

STATE UNIVERSITY OF NEW YORK AT ALBANY

DEPARTMENT OF PHYSICS

Albany, New York 12222
<http://www.albany.edu/physics>

General University Information

President: Havidan Rodriguez
Dean of Graduate School: Kevin Williams
University website: <http://www.albany.edu>
School Type: Public
Setting: Suburban
Total Faculty: 1,000
Total number of Students: 17,040
Total number of Graduate Students: 4,936

Department Information

Department Chairman: Prof. Keith Earle, Chair
Department Contact: Keith Earle, Chair
Total full-time faculty: 16
Total number of full-time equivalent positions: 3
Full-Time Graduate Students: 46
Female Full-Time Graduate Students: 5
First-Year Graduate Students: 7
Female First-Year Students: 2
Total Post Doctorates: 1

Department Address

Physics 216
1400 Washington Avenue
Albany, NY 12222
Phone: (518) 442-4501
Fax: (518) 442-5260
E-mail: Physics@albany.edu
Website: <http://www.albany.edu/physics>

ADMISSIONS

Admission Contact Information

Address admission inquiries to: Paul LaBate, Physics 216, Albany, NY 12222
Phone: (518) 442-4501
E-mail: physics@albany.edu
Admissions website: <http://www.albany.edu/graduate/graduate-admissions.php>

Application deadlines

Fall admission:
U.S. students: February 15 *Int'l. students:* February 15
Spring admission:
U.S. students: November 15 *Int'l. students:* November 15

Application fee

U.S. students: \$75 *Int'l. students:* \$75

Admissions information

For Fall of 2018:
Number of applicants: 120
Number admitted: 17
Number enrolled: 15

Admission requirements

Bachelor's degree requirements: A bachelor's degree in Physics or a related field is required.

GRE requirements

The GRE is not required.

Subjective GRE requirements

The Subjective GRE is not required.

TOEFL requirements

The TOEFL exam is required for students from non-English-speaking countries.
PBT score: 600
iBT score: 100
The minimum accepted computer-based exam (CBT) score is 250.

Other admissions information

Additional requirements: GPA, GRE, letters of recommendation, and research alignment with faculty specializations are all considered for admission.

Undergraduate preparation assumed: Symon, Mechanics; Griffiths, Introduction to Electrodynamics; Griffiths, Quantum Mechanics.

TUITION

Tuition year 2018–19:
Tuition for in-state residents
Full-time students: \$11,090 annual
Part-time students: \$462 per credit
Tuition for out-of-state residents
Full-time students: \$22,650 annual
Part-time students: \$944 per credit
Credit hours per semester to be considered full-time: 12
Deferred tuition plan: No
Health insurance: Available at the cost of \$1,174 per year.
Other academic fees: \$75 application fee. \$250 enrollment deposit. Various university fees.
Number of first-year students who received full tuition waivers: 9

Teaching Assistants, Research Assistants, and Fellowships

Number of first-year
Teaching Assistants: 9
Average stipend per academic year
Teaching Assistant: \$18,500

FINANCIAL AID

Application deadlines

Fall admission:
U.S. students: February 15 *Int'l. students:* February 15
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U.S. students: November 15 *Int'l. students:* November 15

Loans

Loans are available for U.S. students.
Loans are not available for international students.
GAPSFAS application required: No
FAFSA application required: Yes

For further information

Address financial aid inquiries to: Student Financial Center, Campus Center G-26, 1400 Washington Avenue, Albany, NY 12222.
Phone: (518) 442-3202
E-mail: sfc@albany.edu
Financial aid website: <http://www.albany.edu/student-services>

HOUSING

Availability of on-campus housing

Single students: No
 Married students: No
 Childcare Assistance: No

For further information

Address housing inquiries to: Residential Life, State University of New York at Albany, State Quad U-Lounge, 1400 Washington Avenue, Albany, NY 12222.
 Phone: (518) 442-5875
 E-mail: reslife@albany.edu
 Housing aid website: <http://www.albany.edu/housing/index.shtml>

Table A—Faculty, Enrollments, and Degrees Granted

Research Specialty	2018–19 Faculty	Enrollment Fall 2018		Number of Degrees Granted 2017–18 (2018–19)		
		Mas-ter's	Doc-torate	Mas-ter's	Terminal Master's	Doc-torate
Biophysics	2	1	3	–	–	1
Computational Physics	1	–	6	–	–	1
Condensed Matter Physics	–	–	–	–(4)	–	–(6)
Optics	3	2	5	–	–	1(6)
Particles and Fields	3	4	12	–	–	1(6)
Solid State Physics	1	3	6	1(4)	–(5)	–(5)
Theoretical Physics	2	4	6	3(5)	1(3)	–(5)
Total	12	14	38	4(13)	1(8)	5(39)
Full-time Grad. Stud.	–	2	38	–	–	–
First-year Grad. Stud.	–	5	9	–	–	–

GRADUATE DEGREE REQUIREMENTS

Master's: Thirty graduate course credits, at least 24 on campus, including core, elective, and research courses, are required. Master's thesis or passage of comprehensive examination is required.

