

Loqman Salamatian

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Github : [Burdantes](#)



Education

- Fall 2020- (Expected) **Columbia University - Ph.D. Candidate in Computer Science, Network and Systems**, with Ethan Katz-Bassett, Vishal Misra and Dan Rubenstein.
- Spring 2026
- 2018-2020 **Sorbonne Université - Master of Mathematics and Applications**, Campus UPMC.
- 2016-2017 **The University of Hong Kong (HKU) - Bachelor of Mathematics**.
Exchange Semester
- 2015-2017 **Université du Luxembourg - Bachelor of Mathematics**.
Graduation June 2017 with Honors (Mention Bien)
- 2014-2015 **École Polytechnique Fédérale de Lausanne (EPFL) - Bachelor of Mathematics**.
Validation of the Propédeutique Year
- 2013 **International Option Baccalaureate in Science and Mathematics**.
Lycée International de Ferney-Voltaire
With Honors (Mention Bien)

Experience

- Jun. 2018 – **Research Associate**, *Géode Research Center*.
Present Cyber-Strategy, BGP, Geopolitics, Geography of Cyberspace, Visualization
- Jun. 2024 – **Student Researcher (hosted by Phillipa Gill)**, *Google*.
Dec. 2024 Internet Measurement
- Sep. 2020 – **Case Officer - Data Scientist**, *Cyber Peace Institute*.
Jan. 2021 Data Science, Network Forensics
- Jun. 2019 – **Research Associate (hosted by Alberto Dainotti)**, *UCSD – CAIDA*.
Sep. 2019 Topology Analysis, BGP, Internet Measurement, Mathematical Modeling
- Sep. 2017 – **Research Associate (hosted by Dali Kaafar)**, *CSIRO, Sydney, Australia*.
Jun. 2018 Privacy, BGP, Network Theory, Discrete Geometry, Ricci Curvature, Complex Networks
- Jan. 2017 – **Research Associate (hosted by German Castigniani)**, *SNT, Luxembourg City, Luxembourg*.
Jun. 2017 Autonomous Driving, Pattern Recognition, Statistical Machine Learning
- May 2016 – **Research Intern (hosted by Sue Moon)**, *KAIST UNIVERSITY, Daejeon, Korea*.
Sep. 2016 Game Theory, Mean-Field Analysis, Cyber-Insurance
- May 2014 – **Research Officer**, *Société Européenne de l'Internet*.
Sep. 2014 Author for the blog *Lois des réseaux* on *lemonde.fr* (France's largest newspaper).



Grants and Fellowships Awarded

- Sept 2023 **Best of CCR**.
- Aug 2023 **Research Highlight in CACM**.
- Oct. 2022 **ACM IMC Travel Grant**, Nice - France.
- July 2022 **ACM Sigmetrics Travel Grant**, Mumbai - India.
- April 2021 **RACI Grant - RIPE**, *Mapping Connectivity and the Digital Space in Central Asia*, with Louis Pétiinaud and Kévin Limonier.
https://labs.ripe.net/author/gergana_petrova/raci-funding-in-2021-planning-and-projects/

- Sept. 2020 **Columbia, Dean's Fellowship**, awarded for a year.
<https://www.cs.columbia.edu/2020/students-with-fellowships-2020/>
- Dec. 2019 **Web Mapping Challenge SYNAPSE**, *Intelligence Campus Challenge Grant*, Laureate with Cassini, with Kévin Limonier, David Ansellem, Kavé Salamatian, Frédéric Douzet.
<https://www.defense.gouv.fr/actualites/challenge-synapse-deux-laureats>
- April 2019 **RACI Grant - RIPE**, *Geopolitics of routing, What RIPE tells us of geography and power : a methodological approach (Post Soviet Case Studies)*, RIPE NCC Days Moscow and MENOG Beyrouth, with Louis Pétiinaud.

Pre-prints and Publications in English

In Preparation / Under Review

- 2025 *CDN-scale detection of large shared IP addresses* — Vasilis Giotsas, **Loqman Salamatian**, Marwan Fayed. In preparation for **ACM IMC 2026**.
- 2025 *The Roads Not Taken : A Study in Facility and Peering Selection (FROST)* — **Loqman Salamatian**, Dan Rubenstein, Vishal Misra, Ethan Katz-Bassett. In preparation for **ACM SIGMETRICS 2026**.
- 2025 *HERMES : Repurposing User-Driven Speed Tests to Monitor the Internet* — **Loqman Salamatian**, Kevin Vermeulen, Dave Choffnes, Ethan Katz-Bassett, Phillipa Gill. Under review at **USENIX NSDI 2026**.
- 2025 *Matisse : Visualizing Measured Internet Latencies as Manifolds* — Stephen Jasina, **Loqman Salamatian**, Scott Anderson, Paul Barford, Mark Crovella, Walter Willinger. In preparation for **NINES**.

Accepted

- 2025 *The Internet as Sisyphus : Repeating Measurements, Missing Causes* — **Loqman Salamatian**. Accepted to **ACM HotNets 2025**.
- 2025 *A Breath of Fresh Air : Visualizing How Networks "Breathe"* — Stephen Jasina, **Loqman Salamatian**, Paul Barford, Mark Crovella, Walter Willinger. Accepted to **ACM HotNets 2025**.
- 2025 *Unveiling and Engaging with the Humans of Networking Research* — Nova Ahmad, **Loqman Salamatian**¹. Accepted to **ACM HotNets 2025**.

