

# Diwen Xue

PhD Student, *University of Michigan*

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## Research Overview

My research focuses on areas where the privacy, security and availability implications of networked systems affect users in the real world. My interests include network security, Internet measurement, and censorship study. Lately, I'm also interested in building and testing censorship circumvention tools and facilitating their delivery to users located in restrictive networks.

## Education

- Ph.D in Computer Science, University of Michigan, 2020 - Present  
Advisor: Prof. Roya Ensafi
- B.A. in Computer Science, New York University, Spring 2020  
Minor in Mathematics GPA: 3.86/4.00, *magna cum laude*

## Refereed Conference Publications

- [1] **The Use of Push Notification in Censorship Circumvention**  
*Diwen Xue* and R. Ensafi  
**In: Free and Open Communications on the Internet, 2023**, (FOCI '23).
- [2] **TSPU: Russia's Decentralized Censorship System**  
*Diwen Xue*, B.Mixon-Baca, ValdikSS, A. Ablove, B. Kujath, J. Crandall, and R. Ensafi  
**In: Internet Measurement Conference 2022**, (IMC '22).
- [3] **OpenVPN is Open to VPN Fingerprinting**  
*Diwen Xue*, R. Ramesh, A. Jain, M. Kallitsis, J. Halderman, J. Crandall, and R. Ensafi  
**In: USENIX Security Symposium 2022**, (USENIX Security '22).  
**\*Award: Distinguished Paper Award Winner & First Prize Winner of the 2022 Internet Defense Prize**
- [4] **VPNalyzer: Systematic Investigation of the VPN Ecosystem**  
R. Ramesh, L. Evdokimov, *Diwen Xue*, and R. Ensafi  
**In: Network and Distributed System Security Symposium 2022**, (NDSS'22).  
**\*Award: Won First Place at the CSAW '22 Applied Research Competition.**

[5] **Throttling Twitter: An Emerging Censorship Technique in Russia**

*Diwen Xue*, R. Ramesh, ValdikSS, L. Evdokimov, A. Viktorov, A. Jain, E. Wustrow, S. Basso, and R. Ensafi

In: **ACM Internet Measurement Conference (IMC) 2021**, (IMC '21).

**Recognized as the Highest Scoring Short Paper at IMC'21**

Blogpost available at <https://censoredplanet.org/throttling>

## Speaking

### Conference Talks

- **TSPU: Russia's Decentralized Censorship System**  
IMC 2022, Nice, France, October 25, 2022.
- **OpenVPN is Open to VPN Fingerprinting**  
USENIX Security 2022, Boston, MA, August 10, 2022.
- **Throttling Twitter: An Emerging Censorship Technique in Russia**  
IMC 2021, Virtual, October 23, 2021.

## Teaching

- **Graduate Student Instructor, University of Michigan** (*Jan 2023 - Apr 2023*)  
*EECS-588 Computer & Network Security*
- **Teaching Assistant, NYU** (*May 2019 - Jan 2020*)  
*CSCI-UA 310 Basic Algorithms, CSCI-UA 480 Introduction to Computer Security*

## Broader Impact of Selected Projects

- **VPNalyzer: Crowdsourced Investigation into Commercial VPNs** (2020–present)  
I contributed to the project VPNalyzer, a crowdsourced, data-driven investigation into the commercial VPN ecosystem. Our collaboration with Consumer Reports led to a [White Paper](#) and an [article](#) on the investigation of the security and privacy aspects of VPNs running on Windows 10.
- **Investigating the Throttling of Twitter in Russia** (2021)  
I was the lead researcher for the report and IMC paper on the Throttling of Twitter in Russia, which has been highlighted by over 20 press mentions and media coverages, including [Ars Technica](#), [Meduza](#), and the front page of the [New York Times](#). The paper was highlighted in IMC 2021 as the “Highest Scoring Short Paper”.