LSU

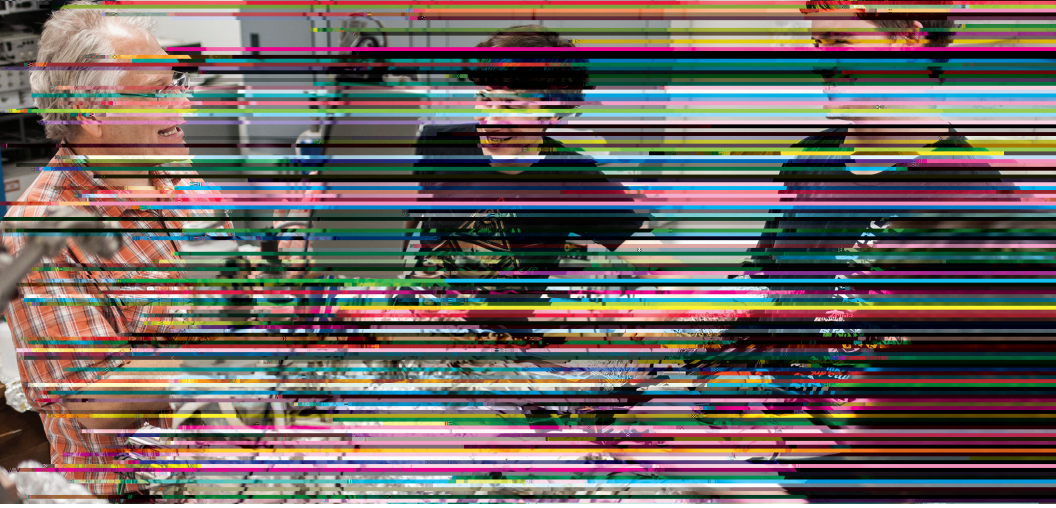
Colle
Science
Departmen s & omy

Among our faculty is a National Academy member, many fellows of the American Physical Society and the Optical Society of America, the American Association for the Advancement of Science Fellows, and other distinguished researchers.

GRADUATE STUDIES IN **PHYSICS & ASTRONOMY**

Louisiana State University is a leading Carnegie Research I institution and the flagship university of Louisiana. LSU's Department of Physics & Astronomy offers PhD programs in physics and astronomy, as well as MS and PhD programs in medical physics. Our graduate students also have an option of obtaining a certificate in materials science as part of their progress towards a PhD.

Our faculty lead research on a wide range of cutting-edge topics, from investigating properties of nature on the Planck scale and the physics of subatomic particles to making, modeling, and studying novel magnets and superconductors, and exploring superclusters of galaxies.



Professor Phillip Sprunger and students conduct research in the Surface Science Lab.

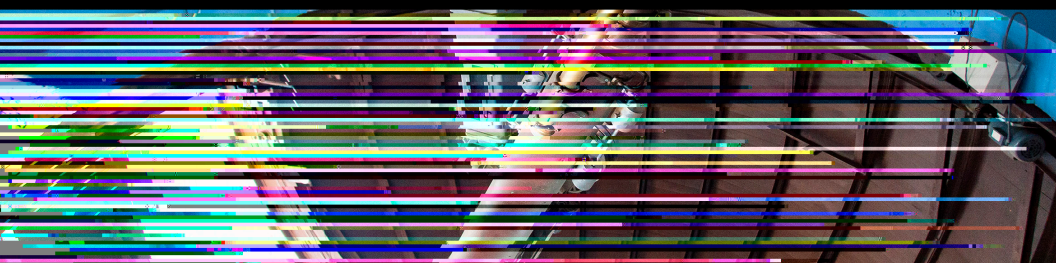
STIPENDS & TUITION WAIVERS

All our graduate students receive assistantships and/or fellowships with competitive salaries. Our healthy research funding provides most students, beyond their second year, with support from research grants. This allows you to fully focus on specific projects, accelerating progress toward your PhD. In many cases, you will participate in collaborative projects between groups. This creates a collegial atmosphere where interactions are encouraged and expertise is easily exchanged.

