DEPARTMENT RANKING

- 4th among all public universities
- 15th among all physics departments nationally

(2006 U.S. News & World Report)

SIZE: One of the largest physics research programs in the U.S.

GRADUATE EDUCATION & RESEARCH PROGRAMS

Experimental Groups (15):

- ♦ Astro-Metrology (AM)
- ♦ Atomic Molecular & Optical (AMO)
- Center for Superconductivity Research (CSR)
- Condensed Matter (CME)
- ◆ Cosmic Ray Physics (CRP)
- Gravitation Experiment (GRE)
- High Energy Physics with Accelerators (HEP)
- Non Linear Dynamics & Chaos (NLDC)
- Nuclear Physics (NPE)
- Particle Astrophysics (PA)
- Physics Education Research Group (PERG)
- Quantum Electronics: Relativity & Quantum Mechanics (QE)
- Space Physics (SP)
- Spintronics & Spin Quantum Computing (SSQC)
- Superconducting Quantum Computing (SOC)

Theoretical Groups (11):

- Atomic Molecular & Optical (AMO)
- Condensed Matter (CMT)
- Dynamical Systems & Accelerator Theory (DSAT)
- Elementary Particles (EP)
- Gravitation Theory (GT)
- Non Linear Dynamics & Chaos (NLDC)
- Plasma Physics (PPT)
- Theoretical Quarks, Hadrons & Nuclei (TOHN)
- Quantum Coherency & Information (OCI)
- Spintronics & Spin Quantum Computing (SSQC)

Other UM Research Involvements:

- Charged Particle Beam Research (CPB)
- Chemical Physics (CP)
- Institute for Physics Science & Tech-

FACTS

2007-2008



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nology (IPST)

- Institute for Research in Electronics & Applied Physics (IREAP)
- Institute for Systems Research (ISR)
- Institute for Advanced Computer Studies (UMAICS)
- Mathematical Physics (MP)

FACULTY

- 60 Full Professors (includes 8 Distinguished Univ. Professors; 2 Distinguished Univ. Fellows; 2 Univ. Sys. Of MD Regents Professors)
- 1 Named Chair: Alford Ward Chair of Semiconductor Physics
- 6 Associate Professors
- 6 Assistant Professors
- 2 Chancellors Emeritus
- 1 President Emeritus (UM)
- 19 Research Scientists
- 62 Research Associates
- 70 Faculty Research Assistants
- 6 Slawsky Tutoring Clinic Staff

FACULTY AWARDS &

HONORS

- Boltzmann Medal
- COSPAR Medal
- Buckley Prize-Condensed Matter
- Dirac Medal
- Distinguished Scholar-Teachers
- Goeppert-Mayer Award
- Guthrie Medal & Prize (UK)
- Heinemann Prize-Mathematical Physics
- Hirschfelder Prize
- Humboldt Prize
- Irving Langmuir Prize
- ◆ Lenin Prize (USSR)
- Maxwell Prize in Plasma Physics
- Meggers Award
- Millikan Medal
- Nobel Prize
- Onsager Prize in Statistical Physics
- Simon Memorial Prize
- Szilard Award
- Tate Medal
- Wetherill Medal
- Wolf Prize
- World Science for Peace Prize
- APS Fellows
- American Academy of Arts & Science Fellows
- American Association for the Advancement of Science Fellows
- A VS Fellows
- AGU Fellows
- Cottrell Scholars Fellowship
- Guggenheim Fellows
- IEEE Fellows
- NY (PIY)'s
- Presidential Early Career Award
- Packard Fellow
- Sloan Fellows
- National Academy of Science Members
- New York Academy of Science Members
- Washington Academy of Science Fel-
- Members of the Royal Society

STUDENTS

- 250 Undergraduate Majors
- 215 Graduate Students
- 20 Graduate Fellows
- 40 Entering Undergraduate Students in 2007
- Average SAT for Fall 200 incoming freshmen:

Math - 720

Verbal - 670

- 138 Graduate Research Assistants
- 43 Teaching Assistants
- 1:18 ratio of faculty to undergraduate majors

