Reconfigurable Computing Group

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Type of Research Position:
• Graduate RA at the PhD level

Desired Qualifications and/or Background:
The qualified student should be familiar with digital hardware design. Some industry experience is desirable. Previous coding experience using hardware description languages is a plus.

Description of Research Project:
The Reconfigurable Computing Group (RCG) explores the use of computing devices that can change their functionality over time. These devices can be programmed by users to become any type of digital circuit. Currently, we are actively working on the use of reconfigurable computing devices, called field-programmable gate arrays or FPGAs, in data centers. FPGAs are used to accelerate machine learning algorithms and they have been shown to provide dramatically better performance than standard microprocessors. A new student would explore the security of FPGA use in data centers. We are currently actively engaged with Microsoft and Amazon on ideas related to the project.

RCG includes a diverse set of men and women interested in state-of-the-art research. Group members often interact together socially. We have close collaborations with research groups in France and Germany. There are many opportunities to study abroad.