

Research Opportunities at the Technion ASIC² Research Group

In the **Technion ASIC² Research Group**, we investigate the implications of emerging technologies in Computer Architecture, VLSI Systems, and Integrated Circuit Design.

The goal of the **ASIC² Technion Research Group**, led by **Professor Shahar Kvatinsky**, is to explore novel applications of emerging technologies in different fields such as Computer Architecture, VLSI Systems, Integrated Circuit Design, and Hardware Security.

Currently, our research focuses on performing logic using memory cells to build the memristive memory processing unit (mMPU), mixed-signal circuits, RF circuits, neuromorphic computing, cytomorphic systems, deep learning accelerators, internet-of-things, and hardware security. We also develop device, circuit and architecture models and tools.

Emerging technologies, such as memristors, have new and very different properties than conventional technologies. These new properties can be exploited for more than just replacing the existing, and may enable entirely new designs.

We believe that using new materials and devices allows us to revisit the entire way modern computing systems are built.

In our research, we focus on inventing novel circuits and architectures for various applications and building non-von Neumann systems to overcome the main performance and energy limitations of modern computing systems.

ASIC² Research Group is always looking for excellent students to join the group...

Join Us!

Post-docs

If you are interested in joining our group, hold a Ph.D. in EE/CE/CS with relevant background, with a high level of written and spoken English, self-motivated, independent and creative, you are welcome to apply.

To apply contact Prof. Shahar Kvatinsky with a cover letter explaining your research interests and experience, CV, and 2-3 reference letters.

Students (from the Technion)

Our group members are students at all levels (Ph.D., M.Sc., and B.Sc.). The best way to start working in our group is to perform a research project in your undergraduate studies (regular B.Sc. project as listed in <https://asic2.group/>, research project for undergrads either as part

