

Ioannis Gasparis

SECURITY RESEARCHER · MOBILE SECURITY EXPERT

Foster City, CA, 94404

✉ ioannis@gasparis.dev | 📧 igasparis | 📧 igasparis | ioannisgasparis | 📧 Ioannis Gasparis

Experience

Google

SECURITY ENGINEER

Mountain View, CA

November 2022, Now

- Android malware hunting, analysis and detection.
- Protect users' privacy from invasive Play Store apps and SDKs.

Lookout

STAFF SECURITY INTELLIGENCE ENGINEER

San Francisco, CA

Mar. 2021 - October 2022

- Automating the discovery of Android and iOS malware via implementing state of the art static and dynamic analysis tools.
- Android and iOS Malware hunting and coverage creation.
- Research ways to discover malware on various frameworks such as Flutter, Unity and React Native.

Facebook Reality Labs

SECURITY ENGINEER

Menlo Park, CA

Nov. 2019 - Mar. 2021

- Created an automated security CI/CD pipeline for Facebook Reality Labs. The automation scanner ran various custom Android device/app related security tests (static + dynamic analysis tests).
- Performed security reviews on Android AOSP changes in the Facebook Reality Labs family of devices (Oculus and Portal).
- Responsible for Android security related education at Facebook including teaching classes as well as developing CTF Android challenges.

NowSecure

ANDROID SECURITY RESEARCHER

Chicago, IL

Jun. 2017 - Oct. 2019

- Transformed innovating thinking into actual products that contribute to the company's bottom line while staying ahead of the competition.
- Designed and implemented a state of the art fast static analysis tool with nearly 300 tests for Android/iOS in C++. Key Functionalities: emulation, support for apk/jar/aar/elf/macho/ipa files, deobfuscation, taint analysis.
- Other tools: Mobile Backend Scanner in Go, developed various Frida scripts for Android, Android malware analysis using machine learning in Go/Python and a Frida Gadget injector in Go.
- Other: Researched how Play Protect works and how an attacker can bypass it, reverse engineered/attacked various android apps, dynamically analyzed games using computer vision.

UC Riverside

GRADUATE RESEARCH ASSISTANT

Riverside, CA

Sep. 2012 - Feb. 2017

- Developed a framework in User and Kernel space that discovers/analyzes rootkits on Android devices.
- Developed a framework for flexible, fine-grained dynamic permission management on Android.
- Analyzed how android applications behave under the new fine-grained permission management policy of Android M.
- Developed an Android application with a mathematical framework that captures the impact of the encryption process on the delay experienced by a video flow, and the distortion seen by an eavesdropper.

Real Time Innovations

SECURITY RESEARCH INTERN

Sunnyvale, CA

Aug. 2015 - Mar. 2016

- Worked in the area of security and Data Distribution Service (DDS) for a patient-centric Integrated Clinical Environment (ICE).
- Integrated different versions of Secure DDS in the ICE platform. Developed and integrated various security policies, and performed different attack scenarios showing the benefits and drawbacks of each policy.

DOCOMO Innovations

RESEARCH ENGINEER INTERN

Palo Alto, CA

Mar. 2014 - Feb. 2015

- Focused on networking programmability (SDN) and traffic optimization for wireless networks.
- Responsibilities included algorithm development, network simulations, proto-typing and measurements.
- Implemented an LTE emulator (C++) over Mininet Framework and a simulator for LTE Small Cell Architectures (C++) over ns-3.

AUEB

UNDERGRADUATE RESEARCH ASSISTANT

Athens, Greece

Sep. 2010 - Sep. 2011

- Designed, implemented and evaluated an information-centric Publish-Subscribe Internet architecture (Java and C++).
- Showed how live media can be supported over that architecture by providing evaluated results tested in PlanetLab and in an emulated network over ns-3.

Education

University of California, Riverside

PH.D. IN COMPUTER SCIENCE

Riverside, CA

Sep. 2012 - Feb. 2017

- Thesis Title: Ensuring Users' Privacy and Security on Mobile Devices
- Thesis Advisor: Prof. Srikanth Krishnamurthy

- Thesis Title: Implementation of an RTFM based Pub/Sub Network Architecture
- Thesis Advisor: Prof. George Xylomenos

Publications

Figment: Fine-grained Permission Management for Mobile Apps

IOANNIS GASPARI, Z. QIAN, C. SONG, S. V. KRISHNAMURTHY, R. GUPTA, PAUL YU

INFOCOM 2019

Droid M+: Developer Support for Imbibing Android's New Permission Model

IOANNIS GASPARI, A. AQIL, Z. QIAN, C. SONG, S. V. KRISHNAMURTHY, R. GUPTA, E. COLBERT

AsiaCCS 2018

Detecting Android Root Exploits by Learning from Root Providers

IOANNIS GASPARI, ZHIYUN QIAN, CHENGYU SONG, SRIKANTH V. KRISHNAMURTHY

USENIX Security 2017

Programming Flows in Dense Mobile Environments: A Multi-user Diversity Perspective

IOANNIS GASPARI, ULAS C. KOZAT, M. OGUZ SUNAY

arXiv 2015

Resource Thrifty Secure Mobile Video Transfers on Open WiFi Networks

JOHN GASPARI, GEORGE PAPAGEORGIOU, SRIKANTH V. KRISHNAMURTHY, RAMESH GOVINDAN, TOM LA PORTA

CoNEXT 2013

Efficient Real-time Information Delivery in Future Internet Publish-Subscribe Networks

CHRISTOS TSILOPOULOS, IOANNIS GASPARI, GEORGE XYLOMENOS, GEORGE C. POLYZOS

ICNC 2013

Skills

Programming C/C++, Go, Python, Java, Bash, ARM/x86 Assembly, Javascript, SQL, \LaTeX

Frameworks Android SDK/NDK, iOS, Docker

Tools & OS Frida, radare2, JEB, IDA, GNU/Linux

Areas Mobile Security/Privacy, Malware, Reverse Engineering

Languages Greek, English

Honors & Awards

2012 **Dean's Distinguished Fellowship**, UC Riverside

Riverside, U.S.A

Blog Posts

Lookout Unearths Android Crypto Mining Scams

[HTTPS://BIT.LY/3BADFWV](https://bit.ly/3BADFWV)

Lookout

Jul. 2021

Think Twice Before Adopting Security By Obscurity in Kotlin Android Apps

[HTTP://BIT.LY/2ZRS1T6](http://bit.ly/2ZRS1T6)

NowSecure

Jul. 2019

How to Guard Against Mobile App Deep Link Abuse

[HTTP://BIT.LY/2ZV00C1](http://bit.ly/2ZV00C1)

NowSecure

Apr. 2019

Mobile App Session Replay & Its Privacy Impact

[HTTP://BIT.LY/2KWLYMV](http://bit.ly/2KWLYMV)

NowSecure

Feb. 2019

Shining a spotlight on privacy violations in children's mobile apps

[HTTP://BIT.LY/2HoQXII](http://bit.ly/2HoQXII)

NowSecure

Jan. 2019

Less than 1% of popular Android apps tested use the Google SafetyNet Attestation API

[HTTP://BIT.LY/2ZHU8DP](http://bit.ly/2ZHU8DP)

NowSecure

Aug. 2017