

Gaukas Wang

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Education

University of Colorado Boulder <i>Electrical and Computer Engineering</i>	Boulder, CO
Bachelor of Science (B.Sc.) <i>summa cum laude</i>	2018 - 2021
Master of Science (M.Sc.)	2022 - est. 2024
Doctor of Philosophy (Ph.D.) advised by Prof. Eric Wustrow	2022 - est. 2027

Research Area/Interests

Anti-Censorship: Measure and analyze new censorship systems, build circumvention systems/solutions.	Priority
Computer Networking: Build and improve various network systems.	
Privacy: Design and implement new Privacy Enhancement Technologies.	
Cybersecurity: More general topics including Cryptography, Web security, and Software Reverse Engineering	

Selected Publications

Extended Abstract: Oscr0: One-shot Circumvention without Registration <i>M. Chen, J. Wampler, A. Alaraj, G. Wang, E. Wustrow</i>	FOCI 2024
Just add WATER: WebAssembly-based Circumvention Transports <i>E. Chi, G. Wang, J.A. Halderman, E. Wustrow, J. Wampler</i>	FOCI 2024
MRTOM: Mostly Reliable Totally Ordered Multicast <i>Z. Liu, D. Grunwald, J. Izraelevitz, G. Wang, S. Ha</i>	ICDCS 2023
Chasing Shadows: A security analysis of the ShadowTLS proxy <i>G. Wang, Anonymous, J. Sippe, H. Chi, E. Wustrow</i>	FOCI 2023
Acuerdo: Fast Atomic Broadcast over RDMA <i>J. Izraelevitz, G. Wang, R. Hanscom, K. Silvers, T.S. Lehman, G. Chockler, A. Gotsman</i>	ICPP 2022

Selected Projects

W.A.T.E.R.: WebAssembly Transport Executable Runtime <i>Next-generation engine for WebAssembly-based network transport protocols</i>	Since 2023
TLS/QUIC Fingerprinting <i>Fingerprinting TLS and QUIC connections through Deep Packet Inspection (DPI)</i> <ul style="list-style-type: none">clienthellod A TLS ClientHello and QUIC Initial Packet parser for fingerprinting purposesuTLS Low-level access TLS ClientHello mimicry library allowing low-level access to TLS HandshakeuQUIC Low-level access QUIC Initial Packet mimicry library allowing low-level access to QUIC HandshakeTLSFingerprint.io Online museum for collected TLS client fingerprints on a network tap at CU Boulderquic.TLSFingerprint.io Online museum for collected QUIC client fingerprints on a network tap at CU Boulder	Since 2021
Common Vulnerabilities and Exposures <i>Individual contributions to the CVE® Program</i> <ul style="list-style-type: none">CVE-2021-36539 Unbound File Access vulnerabilities in Canvas LMS by <i>Instructure, Inc.</i>CVE-2021-28681 DTLS Man-in-the-Middle(MITM) risks in pion/webrtc by <i>Pion</i>	

Working Experience

Graduate Student Researcher <i>University of Colorado Boulder</i>	Censorship, Cybersecurity, Network <i>Aug 2022 - Present</i>
Fullstack Software Engineer <i>Intelepeer Cloud Communications LLC</i>	C++, Javascript, PHP, Python, SQL <i>Aug 2021 - June 2022</i>
Temporary Researcher <i>University of Colorado Boulder, with Prof. Eric Wustrow and Psiphon, Inc.</i>	Network, Censorship <i>July 2021 - Apr 2022</i>
Undergraduate Research Assistant (Independent Study) <i>University of Colorado Boulder, with Prof. Eric Wustrow</i>	Network, Censorship <i>Jan 2021 - May 2021</i>
Undergraduate Research Assistant <i>University of Colorado Boulder, with Prof. Joe Izraelevitz</i>	Distributed Systems, Network, RDMA <i>Apr 2020 - Apr 2021</i>

Teaching Experience

Teaching Assistant <i>University of Colorado Boulder</i>	
ECEN 4133/5133: Fundamentals of Computer Security	<i>Fall 2023</i>
ECEN 4313/5313: Concurrent Programming	<i>Fall 2020 / Fall 2022</i>
ECEN 1310: C Programming for ECE	<i>Spring 2020 / Spring 2021</i>

Awards & Other Honors

ECEE University Grad Program Support Scholarship <i>University of Colorado Boulder</i>	<i>Dec 2023</i>
ECEE Excellence Fellowship <i>University of Colorado Boulder</i>	<i>Aug 2022</i>
ECEE Outstanding Accomplishment Award <i>University of Colorado Boulder</i>	<i>May 2021</i>