CCS'03)*, p. 190-199, Oct. 27-31, 2003. Washington DC, U.S. (Acceptance ratio: 35/253=**13.8%**).
73. Cliff C. Zou, Weibo Gong, and Don Towsley. "Worm Propagation Modeling and Analysis under Dynamic Quarantine Defense," in *Proceedings of ACM/CCS Workshop on Rapid Malcode (WORM'03)*, p. 51-60, Oct. 27, 2003. Washington DC, U.S. (Acceptance ratio: 10/25=**40%**).
74. Cliff C. Zou, Weibo Gong, and Don Towsley. "Code Red Worm Propagation Modeling and Analysis," in *Proceedings of 9th ACM Conference on Computer and Communication Security (CCS'02)*, p. 138-147, Nov. 18-22, 2002. Washington DC, U.S. (Acceptance ratio: 27/153=**17.6%**).

### Invited Presentations

Guest lecture entitled "Introduction of NSF Project: Online Digital Forensics and Labs", Florida A&M University, March 1, 2021.

Invited talks entitled "Modeling, Analysis, and Mitigation of Internet Worm Attacks":

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- AT&T Labs Research, Florham Park, NJ, December 9, 2003
- CS Dept. Colloquium, Worcester Polytechnic Institute (WPI), MA, January 16, 2004
- College of Computing, Georgia Institute of Technology, GA, October 11, 2005
- University of Science & Technology of China, January 2006

Invited talks entitled “The Next Generation of Botnet Attacks”:

- University of Massachusetts, Amherst, January 22, 2009.
- University of Science and Technology of China, China, Apr. 27, 2010.

Invited talk entitled “Research in malware detection and software vulnerability analysis”:

- Cyber Security Conference @ UCF (Mar. 15<sup>th</sup>, 2014).

Invited talk entitled “Wi-Fi Networking Security in the Age of Mobile Devices and Internet-of-Things”:

- University of Science & Technology of China, Jun. 12, 2016

## **TEACHING**

### **Courses taught in recent years**

| Course Number & Section | Course Title                                | Semester /year | # of Students | Student Evaluation: Overall Effectiveness | Student Evaluation: Department Mean |
|-------------------------|---|----------------|---------------|---|-------------------------------------|
| CIS6395.0V01            | Incident Response Technologies              | Fall 20        | 19            | <b>4.87</b>                               | 4.03                                |
| CIS6395.0V61            | Incident Response Technologies              | Fall 20        | 80            | <b>4.68</b>                               |                                     |
| CNT5410L.0R01           | Cyber Operation Lab                         | Spring 20      | 7             | <b>5.00</b>                               | 3.98                                |
| CNT5410L.0V61           | Cyber Operation Lab                         | Spring 20      | 11            | <b>4.14</b>                               |                                     |
| CAP6135.0R01            | Malware and Software Vulnerability Analysis | Spring 20      | 26            | <b>4.54</b>                               | 3.98                                |
| CAP6135.0V61            | Malware and Software Vulnerability Analysis | Spring 20      | 30            | <b>4.40</b>                               |                                     |
| CIS6395.0R01            | Incident Response Technologies              | Fall 19        | 26            | <b>4.68</b>                               | 3.97                                |
| CIS6395.0V61            | Incident Response Technologies              | Fall 19        | 74            | <b>4.69</b>                               |                                     |
| CNT5410L.0R01           | Cyber Operation Lab                         | Spring 19      | 10            | <b>4.75</b>                               | 3.99                                |
| CNT5410L.0V61           | Cyber Operation Lab                         | Spring 19      | 8             | <b>5.00</b>                               |                                     |
| CAP6135.0R01            | Malware and Software Vulnerability Analysis | Spring 19      | 31            | <b>4.48</b>                               | 3.99                                |
| CAP6135.0V61            | Malware and Software Vulnerability Analysis | Spring 19      | 54            | <b>4.32</b>                               |                                     |
| CIS6395.0R01            | Incident Response Technologies              | Fall 18        | 21            | <b>4.4</b>                                | 3.96                                |
| CIS6395.0V61            | Incident Response Technologies              | Fall 18        | 61            | <b>4.57</b>                               |                                     |
| CNT5410L.0R01           | Cyber Operation Lab                         | Spring 18      | 9             | <b>4.5</b>                                | 3.90                                |
| CNT5410L.0V61           | Cyber Operation Lab                         | Spring 18      | 3             |   |                                     |
| CAP6135.0R01            | Malware and Software Vulnerability Analysis | Spring 18      | 23            | <b>4.42</b>                               | 3.90                                |
| CAP6135.0V61            | Malware and Software Vulnerability Analysis | Spring 18      | 52            | <b>4.38</b>                               |                                     |
| CIS6395.0R01            | Incident Response Technologies              | Fall 17        | 30            | <b>4.26</b>                               | 3.88                                |
| CIS6395.0V61            | Incident Response Technologies              | Fall 17        | 66            | <b>4.44</b>                               |                                     |
| CNT5410L.0R01           | Cyber Operation Lab                         | Spring 17      | 15            | 3.38                                      | 3.86                                |
| CNT5410L.0V61           | Cyber Operation Lab                         | Spring 17      | 15            | <b>4.57</b>                               |                                     |
| CAP6135.0R01            | Malware and Software Vulnerability Analysis | Spring 17      | 37            | <b>4.40</b>                               | 3.86                                |
| CAP6135.0V61            | Malware and Software Vulnerability Analysis | Spring 17      | 74            | <b>4.31</b>                               |                                     |
| CIS6395.0R01            | Incident Response Technologies              | Fall 16        | 22            | <b>4.67</b>                               | 3.88                                |
| CIS6395.0V61            | Incident Response Technologies              | Fall 16        | 36            | <b>4.76</b>                               |                                     |
| CNT5410L                | Cyber Operation Lab                         | Spring 16      | 15            | 3.25                                      | 3.89                                |
| CAP6135.0R01            | Malware and Software Vulnerability Analysis | Spring 16      | 34            | <b>4.33</b>                               | 3.89                                |

