**Project Title:** CubeSat Active Cooling Radiator

**Advisors:** Dr. Alexander Ghosh, Dr. Kevin Bassett, Prof. Victoria Coverstone

**Project Description:**

The University of Illinois at Urbana-Champaign seeks to advance the state-of-the-art in small spacecraft power generation, energy storage, and thermal management systems through the application of a novel microvascular composite fabrication technique which has been developed at the University. Application of the already mature microvascular composite technique to small spacecraft power and thermal control systems will enable the high specific power operation and advanced thermal control necessary for next-generation small spacecraft with advanced payloads and/or deep space mission profiles.

**Student Background and expected research activities:**

The student will participate in the research and development of an active fluid-cooled CubeSat-scale deployable radiator system. This includes composite manufacturing, electronics and pump selection and design, laboratory testing for system leaks and materials research. Students with background in at least one of fluid or heat transfer analysis, composite manufacturing, or electronics design are sought. Previous experience working with satellite hardware is an additionally desired skillset.

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