Published

- 2024 *Toward Applying Quantum Computing to Network Verification* — Kahlil Dozier, Justin Beltran, Kylie Berg, Hugo Matousek, **Loqman Salamatian**, Ethan Katz-Bassett, Dan Rubenstein. Published in **ACM HotNets 2024**.
- 2024 *What's in the Dataset? Unboxing the APNIC User Populations* — **Loqman Salamatian**, Todd Arnold, Vasilis Giotsas, Calvin Ardi, Matt Calder. Published in **ACM IMC 2024**.
- 2024 *MetAScritic : Reframing AS-Level Topology Discovery as a Recommendation System* — **Loqman Salamatian**, Kevin Vermeulen, Italo Cunha, Vasilis Giotsas, Ethan Katz-Bassett. Published in **ACM IMC 2024**.
- 2024 *Analysis of False Negative Rates for Recycling Bloom Filters (Yes, They Happen!)* — Kahlil Dozier, **Loqman Salamatian**, Dan Rubenstein. Published in **ACM SIGMETRICS 2024**.
- 2024 *Modeling Average False Positive Rates of Recycling Bloom Filters* — Kahlil Dozier, **Loqman Salamatian**, Dan Rubenstein. Accepted at **IEEE INFOCOM 2024**.
- 2023 *The Central Problem with Distributed Content : Common CDN Deployments Centralize Traffic in a Risky Way* — Kevin Vermeulen, **Loqman Salamatian**, Sang Hoon Kim, Matt Calder, Ethan Katz-Bassett. Published in **ACM HotNets 2023**.
- 2023 *Who are the IPv4 Squatters?* — **Loqman Salamatian**, Jiangchen Zhu, Todd Arnold, Italo Cunha, Ethan Katz-Bassett, Matt Calder. Published in **ACM SIGCOMM CCR 2023**. 🏆 **Best of CCR Award**.
- 2023 *A Manifold View of Connectivity in the Private Backbone Networks of Hyperscalers* — **Loqman Salamatian**, Scott Anderson, Joshua Matthews, Paul Barford, Mark Crovella, Walter Willinger. Published in **Communications of the ACM**.
- 2022 *iGDB : Connecting the Physical and Logical Layers of the Internet* — Scott Anderson, **Loqman Salamatian**, Zachary Bischof, Alberto Dainotti, Paul Barford. Published in **ACM IMC 2022**.
- 2021 *Curvature-based Analysis of Network Connectivity in Private Backbone Infrastructures* — **Loqman Salamatian**, Scott Anderson, Joshua Matthews, Paul Barford, Mark Crovella, Walter Willinger. Published in **ACM SIGMETRICS 2022**. 🏆 **Selected as a Research Highlight in Communications of the ACM**.
- 2020 *Measuring the Fragmentation of the Internet : The Case of the Border Gateway Protocol (BGP) during the Ukrainian Crisis* — Frédéric Douzet, Louis Pétiinaud, **Loqman Salamatian**, Kévin Limonier, Kavé Salamatian. Published in **IEEE CyCon 2020**.
- 2019 *The Geopolitics Behind the Routes Data Travel : A Case Study of Iran* — **Loqman Salamatian**, Frédéric Douzet, Kavé Salamatian, Kévin Limonier. Published in **Journal of Cybersecurity**.

- 2018 *Monitoring the Internet through Riemannian Geometry* — **Loqman Salamatian**, Dali Kaafar, Kavé Salamatian. ArXived in 2018.

Pre-prints and Publications in French :

- 2019 Développer une approche géopolitique via le numérique : le cas de l'influence médiatique russe sur le segment francophone de Twitter. with Colin Gérard, Guilhem Marotte (**Third author**) *Published in Espace Politique*
- 2019 Une approche géopolitique du routage des données, le rôle de la topologie d'Internet dans les territoires en conflit en Ukraine with Louis Pétiinaud (**Second Author**) *Published in Espace Politique*

Services

- 2025 **Non-paper Session Organizer : Internet Visualization Exhibit (IVE)**, ACM SIGCOMM'25, with Paul Barford.
- 2025 **Shadow PC Member**, ACM IMC'25.
- 2025 **Hackathon Co-Organizer**, ACM IMC'25.
- 2022 **Shadow PC Member** — **Columbia**, ACM IMC'22.

Teaching

- Jan. 2021 - **Course Assistant for CSEEW6180**, Professor : Vishal Misra, **Modeling Performance Evaluation**,
2022 Grading, Writing Homeworks and Finals, Recitations.

Mention in Press and Blog

- May 2022 **Financial Times**, *Russian forces usurp Ukrainian internet infrastructure in Donbas*, <https://www.ft.com/content/969ac0a8-c0bf-4114-9029-7f75e7895845>.
- Jan 2022 **Medium Blog**, *Dynamic Visualization and Analytics for Cybersecurity — Project Genesis*, <https://medium.com/kineviz/dynamic-visualization-and-analytics-for-cybersecurity-project-genesis-2279e8c16e1a>.
- Nov. 2019 **Le Monde**, *Internet coupé en Iran : « Le niveau de sophistication de ce blocage est une première »*, https://www.lemonde.fr/pixels/article/2019/11/20/internet-coupe-en-iran-le-niveau-de-sophistication-de-ce-blocage-est-une-premiere_6019883_4408996.html.
- July 2018 **Le Monde**, *Cyberespace : la guerre mondiale des données*, https://www.lemonde.fr/international/visuel/2018/07/23/cyberespace-la-guerre-mondiale-des-donnees_5334901_3210.html?