

Physics

Chairperson

Chang Kee Jung, Physics Building P-101 (631) 632-8108

Graduate Program Director

Matt Dawber, Physics Building P-107 (631) 632-4978

Assistant Graduate Program Director

Donald J. Sheehan III, Physics Building P-110 (631) 632-8759

Degrees Awarded

Ph.D. in Physics; Ph.D. in Physics with Concentration in Astronomy; Ph.D. in Physics with Concentration in Physical Biology, M.A. in Physics; M.S. in Physics in Scientific Instrumentation, Advanced Graduate Certificate in Accelerator Science.

Web Site

<https://www.stonybrook.edu/commcms/grad-physics-astronomy/>
<http://graduate.physics.sunysb.edu> <http://www.physics.sunysb.edu/Physics/>

Application

<https://graduateadmissions.stonybrook.edu/apply/>

General Description of the Graduate Program

The Department of Physics and Astronomy in the College of Arts and Sciences offers courses of study and research that normally lead to the Ph.D. degree. The M.A. degree is awarded either as a terminal degree, or to students on the way to the Ph.D. degree. The Master of Science in Scientific Instrumentation program is provided for those interested in instrumentation for physical research. A Master of Arts in Teaching program, from the School of Professional Development, is available for students seeking to teach physics in high schools. An Advanced Graduate Certificate in Accelerator Science is offered, which can be taken concurrently with a PhD or Masters degree.

Students may find opportunities in various areas of physics not found in the department or in related disciplines at Stony Brook in such programs as Medical Physics, Chemical Physics, Atmospheric and Climate Modeling, Materials Science and at Brookhaven National Laboratory or Cold Spring Harbor Laboratory.

The entire faculty participates in teaching a rich curriculum of undergraduate, graduate, and professional development courses, including many courses on special topics of current interest. PhD and MSI students must fulfill one year of teaching. PhD students are encouraged to participate in research as early as possible and to begin their thesis research no later than the beginning of their third year. The typical length of time to the Ph.D. is four to six years, whereas the Master's in Scientific Instrumentation is a two-year program that involves a thesis project in instrumentation design or development. The minimum time to earn the M.A. degree is two semesters and one Summer, but it usually takes two years.

The Stony Brook Physics graduate program has been highly ranked in national surveys for the quality of its graduate program, its faculty, and the impact of its published research. It strives to make a graduate education in physics intellectually stimulating and educationally rewarding.

Degrees**Doctoral Program in Physics**

This is the generic Ph.D. degree which may specialize in any area of Physics research. This course of study is pursued by most students in the Ph.D. program. See below for a description of the degree requirements.

Doctoral Program with Concentration in Astronomy

The Department of Physics and Astronomy offers a Ph.D. degree with concentration in astronomy when the thesis work is carried out in the area of astronomy or astrophysics. Some of the requirement for the Ph.D. degree are substituted by astronomy courses.

Doctoral Program with Concentration in Physical Biology

This is an interdisciplinary concentration connected with the Laufer Center for Quantitative Biology. Students usually declare their interest in this concentration not later than the end of the first semester. Postponing this decision will result in a loss of time. There are several differences with the default physics concentration. The number of core courses is reduced by one course while several physical biology courses are required. Instead of the graduate lab students do rotations with faculty associated with the Laufer Center. Also the Graduate Seminar is substituted by the Laufer Center Journal Club.

Doctoral Programs with Concentration in Chemical Physics

The basic degree requirements for a student enrolled in this program are the same as those for other students in physics. Students will usually be advised to take one or more courses in chemical physics. The written part of the preliminary (comprehensive) examination is the same as for other physics students; the oral part will ordinarily be on topics in chemical physics. The student's research advisor may be chosen from faculty working in chemical physics.

Master of Science Program with Concentration in Instrumentation

This is a two year Master of Science Program in which students focus on the study of modern research instrumentation.

Master of Arts Degree in Physics

This program which can be completed in three or four semesters prepares you either of admission to a Ph.D. program or for a physics related job in a national lab or in the private sector.

Advanced Graduate Certificate in Accelerator Science

The goal of this program is to educate the next generation of accelerator scientists and engineers to maintain US's leadership in this important area of science and industry.

