Quan Chen

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Education

North Carolina State University – GPA 3.97/4.0 Raleigh, NC (2011 – Present)
Ph.D. in Computer Science (Final Defense passed: Fall 2020)

- Current research focus: Security & Privacy Implications of Web Technologies
  - Advised by Dr. Alexandros Kapravelos (Advisor webpage: https://kapravelos.com/)
- Past research: Operating System Kernel Hardening and Integrity Protection
  - Advised by Dr. Peng Ning (https://www.linkedin.com/in/pengning)

Xiamen University – GPA 3.8/4.0 Xiamen, China (2007 – 2011)
Bachelor in Computer Science

- Graduated with Honor

Experience

North Carolina State University Raleigh, NC (2011 - Present)
Graduate Research Assistant

- Thesis topic: Privacy Implications of Emerging Web Technologies
- Past project: Operating System Kernel Hardening and Integrity Protection
- Advisors: Alexandros Kapravelos (current advisor), Peng Ning (past advisor)

Brave Software San Francisco, CA (2019)
Ph.D. Intern

- Worked on research project that aim to improve user privacy on the web
- First author on a research paper, accepted at *IEEE Symposium on Security and Privacy, 2021*
  - Manuscript available as arxiv preprint: https://arxiv.org/pdf/2005.11910.pdf
- Supervisor: Peter Snyder (https://www.peteresnyder.com/)

Samsung Research America, Knox Team Santa Clara, CA (2014)
Research Intern

- Researched hardening techniques for the Linux kernel to protect against runtime tampering
- First author on a research paper, accepted at *ACM Asia Conference on Computer and Communications 2017*
  - Available from ACM: https://dl.acm.org/doi/pdf/10.1145/3052973.3053029
- Supervisor: Ahmed Moneeb Azab (https://www.linkedin.com/in/amazab)

Samsung Research America, Knox Team Santa Clara, CA (2013)
Research Intern

- Researched Linux kernel hardening techniques and deployed on production Android devices
- Patented the key designs (first author; patent granted: US9772953B2)
- Supervisor: Ahmed Moneeb Azab (https://www.linkedin.com/in/amazab)

Publications

- **Quan Chen**, Panagiotis Ilia, Michalis Polychronakis, and Alexandros Kapravelos, “Cookie Swap Party: Abusing First-Party Cookies for Web Tracking”. *In Proceedings of The Web Conference 2021 (WWW 2021)*

- Pierre Laperdrix, Oleksii Starov, **Quan Chen**, Alexandros Kapravelos, and Nick Nikiforakis, “Fingerprinting in Style: Detecting Browser Extensions via Injected Style Sheets.” *In Proceedings of the 2021 USENIX Security Symposium* (USENIX Security 2021)

- **Quan Chen**, Peter Snyder, Benjamin Livshits, and Alexandros Kapravelos, “Detecting Filter List Evasion With Event-Loop-Turn Granularity JavaScript Signatures.” *In Proceedings of the 2021 IEEE Symposium on Security and Privacy (S&P 2021)*

- **Quan Chen**, and Alexandros Kapravelos. "Mystique: Uncovering Information Leakage from Browser Extensions." *In Proceedings of the 2018 ACM SIGSAC Conference on Computer and Communications Security* (CCS 2018)

- **Quan Chen**, Gurupradsad Ganesh, Ahmed M. Azab, and Peng Ning. “PrivWatcher: Non-bypassable Monitoring and Integrity Protection of Process Privileges.” *In Proceedings of the 2017 ACM Asia Conference on Computer and Communications Security* (AsiaCCS 2017)

- Ahmed M. Azab, Peng Ning, Jitesh Shah, **Quan Chen**, Rohan Bhutkar, Gurupradsad Ganesh, Jia Ma, and Wenbo Shen. “Hypervision Across Worlds: Real-time Kernel Protection from the ARM TrustZone Secure World.” *In Proceedings of the 2014 ACM SIGSAC Conference on Computer and Communications Security* (CCS 2014)

- Ruowen Wang, Peng Ning, Tao Xie, and **Quan Chen**. "MetaSymploit: Day-One Defense against Script-based Attacks with Security-Enhanced Symbolic Analysis." *In Proceedings of the 2013 USENIX Security Symposium* (USENIX Security 2013)

Patents

- **Quan Chen**, Ahmed Azab, Peng Ning, Gurupradsad Ganesh. “Methods and Apparatus for Protecting Operating System Data”, United States Patent (US9772953B2)

Technical Skills

- **Proficiency:** C/C++, Python, JavaScript, SQL, Unix/Linux shell, Java
- **Familiarity:** ARM/x86/x64 assembly
- **Tools:** Docker, Kubernetes, PostgreSQL, MongoDB, Redis, Puppeteer, Selenium, mitmproxy
- **Operating Systems:** Linux (Debian/Redhat derivatives), Windows

Honors

- Phi Kappa Phi, North Carolina State University Chapter, Apr. 2013
- Undergraduate fellowships, Xiamen University, 2007 – 2011