Ioanna Vavelidou

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EDUCATION

PhD in Electrical Engineering *Sept 2021 - Present*
Stanford University, CA

MS in Electrical Engineering *Sept 2022 - June 2024*
Stanford University, CA

Diploma in Electrical and Computer Engineering *Oct 2015 - July 2021*
(Joint BSc & MEng)
National Technical University of Athens, Greece
Advisor: Professor Nectarios Koziris, Computing Systems Laboratory
Thesis: *Efficient Shared Resource Management in Multiprocessors using Reinforcement Learning techniques*
GPA: 9.26/10 (top 3%)
Department Entrance Rank: 1st (Highest score in the National University Admission Exams, top 0.01% nation-wide)

RESEARCH EXPERIENCE

Ph.D Research Assistant *April 2022 - Present*
Stanford University, CA
Advised by Professor Caroline Trippel
Topic: *Toward Reliable and Sustainable Computing: Understanding, Detecting, and Mitigating Hardware Faults in Modern Systems*

Undergraduate Research *Dec 2019 - July 2021*
National Technical University of Athens, Greece
Thesis: *Efficient Shared Resource Management in Multiprocessors using Reinforcement Learning techniques*

INDUSTRY EXPERIENCE

PhD Student Researcher at Google DeepMind *June 2025 - Sept 2025*
Reliability of Machine Learning Workloads on Defective TPUs
PhD Student Researcher at Google LLC *October 2023 - June 2024*
Collaborated with multiple teams to devise functional tests for Silent Data Corruption detection
PhD Software Engineer Intern at Meta Platforms *June 2022 - Sept 2022*
Memory Optimizations for Machine Learning Workloads

HONORS & AWARDS

Award by the President of the Republic of Greece
For achieving the highest National University Admission score in my educational district (Attica district A')
Award and Grant by the National Technical University of Athens
For achieving the highest entrance score in my department
Award and Grant by Eurobank EFG, "The Great Moment for Education"
For achieving the highest National University Admission score in my High School

PUBLICATIONS

Ioanna Vavelidou, Subho Banerjee, Eric Liu, Mike Fuller, Subhasish Mitra, Caroline Trippel
ITHICA: Intra-Thread Instruction Checking Approach for Defect-Induced Silent Data Corruptions
ASPLOS 2026 (in submission)

Saranyu Chattopadhyay, Keerthikumara Devarajegowda, Bihan Zhao, Florian Lonsing, Brandon Alan D'Agostino, **Ioanna Vavelidou**, Vijay Deep Bhatt, Sebastian Prebeck, Wolfgang Ecker, Caroline Trippel, Clark Barrett, Subhasish Mitra
G-QED: Generalized QED Pre-silicon Verification beyond Non-Interfering

Hardware Accelerators
DAC 2023, Design Automation Conference

Hang Qiu, **Ioanna Vavelidou**, Jian Li, Evgenya Pergament, Pete Warden, Sandeep Chinchali, Zain Asgar, Sachin Katti
ML-EXRAY: Visibility into ML Deployment on the Edge
MLSys 2022, Conference on Machine Learning and Systems

SKILLS	**Languages**: English (highly proficient, Michigan ECPE C2 Degree, TOEFL), French (adequate working knowledge, Delf B2 Degree), Greek (native) **Programming Languages**: Python, C, C++, MATLAB, x86 assembly **Tools**: Jupyter, Tensorflow, PyTorch, Git, Gym, Docker, VirtualBox, Google Cloud Platform, Eclipse, Simulink, Tensorboard, Sniper Simulator, Intel PIN
GRE SCORES	GRE General Aug. 2020: Quantitative Reasoning 169/170, Verbal Reasoning 163/170, Analytical Writing 4.5/6
PROFESSIONAL MEMBERSHIPS	- ACM Member, ACM SIGARCH - Computing Research Association - Widening Participation (CRA-WP) - IEEE Member