

# Esteban Carisimo

 estcarisimo.github.io |  estcarisimo |  Esteban Carisimo

## Personal Profile

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My research interests broadly focus on Internet topology, particularly on performance, resilience, and the role of governments in shaping the Internet. I am particularly interested in studying key Internet infrastructures such as Submarine Cable Networks (SCNs), Content Delivery Networks (CDNs), Internet Exchange Points (IXPs), and Public DNS resolvers. Recently, much of my work has explored how governments influence Internet development, accessibility, and control.

## Education

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### Universidad de Buenos Aires

Doctor of Engineering

- Advisor: J.I. Alvarez-Hamelin (UBA); Co-Advisor: Amogh Dhamdhere (UC San Diego)
- Dissertation: *Internet tomography: Traffic measurement and its relationship with topology*
- Summa Cumme Laude

Buenos Aires, Argentina

Apr 2015 - Apr 2020

### Universidad de Buenos Aires

Engineering Degree in Electronics

- Diploma de Honor (*Honor for outstanding GPA*)

- Dissertation: *Network tomography: Measurements on an Internet Exchange Point*

Buenos Aires, Argentina

Mar 2009 - Dec 2014

## Appointments

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### Cloudflare

Software Engineer

- Networks Protocols Team

Austin, TX, USA

Jan 2026 - Present

### Department of Computer Science, Northwestern University

Postdoctoral Fellow

- Mentor: Fabian E. Bustamante

Evanston, IL, USA

Apr 2021 - Dec 2025

### Department of Computer Science, School of Engineering, Universidad de Buenos Aires

Assistant Professor (Spanish: Profesor Regular Adjunto)

- Tenured Teaching Appointment
- Instructor of 75.43 - Introduction to Distributed Systems

Buenos Aires, Argentina

Aug 2019 - Apr 2021

### Department of Computer Science, School of Engineering, Universidad de Buenos Aires

Head of Teaching Assistants

- 75.43 - Introduction to Distributed Systems

Buenos Aires, Argentina

Mar 2017 - Jul 2019

### CONICET (Argentina's National Scientific and Technical Research Council)

Doctoral Fellow

- Mentor: J.I. Alvarez-Hamelin

Buenos Aires, Argentina

Apr 2015 - Apr 2020

### CAIDA, San Diego Supercomputer Center, UC San Diego

Visiting Graduate Student

- Researched automatic detection of persistent congestion in the Internet.
- Mentor: Amogh Dhamdhere

La Jolla, CA, USA

Oct 2017 - Apr 2018

## Awards

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2022	<b>Best Dataset Award</b> , <i>Quantifying Nations' Exposure to Traffic Observation and Selective Tampering</i> . Passive and Active Measurement (PAM) Conference	Virtual Event
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## Publications

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† indicates mentee

### JOURNAL ARTICLES

- [J4] Take The Long Way Home - Distant Peering to the Cloud  
**Esteban Carisimo**, Mia Weaver, Paul Barford, Fabián E. Bustamante  
IEEE ToN. 2025

- [J3] Network topology facilitates internet traffic control in autocracies.  
Eda Keremoğlu, Nils B Weidmann, Alexander Gamero-Garrido, **Esteban Carisimo**, Alberto Dainotti, Alex C Snoeren  
*PNAS Nexus*. pgae069. 2024
- [J2] A First Look at the Latin American IXPs.  
**Esteban Carisimo**, Julián M. Del Fiore, Diego Dujovne, Cristel Pelsser, J. Ignacio Alvarez-Hamelin  
*SIGCOMM Comput. Commun. Rev.* pp. 18–24. 2020
- [J1] Studying the evolution of content providers in IPv4 and IPv6 internet cores.  
**Esteban Carisimo**, Carlos Selmo, J. Ignacio Alvarez-Hamelin, Amogh Dhamdhere  
*Computer Communications*. pp. 54–65. 2019

