



# Students and Sandia

*Ken Struve, Center 1600*

*2010 Science with High-Power Lasers and Pulsed Power Workshop*

*August 6, 2010*



## Students are welcome at Z, but it is not necessarily easy for students to work at Z, ZBL, or ZPW

- **Badges required, but no security clearance needed for most Z experiments. Access easy for US citizens, more difficult for non-US citizens**
  - **Unclassified visit request takes 3 or more days for US citizens**
    - » Paperwork handled by Sandia contact
    - » Badge picked up at badge office off-base – bring ID
    - » Badge gives access to unclassified (property protection) areas
  - **Approval for non-US citizens can take up to 3 months**
    - » Requires submitting a foreign national request by Sandia contact
    - » Some nationalities not allowed
    - » Restrictions related to Export Laws for foreign nationals who do not have permanent residency (Green Card).
- **No formal user-facility process**
  - Office space provided on an as-available/as-needed basis
  - Sandia computer access not automatic, but possible
  - No help with local living/transportation arrangements
- **Required safety training for experimental access to facilities**
  - Necessary for getting a facility access badge
  - Necessary for access to controlled areas around the machine
- **Visitors can bring in cell phones and laptops to Z. Personal vehicles allowed on site without special permission.**



## We have several avenues for bringing in and supporting students

- Student intern program
- SEERI
- Non-funded visits
- Contracts to university professors
- NPSC student fellowships

For any of these to work there must be a Sandia contact or mentor



# Sandia student intern program found on the external website at <http://www.sandia.gov/careers/stu-interns.html>



[About Sandia](#) | [Mission Areas](#) | [Newsroom](#) | [Careers](#) | [Doing Business](#) | [Education](#) | [Contact Us](#)

[Employee Locator](#) | [Index](#) | [Site Map](#)

[Careers](#) > [Careers Paths](#) > [Student Interns](#)

## CAREERS

[Home](#)

[Search Openings](#)

### Career Paths

> [Experienced Professionals](#)

### Recent Graduates

### Student Interns

> [Overview & Requirements](#)

> [Institutes](#)

> [How to Apply](#)

> [Intern Benefits](#)

> [Intern FAQs](#)

> [Media](#)

### Career Tools

### Campus Recruiting

[Top Ten Benefits](#)

### Working at Sandia

## STUDENT INTERNS

Here you will receive training and practical work experience in the operation of state-of-the-art equipment and instruments



Are you interested in continuing your education and obtaining a science, math, engineering, or business degree? Would you like to see how classroom theory applies in a work environment? If the answer is yes, an exceptional educational experience awaits you.

To meet the Labs' future work force needs for trained scientists, engineers, administrators and technicians at all degree levels, we maintain internship programs that:

- Identify outstanding graduates for possible full-time employment.
- Offer students training and practical work experience in the operation of state-of-the-art equipment and instruments. Interns work under the direction of a mentor, in a variety of technical and business disciplines.
- Identify undergraduate students as potential graduate school candidates. Internship programs are offered during the summer (local high school and college students work year-round).
- Help students gain academic credit while working. Co-op internships are offered during the spring, fall, and winter. (Co-op or internship offices at your institution can assist you in determining if academic credit is available.)
- Increase access to underrepresented students upon graduation. Graduate programs provide underrepresented students with access to graduate education through fellowships and paid summer employment.

### We make our selections based...

on your interests, academic achievement, applicable experience and Sandia's workforce needs. Apply a minimum of three months prior to your desired start date.

## Student Resources

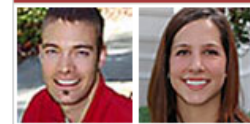
- [Overview and Requirements](#)
- [How to Apply](#)
- [Intern Benefits](#)
- [Institutes](#)

### What is it like to be an intern at Sandia?

### Can interns expect to work on real, worthwhile projects?

To find out the answers to these questions and more, check out these videos.

