



## APPLIED PHYSICS PROGRAM

Interdisciplinary applications of foundational modern physics

The University of Michigan has a distinguished record of innovation in applied physics. As an interdisciplinary graduate program, applied physics brings the fundamentals of physical theory together with its applications to modern technology and practical hands-on training in the research laboratories. Applied physics benefits from the university's acclaimed multidisciplinary research environment by providing dynamic graduate training and research that lays a solid base in the fundamentals of modern physics, while also exploring applications in the context of various branches of engineering, biological and medical science, chemistry, geology, environmental science, natural resources, and public policy. With access to the most advanced facilities and foremost scholars and scientists across the campus, our students gain the knowledge and skills to apply and advance concepts in emerging technologies. Our graduates are highly sought to fill leadership positions in research, industry, academia, and government.

Applied physics at Michigan is on the cutting edge in research and technology. Promotion of interdisciplinary studies in applied physics that connects physics across many disciplines is increasingly important in developing intellectual synergy. Our students have the opportunity to pursue research in such areas as nanoscience and technology, condensed matter and material physics, optics, energy, plasma and chemical physics, atomic and molecular physics, biophysics, photonics, quantum electronics and information, solid state electronics synchrotron radiation and ultrafast science. Our vision is that these scholars will become the entrepreneurs of the future, the saviors of the environment, the providers of clean energy, and the engineers of the new economy.

To build and grow in this vital area, the Applied Physics Program must recruit the world's top scientists, teachers, and graduate students to Michigan. To do so, we must make Michigan more accessible for talented students and provide opportunities to explore the application of physics in various career and educational paths.

## BRIDGE TO GRADUATE STUDIES FOR UNDERREPRESENTED STUDENTS

Despite its small size, the Applied Physics Program is one of the leading producers of underrepresented minority Ph.D.s in the nation. In 2010, we launched the Imes-Moore Fellows Program, a master's degree bridge program designed to prepare students for doctoral studies in applied physics, physical sciences in engineering. From its inception, the Ph.D. and bridge programs were fully integrated, allowing students to smoothly transition from master's to Ph.D. This feature together with a strong support structure available to all of our students has led to a nearly perfect retention rate of our bridge students. Gifts to the Applied Physics Bridge Program would support master's students who are transitioning into graduate studies in interdisciplinary areas in applied physics.

## APPLIED PHYSICS SEMINAR

Gifts of \$5,000 - \$10,000 annually will support a weekly interdisciplinary seminar. Topics will be broadly drawn from across campus to educate students about the incredible range of opportunities for research collaborations available at U-M in an effort to bring a community of scholars together from all over campus to learn about applications of physics. We envision this as a continuation of the highly successful applied physics lunch seminars, for which no funding currently exists.

## GRADUATE FELLOWSHIPS

The Applied Physics Program attracts excellent graduate students from diverse backgrounds who are interested in interdisciplinary research at the interface of physical sciences, engineering, and medicine. An endowed gift of \$1M will secure a named fellowship supporting a graduate student and will serve as a powerful recruitment and retention tool. Awards will focus on areas where there is high potential for societal impact, such as the environment, health care, and energy policy.

## WAYS TO FUND YOUR GIFT

Your gifts of cash, pledges, or appreciated securities change lives. Wills, estate, and planned gifts allow you to create a lasting legacy that will enable the best and brightest minds to experience a liberal arts education, solve problems in a changing world, and yield ideas and innovations that will make a difference in Michigan and around the globe.

## CONTACT INFO

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**“In joining the University of Michigan’s Applied Physics Program, I could only gasp at the marvels of physics that I experienced in my classes and in my laboratory, studying plasmas. For me, the Applied Physics Program has continued to evoke amazement in human ingenuity and in the enormity of the universe.”**

**—Akash Shah, 5th year Ph.D. student**

