

Center for Applied Mathematics 2017 - 2022, Synopsis Report

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The Center for Applied Mathematics (CAM) was created to support the development and application of mathematics at the University Florida. Its mission and goals are to:

- Support top quality research in multi-disciplinary, applied, and applicable math.
- Facilitate collaborative research projects between mathematicians and researchers from other disciplines and industry. These collaborations should produce significant practical and theoretical results while providing research and training opportunities for graduate students.
- Strengthen the graduate program in all aspects.
- Provide computational infrastructure necessary for mathematics research. Specifically, acquire hardware and software to support mathematical experimentation, algorithm development, and the numerical solution of mathematical problems that arise in wide-spread applications.

The development and application of mathematics is an essential part of any research university. This research is centered in the Mathematics Department with significant activity in a variety of disciplines and departments. CAM is the only entity at the UF solely dedicated to the growth and development of cross-disciplinary mathematics, and CAM has played a significant role in building and maintaining mathematical excellence at the UF by providing vital support for student and faculty research.

Advances in mathematics do not require a great deal of physical infrastructure, but rather depend on sustained interactions between experts with overlapping or complementary interests. Thus CAM has made the strategic decision to focus its resources on providing numerous moderate size awards to support faculty and student travel to conferences (\$700 each). This we have found to be a high return, efficient use of the Center's resources. In the pandemic years few people were traveling so we redirected our resources to other channels though we did continue to support fees for virtual conferences.

The Center for Applied Mathematics is a University of Florida type III center. It is thus solely funded by a portion of the grant overhead generated by Mathematics Department faculty. The income for 2017-2021 (the available data) was \$48,422. These funds came from 46 separate grants and 29 different PI's

Here is a summary of our expenditures during the reporting period by categories: \$12,524 for 43 faculty and graduate student trips and virtual conferences; \$3,000 for three local conferences; \$1,000 for the Association for Women in Mathematics Lecture; \$5,283 to equip the Atrium (our main colloquium room) with a computer, two monitors, lcd projector and high quality camera for hybrid lectures; \$30,500 for eight Summer Graduate Research Fellowships; and \$11,325 for HiPerGator access for all faculty and grad students (16 Normalized Compute Units and one T. Long-term Storage Unit purchase and renewed and 4 Normalized Graphics Processor Units with half the latter supported by Prof. Wang).

Note that there is no FTE-funded support to CAM, and we entered the reporting period with a positive balance which was spent down.