

Jonatan Langlet

3rd Year PhD Candidate - Networking Systems

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Education

- 2020–Present **PhD, Networking Systems**, QUEEN MARY UNIVERSITY OF LONDON
- Researching high-speed telemetry and streaming data processing through programmable networks
 - Advisor: Dr. Gianni Antichi
- 2019–2020 **MSc, Computer Science**, KARLSTAD UNIVERSITY
- Thesis: Offloading Virtual Network Functions–Hierarchical Approach
 - Advisor: Prof. Andreas Kassler
- 2016–2019 **BSc, Computer Science**, KARLSTAD UNIVERSITY
- Thesis: Towards Machine Learning Inference in the Data Plane
 - Advisor: Prof. Andreas Kassler

Work Experience

- Mar-Oct 2022 **Research Fellow**, HARVARD UNIVERSITY
- Researching hyperscale streaming data processing systems through data plane programmability
 - Advisor: Prof. Minlan Yu
- 2020–2022 **Lab Supervisor & Teaching Assistant**, QUEEN MARY UNIVERSITY OF LONDON
- Teaching and grading in Distributed Systems
- 2019–2020 **Research & Teaching Assistant**, KARLSTAD UNIVERSITY
- Researching programmable network data planes, working with industry on 5G core networks
 - Teaching and grading in Data Structures & Algorithms
- 2011–2016 **Owner/Developer**, TANAPPS
- Sole proprietorship with a main focus on web application development
 - Installation and maintenance of a virtualization cluster for hosting clients' applications
- 2011–2013 **IT Technician**, FOUREEDGE
- Server installation/maintenance with a main focus on Linux and virtualization
 - Sysadmin consultant for clients, designing and maintaining IT environments
 - Second line helpdesk support, troubleshooting server issues

Extra Courses, Certificates, and Awards

- 2022 **Brendan Murphy Prize winner**, I was awarded the prize for my work on Direct Telemetry Access
- 2021 **NVIDIA DPU Course & Hackathon**, A crash course on a new programmable NIC
- 2020 **Xilinx Adaptive Compute PhD school**, A week-long course on FPGA development
- 2019 **Barefoot Academy BA-102**, A week-long course on programmable switches
- 2012 **ITIL Foundation Certification**
- 2011 **Cisco CCNA Discovery**

Publications

- IEEE TMC 2022 **Hybrid P4 Programmable Pipelines for 5g gNodeB and User Plane Functions**, Suneet Kumar Singh, Christian Esteve Rothenberg, **Jonatan Langlet**, Andreas Kassler, Péter Vörös, Sándor Laki, and Gergely Pongrácz
- ACM HotNets 2021 **Zero-CPU Collection with Direct Telemetry Access**, **Jonatan Langlet**, Ran Ben Basat, Sivaramakrishnan Ramanathan, Gabriele Oliaro, Michael Mitzenmacher, Minlan Yu, and Gianni Antichi
- IEEE EuroP4 2019 **Towards Neural Network Inference on Programmable Switches**, **Jonatan Langlet**, Andreas Kassler, and Deval Bhamare