

Charalampos Rotsos

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Research group:
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PROFESSIONAL APPOINTMENTS

- 2017– **Lecturer**
School of Computer and Communications
Lancaster University, UK
- 2015–2017 **Senior Research Associate**
School of Computer and Communications
Lancaster University, UK
- 2013–2015 **Research Associate**
Computer Laboratory
University of Cambridge, UK
- 2016 **Research Intern**
Stanford Research Institute
US
- 2011 **Research Intern**
Horizon Institute
Notttingham University, UK
- 2010 **Research Intern**
Deutsche Telekom
Technical University Berlin, Germany
- 2007–2009 **Research Assistant**
Department of Informatics and communications
University of Athens

EDUCATION

- 2009–2014 **PhD in Computer Science, University of Cambridge, UK**
- 2006–2007 **MSc in Data Communications, Networks and Distributed Systems, UCL, UK**
- 2001–2006 **BSc in Computer Science, University of Piraeus, Greece**

GRANTS & FELLOWSHIPS

- 2019 H2020: “Nestor“ (Not funded). Amount: £650000 PI: D. Hutchison, **Co-I:** C. Rotsos, A. Marnerides. *Lancaaster University*
- 2018 H2020 Fed4Fire+ Open Call: “LEMNOS“ (Not funded). Amount: £40000. **PI:** Rotsos, C, Co-I: A. Farshad. *Lancaaster University*
- H2020 5GinFire Open Call: “ARCADINS“ (Not funded). AMount: £40000. **PI:** Rotsos, C, M. Broadbent. *Lancaaster University*
- 2016 H2020 MC-ETN: “5G-Nordic“ (Not funded). Amount: £200000 PI: Andreas Mauthe, **Co-I: Rotsos, C.** *Lancaaster University*

AWARDS & HONORS

- 2013 Best-paper award, “Unikernels: library operating systems for the cloud“
European Network on High Performance and Embedded Architecture and Compilation.

PUBLICATIONS

CONFERENCE & JOURNALS

- 2020 H. Alshaer, N. Uniyal, K. Katsaros, K. Antonakoglou, S. Simpson, H. Abumarshoud, H. Falaki, P. McCherry, C. Rotsos, T. Mahmoodi, R. Nejabati, D. Kaleshi, D. Hutchison, H. Haas, D. Simeonidou. The UK Programmable Fixed and Mobile Internet Infrastructure: Overview, capabilities and use cases deployment. *IEEE Access* doi:[10.1109/ACCESS.2020.3020894](https://doi.org/10.1109/ACCESS.2020.3020894)
- N Hart, C Rotsos, V Giotsas, N Race, D Hutchison. λBGP: Rethinking BGP programmability. *IEEE Network and Management Symposium* doi:
- 2019 S. Simpson, A. Farshad, P. McCherry, A. Magzoub, W. Fantom, C. Rotsos, N. Race, D. Hutchison. DataPlane Broker: Open WAN control for multi-site service orchestration. *IEEE Conference on Network Function Virtualization and Software-Defined Networks*. doi:
- 2018 R Oudin, G Antichi, C Rotsos, AW Moore, S Uhlig. OFLOPS-SUME and the art of switch characterization. *IEEE Journal on Selected Areas in COmmunications*
- C. Rotsos, A. Farshad, D. King, D. Hutchison, Q. Zhou, A.J.G. Gray, C.X. Wang, S. McLaughlin. ReasoNet: Inferring network policies using ontologies. *IEEE Conference on Network Softwarization*.
- 2017 C. Rotsos, D. King, A. Farshad, J. Bird, L. Fawcett, N. Georgalas, M. Gunkel, K. Shiimoto, A. Wang, A. Mauthe, N. Race, D. Hutchison. Network service orchestration standardization: A technology survey. *Elsevier Computer Standards & Interfaces*

- D King, C Rotsos, I Busi, F Zhang, N Georgalas. Transport Northbound Interface: The Need for Specification and Standards Coordination. *International Conference on Optical Network Design and Modeling*.
- 2016 A. Chatzipapas, D. Pediaditakis, C. Rotsos, V. Mancuso, J. Crowcroft, A.W. Moore. Resolving data center power bill disputes: The energy-performance trade-offs of consolidation. *ACM Conference on Future Energy Systems*
- 2015 N. Zilberman, P.M. Watts, C. Rotsos, A.W. Moore. Reconfigurable network systems and software-defined networking. *Proceesings of the IEEE*
- C. Rotsos, G. Antichi, M. Bruyere, P. Owezarski, A.W. Moore. OLOPS-Turbo: Testing the next-generation OpenFlow switch. *IEEE ICC*
- 2015 J.H. Han, P. Mundkur, C. Rotsos, G. Antichi, N. Dave, A.W. Moore, P.G. Neumann. Blueswitch: Enabling provably consistent configuration of network switches. *ACM/IEEE Symposium on Architectures from Networking and Communications*

