

Julien Gamba

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Bio: I am a third year PhD student at the IMDEA Network Institute in Madrid, Spain. My research interests range from traffic analysis and network measurements to practical security and privacy aspects in emerging networking technologies.

Education

- 2017 **■ M.Sc. Computer Networks, University of Strasbourg, France** (First Class Honours)
Thesis title: *Conception rules for IGP and iBGP topologies to ensure BGP correctness*
- 2015 **■ B.Sc. Computer Science, University of Strasbourg, France**

Professional Experience

- Since 2017 **■ PhD student.** IMDEA Networks Institute, Madrid, Spain
Research interests: network measurements, privacy and security, interdomain routing.
Expected graduation year: 2022.
Advisor: Narseo Vallina-Rodriguez (IMDEA Networks Institute, ICSI)
- 2017 **■ Assistant researcher.** iCube laboratory, University of Strasbourg, France (6 months)
Study of rules for the conception of IGP and iBGP topologies to ensure BGP stability and correctness in the context of route reflection.
Advisors: Cristel Pelsser and Pascal Merindol (University of Strasbourg)
- 2016 **■ Assistant researcher.** Internet Initiative Japan, Tokyo (2 months)
Study of the fragmentation of the BGP routing table by analyzing public data from the Route Views project and RIPE Routing Information Service.
Advisors: Randy Bush (IIJ) and Cristel Pelsser (University of Strasbourg)

Awards and Career Achievements

- 2020 **■ AEPD Emilio Aced Prize**, for our paper our pre-installed Android
- 2019 **■ CNIL-INRIA Privacy Protection Award**, for our paper our pre-installed Android applications
■ TMA'19, selected for the PhD school
- 2018 **■ ACM IMC'18, community contribution award** for our paper on Internet top-lists
■ TMA'18, selected for the PhD school

Community Services

- 2018 **■ ACM SIGCOMM'18**, student volunteer
■ TMA'18, shadow PC member

Personal Grants

- 2019 **■ ACM IMC'19**, student travel grant (1000€)
■ TMA'19, student travel grant (800€)
- 2018 **■ ACM SIGCOMM'18**, student travel grant (400€)
■ TMA'18, student travel grant (650€)
- 2017 **■ RIPE Academic Coordination Initiative**, full travel grant to attend RIPE 74

Projects

- **Pre-installed Android software** — the open-source nature of the Android OS makes it possible for manufacturers to ship custom versions of the OS along with a set of pre-installed apps (including third-party applications), often for product differentiation. This project aims at studying the ecosystem of pre-installed software using static and vulnerabilities analysis, to uncover the complex relationships between stakeholders and to raise user awareness about privacy risks that some of these apps create.
- **Haystack** — as the Internet becomes increasingly personalized and ubiquitous, millions of users become vulnerable to security and privacy violations inflicted by the many parties conforming the mobile ecosystem. The Haystack project aims to promote mobile transparency and illuminate unknown performance, privacy and security aspects of mobile apps using cutting-edge on-device traffic measurements through the Lumen Android app, and thus uncovering the third-party tracking ecosystem. This project is sponsored by the NSF.

■ Funded projects

Year(s)	Funding body	Award amount	Role	Project name	Award #
2018-2020	H2020	€3.3M	Researcher	GDPR Compliance Cloud Platform for Micro Enterprises (SMOOTH)	786741
2016-2019	NSF	\$1.0M	Researcher	Medium: HayStack: Fine-grained Visibility and Control of Mobile Traffic for Enhanced Performance, Privacy and Security	CNS-1564329
2016-2017	DTL	€50K	Researcher	Characterizing Indirect Privacy Leaks in Mobile Apps	

Peer-Reviewed Publications

- **Julien Gamba**, Mohammed Rashed, Abbas Razaghpanah, Juan Tapiador & Narseo Vallina-Rodriguez (2020). *An Analysis of Pre-installed Android Software*. To appear in IEEE Security and Privacy. San Fransisco, USA. **CNIL-INRIA Privacy Protection Award, AEPD Emilio Aced Prize**
<http://eprints.networks.imdea.org/id/document/4775>
- Pelayo Vallina, Álvaro Feal, **Julien Gamba**, Narseo Vallina-Rodriguez, & Antonio Fernandez-Anta (2019). *Tales from the Porn: A Comprehensive Privacy Analysis of the Web Porn Ecosystem* In ACM Internet Measurements Conference (IMC). Amsterdam, Netherlands
<http://eprints.networks.imdea.org/id/document/4848>
- Quirin Scheitle, Oliver Hohlfeld, **Julien Gamba**, Jonas Jelten, Torsten Zimmermann, Stephen Strowes, & Narseo Vallina-Rodriguez (2018). *A Long Way to the Top: Significance, Structure, and Stability of Internet Top Lists*. In ACM Internet Measurements Conference (IMC). Boston, USA. **ACM SIGCOMM Community Contribution Award**
<http://eprints.networks.imdea.org/id/document/4681>
- **Julien Gamba**, Mohammed Rashed, Abbas Razaghpanah, Narseo Vallina-Rodriguez & Juan Tapiador (2018). *An Analysis of Pre-installed Android Software*. In National Cybersecurity Research Conference (JNIC). San Sebastián, Spain.
<http://eprints.networks.imdea.org/id/document/4605>
- Pelayo Vallina-Rodriguez, **Julien Gamba**, Álvaro Feal, Narseo Vallina-Rodriguez & Antonio Fernández-Anta (2018). *This Is My Private Business! Privacy Risks on Adult Websites*. In National Cybersecurity Research Conference (JNIC). San Sebastián, Spain.
<http://eprints.networks.imdea.org/id/document/4661>
- **Julien Gamba**, Romain Fontugne, Cristel Pelsser, Randy Bush & Emile Aben (2017). *BGP Table Fragmentation: what & who?* In Francophone Meeting on Protocol Conception, Performance Evaluation and Networks Experimentation (CoRes)
<https://jgamba.eu/files/papers/2017-cores-bgp-fragmentation.pdf>

