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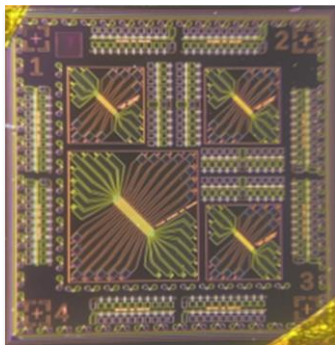


## Electrical Characterization of Memory Device

Emerging memristors are novel circuit elements, originally described as the “fourth missing circuit element” and considered today as the future of nonvolatile memory. Different memristors have been developed and simulatively characterized by the Technion’s ASIC² research group, headed by Prof. Shahar Kvatinsky.

Some of the memristor devices have been manufactured by semiconductor companies (such as Tower Semiconductor, Winbond, and Weebit) and some of them were fabricated in academia by our collaborators from universities such as Stanford, Aachen, and Arizona State.

Our target is to experimentally measure and characterize memristors and to demonstrate their functionality for novel circuits in applications such as artificial intelligence, memory, and logic.



### Project Goals:

In this project, the students will measure real memristors, test them, and demonstrate their ability to compute and store information together.

The students will:

- Gain practical experience by working with lab instruments including Probe Station
- Extract device characteristics
- Make a data analysis according to the theoretical terms

### Prerequisites:

- **Courses:** Electronic Circuits or Introduction to VLSI

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