DEMOS & POSTERS

- 2015 C. Rotsos, G. Antichi, A. W. Moore. Enabling Performance Evaluation Beyond 10 Gbps (DEMO). *SIGCOMM 2015*
- J. H. Han, G. Antichi, N. Zilberman, C. Rotsos, A. W. Moore. An integrated environment for open-source network softwarization. *IEEE NetSoft '15*
- 2014 C. Rotsos, G. Antichi, M. Bruyere, P. Owezarski, A. W. Moore. An open testing framework for next-generation OpenFlow switches (Poster). *EWSDN '14*
- 2012 A. Chaudhry, A. Madhavapeddy, C. Rotsos, R. Mortier, A. Aucinas, J. Crowcroft, S. Probst Eide, S. Hand, A. W. Moore, N. Vallina-Rodriguez. Signposts: end-to-end networking in a world of middleboxes (DEMO). *SIGCOMM '12*
- 2011 R. Mortier, B. Bedwell, K. Glover, T. Lodge, T. Rodden, C. Rotsos, A. W. Moore, A. Koliousis, J. Sventek. Supporting novel home network management interfaces with OpenFlow and NOX. *SIGCOMM '11*

OPEN-SOURCE SOFTWARE

- 2012– **OFLOPS** – github.com/oflops-nf/oflops-sume
A benchmarking suite for OpenFlow switches.
Creator and core developer.
- 2014–2018 **Mirage Unikernel OS** – www.mirage.org
An OCaml Unikernel OS project.
OpenFlow extension developer.

- 2017– **SELENA** – selenaproject.github.io
A network emulation platform providing time dilation capabilities to improve experimentation scalability and fidelity.
Creator and main developer.

TEACHING

UNDERGRADUATE

- 2017– SCC365: Advanced Networking
Teaching research topic on computer network systems.
Module convenor (2017-2020), extensive coursework and module re-design.
School of Computer and Communications, Lancaster University
- 2016– SCC.150: Digital Systems.
Introduction to Assembly programming, C programming and debugging.
Module convenor (2020), coursework re-design.
School of Computer and Communications, Lancaster University

WORKSHOPS & SHORT COURSES

- 2019 Student wellbeing.
Series of lectures on mental wellbeing for UG students.
School of Computer and Communications, Lancaster University
- 2018 Introduction to research (networking group seminar series).
Series of introduction lectures on network and systems research methodologies.
School of Computer and Communications, Lancaster University

COMMITTEES & ADMINISTRATIVE ROLES

- 2018– Departmental committee on Wellbeing, School of Computer and Communications.
- 2018– Part-I exam office, Part-II re-sit officer.
- 2018– Postgraduate Research committee member (Networking group).
- 2017–2018 LU-Goenka SCC scheme director.

STUDENT SUPERVISION

PhD

- 2019– Abubakr Magzoub (Part-time - Co-Advising)
Lancaster University, UK
Advisor: David Hutchison

- 2019– Ahlam Althobaiti (co-Advising)
Lancaaster University, UK
Advisor: Angelos Marnerides
- 2019– Lyn Hill (co-Advising)
Lancaaster University, UK
Advisor: David Hutchison
- 2018– Willian Fantom (co-Advising)
Lancaaster University, UK
Advisor: Nicholas Race
- 2017– Alexander Jung (co-Advising)
Lancaaster University, UK
Advisor: David Hutchison
- 2017– Nicholas Hart (co-Advising)
Lancaaster University, UK
Advisor: David Hutchison, Nicholas Race

MASTER'S

- 2019–2020 James Hymes (MSci), Rebecca Yates (MSc Data Science)
Lancaaster University, UK.
- 2018–2019 Nathan Rutherford (MSci), Ammar Haseeb (MSc Data Science)
Lancaaster University, UK.
- 2017–2018 Alex Mofet (MSc Data Science)
Lancaaster University, UK.

PRESENTATIONS

- 2020 Ning Wang, **Rotsos, C.** Intent-Based Networking. *BT Thought Leadership series on Next Generation Converged Digital Infrastructure*
- 2019 S. Simpson, P. Mccherry, A. Magzoub, A. Farshad, **Rotsos, CA** WIM Plugin for DataPlane Broker (DPB) (Demo). *7th OSM hackfest*. Patras, Greece.
- 2018 **Rotsos, C.** Resilient service orchestration. *TOUCAN Industrial Schowcase* London, UK.
- 2015 N. Zilberman, G. Antichi, **Rotsos, C.** Open Hardware Networking - Tutorial. *SIGCOMM 2015* Imperial College London, UK.
- N. Zilberman, G. Antichi, **Rotsos, C.** Open Source Networking - Tutorial. *Netsoft 2015* University College London, UK.

ACADEMIC SERVICE & AFFILIATIONS

REVIEWER

IEEE Infocom (2020)

TPC for the European Workshop on SDN (EWSDN) (2012-2015)

TPC for the International Teletraffic Conference (2015)

IEEE Conference on Computer Communications and Networks (2015)

IEEE/ACM Transactions on Networking

Elsevier Computer Networks Journal

IEEE Communications Letters

IEEE Transactions on Network Service and Management