General University Information
President: G. P. Peterson
Dean of Graduate School: Rafael Bras
University website: http://www.gatech.edu
School Type: Public
Setting: Urban
Total Faculty: 1,163
Total Graduate Faculty: 923
Total number of Students: 26,839
Total number of Graduate Students: 11,350

Department Information
Department Chairman: Prof. Pablo Laguna, Chair
Department Contact: James Sowell, Graduate Recruiter
Total full-time faculty: 43
Total number of full-time equivalent positions: 43
Full-Time Graduate Students: 140
Female Full-Time Graduate Students: 32
First-Year Graduate Students: 19
Female First-Year Students: 8
Total Post Doctorates: 23

Department Address
837 State Street
Atlanta, GA 30332-0430
Phone: (404) 894-5200
Fax: (404) 894-9958
E-mail: jim.sowell@physics.gatech.edu
Website: http://www.physics.gatech.edu

ADMISSIONS
Admission Contact Information
Address admission inquiries to: Graduate Recruiter, School of Physics
Phone: (404) 385-1294
E-mail: jim.sowell@physics.gatech.edu
Admissions website: http://www.physics.gatech.edu/graduate-program

Application deadlines
Fall admission:
U.S. students: January 1
Int’l. students: January 1

Application fee
U.S. students: $75
Int’l. students: $85

Admissions information
For Fall of 2018:
Number of applicants: 260
Number admitted: 48
Number enrolled: 16

Admission requirements
Bachelor’s degree requirements: Bachelor’s degree in Physics is preferred, with a minimum undergraduate GPA of 3.0 preferred for the M.S. program and 3.5 for the Ph.D. program.
Minimum undergraduate GPA: 3.5

GRE requirements
The GRE is required.
Quantitative score: 155
Verbal score: 153
Analytical score: 3.0

Subjective GRE requirements
The Subjective GRE is recommended.
Minimum accepted Advanced GRE score: 640
GRE Physics test is Required for International Students. It is Optional for US students.

TOEFL requirements
The TOEFL exam is required for students from non-English-speaking countries.
IBT score: 106

Other admissions information
Undergraduate preparation assumed: Classical Mechanics, Thornton & Marion; Electrodynamics, Griffiths; Quantum Mechanics, Griffiths; Thermal Physics, Schroeder.

TUITION
Tuition year 2018–2019:
Tuition for in-state residents
Full-time students: $28,096 annual
Tuition for out-of-state residents
Full-time students: $48,894 annual
Credit hours per semester to be considered full-time: 12
Deferred tuition plan: No
Health insurance: Available at the cost of $664 per year.
Other academic fees:
Students employed as Graduate Research or Teaching Assistants pay $25 per semester tuition plus $1100 fee per semester.
Academic term: Semester
Number of first-year students who received full tuition waivers: 15

Teaching Assistants, Research Assistants, and Fellowships
Number of first-year
Teaching Assistants: 15
Average stipend per academic year
Teaching Assistant: $25,068
Research Assistant: $25,068
All Ph.D. students receive financial support either as a Graduate Teaching Assistant or as a Graduate Research Assistant.

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

For further information
Address financial aid inquiries to: https://finaid.gatech.edu/contacting-our-office.
Financial aid website: https://finaid.gatech.edu

HOUSING
Availability of on-campus housing
Single students: Yes
Married students: Yes
Childcare Assistance: No
Georgia

For further information
Address housing inquiries to: Housing Office.
Phone: 404-894-2470
E-mail: information@housing.gatech.edu
Housing aid website: http://www.housing.gatech.edu