Admission requirements of Physics and Astronomy Department

For admission to graduate study in Physics and Astronomy the following, in addition to the minimum Graduate School requirements, are required:

- A. A bachelor's degree in physics or a closely related field from an accredited institution.
- B. A minimum grade average of B in all undergraduate coursework, and B or better in the sciences and mathematics.
- C. Acceptance by the Department of Physics and Astronomy and the Graduate School.

In special cases, a student not meeting requirement A (or, in unusual cases, requirement B) may be admitted on a provisional basis, without financial support. Upon admission, the student will be informed of the requirements that must be satisfied for termination of provisional status.

Retention of students in subsequent years will depend on satisfactory academic progress.

Research in the Physics and Astronomy Department

Research areas for the program include, Accelerator Physics and the Center for Accelerator Science and Education; Astronomy, Astrophysics and Cosmology; Atmospheric and Marine Sciences; Atomic, Molecular and Optical Physics; Experimental Condensed Matter and Devices; Experimental High Energy Physics; Experimental Nuclear Physics; Biological Physics at the Laufer Center; Theoretical Condensed Matter and Statistical Physics; Theoretical Nuclear Physics; Mathematical Physics; and Theoretical Particle Physics including String Theory. For information on this topic, please visit the program website at the link <https://www.stonybrook.edu/commcms/physics/research/>

A number of institutes dedicated to specific fields offer a diverse spectrum of research opportunities. The C. N. Yang Institute for Theoretical Physics focuses on research in fundamental theory such as particle theory, neutrino physics, string theory, supersymmetry, and statistical mechanics. The Nuclear Theory Institute works on non-perturbative quantum chromodynamics, many-body quantum physics and the properties of hadronic matter under extreme conditions such as those created in the Relativistic Heavy Ion Collider at BNL. The Simons Center for Geometry and Physics initiated by a significant private donation to the University offers research programs that are built on the historic close interaction between mathematicians and physicists at Stony Brook. The Laufer Center for Physical and Quantitative Biology aims to advance biology and medicine through discoveries in physics, mathematics and computational science. Data Science and computing in science and engineering including physics is performed at the Institute for Advanced Computational Science. Finally, the Center for Frontiers in Nuclear Science is devoted to physics related to the Electron-Ion Collider.

Stony Brook co-manages nearby Brookhaven National Laboratory which conducts research in the physical, biomedical, and environmental sciences, as well as in climate and energy technologies. Brookhaven Lab also builds and operates major scientific facilities that include the Relativistic Heavy Ion Collider (RHIC), the Center for Functional Nanomaterials, the National Synchrotron Light Source, NSLS II, the Brookhaven Computational Science Center with the IBM BlueGene supercomputer. Stony Brook is the largest academic user of Laboratory facilities with over 600 faculty, staff, and students involved in collaborative research (see <http://www.bnl.gov/sciencefor> for more information). Our nuclear physics faculty is one of the leading groups at RHIC. Experimental condensed matter and X-ray physicists in our department play a leading role in NSLS II and the Center for Functional Nanomaterials. Several of our colleagues are active in the interdisciplinary Stony Brook Center for Computational Science that uses the BlueGene supercomputer.

In addition to facilities at BNL, faculty and staff make use of many off-campus facilities including the Large Hadron Collider at CERN, Argonne National Laboratory and Lawrence Berkeley National Laboratory.

The Department had a Tandem Van de Graaff accelerator that after 40 years of nuclear research has been converted to educational, training, and accelerator R&D efforts. The Institute for Terrestrial and Planetary Atmospheres at the School of Marine and Atmospheric Sciences offers a program in atmospheric physics.

Astronomical research is conducted on both theoretical and observational topics. The group uses DOE supercomputing facilities as well as on-site Beowulf clusters for extensive simulations of astronomical objects and nuclear astrophysical processes. Recently we established a strong effort in cosmology as well.

