



**IEEE**

## Arrowhead Section Meeting Notice

Date / Event:

**Thursday, April 20, 2017**

Student Presentations on UMD Campus

Reservations by Noon, Wed. April 19

BruceHowell@ieee.org

218-343-5546 (leave message)

Map to MWAH Bldg. on UMD Campus: <http://www.duluth.umn.edu/maps/MWAH/>

Time / Activity:

5:30pm – Meet Student IEEE Members

6:00pm – Dinner then Presentations

Meeting and Dinner Location:

UMD MWAH 291 Power Systems Lab

**Lasagna Dinner Provided by IEEE**

Zachary Koop and Jackson Elliott will present their proposed research on dye-sensitized “Gratzel” solar cells as an alternative to traditional semiconductor solar technologies. Because the Gratzel cell are simpler to manufacture, they will be cheaper and may achieve grid-parity once the efficiency reaches 15%. They propose to construct dye-sensitized solar cell prototypes and then seek ways to improve the output performance through dye selection and cell structure design.

UMD Students, Isaac Lindahl, Ricky Ward and Andrew Lanz have applied Nikola Tesla's ideas to build a Musical Tesla Coil. They will demonstrate this electrical resonant transformer circuit that modulates to an input audio signal and output a "singing" electric arc. This high voltage project allows people to experience one of Tesla's most shocking inventions with an entertaining twist.

Arrowhead Section Officers: **Chair:** Terry Larson; **Vice Chair:** Nickolas Johnson; **Sec./Treas.:** Bruce Howell