## CONFERENCE PROCEEDINGS

- [C15] En Unión y Libertad: Subnational Strategies for Hosting Government Services  
**Esteban Carisimo**, Mariano G. Beiró, Lukas De Angelis Rivas<sup>†</sup>, Mauricio Buzzone<sup>†</sup>, Fabián E. Bustamante  
*Passive and Active Measurement*, 2026, Acceptance rate 31.57% (18/57)
- [C14] Monitoring Latency on Submarine Cables: Limitations and Opportunities  
Mia Weaver, Darryl Veitch, Paul Barford, Fabián E. Bustamante, **Esteban Carisimo**,  
*Proc. of NiNES*, 2026, Acceptance rate 48.27% (28/58)
- [C13] The Aleph: Decoding DNS PTR Records With Large Language Models  
Kedar Thiagarajan<sup>†</sup>, **Esteban Carisimo**, Fabián E. Bustamante  
*ACM CoNEXT*, 2025
- [C12] Learning AS-to-Organization Mappings with Borges  
Carlos Selmo, **Esteban Carisimo**, Fabián E. Bustamante, J. Ignacio Alvarez-Hamelin  
*ACM IMC*, 2025, Acceptance rate 17.44% (15/86)
- [C11] DarkSim: A similarity-based time-series analytic framework for darknet traffic  
Max Gao<sup>†</sup>, Ricky P. K. Mok, **Esteban Carisimo**, K Claffy, Eric Li, Shubham Kulkarni and  
*ACM IMC*, 2024, Acceptance rate 21.34% (54/253)
- [C10] Of Choices and Control - A Comparative Analysis of Government Hosting  
Rashna Kumar<sup>†</sup>, **Esteban Carisimo**, Lukas De Angelis Rivas, Mauricio Buzzone, Fabián E. Bustamante, Ihsan Ayyub Qazi, Mariano G. Beiró  
*ACM IMC*, 2024, Acceptance rate 21.34% (54/253)
- [C9] Ten years of the Venezuelan crisis - An Internet perspective  
**Esteban Carisimo**, Rashna Kumar, Caleb J. Wang, Santiago Klein, Fabián E. Bustamante  
*ACM SIGCOMM*, 2024, Acceptance rate 16.94% (62/366)
- [C8] A hop away from everywhere: A view of the intercontinental long-haul infrastructure.  
**Esteban Carisimo**, Caleb J. Wang, Mia Weaver, Paul Barford, Fabián E. Bustamante  
*Proc. ACM Meas. Anal. Comput. Syst.* 2023, Acceptance rate 12.50% (10/80)
- [C7] Destination Unreachable: Characterizing Internet Outages and Shutdowns.  
Zachary Bischof, Kennedy Pitcher, **Esteban Carisimo**, Amanda Meng, Rafaek Nunes, Ramakrishna Padmanabhan, Margaret E. Roberts, Alex C. Snoeren, Alberto Dainotti  
*ACM SIGCOMM*, 2023, Acceptance rate 22.46% (73/325)
- [C6] as2org+: Enriching AS-to-Organization Mappings with PeeringDB.  
Augusto Arturi<sup>†</sup>, **Esteban Carisimo**, Fabián E. Bustamante  
*Passive and Active Measurement*, 2023, Acceptance rate 33.75% (27/80)
- [C5] Jitterbug: A new framework for jitter-based congestion inference.  
**Esteban Carisimo**, Ricky K. P. Mok, David D. Clark, Kc Claffy  
*Passive and Active Measurement*, 2022, Acceptance rate 48.39% (30/62)
- [C4] Quantifying Nations' Exposure to Traffic Observation and Selective Tampering.  
Alexander Gamero-Garrido, **Esteban Carisimo**, Shuai Hao, Bradley Huffaker, Alex C. Snoeren, Alberto Dainotti  
*Passive and Active Measurement*, 2022, Acceptance rate 48.39% (30/62)
- [C3] Identifying ASes of State-Owned Internet Operators.  
**Esteban Carisimo**, Alexander Gamero-Garrido, Alex C. Snoeren, Alberto Dainotti  
*ACM Internet Measurement Conference (IMC)*, 2021, Acceptance rate 27.55% (54/196)
- [C2] Studying the Evolution of Content Providers in the Internet Core.  
**Esteban Carisimo**, Carlos Selmo, J. Ignacio Alvarez-Hamelin, Amogh Dhamdhere  
*Network Traffic Measurement and Analysis Conference (TMA)*, 2018
- [C1] Hidden Internet Topologies Info: Truth or Myth?.  
Sofía Silva Berenguer, **Esteban Carisimo**, J. Ignacio Alvarez-Hamelin, Francisco Valera Pintor  
*Workshop on Fostering Latin-American Research in Data Communication Networks*, 2016

