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I entered the Research group to attend the integrated circuit laboratory, this work is the first task on architectures for approximate circuits, more comprehensively, it is about digital circuits that normally search increase optimizations in, area, timing and power. The approximated circuits turn possible make new devices with low power consumption, and increment performance in general.

Basically, an approximate operation saves performance in many circumstances, mainly in applications that allow errors without losing its usability, how neural networks and other systems. To increase performance in digital integrated circuits using approximate operators in general you need to understand analog primitives in low level (transistorized basic systems) and to understand the digitals arithmetic blocks in high level. The first way to do this research was known in detail about arithmetic blocks, specifically, multipliers arithmetic's blocks. The knolegement in these arithmetic blocks turns easy understand the next step, approximate techniques, that uniting with precise techniques give us the tools to create new approximate architectures or use them to increase performance in other systems and digital circuits.

Uniting the contents and other works of the group as framework "MaxPy", it was possible to use these techniques in other levels the design in the digital circuits abstracting the low implementation levels of the architectures. Where finally, I am creating a new chip idea to calculate approximate multiplications with DataPath reconfigurable and enjoy all the benefits, this job is the continuation of the work that I have been doing in the lest years.