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|              |   |           |    |             |      |
|--------------|---|-----------|----|-------------|------|
| CAP6135.0V61 | Malware and Software Vulnerability Analysis | Spring 16 | 58 | <b>4.74</b> |      |
| CDA6530.0R01 | Performance Models of Computers & Networks  | Fall 15   | 43 | <b>4.75</b> | 3.93 |
| CDA6530.0V61 | Performance Models of Computers & Networks  | Fall 15   | 18 | <b>4.20</b> |      |
| CNT4704.0R01 | Analysis Computer Communication Networks    | Fall 15   | 35 | <b>4.45</b> | 3.93 |
| CNT4704.0V61 | Analysis Computer Communication Networks    | Fall 15   | 61 | <b>4.37</b> |      |

### **MS Thesis and Ph.D. Dissertation Students**

*Graduated:*

**Ping Wang: Ph.D.** graduated in Dec. 2010. Working in Symantec Inc., Lake Mary, FL.

**Baber Aslam: Ph.D.** graduated in Spring 2012. Working as an assistant professor in National University of Sciences and Technology (NUST), Parkistan.

**Faisal Amjad: Ph.D.** graduated in May 2015. Working as an associate professor in National University of Sciences and Technology (NUST), Parkistan.

**Omar Hachum: Ph.D.** graduated in May 2018. Working in an industry company.

**Afraa Attiah: Ph.D.** graduated in May 2018. Working as an assistant professor at College of Computing and Information Technology, King Abdulaziz University, Jeddah, Saudi Arabia.

