ILIANA MARIA XYGKOU

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EDUCATION

- **Ph.D. in Computer Science,** Georgia Institute of Technology, U.S.A. 08/2022 –
  - GPA: 4.0/4.0
  - Advisor: Prof. Alberto Dainotti
  - Focus: BGP routing security, programmable networks

- **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

- **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 MORP4, a programmable data plane framework implementing a "dynamic" network telescope. MORP4 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++.

HARD SKILLS

- **Programming languages**: Python, C++, P4, Prolog, Javascript, Java, 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))