Table A—Faculty, Enrollments, and Degrees Granted

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mas-ter’s</td>
<td>Doctorate</td>
<td>Master’s Terminal Doctorate</td>
</tr>
<tr>
<td>Astrophysics</td>
<td>9</td>
<td>18</td>
<td>–</td>
</tr>
<tr>
<td>Atomic, Molecular, &amp; Optical Physics</td>
<td>6</td>
<td>22</td>
<td>–</td>
</tr>
<tr>
<td>Biophysics</td>
<td>6</td>
<td>23</td>
<td>–</td>
</tr>
<tr>
<td>Condensed Matter Physics</td>
<td>13</td>
<td>22</td>
<td>–</td>
</tr>
<tr>
<td>Nonlinear Dynamics and Complex</td>
<td>5</td>
<td>18</td>
<td>–</td>
</tr>
<tr>
<td>Systems</td>
<td>4</td>
<td>15</td>
<td>–</td>
</tr>
<tr>
<td>Soft Matter</td>
<td>4</td>
<td>22</td>
<td>1(3)</td>
</tr>
<tr>
<td>Non-specialized</td>
<td>–</td>
<td>3</td>
<td>2(10)</td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td>140</td>
<td>1(3)</td>
</tr>
<tr>
<td>Full-time Grad. Stud.</td>
<td>–</td>
<td>140</td>
<td>–</td>
</tr>
<tr>
<td>First-year Grad. Stud.</td>
<td>–</td>
<td>16</td>
<td>–</td>
</tr>
</tbody>
</table>

GRADUATE DEGREE REQUIREMENTS

Master’s: Thirty semester hours are required. Thesis is optional; 2.7 GPA is required. One-year residency required. No language requirement.

Doctorate: The number of credit hours is not stipulated except 9 hours in minor with 2.9 GPA required. One-year residency required. No comprehensive examination. Thesis and thesis examination are required.

Thesis: Thesis may be written in absentia.

SPECIAL EQUIPMENT, FACILITIES, OR PROGRAMS

Research programs are described at: http://www.physics.gatech.edu.

Table B—Separately Budgeted Research Expenditures by Source of Support

<table>
<thead>
<tr>
<th>Source of Support</th>
<th>Departmental Research</th>
<th>Physics-related Research Outside Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal government</td>
<td>$5,366,977</td>
<td></td>
</tr>
<tr>
<td>State/local government</td>
<td>$90,348</td>
<td></td>
</tr>
<tr>
<td>Non-profit organizations</td>
<td>$73,275</td>
<td></td>
</tr>
<tr>
<td>Business and industry</td>
<td>$33,765</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$5,564,365</td>
<td></td>
</tr>
</tbody>
</table>

Table C—Separately Budgeted Research Expenditures by Research Specialty

<table>
<thead>
<tr>
<th>Research Specialty</th>
<th>No. of Grants</th>
<th>Expenditures ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Astrophysics</td>
<td>19</td>
<td>$3,882,748</td>
</tr>
<tr>
<td>Atomic, Molecular, &amp; Optical Physics</td>
<td>8</td>
<td>$689,842</td>
</tr>
<tr>
<td>Physics of Living Systems</td>
<td>36</td>
<td>$1,974,894</td>
</tr>
<tr>
<td>Condensed Matter Physics</td>
<td>25</td>
<td>$877,978</td>
</tr>
<tr>
<td>Nonlinear Dynamics and Complex</td>
<td>12</td>
<td>$450,013</td>
</tr>
<tr>
<td>Physics</td>
<td>11</td>
<td>$187,950</td>
</tr>
</tbody>
</table>

Total: 111 $5,564,425

FACULTY

Professor


Kennedy, T. A. Brian, Ph.D., Queen’s Belfast University, 1986. Associate Chair for Undergraduate Program. Atomic, Molecular, & Optical Physics. Locomotion biomechanics, Robophysics, Soft condensed matter physics.


Landman, Uzi, Ph.D., Haifa, 1969. F.E. Callaway Chair in Computational Materials Science; Regents’ and Institute Professor; Director, Center for Computational Materials Science. Condensed Matter Physics. Theoretical condensed matter physics; computational physics.


Sheoemaker, Deirdre, Ph.D., University of Texas, Austin, 1999. Dunn Professor. Astrophysics. Gravitational wave astrophysics, Numerical relativity, computational astrophysics.


**Associate Professor**

Ballantyne, David R., Ph.D., University of Cambridge, 2002. Associate Chair for Graduate Studies. *Astrophysics.* High-energy astrophysics, Active galactic nuclei, Accretion physics.