**Hossein Rezaeighaleh: Ph.D.** graduated in Dec. 2020. Working in an industry company.

**Haiou Xiang: MS.** graduated in August 2007.

**Erich Dondyk: MS.** graduated in May 2014.

*Current:*

**Roy Laurens:** current PhD (CS program).

**Raghu Avula:** current PhD (CpE program)

**Anne Tall:** current PhD (CpE program, Co-advised with Dr. Jun Wang)

**Ibrahim Alharbi:** current PhD (CS program, Co-advised with Dr. Yan Solihin)

**Abdulmajeed Alghamdi:** current PhD (CpE program)

**Mohammed Alkhwaiter:** current PhD (CpE program)

**Edward Amoruso:** current PhD (CpE program)

**Lan Luo:** current PhD (CS program, Co-advised with Dr. Xinwen Fu)

**Bryan Pearson:** current PhD (CS program, Co-advised with Dr. Xinwen Fu)

**Mnassar Alyami:** current PhD (CS program, Co-advised with Dr. Yan Solihin)

### **Undergraduate Honors in the Major (HIM) Thesis Students**

**Corey McCall:** graduated in Fall 2010.

**Erich Dondyk:** graduated in Spring 2012.

### **PROFESSIONAL ACTIVITIES**

- Senior Member of IEEE
- Program Co-Chair:
  - Second IEEE LCN workshop on network security, 2006.
  - 5th IEEE International Conference on Malicious and Unwanted Software (Malware), 2010.

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- IEEE International Workshop on Cyberspace Safety and Security (CSS), 2011.
- Local Arrangement Chair or Co-Chair:
  - ACM Conference on Computer and Communication Security (CCS), 2020.
  - EAI International Conference on Security and Privacy in Communication Networks (Securecomm), October 2019.
  - ACM/IEEE International Conference on Internet of Things Design and Implementation (IoTDI), April 2018.
  - IEEE International Conference on Cloud Engineering (IC2E), April 2018.
  - ACM Multimedia Conference, 2014.
  - 11th International Conference on Ubiquitous Computing (UbiComp), 2009.
  - IEEE International Conference on Network Protocols (ICNP), 2008.
  - IEEE/ACM Symposium on Architectures for Networking and Communications Systems (ANCS), 2007.
- Conference Technical Program Committee Member:
  - 2020: ICDCN, WoWMoM, SPTM, SciSec, FutureTech, SocialSec, SecureComm, Blockchain, BSC, IEMCON, HotICN, ICC, UEMCON
  - 2019: WoWMoM, SocialSec, SciSec, FutureTech, DSIT, IEMCON, Malcon, CloudNet
  - 2018: WoWMoM, Securecomm, SciSec, CloudNet, IEMCON, Inscript, Malware
  - 2017: WoWMoM, DCNET, TrustCom, Malware, Securecomm, Inscript
  - 2016: ICC, ICC, DCNET, WoWMoM, Securecomm, FutureTech, Malcon, Inscript
  - 2015: ICDCN, ICC, WoWMoM, DCNET, TrustCom, MALCON, SecureComm, Inscript
  - 2014: ICDCN, DCNET, WoWMoM, Globecom, SMPE, NSS, DHSS, STA, CIACS, ICCVE, TrustCom, Inscript, WCSP
  - 2013: NSS, GLOBECOM, WoWMoM, STA, ICC, DCNET, TrustCom, FutureTech, INTERNET, ICCVE, Inscript, NCIA
  - 2012: ICC, WoWMoM, DCNET, NPC, STA, GLOBECOM, INTERNET, Future Tech, Malware, ICCVE
  - 2011: Malware, SecureComm, Trustcom, CSA, DCNET, WoWMoM, ICCCN, GLOBECOM, STA
  - 2010: STA, ICPADS, Milcom, MMM-ACNS, Trustcom, IWCMC, ICC, NSS
  - 2009: IWCMC, CHINACOM, NSS, PACCF, SecureComm, Malware
  - 2008: SecureComm, NSS, Malware
  - 2007: GLOBECOM, ICSS,
  - 2006: WORM
- Conference Session Chair:
  - EAI International Conference on Security and Privacy in Communication Networks

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(SecureComm) 2019.

- IEEE International Conference on Blockchain (Blockchain) 2019.
- IEEE Global Communications Conference (Globecom) 2017.
- IEEE Consumer Communications & Networking Conference (CCNC) 2013.
- ACM ASIA Conference on Information, Computer and Communications Security (AsiaCCS) 2010.
- International Conference on Security and Privacy in Communication Networks (SecureComm), 2008.
- International Swarm Intelligence & Other Forms of Malware Workshop (Malware), 2008.
- 4th Workshop on Rapid Malcode (WORM'06), 2006.

