Road To Grad School & Beyond

Jonathan Dowling
Buy This Book or the Cat Will (and Will Not) Die!

Schrödinger’s Killer App
Race to Build the World’s First Quantum Computer

Jonathan P. Dowling

7 ★★★★★★★ REVIEWS!

“...I found myself LAUGHING OUT LOUD quite frequently.”

“The book itself is fine and well-written … I can thoroughly recommend it.”
To Get Into Good Grad School

GPA $\geq$ 3.0

Letters from Research Advisors

Refereed Publication

Physics Subject GRE $\geq$ 50%

Fellowships
Supervised Undergraduate Research Experiences (SURE)
A Program for Women and Underrepresented Minorities* in STEM Disciplines

Request for Applications

DEADLINE DATE: April 3, 2014
Last Day to ask questions about this RFA: March 20, 2014

LOUISIANA EXPERIMENTAL PROGRAM TO STIMULATE COMPETITIVE RESEARCH (EPSCoR)

Sponsored By:
The National Science Foundation and the Louisiana Board of Regents

1201 North Third Street, Suite 6-200
Baton Rouge, Louisiana 70802
(225) 342-4253
www.leregents.org

Issuance Date: 14 January 2014

* Students or African-Americans; those of Hispanic or Latino ethnicity; American Indian or Alaskan Natives; Native Hawaiian or other Pacific Islanders; or those with disabilities (e.g., hearing, visual, or mobility impairments)

Would you like to...

✓ See ripples in space-time?
✓ Deduce astronomical knowledge from ancient writings?
✓ Create clean renewable energy sources?
✓ Observe the oscillation of neutrinos?
✓ Collect cosmic rays with a balloon?

Then come be an REU program student in the Department of Physics & Astronomy at Louisiana State University! You can be in any undergraduate academic year and need not have a declared major, but must have completed the introductory physics sequence at your school.

Participants are lodged in apartment-style University housing and paid a stipend for food and personal expenses. Further information is available on our web page.

www.phys.lsu.edu/REU

Research Areas

✓ Astronomy, astrophysics, astro-history
✓ Gravitation and relativity
✓ Atomic/molecular/optical physics
✓ Quantum optics and computing
✓ Condensed matter physics
✓ Materials synthesis & characterization
✓ Energy and materials research
✓ Computational physics
✓ Neutrinos and cosmic rays
✓ Nuclear physics
✓ Medical and health physics

LSU & Local Facilities

✓ LIGO-Livingston
✓ CAMD 1.3 GeV synchrotron
✓ Landolt Observatory
✓ Machine and electronics shops
✓ Highland Road Park Observatory
✓ Center for Computation & Technology
Undergraduate Research @ LSU

http://www.lsu.edu/lastem/

http://www.lsu.edu/sstem/

http://www.lsu.edu/hmi/

http://lsuhhmi.com/
Not @ LSU: NSF REU

FOR STUDENTS

NSF funds a large number of research opportunities for undergraduate students through its REU Sites program. An REU Site consists of a group of ten or so undergraduates who work in the research programs of the host institution. Each student is associated with a specific research project, where he/she works closely with the faculty and other researchers. Students are granted stipends and, in many cases, assistance with housing and travel. Undergraduate students supported with NSF funds must be citizens or permanent residents of the United States or its possessions. An REU Site may be at either a US or foreign location.

By using the web page, Search for an REU Site, you may examine opportunities in the subject areas supported by various NSF units. Also, you may search by keywords to identify sites in particular research areas or with certain features, such as a particular location.

Students must contact the individual sites for information and application materials. NSF does not have application materials and does not select student participants. A contact person and contact information is listed for each site.
Not @ LSU: NIST SURF
Not @ LSU: ORAU

Undergraduate Opportunities

http://see.orau.org/AcademicStatus.aspx?type=Undergrad
Not @ LSU: Navy

http://nreip.asee.org/

ABOUT NREIP
NAVAL RESEARCH ENTERPRISE INTERNSHIP PROGRAM

The Naval Research Enterprise Internship Program (NREIP) provides an opportunity for students to participate in research at a Department of Navy (DoN) laboratory during the summer.

The goals of NREIP are to encourage participating students to pursue science and engineering careers, to further education via mentoring by laboratory personnel and their participation in research, and to make them aware of DoN research and technology efforts, which can lead to employment within the DoN.

NREIP provides competitive research internships to approximately 275 college students (200 undergraduate students and 75 graduate students) each year. Participating students spend ten weeks during the summer conducting research at approximately 29 DoN laboratories.

NREIP Online Application is Currently Closed for the Year!
Not @ LSU: Army

http://www.usaeop.com/

Welcome to the Army Educational Outreach Program (AEOP)!
The AEOP is comprised of Army-sponsored research, education, competitions, internships and practical experiences designed to engage and guide students and teachers in science, technology, engineering and mathematics (STEM) education.

Click here to learn more about the Army's portfolio of STEM educational opportunities

Registration for many AEOP programs is now OPEN! Go to the program pages for more information.

NEWS

• 2014 SEAP application NOW AVAILABLE. (March, 2014)
• Many GEMS Program Applications Are Now Open (March 2014)
• UNITE summer program sites announced for 2014. (February, 2014).
• VIDEO – AEOP Participants in Army Strong Zone at Army All American Game. (January, 2014)
Not @ LSU: NASA

https://intern.nasa.gov/
Not @ LSU: JPL

http://www.jpl.nasa.gov/education/index.cfm?page=393

About JPL Internships

Dare mighty things. That’s our unofficial mantra at the NASA Jet Propulsion Laboratory. It’s guided us through the launch of the first U.S. satellite, soft landings on the moon, dozens of journeys to the planets, the surface of Mars and even to the edge of our solar system. It’s brought some of the most talented engineers and expert scientists in the world to our laboratory—and we hope it’ll bring you here, too.