Observational research focuses on topics in galactic and extragalactic star formation, substellar and stellar astrophysics, extrasolar planets, neutron stars, molecular clouds, and galaxy formation and evolution. Faculty and students are also frequent users of the National Optical Astronomy Observatories, the National Radio Astronomy Observatories, the observatories at Mauna Kea and the millimeter wave facilities at CARMA and Nobeyama observatories. They have also received extensive time on space-based observatories, including the Hubble Space Telescope, the Spitzer Space Telescope, the Herschel Space Observatory, and XMM-Newton.

Requirements for the M.A. Degree in Physics

1. Satisfactory performance in a program of studies (30 graduate credits) approved by the department. Normally such a program would include graduate seminars, classical mechanics, electrodynamics, and quantum mechanics.
2. Minimum grade point average of 3.0 in all graduate courses taken at Stony Brook.
3. Either passing the graduate comprehensive examination at the master's level or completion of a master's project.

Requirements for the M.S. Degree with Specialization in Scientific Instrumentation (MSI)

A candidate for the master's degree with concentration in instrumentation will be required to demonstrate a certain level of knowledge of physics (by written and/or oral examination), to take required and elective courses, and to complete both a major and minor project. The curriculum is designed to meet the needs of students learning about the design, construction, and testing of sophisticated instrument systems. The degree holder will not be a super-technician, but a professional scientist trained in both physics and measurement techniques.

A. A student shall demonstrate proficiency in undergraduate physics at the level of the courses PHY 335 (Junior Laboratory I), 405 (Advanced Quantum Physics). Students need to have demonstrated knowledge in two of the three areas Nuclear and Particle Physics (covered in PHY 431), Condensed Matter Physics (PHY 472) and Laser and Atomic Physics (PHY 452). This can be done (1) by acceptance by the Master's in Scientific Instrumentation Committee of courses taken as an undergraduate, (2) by written examination, or (3) by passing the courses appropriate to a student's background;

B. A course about research instrumentation (PHY 514);

C. Two semesters each of graduate lab (PHY 515) and graduate seminar (PHY 598, PHY 599);

D. Students shall work as teaching assistant in an undergraduate laboratory for at least one semester (being a TA in PHY 445 may satisfy the requirement of taking the second semester of graduate lab (PHY 515));

E. Thirty credits (minimum) of graduate courses (500 level or above), including a minor project and a master's thesis. This thesis must describe a major piece of work in scientific instrumentation and must be in a form acceptable to the Graduate School. It need not be original research in the same sense as a Ph.D. thesis, but it should be the result of an effort consistent with a year of full-time work. The thesis should present an improvement of the state of the art in some area, the development of a sophisticated apparatus, or some other significant laboratory project, and be defended before a committee;

F. Students shall acquire those technical skills deemed necessary by their thesis supervisors. These must include, but are not limited to, machining capability and computer literacy.

Each student will be assigned an advisory committee of three faculty members and will be required to meet frequently with them. It is expected that close communication among all the faculty and students involved will foster spirit, expose problems, and generally contribute to success.

Requirements for the Professional MSI Track

The only difference with the existing MSI program is that the minor project is replaced by a minimum of 9 credits of "Plus Courses" in Stony Brook's College of Business, the School of Journalism or similar courses from a different program (subject to approval). The advisory committee will advise the student on which "Plus Courses" to take.

For further information on this program, contact Professor Harold Metcalf.

Requirements for the Ph.D. Degree in Physics

A. Completion of the following core courses with a grade of B or better: 501, 505, 511, 512, 540. A student can skip one or more of these courses by sufficiently good performance in the corresponding parts of the placement exam (2nd year and older students need permission from the Graduate Program Director). Students who took similar courses elsewhere can satisfy this requirement by taking advanced graduate courses (subject to approval by an Advising Committee appointed by the Graduate Program Director);

B. Completion of required courses: Each of the courses listed below must be passed with a minimum grade of B:

1. PHY 598 and PHY 599 Graduate Seminars. These courses are normally taken during the first year of graduate study, one per semester, in either order.
2. PHY 515 Methods of Experimental Research. This course must be taken not later than the fourth semester of residence. This requirement can also be satisfied by PHY 517, Laboratory Course in Astronomical Techniques.
3. Three advanced courses, in three different areas of physics.