### **Other External Service**

- **NSF Panelist** on SaTC EDU panel, February 23-24, 2021.
- **NSF Panelist** on SaTC Small - Wired Networks Panel (P161595), April 21-22, 2016.
- **NIH Panelist** on NIH Small Business Innovation Research grant applications, Feb. 2014.
- **NSF Panelist** on NeTS Small Security Panel (P111391), April 4-5, 2011.
- I served as Judge in UCF Student Scholar Symposium on March 30-31, 2021.
- I served as Judge in UCF Graduate Research Forum on April 3, 2012; April 1, 2014; April 5, 2016; April 3, 2018; April 5, 2019.
- I served as a judge for UCF Showcase of Undergraduate Research Excellence on April 3rd, 2014.
- I served as a judge for the first ArtScience Prize program for the Disney Boys & Girls Clubs on May 8th, 2014.
- I served as a judge for Florida Technology Student Association (TSA) conference for the past three consecutive years, on Mar. 1st and 2nd, 2018, Mar 1<sup>st</sup>, 2019, and Feb. 29<sup>th</sup>, 2020.
- I served as Judge for the “Florida Elementary Science Olympiad” held in May 14th, 2011 in UCF.

### **RECOGNITION AND AWARDS**

- I was interviewed by Local 9 WFTV about the effectiveness of contact tracing app on Covid-19 (April 21st, 2020).
- Our paper on Wiley Journal of Security and Communication Networks "SMM Rootkit: A New Breed of OS Independent Malware" is reported by Advances in Engineering Magazine (July 4th, 2014).
- I was interviewed by Local 6 TV News in Nov. 2013 about hacked baby monitor and how to defend against it.
- Received UCF-Teaching Incentive Program (UCF-TIP) Award, May 2013.
- Cliff Zou got “Outstanding Contribution Award” for the program co-chair work on conference Malware 2010.

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- Our undergraduate research project “Personal Medication Monitor” won the first prize (\$1500) in the *first annual UCF Inventing Entrepreneurs Innovation Competition*, Mar. 2010. It is reported by UCF News: <http://today.ucf.edu/winners-of-inaugural-innovation-competition-named/>
- Our work and paper “Honeypot detection in advanced botnet attacks” published in *International Journal of Information and Computer Security* 2010, 4(1), pp. 30-51 have been reported by *EurekaAlert!* News Service, and by *The Register* (one of the world's biggest online tech publications), respectively at:  
[http://www.eurekaalert.org/pub\\_releases/2010-02/ip-hth022610.php](http://www.eurekaalert.org/pub_releases/2010-02/ip-hth022610.php)  
[http://www.theregister.co.uk/2010/03/02/honeypot\\_anti\\_security\\_countermeasures/](http://www.theregister.co.uk/2010/03/02/honeypot_anti_security_countermeasures/)
- I provided comments about botnet attack on [WDBO-AM Radio](#) news broadcasted on 03/02/2010. The audio is at: <http://www.cs.ucf.edu/~czou/research/botnets-radio.MP3>
- Our paper in Milcom'09 reported by a conference preview article published in *IEEE communication magazine*, October 2009, page 22.
- The SMM rootkit work (paper published in Securecomm'08) was reported by *PCWorld Magazine* (05/09/2008).
- The SMM rootkit paper published in Securecomm'08 is invited for SCN journal submission as one of the best papers from the conference.
- The paper published in conference ACSAC 2007 was awarded with “**Best Student Paper Award.**”
- The research work in NDSS'06 paper "Modeling Botnet Propagation Using Time Zones" was reported by the [New Scientist Magazine](#), Mar. 4, 2006 189(2541), pg. 32.
- **Best Paper Runner-up** in conference PADS'05.
- **Best Paper Runner-up** in conference ICCCN'04.
- Interviewed by National Public Radio (NPR) on my research “dynamic quarantine of Internet worm” (by Correspondent Larry Abramson), September 2003.