



www.physics.umd.edu

Welcome

Welcome to Physics at Maryland!

A research university does more than just disseminate knowledge; it creates knowledge. In physics, academia drives discovery and the Maryland Physics Department, one of the largest in the nation, is at the forefront of innovative research worldwide. Together, our world-class faculty and students are exploring more than 30 areas of physics. Our faculty are distinguished for both their research successes and teaching expertise; our undergraduates are sought after by premier graduate schools and a competitive marketplace; and our graduate students move on to prominent positions in academia, government and industry. We collaborate with everyone from top science programs here on campus to government agencies to world-renowned research institutions. With the support of a large, diverse research university and Washington D.C.'s many opportunities for science, culture and entertainment, Physics at Maryland is an ideal place to work, study and play.



Academics

The Maryland Physics Department attracts a diverse group of gifted and promising scholars from across the country and around the globe. Our distinguished faculty introduce these students to the field of physics with a rigorous classroom experience and involvement in research at the undergraduate and graduate level. Strong science programs throughout the university – such as engineering, computer science, astronomy and mathematics – further fortify the experience. With so many career opportunities for scientists in the Washington Metropolitan Area, our graduates are exploring an array of careers in academia, government and private industry.



World-Class Faculty

- 75 Faculty
- 1 Nobel Laureate
- 5 National Academy of Science Members
- 11 Distinguished University Professors
- 9 Distinguished Scholar-Teachers

Graduate Students

(The Fall 2004 Class)

- 766 Average Physics GRE
- 3.69 Average Undergraduate GPA

- Approx. 200 Total Graduate Students

- All Graduate Students Fully Supported

Undergraduate Students

(The Fall 2004 Class)

- 44 Incoming freshmen
- 710 Average Math SAT
- 670 Average Verbal SAT
- 4.03 Average High School GPA
- 5 Banneker-Key Scholars
- 7 President's Scholars
- 9 Dean's Scholars

- Approx. 200 Total Undergraduate Students
- 40 percent have merit-based scholarships

Undergraduate

Areas of Concentration

- Professional Physics
- Meteorology Physics
- Education Physics
- Citation in Physics*

*A "citation" at the University of Maryland is similar to a "minor" at other universities



Contacts

General Information

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Undergraduate Information

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CMPS
College of Computer,
Mathematical &
Physical Sciences

Photos courtesy of John Consoli, Jordan Goodman, Karrie Hawbaker, Steven Rolston and Gregory Sullivan

Research

Physicists from Maryland's more than 30 research groups and centers, including a burgeoning AMO group, explore an array of theoretical and experimental physics concepts. Our top-notch laboratories and theoretical centers consistently generate provocative results. And collaborations with on-campus interdisciplinary research centers, peer institutions, government agencies and private industry are providing even more opportunities for discovery. From College Park to Geneva to the South Pole, the University of Maryland is making an impact on the field of physics worldwide.

Experimental Groups

Astro Metrology
Atomic, Molecular and Optical Physics
Condensed Matter
Cosmic Ray Astrophysics
Gravitation Experiment
High Energy with Accelerators
Nonlinear Dynamics & Chaos
Nuclear Physics
Particle Astrophysics
Physics Education
Plasma Physics
Quantum Electronics:
Relativity & Quantum Mechanics
Quantum Computation
Space Physics
Spintronics & Spin Quantum Computing
Superconducting Quantum Computing

Theoretical Groups

Atomic, Molecular and Optical Physics
Condensed Matter
Dynamical Systems &
Accelerator Physics
Elementary Particles
Gravitation Theory
Nonlinear Dynamics & Chaos
Plasma Physics
Quarks, Hadrons & Nuclei

Department Centers & Affiliates

Center for Particle and String Theory
Center for Superconductivity
Center for Scientific Computing &
Mathematical Modeling
Condensed Matter Theory Center
East-West Space Science Center
Institute for Advanced Computer Studies
Institute for Physical Science &
Technology
Institute for Research in Electronics &
Applied Physics
Institute for Systems Research
Materials Research Science &
Engineering Center

Frontiers

While The Department of Physics maintains its dedication to the traditional areas of physics such as elementary particles, nuclear physics and condensed matter, we're also exploring new frontiers in emerging fields like atomic, molecular and optical physics, nonlinear dynamics, nanotechnology and quantum computing. Maryland physicists are found at the forefront of some of the most innovative research today.

Some of our latest ventures include:

- A burgeoning research group in Atomic, Molecular & Optical (AMO) physics, led by Nobel Laureate William D. Phillips
- Nonlinear Dynamics' new holographic laser tweezer array opening up innumerable opportunities for the study of complex microscopic structures
- Key advances in both theoretical and experimental quantum computing
- Study of the fundamental nature of matter through some of the world's largest and most productive high energy physics experiments, including BaBar, DZero and CMS
- The new Center for Particle and String Theory, exploring new ways to look at the fundamental structure of our universe
- The new Condensed Matter Theory Center, exploring everything from High-Tc superconductors to surface science
- Our nanotechnology team working atom by atom to create new structures with endless potential applications for the fields of electronics and technology
- The new particle astrophysics experiment, IceCube, using a 1 KM³ telescope to detect high energy neutrinos beneath the ice of the South Pole
- A nonlinear dynamics experiment that uses a liquid sodium-filled globe for studying the earth's magnetic field
- Pioneering steps in the field of econophysics, which uses statistical physics to describe economic and financial problems

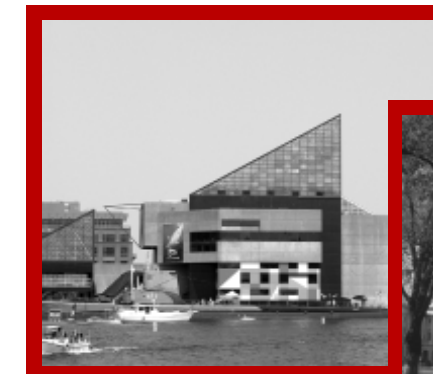


Location

The University of Maryland's 1500 acres of beautifully landscaped grounds are located mere minutes from the nation's capital. Surrounded by some of the world's best laboratories – from NASA Goddard to NIST to NIH – Physics at Maryland is positioned as a hub for collaboration and discovery. Washington, D.C. provides endless opportunities for culture and entertainment. And the State of Maryland boasts Eastern Shore beaches, Appalachian Mountains, the urban rhythms of Baltimore and Annapolis and more.

Some of our neighbors include:

- American Institute of Physics
- Applied Physics Laboratory
- Army Research Laboratory
- Department of Energy
- Maryland Science Center
- National Institutes of Health
- National Science Foundation
- NASA Goddard Space Flight Center
- National Institute of Standards & Technology
- Naval Research Laboratory
- Space Telescope Institute
- C&O Canal
- Ford's Theatre
- Harborplace
- The Kennedy Center
- Mt. Vernon
- The National Aquarium in Baltimore
- The National Gallery of Art
- The Smithsonian Institution
- Professional baseball, basketball, football, hockey and soccer



Helpful Links:
<http://www.baltimore.org>
<http://www.washington.org>