## PEER-REVIEWED EXTENDED ABSTRACTS AND POSTERS

- [P4] Threading the Ocean: Mapping Digital Routes Across Submarine Cables using Calypso  
Caleb J. Wang<sup>†</sup>, Ying Zhang<sup>†</sup>, Oscar Dong<sup>†</sup>, **Esteban Carisimo**, Fabián E. Bustamante, Ram Durairajan  
*Proc. of SIGCOMM Shorts*, 2025

- [P3] A hop away from everywhere: A view of the intercontinental long-haul infrastructure  
**Esteban Carisimo**, Caleb J. Wang, Mia Weaver, Paul Barford, Fabián E. Bustamante  
*Abstracts of ACM SIGMETRICS/IFIP PERFORMANCE*, 2024
- [P2] Beyond Proximity: Exploring Remote Cloud Peering  
**Esteban Carisimo**, Mia Weaver, Paul Barford, Fabián E. Bustamante  
*Proc. of SIGCOMM Posters*, 2024
- [P1] Revealing Hidden Secrets: Decoding DNS PTR records with Large Language Models  
Kedar Thiagarajan<sup>†</sup>, **Esteban Carisimo**, Fabián E. Bustamante  
*Proc. of SIGCOMM Posters*, 2024

## Software, Systems and Datasets

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### WEB SERVICES

- The Aleph** PTR-based Geolocation method <https://thealeph.ai/>
- NetCores** AS connectivity using k-core decomposition <https://netcores.fi.uba.ar>
- LaNet-vi** Large Networks Visualization using k-core decomposition <https://lanet-vi.fi.uba.ar>

### TOOLS

- Borges** AI-based AS-to-Organizations mapping tool <https://github.com/NU-AquaLab/borges>
- Jitterbug** Network Congestion Inference tool <https://www.github.com/estcarisimo/jitterbug>
- LaNet-vi** Large Networks Visualization using k-core decomposition <https://github.com/conexdat/lanet-vi>
- as2org+** Regex-based AS-to-Organizations mapping tool <https://github.com/NU-AquaLab/as2orgplus>

### DATASET

- State-Owned ASes** List of ASes of State-Owned Internet Providers <https://www.github.com/estcarisimo/state-owned-ases>

