

**MIT PhD student designing fast, principled datacenter networks systems for AI & latency-sensitive workloads.****Education**

- 2020 - present **MIT** (EECS PhD), Cambridge, MA. Expected graduation date: February 2025.  
Advisors: Profs. Manya Ghobadi and Muriel Médard.  
Research focuses on principled design, modelling and implementation of job schedulers and networking systems for ML inference queries, and online, latency-sensitive applications.  
Classes: Computer Networks, Randomized algorithms, Information theory, Principles of digital communication. Minor in Music technology.
- 2018 - 2020 **Stanford University** (EE M.Sc.), Stanford, CA.  
Communication and Networking track. Classes include Building an Internet Router (P4/NetFPGA), Performance Engineering of Computer Systems & Networks, Crypto. and Blockchain, Computer Systems Architecture, Machine Learning, Digital Comms (Intro and Advanced), Wireless Comms, Information Theory, Linear Dynamic Algebra, Convex Optimization, Fourier Series, and Device Fabrication (IC and MEMS).
- 2015 - 2018 **École Polytechnique** (Diplôme d'Ingénieur, 2018, EE MSE, 2019 - Cycle Ingénieur), Palaiseau, France.  
Third year: Master of Science & Engineering in EE. Classes includes Networking, Info. Theory, Signal Processing, IC and VLSI design.  
First year & second year electives: Computer Science, Fundamental Physics, Fluid Dynamics, Big Data Processing.
- 2013 - 2015 **Lycée Louis le Grand** (CPGE), Paris, France. Majored in Mathematics and Physics with a minor in Chemistry (PC).

**Research Projects**

- 2024 - present **Reactive Congestion Control for Datacenter Traffic** *Consulting Researcher, Microsoft*  
Part-time project, supervised by Ahmad Ghalayini and Abdul Kabbani. Study on the benefit of reactive CC schemes for datacenters.
- 2024 - present **Network Coding Congestion Control** *Research Assistant, HiPerSys & NCRC Groups, MIT*  
PhD project, supervised by Profs. Manya Ghobadi and Muriel Médard. Study on the benefits of in-network network coding.
- 2020 - 2024 **Stochastic Job Scheduling for Latency-Sensitive Online Queries** *Research Assistant, HiPerSys & NCRC Groups, MIT*  
PhD project, supervised by Profs. Manya Ghobadi and Muriel Médard. Analysis, design, and implementation of optimal a stochastic job scheduling approach based on queueing theoretic techniques for ML inference tasks. **Publication** (1<sup>st</sup> author) published at CloudNet'24.
- 2018 - 2019 **Bio-haptic Feedback Systems for Stress Relief** *Research Assistant, PWT lab, Stanford University*  
Semester project, supervised by Prof. Pablo Paredes. Design and conduct of studies for a haptic bio-feedback device embedded in car seats to help relieve commuters' stress. Side project co-designing an entrainment display system to subliminally generate relaxing brainwaves in users lead to a **Poster** at the 4th Symposium on Computing and Mental Health at CHI 2019.
- 2018 **Stateless and Load-Aware Load-Balancing for Datacenters** *Research Intern, Cisco Systems, France*  
Summer Internship, supervised by Prof. Thomas Clausen and Mark Townsley. Design and implementation of a Power of Two Choices approach to stateless load balancing. **Publication** (1<sup>st</sup> author) at the P4EU workshop at ICNP 2018 and **Patent** (US10680955B2).
- 2017-2018 **ML-Based Analysis of Care Pathways** *Group Research Project, École Polytechnique*  
Semester project, supervised by Prof. Emmanuel Bacry. ML-based anomaly detection and visualization for care pathways on nationwide medical databases.

**Professional experience**

- Fall 2024 **Teaching assistant**, Computer Networks **MIT**
- Spring 2020 **Teaching assistant**, Introduction to Internet of Things **Stanford University**
- 2019 **Hardware Engineering Intern** *Data Center Business Unit, Cisco Systems, USA*  
Signal integrity for Cisco's Data Center Switch (Nexus product line), hardware testing, and simulations (Keysight ADS).
- 2017 **Web Development Intern** **AXA Life Japan**  
Development of in-house web applications and JavaScript plugins for MyAXA (customer relation website) in a pilot agile team.
- 2015 - 2016 **Assistant Teacher** (6 months) **Lycée du Parc, Lyon, France**  
Set up and taught tutoring sessions (circa 15 hours/week) for high school and preparatory classes students in math, physics and chemistry.

**Awards and fellowships**

- 2020 Irwin Mark Jacobs and Joan Klein Jacobs **Presidential Fellowship**.
- 2018 **École Polytechnique's** research internship award.

**Community Service and Extra-Curricular activities**

- 2021 - present College radio **host and DJ**, WMBR, Cambridge
- 2018 Selected to represent **École Polytechnique** at the 2018 **French Debating Association tournament (English language)**.

**Skills & Interests**

- Languages:** **French** (mother tongue), **English** (fluent) **Spanish** (intermediate), **Japanese** (beginner), **Chinese** (beginner)
- Programming:** Currently working with Python, C++, Bash. Some previous experience with Java, P4, HTML, CSS, Scala, C. Familiar with htsim and Linux kernel module development.