Bogdanovic, Tamara, Ph.D., Pennsylvania State University, 2006. *Astrophysics.* Black hole astrophysics, Active galactic nuclei, Theoretical and computational astrophysics.


**Assistant Professor**


Maldovan, Martin, Ph.D., Massachusetts Institute of Technology. Assistant Professor in School of Chemical & Biomolecular Engineering. *Condensed Matter Physics.* Chemical Physics, Chemical engineering and physics.


**Professor Emeritus**


**Adjunct Faculty**

Amini, Jason, Ph.D., University of California, Berkeley, 2006.

Bréchignac, Catherine, Ph.D., University of Paris-Sud, Orsay, 1977. *Atomic, Molecular, & Optical Physics, Condensed Matter Physics, Nano Science and Technology.*

Brown, Kenton, Ph.D., University of Maryland, 2005. Quantum information systems.

Hu, David, Ph.D., Massachusetts Institute of Technology, 2005. *Biophysics.*


Orlando, Thomas, Ph.D., Stony Brook University, 1988. *Chemical Physics.* Experimental physical, analytical, and materials chemistry.


**Professor of the Practice**


**Senior Research Scientist**


**Research Scientist**


**Senior Academic Professional**


Academic Professional


DEPARTMENTAL RESEARCH SPECIALTIES AND STAFF

Theoretical

Astrophysics. General relativity; gravitational radiation patterns; gravitational and phenomenological astrophysics; galaxy and black hole evolution; high-energy particle astrophysics; accretion disks; numerical relativity; cosmology; gravitating systems; black holes; galaxy and black hole evolution; high-energy particle astrophysics; accretion disks; gravitational physics. Ballantyne, Bogdanovic, Laguna, Li, Shoemaker, Wise.

Condensed Matter Physics. Nanoscience; phase transitions; mesoscopic physics; quantum interference effects; superconductors in high magnetic fields; Bose-Einstein superconductivity; macroscopic quantum phenomena; ferroelectrics; Sutherland-Calogero models; ferromagnets; spintronics; semiconductor quantum dots. Chou, Fernandez de las Nieves, Kindermann, Landman, Pustilnik, S de Melo.

Nonlinear Dynamics and Complex Systems. Molecular fluctuations; chaotic dynamics; quantum chaos; Husimi-Wigner wave packets; Lyapunov exponent; Rydberg states; trajectory analysis; massively coupled oscillators; chemical reaction dynamics; Hamiltonian flows. Cvitanović, Grigoriev, Uzer, Wiesenfeld.

Biophysics. Energy transduction; chemiosmosis; noise; protein biosynthesis; energy metabolism; ion channel fluctuations; molecular motors; Hodgkin-Huxley equations; chemomechanical energy conversion; energy driven rectification of Brownian motion; quantum mutations in DNA. Curtis, Fenton, Goldman, Gumbart, Kim, Orlando, Sponberg, Wartell, Weitz, Wiesenfeld, Yunker, Zhu.

Experimental

Astrophysics. Neutrino and gamma-ray astrophysics; gravity wave detection. Ballantyne, Cadonati, Otte, Taboada.

Atomic, Molecular, & Optical Physics. Fundamental properties of ultra-cold condensed gases; atom trapping; multi-atom entanglement; cavity QED; laser Raman and Brillouin scattering; chemical biosensors; photovoltaic devices; quantum memory; ultrafast optics. Chapman, Parker, Raman, Trebino.


Condensed Matter Physics. Nanoscience; soft matter; scanning tunneling microscopy; high-resolution X-ray scattering; magnetic heterostructures; graphene; Josephson tunneling; molecular clusters; thin-film magnetism; semiconductor nanostructures; atomic force microscopes; friction; nanowires; spintronics; liquid crystals; colloids. Conrad, Davidovic, de Heer, Fernandez de las Nieves, First, Jiang, Mourigal, Yunker.

Nonlinear Dynamics and Complex Systems. Spatiotemporal chaos; control/exploitation of chaos; pattern formation in fluids; weather-in-a-box; spontaneous and manipulated patterns; fluid instabilities; coupled mechanical oscillators; granular matter. Fenton, Goldman, Schatz.


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.