## Talks

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- [T15] The Conflicted Relationship between Governments and the Internet  
**Esteban Carisimo**  
2025, Northeastern University, Boston, MA, USA
- [T14] The Conflicted Relationship between Governments and the Internet  
**Esteban Carisimo**  
2024, Johns Hopkins University, Baltimore, MD, USA
- [T13] The Conflicted Relationship between Governments and the Internet  
**Esteban Carisimo**  
2024, University of Maryland – College Park, College Park, MD, USA
- [T12] Una decada de crisis en Venezuela: Una mirada desde la infraestructura de Internet  
**Esteban Carisimo**  
2024, LACNIC/LACNOG 2024, Asuncion, Paraguay
- [T11] Ten years of the Venezuelan crisis - An Internet perspective  
**Esteban Carisimo**  
2024, SIGCOMM 2024, Sydney, NSW, Australia
- [T10] A hop away from everywhere: A view of the intercontinental long-haul infrastructure  
**Esteban Carisimo**  
2024, AIMS-IYP UCSD, La Jolla, CA, USA
- [T9] A hop away from everywhere: A view of the intercontinental long-haul infrastructure  
**Esteban Carisimo**  
2024, SIGMETRICS, Venice, Italy
- [T8] El Dilema Digital de los Gobiernos: Entre Autonomia y Tercerizacion  
**Esteban Carisimo**  
2024, Universidad de San Andres, San Fernando, Buenos Aires, Argentina
- [T7] Unexpected Peering Connections to the Cloud: Going the distance when you don't have to  
**Esteban Carisimo**  
2023, AIMS-IYP UCSD, La Jolla, CA, USA
- [T6] Unexpected Peering Connections to the Cloud: Going the distance when you don't have to  
**Esteban Carisimo**  
2023, University of Wisconsin-Madison, Madison, WI, USA
- [T5] as2org+: Enriching AS-to-Organization Mappings with PeeringDB  
**Esteban Carisimo**  
2023, PAM, Virtual Event

- [T4] Jitterbug: A new framework for jitter-based congestion inference  
**Esteban Carisimo**  
2022, PAM, Virtual Event
- [T3] Identifying ASes of State-Owned Internet Operators  
**Esteban Carisimo**  
2021, IMC, Virtual Event
- [T2] Studying the Evolution of Content Providers in the Internet Core  
**Esteban Carisimo**  
2018, LACNOG, Rosario, Argentina
- [T1] Studying the Evolution of Content Providers in the Internet Core  
**Esteban Carisimo**  
2018, TMA, Vienna, Austria

## Press and Broader Impact

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- 2025 **ISOC Pulse**, (Blog) Mapping Who Really Runs the Internet: Introducing “Borges”
- 2024 **Academia Abierta**, (Newsletter) El dilema de los gobiernos en la era digital
- 2024 **ISOC Pulse**, (Blog) The Story of Venezuela’s Deteriorating Internet Infrastructure
- 2024 **Lawfare Daily**, (PODCAST) How Internet Infrastructure Affects Digital Repression in Venezuela
- 2024 **ISOC Pulse**, (Blog) A hop away from everywhere long-haul links in today’s Internet
- 2024 **APNIC Blog**, (Blog) A hop away from everywhere long-haul links in today’s Internet
- 2022 **APNIC Blog**, (Blog) Identifying Autonomous Systems of State-owned Internet operators

## Teaching

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### CS340 - Introduction to Computer Networking

*Northwestern University*

Instructor

Jan 2022 - Present

- Terms:
  - Fall 2024 (Enrollment: 80, CTEC: 4.64 / 6.00)
  - Fall 2023 (Enrollment: 78, CTEC: 5.04 / 6.00)
  - Fall 2022 (Enrollment: 67, CTEC: 4.83 / 6.00)
  - Winter 2022 (Enrollment: 134, CTEC: 4.20 / 6.00)
- Website: <https://northwestern-cs340.github.io/>

### 75.43 - Introduction to Distributed Systems

*Universidad de Buenos Aires*

Instructor

Jul 2019 - Apr 2021

- Semesters: S2-2020, S1-2020, S2-2019
- Equivalent to Northwestern’s CS340 - Introduction to Computer Networking

### 75.43 - Introduction to Distributed Systems

*Universidad de Buenos Aires*

Head of Teaching Assistants

Mar 2017 - Jul 2019

- Semesters: S1-2019, S2-2018, S1-2018, S1-2017
- Equivalent to Northwestern’s CS340 - Introduction to Computer Networking

## Service

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### DEPARTMENT SERVICE

#### Latin CS

*Northwestern University*

Faculty Advisor

Jan 2023 - Jun 2023

- Student organization for self-identified as Latin American/ Latinx / Hispanic.
- Temporarily invited to represent the faculty in mentoring the organization.

#### Admission Committee for the PhD in Computer Science

*Northwestern University*

Committee Member

Jan 2022 - Jan 2023

- Representing the System and Networking area.

