Esteban Carisimo

✉ esteban.carisimo@northwestern.edu | ⌂ estcarisimo.github.io | estcarisimo | Esteban Carisimo

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. Recently, much of my work has explored how governments influence Internet development, accessibility, and control.

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 Cumme Laude

Universidad de Buenos Aires — *Buenos Aires, Argentina*
Engineering Degree in Electronics — *Mar 2009 - Dec 2014*
- 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*
Assistant Professor (Spanish: Profesor Regular Adjunto) — *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

[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[†], Mauricio Buzzone[†], 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[†], **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[†], Ricky P. K. Mok, **Esteban Carisimo**, k Claffy, Eric Li, Shubham Kulkarniand
ACM IMC, 2024, Acceptance rate 21.34% (54/253)

[C10] Of Choices and Control - A Comparative Analysis of Government Hosting
Rashna Kumar[†], **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[†], **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[†], Ying Zhang[†], Oscar Dong[†], **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†, **Esteban Carisimo**, Fabián E. Bustamante
Proc. of SIGCOMM Posters, 2024

Software, Systems and Datasets

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

[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

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

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

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.

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

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

English	Proficient
Spanish	Native
Italian	Fluent

References

References available upon request.