

ILIANA MARIA XYGKOU

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EDUCATION

- **Ph.D. in Computer Science**, Georgia Institute of Technology, U.S.A. 08/2022 – (expected) 12/2027
 - GPA: 4.0/4.0
 - Advisor: Prof. Alberto Dainotti
 - Focus: BGP routing security, programmable networks
- **M.Sc. in Computer Science**, Georgia Institute of Technology, U.S.A. 12/2025
 - GPA: 4.0/4.0
- **Diploma (Integrated MEng) in Electrical and Computer Engineering** (5-year degree), National Technical University of Athens, Greece 09/2017 – 07/2022
 - Grade: 9.66/10 (3rd/318)
 - Concentration: Informatics
 - Diploma Thesis ([Abstract](#)): “Misinformation containment in social network platforms”, supervised by Prof. S. Papavassiliou

PROFESSIONAL EXPERIENCE

- **Technical Intern**, Cisco ThousandEyes 05/2025 – 08/2025
 - Implementation of “BGP Stuck Routes Observatory” in Kotlin.
- **Graduate Research Assistant**, Georgia Institute of Technology 08/2022 – 05/2023, 01/2025 –
- **PhD Intern**, Cisco ThousandEyes 05/2024 – 08/2024
 - Project: “BGP Zombies Detection” under the guidance of Researcher A. Chariton and Prof. X. Dimitropoulos.
- **Graduate Teaching Assistant**, Georgia Institute of Technology 08/2023 – 05/2024, 08/2024 – 12/2024
 - Course: Computer Networks / Computer Networking II
 - Quizzes' design and grading
 - Deployment and support of assignments' platforms (Docker containers, VirtualBox VMs)
- **Research Intern**, Coalition Inc 05/2023 – 08/2023
 - Project “Honeypot Detection” under the guidance of Dr. S. Bell and Dr. D. Woods.
- **Technical Support Help Desk**, National Technical University of Athens 09/2021 - 08/2022
 - Resolution of technical issues of NTUA’s new educational Moodle platform, “Helios”, under the guidance of Professors P. Tsanakas and E. Sykas.

RESEARCH

- Advancement and evaluation of the [Global Routing Intelligence Platform](#) (GRIP), a BGP incident detection and monitoring tool. GRIP detects and classifies BGP incidents including misconfigurations, exact and subprefix misoriginations, as well as AS path manipulation attacks.
 - Major bugs and logical errors fixes
 - New features' and datasets' introduction, to the system's backend in Python.
- Design and implementation of MROP4, a programmable data plane framework implementing a “dynamic” network telescope. MROP4 adaptively tracks unused space of an organization’s network with configurable time and space granularity and captures only traffic directed towards unused addresses.
 - Implementation of the data plane in P4 for PSA and TNA.
 - Implementation of the control plane in Python and C++.

PUBLICATIONS

- “MROP4: A Dynamic Network Telescope”, Xygkou, I., Sojan, J. K., Rauthan, D., Zhu, F., Holterbach, T., Alcock, S., Flanagan, B., Saeed, A., Dainotti, A., *under submission to NSDI 2026*
- “A First Look into Long-lived BGP Zombies”, Xygkou, I., Chariton, A., Dimitropoulos, X., Dainotti, A., *IMC 2025*

HARD SKILLS

- **Programming languages:** Python, C++, P4, Java, Kotlin, Javascript, Prolog, SML
- **Frameworks:** Flask, Express, React
- **Operating systems:** Linux, UNIX (FreeBSD), Windows
- **Routing software:** Quagga, FRR
- **Database management systems:** ElasticSearch, MySQL, PostgreSQL, Redis
- **Distributed systems:** Apache Kafka

AWARDS AND HONORS

- **Doctoral Scholarship**, Onassis Foundation, 2023-2026
- **Honorary awards**, NTUA, 2022 & Technical Chamber of Greece, 2024
 - Third-ranked Graduate from ECE NTUA in 2022
- **Thomaidion Award**, NTUA, 2023
 - Highest academic performance in 2021-2022 among all ECE students.
- **Seeds For The Future Scholarship**, Huawei, 2021
 - As part of the “Seeds For The Future” program for students with academic excellence.

PRESENTATIONS

- **“Reviving BGP Zombies: New Insights”**
 - NANOG93 (Security Track talk). Atlanta, GA, U.S.A., February 2025.
 - RIPE89 (plenary presentation). Prague, Czechia, October 2024.
- **“Observing Trends in Internet Routing Security”**
 - RIPE89 (lightning talk). Prague, Czechia, October 2024.
 - Internet Integrity Workshop (invited talk). Prague, Czechia, October 2024.

LANGUAGES

- **English:** Proficient -- ECPE C2, 08/2015
- **German:** Upper-Intermediate -- Goethe-Zertifikat B2, 09/2021
- **Greek:** Native

VOLUNTEERING EXPERIENCE

- Volunteer as judge in *Greek National Educational Robotics Competition* hosted by *WRO Hellas* (2018, 2019)
- Volunteer in non-profit actions (cleaning forests, helping in the execution of sports events e.g., “*Greece Race for the Cure*” hosted by Hellenic Association of Women with Breast Cancer “*Alma Zois*” (2017, 2018, 2019))