BUDGET & FUNDING

- FY '02 State Budget \$10.8 M
- FY '02 Externally Funded Research Expenditures \$20 M
- Total FY '02 Budget \$30.8 M

UNDERGRADUATE PROGRAMS

- B.S. degree in traditional physics provides career skills or preparation for graduate study. Interdisciplinary tracks including meteorology and education
- Honors Program in Physics
- Physical Sciences Program
- Undergraduate Research Opportunities Program (UROP) provides handson research experience for undergraduates
- Slawsky Tutoring Clinic
- Society of Physics Students-very active chapter of national society

OUTREACH PROGRAMS

 Physics is Phun (since 1982). A public lecture-demonstration series; 4 programs per year, each offered on 3 consecutive days

Total attendance is 5,000 per year

- Traveling Physics is Phun Van presents program to schools & organizations in the region
- Annual Physics Olympics.
 Competition involves 35-40 teams from high schools in Maryland,
 Northern Virginia, & Washington,
 D.C.
- AAPT Physics Olympiad training. UM has served as the training site for 10 years
- Physics Summer Outreach Program for Middle School Girls. A two-week program offered on campus for 14 years.
- MRSEC Out reach: adopted Kettering Middle School; offers Research Experiences for Undergraduates program; indus-

trial outreach; exchange program with Osaka Univ.; Summer Girls Program.

EXTERNAL RELATIONS

National

- American Center for Physics. Relocated to College Park, adjacent to UM, in November '93. Cooperative activities.
- American Association of Physics Teachers (AAPT)
- American Institute of Physics
- American Physical Society (APS). (UM Physics Professor, Dr. Robert Park, is Executive Director of the APS Office of Public Affairs)
- American Association of Physicists in Medicine (AAPM)
- Thomas Jefferson National Accelerator Facility (formerly CEBAF/SURA).
 Participant in multi-university experiments
- Fermi National Accelerator Laboratory.
 Participant in D0 and E665 experiments.
- NASA & UM East-West Space Science Center. Space Station collaboration

NASA Goddard Space Flight Center collaborations:

- Laboratory for Astronomy and Solar Physics
- Laboratory for High Energy Astrophysics
- Naval Research Laboratory (NRL)
- Cooperative Program in Plasma Physics
- National Institute of Standards and Technology (NIST) collaborations
- Physics Laboratory (Electron and Optical Physics Division; Radiometric Physics Division)
- Materials Science and Engineering Laboratory (Reactor Radiation Division)
- National Institutes of Health (NIH). Biophysics of fellowships
- Neocera, Inc.-graduate of UM incubator program-spin-off company of Center for Superconductivity Research; manufactures thin-film hardware and related technologies
- Southeastern Universities Research Association (SURA). SURA Fellowships
- Stanford Linear Accelerator Center (SLAC) Participant in BABAR experiment at the B-Factory

International

Center for European Nuclear Research

- (CERN, Geneva). Participate in OPAL and CMS experiments
- National Central University, Taiwan. Collaborative exchange agreement with UM Physics Dept.
- Nuclear Science Center, New Delhi, India. Participate in experiments on ion-beam effects on superconductors. University of Bremen, Germany.

FACILITIES

8 Shop Facilities

- Mechanical Development
- Electronic Development
- Engineering and Design
- Technical Illustration
- Print Shop
- Student Shop
- Raw Materials Stores
- Physical Stores

Largest Lecture-Demo Facility in the United States — over 1,500 demonstrations, (seats 500).

AFFILIATED CENTERS

- Center for Superconductivity Research
- East-West Space Science Center
- NSF Materials Research Science & Engineering Center
- Condensed Matter Theory Center
- Center for Particle & String Theory
- Center for Scientific Computation & Mathematical Modeling
- Institute for Physical Science & Technology
- Institute for Research in Electronics & Applied Physics (IREAP)
- Institute for Systems Research
- Institute for Advanced Computer Studies
- Maryland Center for Integrated Nano Science & Engineering
- Materials Research Science & Engineering Center

FACULTY 2007–2008



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