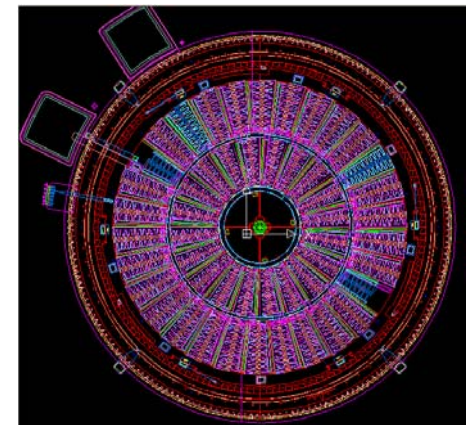
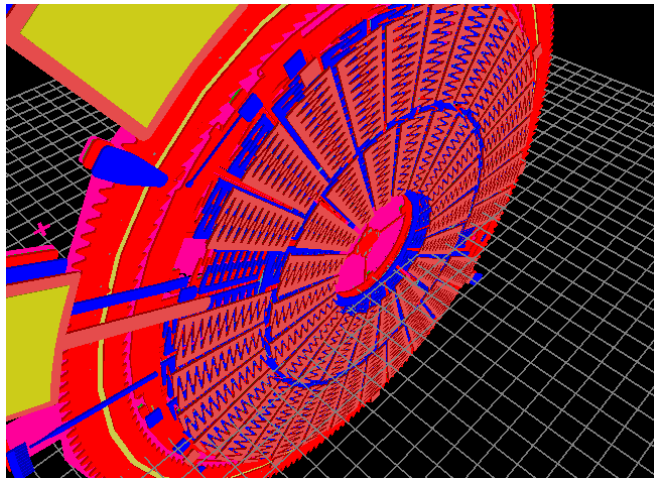




# Matthew Harrison

## ■ Design of a Bi-directional Rotating Actuator

- This research entails designing a more compact and higher performance alternative to the Sandia Microengine that can rotate in both directions. It is going to be used to drive many different types of devices. By using the SUMMiT V process, 4 polysilicon mechanical layers and 1 substrate layer will be used to create the design. It will use the current Sandia torsional ratcheting actuator (TRA) movement with engage hooks that enable it to change directions. A bi-directional anti-reverse switch will also be incorporated.



■ Mr. Harrison is a junior in TTU's Electrical Engineering Department.

