Recently, RF switches based on phase-change materials (PCM) have emerged as promising candidates for high-performance RF switches due to their superb transmission properties, small footprint, low switching time and energy, scalability, CMOS compatibility, and non-volatility. We are currently developing the fabrication process of these devices here at the Technion facilities.

**Project Description:**

In this project, a thermoelectrical model of the indirectly heated four-terminal PCM RF switch. This model will be useful to accurately predict the behavior of these devices and to simulate large circuits with little computational power.

**Schedule:**

- Study the working principles of the PCM RF switch and thermoelectrical modeling of electronic devices.
- Development of the thermoelectrical model for the PCM RF switch using experimental measurements and fine-element simulations.
- Development of the model in Verilog-A.

**Course Requirements:** Introduction to Semiconductors and Linear Circuits

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