C. Passing of the written comprehensive examination. This is offered at the beginning of each semester. It is in four parts with exams on Classical Mechanics, Electrodynamics, Quantum Mechanics, and Statistical Mechanics. It must be passed in the student's fourth semester of study at Stony Brook or earlier. If taken as a placement exam for the core courses, it has to be passed at a higher level.

D. Passing an oral examination on a broad range of topics relevant to the student's intended area of thesis research. The oral examination should be passed before the beginning of the fifth semester of residency.

E. Acceptance of graduate student by an advisor for thesis work;

F. Teaching experience at least equivalent to that obtained in a one-year appointment as a teaching assistant, usually carried out in the first year;

G. Advancement to candidacy for the Ph.D. The department's recommendation to the Graduate School for advancement to candidacy is based on the satisfactory completion of all requirements listed above;

H. Research, dissertation, and passing the dissertation examination.

I. At least one year of residence.

Requirements for the Ph.D. Degree in Physics with Concentration in Astronomy

The requirements are the same except for B3. Instead the student shall take three astronomy core courses (PHY 521, PHY 522, PHY 523, PHY 524) and present a thesis proposal as an oral exam. In addition, the thesis work should be in the area of Astronomy or Astrophysics. The thesis proposal will be prepared in a Special Studies Course (PHY 585) with the advisor.

Requirements for the Ph.D. Degree in Physics with Concentration in Physical Biology

A. Four Physics core course: Electrodynamics (PHY 505), Quantum Mechanics I (PHY 511), Statistical Mechanics (PHY 540) and either Classical Mechanics (PHY 501) or Quantum Mechanics II (PHY 512). Students can be exempted from these courses in the same way as in A above.

B. Two Core Courses in Physical Biology: Physical Biology (PHY 558) and Biological Dynamics and Network (PHY 559)

C. Biology For Physical Scientists (PHY 561)

D. Two semesters of Teaching (PHY 600)

E. Two semesters of Lab Rotations (PHY 584)

F. Two semester of the Laufer Center Journal Club (PHY 665)

G. Two Life Science courses form an approved list. Currently, the following courses have been approved: Biomolecular Structure and Analysis (CHE 541), Molecular Genetics (MCB 503), Structural Biology and Spectroscopy (MCB 512), Graduate Biochemistry I (MCB 520) and Cell Biology (MCB 656)

H. Passing of the Comprehensive Exam.

I. An oral exam on a topic in Physical Biology. The oral examination should be passed before the beginning of the fifth semester of residence.

J. Acceptance of the graduate student by an advisor working on the topic of Physical Biology.

K. Advancement to candidacy for the Ph.D. The department's recommendation to the Graduate School for advancement to candidacy is based on the satisfactory completion of all requirements listed above.

L. Research, dissertation, and passing the dissertation examination.

M. At least one year of residence.

Requirements for the Advanced Graduate Certificate in Accelerator Science

1. Students must take 4 courses, one obligatory course, PHY 554, and three elective courses from an approved list, for a total of 12 credits.

Faculty of the Department of Physics and Astronomy

Distinguished Professors

Deshpande, Abhay, Ph.D., 1995, Yale University: Nucleon spin, heavy ion physics and precision electroweak physics.

Dill, Ken, Ph.D., 1978, UCSD, La Jolla: Physical Biology.

Drees, Axel K., Chair of the Department, Ph.D., 1989, University of Heidelberg, Germany: Experimental nuclear physics; relativistic heavy ions.

Kharzeev, Dmitri, Ph.D., 1990, Moscow State University: Heavy ion physics and particle theory

Lattimer, James M., Ph.D., 1976, University of Texas: Nuclear, neutrino and high- energy astrophysics; supernovae, neutron stars, dense matter; grain formation; isotopic anomalies in meteorites.

Likharev, Konstantin K. , Ph.D., 1969, Moscow State University, Russia: Mesoscopic physics.

Jung, Chang Kee, Ph.D., 1986, Indiana University: Experimental high-energy physics.

McCoy, Barry M. , Ph.D., 1967, Harvard University.C.N. Yang Institute for Theoretical Physics. Theoretical physics; statistical mechanics.

