

AMO group at W&M

Professors



Irina Novikova



Eugeny Mikhailov

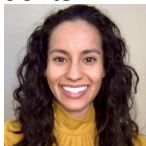


Seth Aubin

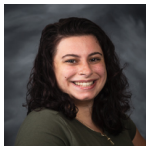
Current Students



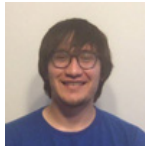
Ziqi Niu



Charris Gabaldon



Olivia Chierchio



Rob Behary



Nic DeStefano



William Miyhira

Graduated in 2022



Savannah Cuozzo



Shuangli Du



Drew Rotunno

What do we do?

AMO: Atomic, Molecular, and Optical Physics (historical name)

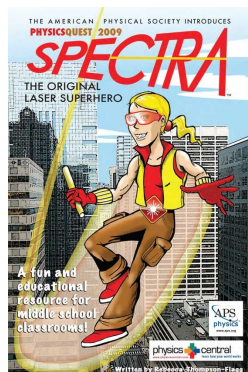
Quantum sensing

We study light-matter interaction

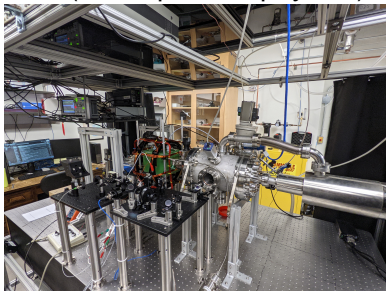
See objects -> Sense energy states -> Track quantum states ->
Control Quantum states

Where is the push?

- Precision measurements
 - New sensors
 - Tests of physics laws
- Quantum Information Science
 - Quantum computers and networks
 - Quantum sensors
- Matter manipulation
 - Atoms instead of photons



Quantum enhanced tracker in collaboration with Prof. Averett (W&M particle physics) and JLab



- VMEC grant: Aubin “Microwave tweezers”
- Aubin/TRIUMF, FrPNC: “Parity violation in francium for Standard Model tests, nuclear anapole moment”
- Mikhailov/Novikova/LSU: “Coherent control of multimode quantum optical signals via atom-mediated nonlinear interactions”
- Mikhailov/Novikova/NIST/JPL: “Vector magnetometer”