#### Curriculum Committee of the CSE Undergraduate Program

*Universidad de Buenos Aires*

Faculty Representative

Jun 2019 - Apr 2021

- Co-governed board composed of faculty (3), graduate (2), and student (1) members

### CONFERENCE COMMITTEES AND JOURNAL REVIEWS

#### General Chair

- PAM 2024

## **Publicity Chair**

- ACM IMC 2025

## **Program Committee Member**

- 2026: ACM IMC, ACM CoNEXT, PAM
- 2025: ACM IMC, ACM CoNEXT, PAM, ACM SIGMETRICS
- 2024: ACM IMC, TMA
- 2023: ACM IMC, PAM
- 2022: PAM, ACM IMC (Only Poster Session)

## **External Reviewer**

- ACM/IEEE Transaction on Networking (ToN)
- ACM SIGCOMM Computer Communications Review (CCR)

## **Mentoring**

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### **PHD STUDENTS**

1. **Rashna Kumar.** Mentor. Northwestern University. *Mar 2021 - Present*
2. **Caleb J. Wang.** Mentor. Northwestern University. *Sep 2023 - Present*
3. **Kedar Thiagarajan.** Mentor. Northwestern University. *Sep 2023 - Present*

### **MASTER STUDENTS OR EQUIVALENT**

1. **Bruno de Cruz Ricciardi.** Research Assistant Mentor (w/ Mariano G. Beiró). Universidad de San Andres. *Oct 2024 - Mar 2025*
2. **Santiago Torres.** Research Assistant Mentor (w/ Mariano G. Beiró). Universidad de San Andres. *Oct 2024 - Present*
3. **Marcos Piotto.** Research Assistant Mentor (w/ Mariano G. Beiró). Universidad de San Andres. *Oct 2024 - Present*
4. **Ignacio Schuemer.** Research Assistant Mentor (w/ Mariano G. Beiró). Universidad de San Andres. *Oct 2024 - Present*
5. **Mauricio Buzzone.** Final Project Advisor. Universidad de Buenos Aires. *Oct 2023 - Nov 2024*
6. **Lukas De Angelis Riva.** Final Project Advisor. Universidad de Buenos Aires. *Oct 2023 - Nov 2024*
7. **Santiago Klein.** Final Project Advisor. Universidad de Buenos Aires. *Jan 2023 - Sep 2023*
8. **Nicolas Aguerre.** Final Project Advisor. Universidad de Buenos Aires. *Jan 2023 - Sep 2023*
9. **Raghul Ravi.** Final Project Advisor. Northwestern University. *Sep 2022 - Jun 2023*
10. **Aman Khalid.** Final Project Advisor. Northwestern University. *Jun 2022 - Dec 2022*
11. **Cecilia Hortas.** Final Project Advisor. Universidad de Buenos Aires. *Sep 2021 - Dec 2022*
12. **Camila Bojman.** Final Project Advisor. Universidad de Buenos Aires. *Sep 2021 - Dec 2022*
13. **Manuel Ruiz Echazu.** Final Project Advisor. Universidad de Buenos Aires. *Sep 2021 - Aug 2022*
14. **Tomas Botalla.** Final Project Advisor. Universidad de Buenos Aires. *Sep 2021 - Aug 2022*
15. **Augusto Arturi.** Master's Thesis Advisor. Universidad de Buenos Aires. *Sep 2020 - Aug 2021*
16. **Rodrigo Zapico.** Final Project Advisor. Universidad de Buenos Aires. *Sep 2020 - Jun 2021*
17. **Martín Errázquin.** Final Project Advisor. Universidad de Buenos Aires. *Sep 2020 - Jun 2021*
18. **Sofía Morseletto.** Master's Thesis Advisor. Universidad de Buenos Aires (joint w University of Luxembourg). *Jan 2019 - Apr 2020*

## **Languages**

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**English** Proficient

**Spanish** Native

**Italian** Fluent

## **References**

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**References available upon request.**