New Mexico is a state of scenic beauty, an inspiration for artists, particularly 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 skiers’ delight. The 10,500ft. 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, which 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. The total number of enrolled students approaches 25,000, with approximately 15% enrolled in graduate school.

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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 60 students have completed the doctoral 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 a 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 - NMOIA.

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
- 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.

Faculty

Participating faculty are from the Department of Physics and Astronomy (PandA), the Department of Electrical and Computer Engineering (ECE) and the Department of Mathematics and Statistics.

L. Lester, (Ph.D., Cornell, 1992), ECE (General Chair)
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