

# Yiyan “Gaukas” Wang

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## EDUCATION

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### University of Colorado Boulder

*B.Sc. in Electrical and Computer Engineering with **Summa Cum Laude***

GPA: **3.93** out of 4.0

*Aug 2018 - May 2021*

## RESEARCH INTERESTS

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**Computer Engineering:** Computer Architecture, VLSI

**Computer Science:** Algorithm Optimization, Censorship Circumvention, Computer Security, Consensus Protocol, Mathematical Proof, Privacy

## RESEARCH

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### Acuerdo, Fast Broadcast over RDMA

*Co-authored with J. Izraelevitz, K. Silvers, G. Chockler, A. Gotsman*

*Expected submission Aug'21*

### MRTOM: Mostly Reliable Totally Ordered Multicast

*Co-authored with Z. Liu, D. Grunwald, J. Izraelevitz, S. Ha*

*Submitted May'21*

### Peering into the Abyss: Using WebRTC in Censorship Circumvention

*Co-authored with J. Wampler, E. Wustrow*

*In progress*

## EXPERIENCE

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### IntelPeer Cloud Communications

*Software Engineer*

Remote/Denver, CO

*Aug 2021 - Present*

- Develop, maintain and improve the Voice Service application which connects clients to the DID/TollFree infrastructure.

### Tunnel.Work

*Software Engineer, Censorship Analyst, DevOps Engineer*

Remote

*Aug 2017 - Present*

- Software Engineer: Lead the development of a *Golang* based backend server software.
- DevOps: Configure and maintain the linux server clusters to keep services running in optimal condition.

### University of Colorado Boulder

*Researcher @ Refraction Networking*

Boulder, CO

*Jan 2021 - Present*

- Analyzes WebRTC and its underlying mechanisms. Designs and develops related Go libraries.
- Integrates libraries mentioned above with a novel robust censorship circumvention technology called Conjure.

*Research Assistant @ CU-NVM, Systems Lab*

*Apr 2020 - Apr 2021*

- Conducts benchmarks on multiple distributed system software implementations.
- Improves an RDMA-based distributed framework and providing important design feedbacks to supervisor(s).

*Teaching Assistant @ Department of Electrical, Computer and Energy Engineering*

*Jan 2020 - Apr 2021*

- [ECEN 4313/5033] [CSCI 4830/7000] Concurrent Programming:  
Conduct *Code Reviews* and *Debug Sessions* for complex issues in multi-threading programs.

### Sarus Inc (prev. EmergenTek.net)

*Embedded Software/Firmware DevOps Engineer*

Boulder, CO

*Aug 2020 - Apr 2021*

- Senior Software Engineer: Conduct Code Review and Debug Sessions for a complex distributed embedded system.
- DevOps: Administrate the version control system for code base, implement and maintain Continuous Integration.

## SELECTED PROJECTS

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<b>TranspoRTC</b>   <i>Golang, WebRTC</i>	July 2021
• A pluggable network transport implemented based on WebRTC datachannel.	
<b>CloudVending</b>   <i>Python, Quart, MySQL, Jinja2</i>	May 2021
• Building an open-source online vending system with simplicity and high programmability.	
<b>WinProtocolHandler</b>   <i>Rust, WinAPI</i>	Jan 2021
• An attempt trying to simplify the Windows URI Scheme handling/management process.	
<b>Seed2SDP</b>   <i>Golang, WebRTC</i>	Jan 2021
• A seed-based SDP generator which simplify the signal process for WebRTC Protocol.	
<b>Chia-On-S3</b>   <i>Shell</i>	May 2021
• Farm your Chia plots using Wasabi or any other S3-compatible service as storage!	
<b>psrecord plus</b>   <i>Python</i>	May 2021
• Implemented Disk I/O record for psrecord, a well-known utilis for system resource consumption visualization.	
<b>PlaySync</b>   <i>Python, Flask, PostgreSQL, Jinja2</i>	Jan 2021
• A cross-platform Playlist Synchronization/Transfer Tool build with Flask-based Web Interface.	

## CONTRIBUTIONS, AWARDS & HONORS

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<b>CVE-2021-28681</b>   <i>pion/webrtc</i>	Mar 2021
<b>Undergraduate Outstanding Accomplishment Award</b>   <i>University of Colorado Boulder, ECEE</i>	April 2021
<b>B.Sc. Degree with Honor: Summa Cum Laude</b>   <i>University of Colorado Boulder</i>	May 2021
<b>Dean's List</b>   <i>University of Colorado Boulder</i>	2018 – 2021

## SIDE NOTES

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**Immigration Status:** F-1 visa holder, currently on Post-completion Optional Practical Training.