Our program is highly ranked
by US News & World Report.
phys.lsu.edu

ASTRONOMY AND ASTROPHYSICS

LSU astronomers and astrophysicists use ground-based and space-based telescopes plus theory to study compact objects – objects like

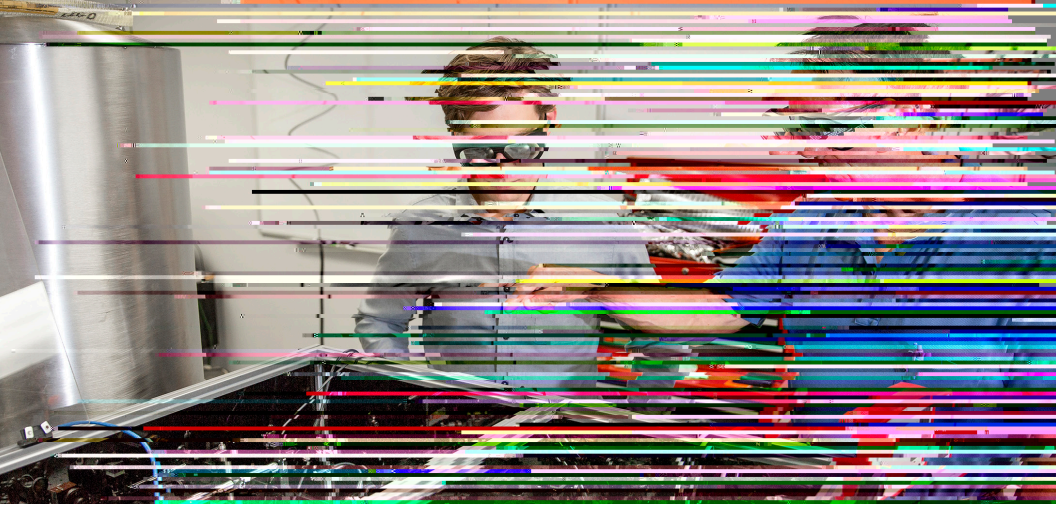


RESEARCH AREAS

Our faculty have achieved university as well as national awards, and are widely recognized for their research, teaching, and authorship of textbooks.

NEUTRINO, HIGH ENERGY, & NUCLEAR PHYSICS

LSU experimenters are measuring neutrino oscillation parameters with the T2K long-baseline neutrino experiment in Japan and are preparing the au 0282[f]11a



Todd Moulder with Jonathan Dowling

over the entire event. LSU has one of the best theoretical GR groups in the world, close access to some of the fastest supercomputers in the world on campus, plus a close connection with the LSU gravitational wave experimentalists from LIGO, one of only two facilities like this in the country.

ATOMIC, MOLECULAR, OPTICAL PHYSICS & QUANTUM SCIENCE

With seven professors, the LSU group in theoretical atomic, molecular, and optical physics is among the largest in the country. One of our specialties is quantum sciences and technologies, including quantum optics, information, sensing, imaging, and photonic materials. Entanglement, superposition, and interference are all aspects of quantum theory that were once regarded as strange and, in some cases, as nuisances. Nowadays, we understand these phenomena to be features that are the enabling fuel for a new quantum theory of information and computation, in which seemingly magical possibilities, such as teleportation, are becoming reality. A second focus area is ultrafast AMO physics. Our attosecond theory group works closely with experimental groups around the world, studying the interaction between atoms or molecules and ultrafast laser fields, in order to explore and understand electron dynamics at the sub-femtosecond time scale.

