Erik Wendt
*Feedback Control on a Red Pitaya*

If you have taken a shower or adjusted a thermostat, you have ventured into the realm of feedback control. The primary subject of control theory, an interdisciplinary field of engineering and mathematics, feedback control deals with controlling the output of dynamic systems whose output is proportional to their input. While many different types of feedback controllers exist, the most prominent type is the PID (proportional, integral, derivative) controller. My research this summer focused on the design and implementation of a feedback controller on a Red Pitaya board in order to keep the frequency of a laser stable around the atomic transitions of erbium isotopes doped in silicon.

Abby Tootell
*NJM Insurance Group: Business Intelligence and Analytics Summer Internship*

This summer, I interned in the newly-formed Business Intelligence and Analytics Department at New Jersey Manufacturers Insurance Group. Within this field of growing importance in business, I worked on projects as diverse as government reporting, metadata management, and internal reporting, while mastering several software programs.

Lunch will be available for colloquium guests DURING the presentations.