Shuryak, Edward, Ph.D., 1974, Institute of Nuclear Physics, Novosibirsk, Russia: Theoretical nuclear physics.

Sterman, George , Director of C.N. Yang Institute for Theoretical Physics. Ph.D., 1974, University of Maryland: Theoretical physics.

Stephens, Peter W., Ph.D., 1978, Massachusetts Institute of Technology: Experimental condensed matter physics.

Van Nieuwenhuizen, Peter , Ph.D., 1971, University of Utrecht, Netherlands. C.N. Yang Institute for Theoretical Physics. Theoretical physics; quantum field theory.

Metcalf, Harold J., Ph.D., 1967, Brown University: Atomic physics; laser cooling and trapping; atom optics; precision stark spectroscopy; lasers and optics.

Hemmick, Thomas, Ph.D., 1989, University of Rochester: Experimental nuclear physics; relativistic heavy ions.

Professors

Abanov, Alexander, Ph.D., 1997, University of Chicago: Theoretical Condensed Matter Physics.

Alvarez-Gaume, Luis, Director, Simons Center, Ph.D., 1980, Stony Brook University: Theoretical Physics and Cosmology.

Armitage, Philip J., Ph.D. 1996, Cambridge University: Theoretical astrophysics.

Averin, Dmitri V., Ph.D., 1987, Moscow State University, Russia: Theoretical condensed matter physics.

Essig, Rouven, Ph.D., 2008, Rutgers University.C.N. Yang Institute for Theoretical Physics: Theoretical particle physics.

Fernandez-Serra, Maria Victoria, Ph.D., University of Cambridge, 2005: Computational condensed matter.

Gonzalez-Garcia, Concha , Ph.D., 1991, Universidad de Valencia, Spain. C.N. Yang Institute for Theoretical Physics. Theoretical Elementary Particle Physics

Hobbs, John, Ph.D., 1991, University of Chicago: Experimental high-energy physics.

Kharzeev, Ph.D., 1990, Moscow State University: Heavy ion physics and particle theory.

Komargodski, Zohar, Ph.D., Weizmann Institute of Science, 2008: Theoretical Physics.

Korepin, Vladimir , Ph.D., 1977, Leningrad University, Russia: C.N. Yang Institute for Theoretical Physics: Theoretical physics.

Lanzetta, Kenneth M., Ph. D. 1988, University of Pittsburgh. Extragalactic Astronomy.

Li, Qiang. Ph. D. 1991, Iowa State University. Experimental Condensed Matter Physics

Litvinenko, Vladimir, Ph.D. 1989, Institute of Nuclear Physics, Novosibirsk, Russia: Accelerator physics and free electron lasers.

McCarthy, Robert L., Ph.D., 1971, University of California, Berkeley: Experimental high-energy physics.

Meade, Patrick, Ph.D. , 2006, Cornell University: phenomenological and theoretical explorations of the terascale. theoretical physics.

Mendez, Emilio E., BNL. Ph.D., 1979, Massachusetts Institute of Technology: Experimental condensed matter physics.

Mihaly, Laszlo, Ph.D., 1977, Eotvos Lorand University, Budapest, Hungary: Experimental condensed matter physics.

Misewich, James, Ph.D., 1984, Cornell University: Experimental Condensed Matter Physics.

Nekrasov, Nikita , Ph.D. 1996, Princeton University. Simons Center for Geometry and Physics: Mathematical physics.

Perna, Rosalba, Ph.D., Harvard University, 1999. High Energy Astrophysics.

Rastelli, Leonardo , Ph.D., 2000, Massachusetts Institute of Technology: String Theory.

Rocek, Martin , Ph.D., 1979, Harvard University. C.N. Yang Institute for Theoretical Physics:Theoretical physics: supersymmetry and supergravity.

Rijssenbeek, Michael, Ph.D., 1979, University of Amsterdam, Netherlands: Experimental high-energy physics.

Schneble, Dominik A., Ph.D., 2002, University of Konstanz: Experimental atomic physics, ultracold quantum gases.

Shrock, Robert , Ph.D., 1975, Princeton University. C.N. Yang Institute for Theoretical Physics: Theoretical physics; gauge theories; statistical mechanics.