Each year, JPL offers hundreds of internship opportunities to students from diverse backgrounds and in various stages of their education. Our internship opportunities span the science, technology, engineering and mathematics universe and give students the chance to work with world-renowned scientists and engineers on some of the most important space missions studying our home planet, the solar system and worlds beyond.

JPL is a NASA federally funded research and development center managed by the California Institute of Technology. We work closely with NASA and Caltech, as well as community colleges, universities and educational programs across the United States to offer opportunities to diverse communities, with a special focus on those in minority and underrepresented groups.

How to Apply

NEWS & UPDATES

Learn what it’s like to be a JPL intern and read success stories from former interns: JPL Edu News

Get updates about internships and student stories on Facebook and Twitter.

NASA INTERNSHIPS

To apply for internships across the various NASA centers, visit NASA’s One Stop Shopping Initiative, or OSSI, website.

(Note: While some JPL opportunities are available on the OSSI website, applicants to JPL-specific internships are encouraged to apply through the JPL Internships page for a full list of offerings.)
Grad Fellowships: DoD-NDSEG

http://ndseg.asee.org/

NDSEG Information

The National Defense Science and Engineering Graduate (NDSEG) Fellowship is a highly competitive, portable fellowship that is awarded to U.S. citizens and nationals who intend to pursue a doctoral degree in one of fifteen supported disciplines. NDSEG confers high honors upon its recipients, and allows them to attend whichever U.S. institution they choose. NDSEG Fellowships last for three years and pay for full tuition and all mandatory fees, a monthly stipend, and up to $1,000 a year in medical insurance (this excludes dental and vision insurance).

The Department of Defense (DoD) is committed to increasing the number and quality of our nation’s scientists and engineers, and towards this end, has awarded approximately 3,200 NDSEG fellowships since the program’s inception 22 years ago. The NDSEG Fellowship is sponsored by the Air Force Office of Scientific Research (AFOSR), the Army Research Office (ARO), the High Performance Computing Modernization Program (HPCM), and the Office of Naval Research (ONR), under the direction of the Director of Defense Research and Engineering (DDR&E).

**NDSEG Fellows do not incur any military or other service obligation.**

Eric Jankowski, NDSEG Fellow

“The academic freedom that is enabled by the NDSEG fellowship is invaluable. With this support I’ve been able to pursue the projects that I’ve found most interesting, not those that have been dictated by someone else’s grant. I feel very fortunate - this is the way science is meant to be done!”

NATIONAL DEFENSE SCIENCE AND ENGINEERING GRADUATE (NDSEG) FELLOWSHIP

Administered by: American Society for Engineering Education (ASEE)
1818 N Street N.W., Suite 600
Washington, DC 20036
Email: ndseg@asee.org, Phone: (202) 649-3831, Fax: (202) 265-8504
Grad Fellowships: DoD-SMART

SCHOLARSHIP FOR SERVICE PROGRAM
Undergraduate, graduate, and doctoral students pursuing degrees in Science, Technology, Engineering, & Mathematics (STEM) fields

SMART Scholars receive:
+ Full tuition and educational fees
  + Generous cash stipend
  + Employment with DoD facilities after graduation
  + Summer internships, health insurance, & book allowance

For more information and to apply, visit http://smart.asee.org
Graduate Fellowships: DOE

http://scgf.orau.gov/

The Department of Energy (DOE) Office of Science (SC) established the DOE Office of Science Graduate Fellowship (DOE SCGF) program in 2009 to support outstanding students to pursue graduate training in fundamental research in areas of physics, biology, chemistry, mathematics, engineering, computer and computational sciences, and environmental sciences relevant to the Office of Science and to encourage the development of the next generation scientific and technical talent in the U.S. who will pursue careers in research critical to the Office of Science mission at DOE laboratories and in academia.

The DOE SCGF is a three-year award, providing partial tuition support, an annual stipend for living expenses, and a research allowance for full-time graduate study and thesis/dissertation research at a U.S. academic institution. Applicants must be U.S. citizens and either a first or second year graduate student, or an undergraduate senior at the time of applying, and must be pursuing or plan to pursue graduate study and research in areas relevant to the science programs supported by the DOE Office of Science. Applications are subject to rigorous peer review by external experts based on established merit review criteria.

For program related questions, please contact:
SCGFInfo@science.doe.gov
Graduate Fellowships: NPSC

http://www.npsc.org/

By helping to provide a continuous source of scientists who are U.S. citizens, employers and universities can achieve diversity and balance in our nation's scientific community. In turn, NPSC can help today's promising young scientists — tomorrow's science leaders — to realize their dreams.

The NPSC Graduate Fellowship is unique in being: open to all American citizens; lasting for up to six years; providing a $20,000 expense allowance; covering tuition; allowing a fellow also to hold a research or teaching assistantship; including one or two paid summer internships with a government agency; providing a mentor and the opportunity for a lasting relationship with the sponsor.

The application is easy to complete, requiring the same information as other national fellowships. The online application opens August 25 and closes November 30.
Physics GRE

http://www.stanford.edu/group/sps/PhysGRE.htm
Be Sure to Relax and Smell the Photons!