Posters

- **Julien Gamba**, Álvaro Feal & Narseo Vallina-Rodriguez (2018). *Exploring Anycast-Based Public DNS Resolvers*. In ACM Internet Measurements Conference (IMC). Boston, USA.
<http://eprints.networks.imdea.org/id/document/4709>
- Abbas Razaghpanah, **Julien Gamba**, Álvaro Feal, Narseo Vallina-Rodriguez, Mark Allman & Phillipa Gill (2018). *A Multi-Protocol Analysis of Android App's Traffic From The Edge*. In ACM Internet Measurements Conference (IMC). Boston, USA.
<http://eprints.networks.imdea.org/id/document/4706>
- Pelayo Vallina-Rodriguez, **Julien Gamba**, Álvaro Feal, Narseo Vallina-Rodriguez & Antonio Fernández-Anta (2018). *Everybody's got something to hide: Analysis of the Online Adult Ecosystem*. In ACM Internet Measurements Conference (IMC). Boston, USA.
<http://eprints.networks.imdea.org/id/document/4711>
- Álvaro Feal, **Julien Gamba**, Narseo Vallina-Rodriguez, Carmela Troncoso, Alessandra Gorla & Paolo Calciati (2018). *A Study on the Privacy Implications of Mobile Parental Control Apps*. In Open Day for Privacy, Transparency and Decentralization (OPERANDI), in conjunction with the 18th Privacy Enhancing Technologies Symposium (PETS). Barcelona, Spain
<http://eprints.networks.imdea.org/id/document/4686>
- Quirin Scheitle, Oliver Hohlfeld, **Julien Gamba**, Jonas Jelten, Torsten Zimmermann, Stephen Strowes, & Narseo Vallina-Rodriguez (2018). *A Long Way to the Top: Significance, Structure, and Stability of Internet Top Lists*. In the 8th TMA PhD School and Conference 2018. Vienna, Austria
<http://eprints.networks.imdea.org/id/document/4640>

Media impact

- **El Pais** — *I spy: How Android phones keep tabs on our every move*
https://elpais.com/elpais/2019/03/22/inenglish/1553244778_819882.html
- **Reuters** — *Study Shows Limited Control Over Privacy Breaches by Pre-Installed Android Apps*
<https://www.reuters.com/article/us-android-security-idUSKCN1R61DH>
- **The Times (UK)** — *Android apps gather user data without permission*
<https://www.thetimes.co.uk/article/android-apps-gather-user-data-without-permission-qb5hrtwgz>
- **Le Figaro** — *La collecte cachée des applications préinstallées sur Android*
<http://www.lefigaro.fr/secteur/high-tech/la-collecte-cachee-des-applications-preinstallees-sur-android-20190401>
- **TechCrunch** — *Android users' security and privacy at risk from shadowy ecosystem of pre-installed software, study warns*
<https://techcrunch.com/2019/03/25/android-users-security-and-privacy-at-risk-from-shadowy-ecosystem-of-pre-installed-software-study-warns/>
- **CPO Magazine** —
Pre-Installed Apps on Android Represent a Threat to User Privacy and Security
<https://www.cpomagazine.com/data-privacy/pre-installed-apps-on-android-represent-a-threat-to-user-privacy-and-security/>
- **ZDNet** — *Android ecosystem of pre-installed apps is a privacy and security mess*
<https://www.zdnet.com/article/android-ecosystem-of-pre-installed-apps-is-a-privacy-and-security-mess/>
- **Silicon.co.uk** — *Study Of Pre-Installed Android Software Finds Privacy 'Wild West'*
<https://www.silicon.co.uk/workspace/study-of-pre-installed-android-software-finds-privacy-wild-west-242727>
- **The Register** — *Eggheads confirm: Rampant Android bloatware a privacy and security hellscape*
https://www.theregister.co.uk/2019/05/09/android_bloatware_security/
- **TechRadar** — *Pre-installed Android apps pose huge security and privacy risks, study says*
<https://www.techradar.com/news/pre-installed-android-apps-pose-huge-security-and-privacy-risks-study-says>