Siegel, Warren , Ph.D., 1977, University of California, Berkeley. C.N. Yang Institute for Theoretical Physics: Theoretical physics; strings.

Teaney, Derek. Ph.D., 2001 Stony Brook University: Nuclear theory.

Verbaarschot, Jacobus J.M., Ph.D., University of Utrecht, 1982. Theoretical physics, strong interactions, random matrix theory, many body quantum physics.

Walter, Fredrick M., Ph.D., 1981, University of California, Berkeley: Stellar astrophysics, including X-ray optical and infrared photometry and spectroscopy; pre-main sequence objects.

Weinacht, Thomas, Ph.D., 2000, University of Michigan: Quantum Optics and Atomic Physics. **Zahed**, Ismail, Ph.D., 1983, Massachusetts Institute of Technology: Theoretical nuclear physics.

Zamolodchikov, Alexander, Ph.D., 1978, Institute for Theoretical and Mathematical Physics, Moscow 1978: Theoretical Physics.

Associate Professors

Allison, Thomas, Ph.D., 2010, University of California at Berkeley: Atomic, Molecular and Optical Experiment.

Calder, Alan, Ph.D., 1997, Vanderbilt University: Observational Astronomy

Dawber, Matthew, Ph.D., 2003, Cambridge University: Experimental condensed matter physics

Du, Xu, Assistant Professor, Ph.D, University of Florida, 2004. Experimental condensed matter physics.

Farr, William M., Ph.D., 2010, Massachusetts Institute of Technology: Astronomy.

Figuroa, Eden, Ph.D. , 2008, University of Calgary/University of Konstanz, 2008: Atomic, Molecular and Optical Experiment.

Kirylyuk, Joanna, Ph.D., 2000, University of Warsaw: Neutrino physics.

Koda, Jin, Ph.D., University of Tokyo, 2002. Astronomy.

Liu, Mengkun, Ph.D., 2012, Boston University: Condensed Matter – experimental and device physics.

McGrew, Clark, Ph.D., 1994, University of California Irvine: Experimental High Energy Physics.

Piacquadio, Giacinto, Ph.D., 2010, University of Freiburg: Experimental High Energy Physics.

Sehgal, Neelima, Ph.D., 2008, Rutgers University: Galaxies and cosmology.

Tsybychev, Dmitri, Ph.D., 2004 University of Florida: Experimental high energy physics.

Wei, Tzu-Chieh, Ph.D., 2005, University of Illinois, Urbana. C.N. Yang Institute for Theoretical Physics: Theoretical Particle physics.

Wilking, Michael, Ph.D., 2009, University of Colorado, Boulder: Experimental High Energy physics.

Zingale, Michael, Ph.D. 2000, University of Chicago: Computational astrophysics.

Assistant Professors

Bernauer, Jan Chrispher, Ph.D. 2010, Universitaet Mainz, Germany: Nuclear Experiment.

Cano, Jennifer, Ph.D., 2015, University of California, Santa Barbara: Condensed Matter Theory.

Dreyer, Cyrus E., Ph.D. 2014, University of California, Santa Barbara: Computational Condensed Matter.

Miranda, Vivian, Ph. D. 2015, The University of Chicago. C.N. Yang Institute for Theoretical Physics: Cosmology.

Shao, Shu-Hung, Ph. D. 2016, Harvard University, C.N. Yang Institute for Theoretical Physics: Theoretical Physics.

Syritysyn, Sergey, Ph.D., 2010, MIT: Theoretical Nuclear Physics.

Vafaei-Najafabadi, Navid, Ph.D., UCLA, 2016: Experimental Accelerator Physics.

von der Linden, Anja, Ph.D., 2007, Ludwig Maximilian Universitaet Muenchen: Astrophysics.

Wilking, Michael, Ph.D., 2009, University of Colorado, Boulder: Experimental High Energy physics.

Brookhaven Professor

Ben-Zvi, Ilan, Ph.D., 1967, Weizmann Institute, Israel: Accelerator and beam physics.

Research Faculty

Allen, Philip B., Ph.D., 1969, University of California, Berkeley: Theoretical condensed matter physics.

