Fabrício Martins Mazzola

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Work Permission	EU and Brazil		

Personal Profile

I am a PhD candidate with over 7 years of combined experience in research and software engineering. I am a very hands-on, motivated person that is always keen to learn new things. I am experienced in handling, processing and analyzing huge amounts of data, researching and advancing knowledge in new topics, working and leading people, and implementing features for web systems. I am looking for job opportunities in the industry in which I can both help directly improve people's live, by helping improve the company's products, and develop myself personally and professionally.

Education

2019-Now **Ph.D. of Computer Science** (Computer Networks, Internet Measurements, Internet routing)

@ UFRGS, Brazil

Collaborations: Queen Mary University of London (UK) and University of Waikato (NZ)

Antecipited graduation date - March 2023

2014-2018 **Bachelor of Science (Computer Science)**

@ UFRGS, Brazil

Third of the class GPA: 8,97/10

Final Project title: A Decade of Backbone Evolution of the Brazilian Academic Network: observations from the routers perspective

Key Competencies and Skills

- **Programming Languages:** Python (Advanced), C++ (Intermediate), C (Intermediate), Javascript (Intermediate)
- **Tools:** Git (Advanced), Matplotlib (Advanced), LaTeX (Advanced), React (Beginner), Node.js (Beginner)
- **CS skills:** Algorithms, Data structures, OOP, Scientific programming, Big data manipulation
- **Computer network:** IXP, Remote Peering, Routing, BGP, TCP/IP, SDN, Open vSwitch, OpenFlow
- **Networking tools:** Traceroute, Ping, Scamper, Whois, RIPE Atlas
- **Languages:** Portuguese (Native), English (Fluent), Spanish (Beginner), Dutch (Beginner), German (Beginner)

Work Experience

2022-Now Principal researcher @ LACNIC FRIDA Remote Peering Funded Project, Brazil

- **Proposed contributions** To analyze the deployment and evolution of Remote Peering on the Latin American region. We will perform active measurements and generate helpful analysis to network operators in the region to help improve traffic engineering.
- **Tech** Python, Git, Matplotlib, Scamper

2018-2019 Software Engineer / Researcher @ Brazilian Academic Network (RNP), Brazil

- **Contributions** Processed and analyzed 11 years of router configuration from more than 30 backbone routers of the Brazilian Academic Network to identify the relationship between configuration changes and network infrastructure events.
- **Main outputs** Online portal with all the analysis available to network operators from the Brazilian Academic Network to help them identify management challenges in security, congestion, and infrastructure planning.
- **Tech** Python, RANCID, Grafana, TimescaleDB, PostgreSQL, Plotly, Shell, Git

2017-2018 Software Engineer / Researcher @ Brazilian Academic Network (RNP), Brazil

- **Contributions** Processed and analyzed network data (e.g., sFlow, router configuration, syslog) from the Brazilian Academic Network and helped the development of a web portal containing the analysis.
- **Main outputs** Web portal system that collects and analyze data from existing tools on RNP backbone and provides analysis to help network operators on operations management, traffic engineering, and network planning.
- **Tech** Python, Django, Plotly, Shell, Git

2015-2017 Researcher @ National Council for Scientific and Technological Development (CNPq), Brazil

- **Contributions** Developed a performance evaluation methodology to measure the latency impact of adding, modifying, and removing OpenFlow rules and applied it to SDN switches with distinct memory architectures.
- **Main outputs** Discovered a previously unknown poor performance behavior of Open vSwitch when deleting OpenFlow rules and published a full paper detailing the research work..
- **Tech** Python, OpenFlow, Open vSwitch, RYU, Shell, Git, LaTeX.

Publications

2022 On the Latency Impacts of Remote Peering. Full paper. In PAM 2022

2019 Are You Really There? Analyzing the Deployment of Remote Peering in the Brazilian IXP Ecosystem. Poster. In IMC 2019, The Netherlands

2019 A Decade of Backbone Evolution of the Brazilian Academic Network:
observations from the perspective of the routers.
Poster. In PAM 2019, Chile

2018 It's About Time: Analyzing Flow Table Update Latency in SDN Switch Architectures.
Full paper. In SBRC, Brazil.