MEDICAL AND HEALTH PHYSICS

To meet the increasing demand of hospitals, clinics, and industry for trained m3s thum{wll3T{e dise se27 {T{e X} Tm{-ita}3 {tio-0.087 r4{e and u {{e gamma u {{e ita

Of all the schools that I visited, only LSU's faculty and staff made me feel like I wouldn't be another cog in a machine. Everyone seemed more invested in helping me achieve my goals while treating me as an individual. It's something that has continued and made the experience all the better.

Ed Montiel, Astronomy

The faculty and staff are very helpful and involved with their students – not to mention connected to collaborators all over the globe. My own thesis study revolves around a cosmic-ray instrument that will be deployed on the International Space Station! Through LSU I have been afforded wonderful opportunities for research with collaborators at

Lydia Wilson Jagetic, Medical Physics

I grew up in a small town and did my undergraduate work at a small liberal arts college. This made LSU very intimidating to me when I was choosing graduate programs. However, LSU made the transition very easy by providing me with access to everything I needed to succeed, from the local high performance computing resources, all the way to having passionate professors who are experts in their research fields helping me at each step along my path.

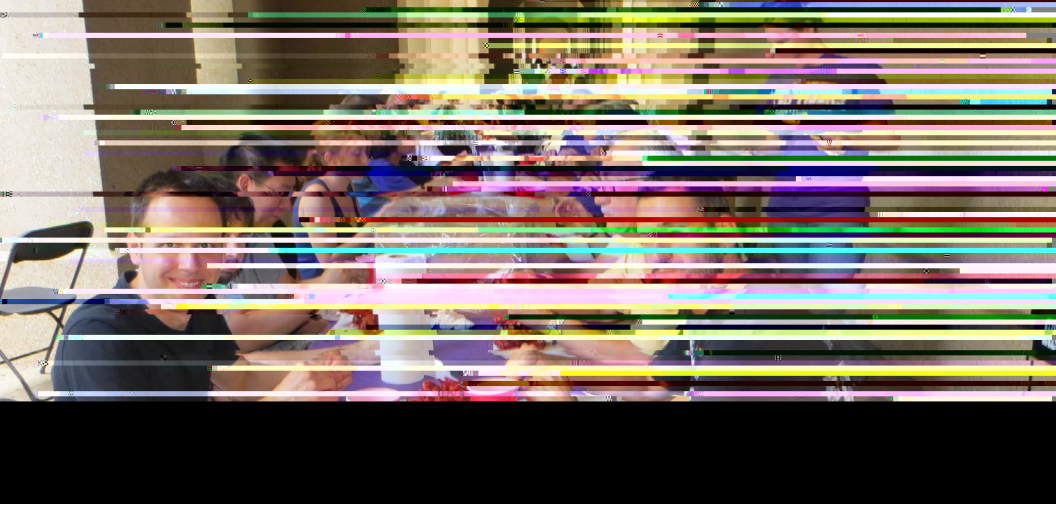
Seth Camp, Atomic and Molecular Physics

Joining the Physics Graduate Program at LSU is for sure the best decision I made in my life. My research experience in the Quantum Science at Technologies group at LSU has been superlative. I have had the opportunity to collaborate internationally, and to present and publish my research at top quality venues. This has helped me now find my dream postdoctoral offer!

Kaushik Seshadreesan, Quantum Physics

LSU AND BATON ROUGE

LSU is just minutes from vibrant downtown Baton Rouge, the state capital and a cultural crossroads between the Cajun country with its center in Lafayette (55 miles to the west) and the birthplace of jazz and home of Mardi Gras, New Orleans (80 miles to the southeast). Baton Rouge – sometimes called “Red Stick” from its French translation –



APPLY NOW

You can be an integral part of this vibrant program at LSU that combines world-class research with extensive course offerings, including accessible and engaged faculty and friendly fellow graduate students. Application deadlines are January 15 for fall and October 15 for spring admission. Apply for the LSU Graduate School online at gradapply.lsu.edu.

Learn more at
phys.lsu.edu