David, Gabor, Ph. D., 1991, Ph.D. Stony Brook University: Nuclear Physics

Grannis, Paul D., *Emeritus*, Ph.D., 1965, University of California, Berkeley: Experimental high-energy physics.

Nomerotski, Andrei, Ph.D., 1996, University of Padua: Cosmology and Instrumentation.

Semenov, Vasili, Ph.D., 1975, Moscow State University: Experimental condensed matter physics.

Swesty, Douglas, Ph.D., 1993, Stony Brook University: Computational astrophysics.

da Via, Cinzia, Ph.D., University of Glasgow, 1997: Experimental high Energy Physics.

Adjunct Faculty

Belomestnykh, Sergey, Ph.D. 1998, Budker Institute of Nuclear Physics. Accelerator Physics.

Cunsolo, Alessandro, Ph.D. 1999, University Joseph Fourier – Grenoble. Inelastic X-Ray Scattering.

Das, Kunal K., Ph. D, 2001, Stony Brook University, Atomic, Molecular and Optical Theory.

Dawson, Sally, Ph.D. 1981, Harvard University. Theoretical physics, collider phenomenology.

Eisaman, Matthew, Ph.D. , 2006, Harvard University: Experimental Condensed Mater Physics.

Fedurin, Mikhael G., Ph.D., 2000, Budker Institute of Nuclear Physics, Accelerator Physics.

Fluerasu, Andrei, Ph.D. 2004, McGill University. Experimental Condensed Matter Physics

Gu, Genda, Ph.D., 1989, Harbin Inst. Of Technology: Experimental Condensed Matter Physics.

Hao, Yue, Ph.D., 2008, Indiana University: Accelerator physics.

Kayran, Dmitry, Ph.D., Novosibirsk State University, 2001:. Accelerator Physics.

Ku, Wei, Ph.D., 2000, University of Tennessee: Theoretical condensed matter physics.

Kumar, Krishna S. Ph.D. 1990, Syracuse University. Experimental nuclear and heavy ion physics.

Loverde, Marilena, Ph.D., 2009, Columbia University. C.N. Yang Institute for Theoretical Physics: Cosmology.

Meot, Francois, Ph. D. 1982, Polytechnic Institute Grenoble. Accelerator Physics.

Ocko, Ben. Ph. D., 1984, MIT. Experimental Condensed Matter Physics.

Petrovic, Cedomir, Ph.D., 2000, Florida State University: Condensed matter physics.

Schenke, Bjoern Peter, Ph.D., 2008, Goethe University Frankfurt, Germany High energy nuclear theory.

Shen, Qun, Ph. D., 1987, Purdue University. Experimental Condensed Matter Physics.

Venugopalan, Raju, Ph.D., 1992, Stony Brook University: Theoretical nuclear physics.

Worcester, Elizabeth, Ph.D. 2007. University of Chicago. Experimental High Energy Physics.

Zhu, Yimei, Ph.D., 1987, Nagoya University: Condensed matter physics.

Emeritus

Goldhaber, Alfred S. , Ph.D., 1964, Princeton University. C.N. Yang Institute for Theoretical Physics: Theoretical physics; nuclear theory; particle physics.

Koch, Peter M., Ph.D., 1974, Yale University: Experimental atomic physics; quantum chaos; nonlinear dynamics.

Yang, Chen Ning , *Emeritus*. Ph.D., 1948, University of Chicago. C.N. Yang Institute for Theoretical Physics. Theoretical physics; field theory; statistical mechanics; particle physics.

Affiliated Faculty

Jia, Jiangyong, Ph.D., Stony Brook University, 2003: Experimental Relativistic Nuclear Physics.

Johnson, Christopher J., Ph.D., 2011, University of California San Diego. Department of Chemistry: Atomic and Molecular Physics.

Lacey, Roy, Ph.D., 1987, Stony Brook University. Department of Chemistry: High Energy Nuclear Physics.

Wang, Jin, Ph.D. 1991, University of Illinois: Department of Chemistry: Biology of physics.

NOTE: The course descriptions for this program can be found in the corresponding program PDF or at COURSE SEARCH.