

# Jon Larrea

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<b>INTERESTS</b>	<b>Mobile Networks, Computer Networking, and Systems</b>	
<b>EDUCATION</b>	<b>Ph.D.</b> in School of Informatics at <i>The University of Edinburgh</i> Jan 2021 – Present <i>Topic:</i> Towards Future Mobile Networks: From Cloud Native Systems to Radio-Aware Networks	
	<b>MSc by Research</b> in School of Informatics at <i>The University of Edinburgh</i> Dec 2019 – Dec 2020 <i>Program:</i> ICSA (Comp. Architecture, Compilation & System Software, Networks & Communication) <i>Thesis:</i> Towards Scalable and Realistic Emulation of Mobile Radio Access Networks for Core Network Evaluation	
	<b>B.S.</b> in Polytechnic School at <i>Autonomous University of Madrid</i> Sep 2015 – Jun 2019 <i>Program:</i> Computer Science and Engineering <i>Thesis:</i> Ad hoc modular OS design for high-performance environments	
<b>WORK EXPERIENCE</b>	<b>Research Visitor</b> , Princeton/UCSD, US Jul 2023 – Dec 2023 Working with Kyle Jamieson and KC Claffy	
	<b>Research Intern</b> , Microsoft Research, Cambridge, UK Jun 2022 – Sep 2022	
	<b>Computer Communications and Networks</b> , University of Edinburgh Spring (2020, 2021 and 2022) Roles: Teaching Assistant and Marker	
	<b>AR software engineer</b> , VPULab Research Group, Madrid, Spain Apr 2019 – Aug 2019	
	<b>Malware analyst</b> , S21Sec, Madrid, Spain Sep 2018 – Dec 2018	
	<b>RESTful Services developer</b> , Knowledge Engineering Institute, Madrid, Spain Jun 2016 – Sep 2016	
<b>PUBLICATIONS</b>	Andrew Ferguson*, <b>Jon Larrea</b> * and Mahesh K. Marina, “ <i>CoreKube: An Efficient, Autoscaling and Resilient Mobile Core System</i> ”, in ACM International Conference on Mobile Computing And Networking ( <b>MobiCom’23</b> ), Oct 2023. (* <i>Co-primary authors.</i> ) <b>Jon Larrea</b> , Mahesh K. Marina and Jacobus Van der Merwe, “ <i>Nervion: A Cloud Native RAN Emulator for Scalable and Flexible Mobile Core Evaluation</i> ”, in ACM International Conference on Mobile Computing And Networking ( <b>MobiCom’21</b> ), Mar 2022. Rupendra Nath Mitra, Mohamed M. Kassem, <b>Jon Larrea</b> and Mahesh K. Marina, “ <i>CUPS Hijacking in Mobile RAN Slicing: Modeling, Prototyping, and Analysis</i> ”, in IEEE Conference on Communications and Network Security ( <b>CNS</b> ), Oct 2021. <b>Jon Larrea</b> and Antonio Barbalace, “ <i>The serverkernel operating system</i> ”, in ACM International Workshop on Edge Systems, Analytics and Networking ( <b>EdgeSys’20</b> ), Apr 2020.	
<b>PATENTS</b>	“ <i>Resource Management and Isolation in Containerized Workloads</i> ”, filed with Sanjeev Mehrotra, Xenofon Foukas, and Bozidar Radunovic in Mar 2023.	
<b>AWARDS &amp; SCHOLARSHIPS</b>	<b>SICSA Research Scholar award</b> Apr 2023 The Scottish Informatics and Computer Science Alliance (SICSA). <b>ACM Student Research Competition</b> Mar 2022 1 <sup>st</sup> place in ACM SRC at MobiCom 2021.	

<b>PhD Studentship</b> School of Informatics, The University of Edinburgh	Jan 2021 – Dec 2023
<b>MSc by Research Studentship</b> School of Informatics, The University of Edinburgh	Dec 2019 – Dec 2020
<b>Research Scholarship</b> Autonomous University of Madrid	2019
<b>Madrid Merit Scholarship</b> Community of Madrid	2018 – 2019

**SELECTED  
PROJECTS**

**CoreKube**

A cloud-native autoscalable and resilient core network architecture for 4G and 5G mobile networks.

**Nervion**

A cloud-based RAN emulator that supports the generation of control and data plane loads for 4G and 5G networks using a novel design that enables scalability and flexibility.

**Serverkernel**

Single space-address operating system for Raspberry Pi that allows the user to offload computations and get the result.

**REFERENCES**

**Mahesh K. Marina**  
**Jacobus (Kobus) Van der Merwe**