

Post-Doctoral Position Available at University of California, San Diego and Purdue University

The position, based in San Diego, is to be filled as soon as possible with a contract period of 2 years, with the option of extension.

The Automatic Implementation of Secure Silicon (AISS) program (<https://www.darpa.mil/program/automatic-implementation-of-secure-silicon>), funded by the Defense Advanced Research Projects Agency (DARPA), aims to ease the burden of designing secure chips. To achieve this goal, one research thrust of the program focuses on automatic generation, integration and optimization of System-on-Chips (SoCs). UC San Diego and Purdue University, part of a team led by Synopsys, Inc. which also includes ARM, Inc., are researching automatic design of domain-specific SoCs with a focus on machine learning as the application domain.

The post-doctoral position will work with Professor Sujit Dey at UCSD and Professor Anand Raghunathan at Purdue University, leading a team of graduate students working on developing methodologies and tools for fast and scalable Multi-Objective (PASS: Power-Area-Speed-Security) Estimation and Optimization, enabling fast and automated mapping of neural network applications to PASS-optimized hardware-software architectures. The position will also coordinate with sponsors, coordinate the deliverables including reports, presentations and software code. Salary will be commensurate with experience.

Minimum Qualifications

- PhD in CS/CSE/ECE
- Solid background in hardware-software design for embedded systems and ASICs, and/or system-level EDA
- Solid understanding of machine learning and neural networks
- Strong research capabilities, demonstrated through a track record of publications in competitive journals or conferences
- Highly self-motivated and committed, with flexibility as well as the ability to work in and contribute to a team.

Optional Qualifications

- Experience in implementing neural networks in hardware-software architectures
- Experience with machine learning frameworks like TensorFlow and Pytorch
- Experience with large scale software development

Qualified candidates are requested to submit their application including:

- CV,
- Brief statement describing your research experience and interests,
- Official transcript of coursework and grades

by email as a single PDF document using reference in **Subject: Post Doc-AISS-UCSD-Purdue, to Theresa Lachman** tlachman@eng.ucsd.edu.

Campus Information

The University of California, San Diego is an Equal Opportunity/Affirmative Action Employer advancing inclusive excellence. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age, covered veteran status, or other protected categories covered by the UC nondiscrimination policy.