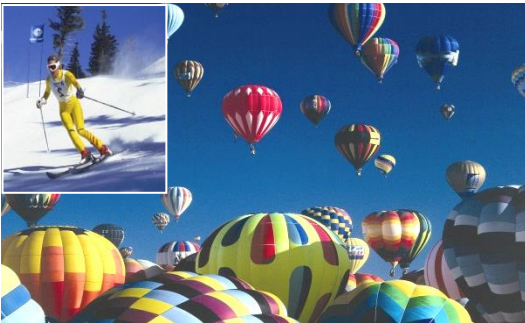


Environment



New Mexico is a state of scenic beauty, an inspiration for artists, particularly the visual and musical arts. It is also a paradise for hikers and nature lovers, with countless parks and monuments. While generally mild and dry, the climate of the region has distinct seasons. Snow capped mountains in the winter are a skier's delight. The 10,500 ft. tall Sandia Mountains overlooking Albuquerque, about 45 minutes away by car, also offer a cool green retreat in the summer.



If there is a single event that catapults Albuquerque into limelight, it is the International Balloon Fiesta, held every October, that attracts thousands of ballooning enthusiasts from around the world. Both Albuquerque and Santa Fe, 60 miles to the north, have extensive art colonies, a wide range of musical entertainment, theater groups and community concert series.

Founded in 1889, the University of New Mexico (UNM) has become one of the fastest growing research universities in the nation. The total number of enrolled students approaches 27,000, with approximately 15% enrolled in graduate school.



Contact

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Optical Science & Engineering

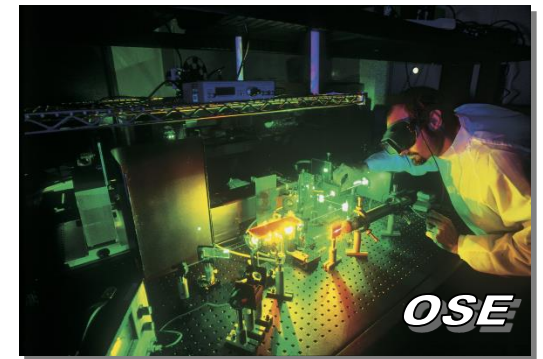
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University of New Mexico

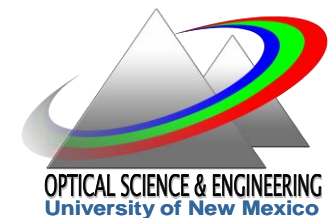


M.S. Optical Science and Engineering

Ph.D. Optical Science and Engineering



*Program jointly administered by the Departments of
Physics and Astronomy
and Electrical and Computer Engineering with
Strong Involvement from the Center for High-
Technology Materials*



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Background

Established in the mid 1980's, the **Optics Program** at UNM has acquired a national and international reputation. More than 300 students have completed the graduate program and found employment in industry, academia, and research laboratories. This interdisciplinary program offers courses in all aspects relating to theoretical and experimental optics, providing versatile and flexible preparation in optics for a future career in science, industry and academia.

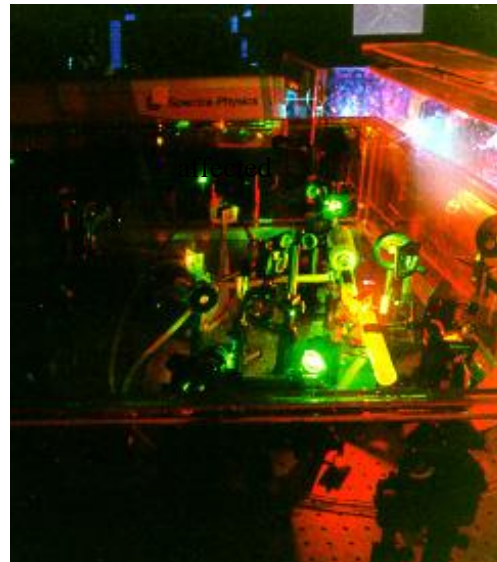


The optics research facilities are located in the Departments of Physics & Astronomy, and Electrical and Computer Engineering, as well as at the Center for High-Technology Materials (CHTM). In 1996 the Optics Program became a member of WICHE (Western Interstate Commission for Higher Education). There are numerous collaborations with the three Federal Laboratories in New Mexico - Sandia National Laboratories (SNL), Los Alamos National Laboratories (LANL), and the Air Force Research Laboratory (AFRL), and with members of the optics industry cluster, the New Mexico Optics Industry Association - NMOptics.

Research Areas

Advanced Materials, Atom Optics, Biomedical Optics, Fiber Optics, Laser Cooling, Laser Physics, Lithography, Nanostructures, Nonlinear Optics, Optical Imaging, Optical Sensors, Optoelectronics, Photonic Integrated Circuits, Quantum Optics, Spectroscopy and Ultrafast Phenomena

Pioneering research has originated from this program in areas ranging from the quantum theory of lasers to ultrashort pulse physics to opto-electronic devices, among others.



Degree Concentrations

1. *Optical Science*
2. *Photonics*
3. *Imaging Science*
4. *Quantum Optics*

Faculty

Participating faculty belong to the Departments of Physics and Astronomy (P&A), Electrical and Computer Engineering (ECE), Chemistry, and Chemical Biological Engineering.

S. Prasad, (Ph.D., Harvard, 1983), P&A (**General Chair**)
M. Hayat, (Ph.D., Univ. of Wisconsin-Madison, 1992), ECE (**Co-Chair**)

V. Acosta (Ph.D., UC Berkeley, 2011), P&A
L. Arissian (Ph.D., U. of New Mexico, 2007)
G. Balakrishnan (Ph.D., U. New Mexico 2005), ECE
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S. Brueck, (Ph.D., MIT, 1971), ECE & P&A
F. Cavallo (Ph.D. Univ. of Chemnitz, Germany, 2009), ECE
C. Caves, (Ph.D., Caltech, 1979), P&A
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K. Malloy, (Ph.D., Stanford, 1983), P&A
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Andy Shreve (Ph.D., Cornell, 1991)
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