

Esteban Carisimo

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Personal Profile

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. My work also explores network congestion and the strategies governments employ to deliver content and provide Internet access and transit.

Education

Universidad de Buenos Aires

[Buenos Aires, Argentina](#)

Doctor of Engineering

Apr 2015 - Apr 2020

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

Universidad de Buenos Aires

[Buenos Aires, Argentina](#)

Engineering Degree in Electronics

Mar 2009 - Dec 2014

- GPA: 3.60 (8.15/10)
- Diploma de Honor (*Honor for outstanding GPA*)
- Dissertation: *Network tomography: Measurements on an Internet Exchange Point*

Appointments

Department of Computer Science, Northwestern University

[Evanston, IL, USA](#)

Postdoctoral Fellow

Apr 2021 - Present

- Mentor: Fabian E. Bustamante

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

[Buenos Aires, Argentina](#)

Adjunct Professor

Aug 2019 - Apr 2021

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

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

[Buenos Aires, Argentina](#)

Head of Teaching Assistants

Mar 2017 - Jul 2019

- 75.43 - Introduction to Distributed Systems

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

[Buenos Aires, Argentina](#)

Doctoral Fellow

Apr 2015 - Apr 2020

- Mentor: J.I. Alvarez-Hamelin

CAIDA, San Diego Supercomputer Center, UC San Diego

[La Jolla, CA, USA](#)

Visiting Graduate Student

Oct 2017 - Apr 2018

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

Awards

2022 **Best Dataset Award**, *Quantifying Nations' Exposure to Traffic Observation and Selective Tampering*. Passive and Active Measurement (PAM) Conference

[Virtual Event](#)

Publications

† *indicates mentee*

JOURNAL ARTICLES

- [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

- [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

- [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
- [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. 2024
- [C7] as2org+: Enriching AS-to-Organization Mappings with PeeringDB.
Augusto Arturi[†], **Esteban Carisimo**, Fabián E. Bustamante
Passive and Active Measurement, 2023, Cham
- [C6] 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
- [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, Cham
- [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, Cham
- [C3] Identifying ASes of State-Owned Internet Operators.
Esteban Carisimo, Alexander Gamero-Garrido, Alex C. Snoeren, Alberto Dainotti
ACM Internet Measurement Conference (IMC), 2021, New York, NY, USA
- [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, New York, NY, USA

PEER-REVIEWED EXTENDED ABSTRACTS AND POSTERS

- [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[†], **Esteban Carisimo**, Fabián E. Bustamante
Proc. of SIGCOMM Posters, 2024

Software, Systems and Datasets

SYSTEMS

Splash Submarine Cable Failure Detection [splash.aqualab.cs.northwestern.edu](https://github.com/estcarisimo/splash)

TOOLS

Jitterbug Network Congestion Inference tool <https://www.github.com/estcarisimo/jitterbug>
as2org+ 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

- [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] as2org+: Enriching AS-to-Organization Mappings with PeeringDB
Esteban Carisimo
2023, PAM, Virtual Event
- [T6] 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
- [T5] 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
- [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

- 2024 **APNIC Blog**, (Invited) A hop away from everywhere long-haul links in today's Internet
- 2022 **APNIC Blog**, (Invited) Identifying Autonomous Systems of state-owned Internet operators

Teaching

CS340 - Introduction to Computer Networking

Northwestern University

Instructor

Jan 2022 - Present

- Terms:
 - Fall 2024 (Enrollment: 80, CTEC:)
 - 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

DEPARTMENT SERVICE

Latin CS

Northwestern University

Faculty Advisor

Jan 2023 - Jun 2023

- Student organization for self-identified as Latin American/ Latinx / Hispanic.
- Temporary 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.

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

CONFERENCE COMMITTEES AND JOURNAL REVIEWS

General Chair

- PAM 2024

Program Committee Member

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

External Reviewer

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

Mentoring

MASTER STUDENTS OR EQUIVALENT

1. **Mauricio Buzzone**. Advisor. Universidad de Buenos Aires. *Oct 2023 - Present*
2. **Lukas De Angelis Riva**. Advisor. Universidad de Buenos Aires. *Oct 2023 - Present*
3. **Santiago Klein**. Advisor. Universidad de Buenos Aires. *Jan 2023 - Sep 2023*
4. **Nicolas Aguerre**. Advisor. Universidad de Buenos Aires. *Jan 2023 - Sep 2023*
5. **Raghul Ravi**. Advisor. Northwestern University. *Sep 2022 - Jun 2023*
6. **Aman Khalid**. Advisor. Northwestern University. *Jun 2022 - Dec 2022*
7. **Cecilia Hortas**. Advisor. Universidad de Buenos Aires. *Sep 2021 - Dec 2022*
8. **Camila Bojman**. Advisor. Universidad de Buenos Aires. *Sep 2021 - Dec 2022*
9. **Manuel Ruiz Echazu**. Advisor. Universidad de Buenos Aires. *Sep 2021 - Aug 2022*
10. **Tomas Botalla**. Advisor. Universidad de Buenos Aires. *Sep 2021 - Aug 2022*
11. **Augusto Arturi**. Advisor. Universidad de Buenos Aires. *Sep 2020 - Aug 2021*
12. **Rodrigo Zapico**. Advisor. Universidad de Buenos Aires. *Sep 2020 - Jun 2021*
13. **Martín Errázquin**. Advisor. Universidad de Buenos Aires. *Sep 2020 - Jun 2021*
14. **Sofía Morsetto**. Advisor. Universidad de Buenos Aires (joint w University of Luxembourg). *Jan 2019 - Apr 2020*

Languages

English Proficient

Spanish Native

Italian Fluent

References available upon request.