Doctorate: Sixty credit hours beyond the bachelor's degree, including core, elective, and research courses with at least two full-time semesters, are required. Transfer credit of up to 30 hours is allowed. Students are required to pass a written comprehensive examination, followed by an oral qualifying examination. Dissertation and dissertation defense examinations are required. Dissertation research may be conducted off-campus in approved programs.

Thesis: Thesis may be written in absentia.

SPECIAL EQUIPMENT, FACILITIES, OR PROGRAMS

Transmission electron microscope and ion beam laboratories study defects and other materials properties. EPR and Raman facilities are used to study biological physics. X-ray research includes applications to materials and medicine. Particle experimentalists are members of either the ATLAS collaboration at CERN or the LUX/LZ dark matter experiments. Robotics laboratory studies intelligent behaviors. Cooperative programs have been established with nearby General Electric Research and Development Center (Watervliet Arsenal, NY), State Public Health, and IBM Watson Research Laboratories.

FACULTY

Professor

- Caticha**, Ariel, Ph.D., California Institute of Technology, 1985. Foundations of physics, information physics. Fundamental problems in quantum, statistical, and gravitational physics.
- Kuan**, Tung-sheng, Ph.D., Cornell University, 1977. Materials science, electron microscopy.
- Lanford**, William A., Ph.D., University of Rochester, 1972. Materials science, thin films, ion beam analysis.
- MacDonald**, Carolyn A., Ph.D., Harvard University, 1986. Medical physics, optics (X-ray and visible).

Associate Professor

- Earle**, Keith, Ph.D., Cornell University, 1994. Biophysics, EPR spectroscopy, magnetic resonance.
- Ernst**, Jesse, Ph.D., University of Rochester, 1995. Experimental particle physics, machine learning.
- Goyal**, Philip, Ph.D., University of Cambridge, 2005. Information physics, foundations of quantum mechanics.
- Jain**, Vivek, Ph.D., University of Hawaii, 1988. Experimental particle physics, colliders.
- Knuth**, Kevin, Ph.D., University of Minnesota, 1995. Computational physics, foundations of physics, space physics (study of exoplanets), robotics.
- Lunin**, Oleg, Ph.D., Ohio State University, 2000. Theoretical particle physics, string theory.

Assistant Professor

- Fotso**, Herbert F., Ph.D., Louisiana State University, 2011. Theoretical condensed matter physics, quantum optics, computational physics.
- Khmaladze**, Alexander T., Ph.D., University of South Florida, 2008. Optics, biophysics, Raman spectroscopy.
- Levy**, Cecilia, Ph.D., University of Muenster, 2014. Experimental particle physics, dark matter searches.
- Petrucelli**, Jonathan, Ph.D., University of Rochester, 2010. Experimental and theoretical optics, computational imaging.
- Robbins**, Daniel G., Ph.D., University of Chicago, 2006. Theoretical particle physics, string theory.
- Szydagis**, Matthew M., Ph.D., University of Chicago, 2010. Experimental particle physics, dark matter searches.

Professor Emeritus

- Alam**, M. Sajjad, Ph.D., Indiana University, 1975.
- Benenson**, Raymond E., Ph.D., University of Wisconsin-Madison, 1955.
- Inomata**, Akira, Ph.D., Rensselaer Polytechnic Institute, 1964.
- Kimball**, John C., Ph.D., University of Chicago, 1969.
- Marsh**, Bruce B., Ph.D., University of Rochester, 1962.
- Roth**, Laura M., Ph.D., Radcliffe Institute for Advanced Study, 1957.
- Scholes**, Charles P., Ph.D., Yale University, 1969.
- Scholz**, Wilfried W., Ph.D., University of Freiburg, 1964.

DEPARTMENTAL RESEARCH SPECIALTIES AND STAFF

Theoretical

- Computational Physics. Applications of computational methods and data analysis to condensed matter physics, optics, particle physics, and planetary science. Ernst, Fotso, Knuth, Petrucelli, Szydagis.
- Condensed Matter Physics. Strongly correlated electron systems, high temperature superconductors. Fotso.
- Cosmology & String Theory. String theory, conformal field theory, quantum gravity. Lunin, Robbins.

Information Physics. Foundations of quantum mechanics and statistical physics; extraction of information from complex data. Caticha, Earle, Goyal, Knuth.

Optics. Computational optical modeling and imaging, quantum optics. Fotso, MacDonald, Petrucci.

Experimental

Biophysics. Applications of ESR, EPR, and Raman spectroscopy to study of bioinorganic molecules; medical applications of x-ray optics. Earle, Khmaladze, MacDonald.

Materials Science, Metallurgy. Thin films, ion beam analysis, electron microscopy. Kuan, Lanford.

Optics. Optics in visible and x-ray domains, laser physics, Raman spectroscopy. Khmaladze, MacDonald, Petrucci.

Particles and Fields. Physics (beyond) Standard Model on ATLAS, dark matter searches on LUX/LZ, machine learning. Ernst, Jain, Levy, Szydagis.

View additional information about this department at www.gradschoolshopper.com. Check out the “Why Choose Us?” section, find out more about the department’s culture and get links to social media networks.