## Intern Profiles



## Contact Us

- [Staffing Dept.](#) ✉
- [Meet our Recruiters](#)
- [Special Accommodations](#)



# Several programs are available

## **Student Internships:**

### **Summer Internships**

The Summer Technical Student Internship Program at Sandia National Laboratories provides opportunities for undergraduate and graduate students majoring in science, math, engineering, technology, computer science and MIS disciplines to integrate their academic program with work-related experience during their summer break.

[\*See Details\*](#)

### **High school Internships**

The High School Internship Program at Sandia National Laboratories has a wide variety of challenging and rewarding learning experiences for our nations future engineers, scientists, technologists, and business leaders. This program will provide a year-round opportunity to work with people who are global leaders in their fields.

[\*See Details\*](#)

### **Undergraduate Internships**

This Internship Program is open to undergraduate students majoring in technical and non-technical disciplines. Students normally work 40-hour weeks during the summer. During school, interns may work a maximum of 25 hours per week. Assignments available vary widely and include work in the clerical, manual, technical, or administrative fields.

[\*See Details\*](#)

### **Graduate Internships**

Graduate students are employed on a part-time (30 hours per week) or full-time (summer and official school breaks only) basis while enrolled in school full time and are actively pursuing the completion of a degree. Documented work assignments or projects must be professional in nature and must complement their Sandia-focused discipline (Science, Math, Engineering, Technology/Business or CIS/MIS).

[\*See Details\*](#)



# Summer Internship Details

## Student Internships:

### Summer Internships

The Summer Technical Student Internship Program at Sandia National Laboratories provides opportunities for undergraduate and graduate students majoring in science, math, engineering, technology, computer science and MIS disciplines to integrate their academic program with work-related experience during their summer break.

[See Details](#)

### Overview

Each year, Sandia welcomes students from around the country. Some are year-round interns, who attend local colleges and universities; many come during the summer months, and some interns co-op during the academic year. We offer a wide range of technical internships and institutes, as well as some business-related internship opportunities, for students ranging from high school (16+ years of age) all the way through those obtaining a Ph.D. Workshops, seminars, tours, social activities, and symposiums are planned for all interns. Interns contribute to Sandia's missions by working on real-world, challenging projects.

### You will receive...

- A competitive rate of pay
- Mentoring
- Professional development opportunities
- Social events

### Requirements

To be eligible for an internship or co-op at Sandia National Laboratories, one must meet the following basic requirements:

- Be a United States citizen
- Be at least 16 years of age
- Have full-time enrollment status at a high school, college, or university during the academic school year (12-unit minimum for undergraduate students or 9-unit minimum for graduate students)
- Have a minimum cumulative GPA of 3.2/4.0 for undergraduate students, 3.5/4.0 for graduate students, or 3.2/4.0 for clerical or laborer students.



# Science of Extreme Environments Research Institute

**SEERI is a laboratory critical skill development program to funnel U.S. undergraduate and graduate students into pulsed power and radiation effects research**

- **Funds split between the Radiation Effects and Pulse Sciences Centers. These are used to support**
  - Summer student internships
  - PhD student fellowships
  - Student seminars
  - Student computers
  - College visits
- **For FY10 \$325k was split between the two centers**

All SEERI expenditures require a 1:1 match from program funds



# NPSC Fellowship Students Fall 2010

	<i>Student</i>	<i>School</i>	<i>Major</i>	<i>Expected Graduation</i>	<i>Sandia Contact</i>
<i>Continuing Graduate Students</i>					
	Nicholas Quart	Univ. of Nevada Reno	Physics	Fall 2010	Mike Cuneo
	Kevin O'Connor	Univ. of Missouri Columbia	EE	Spring 2011	Bryan Oliver
	Jacob Zier	Univ. of Michigan	Nucl. Eng.	Spring 2011	Tom Mehlhorn
<i>Awarded July 09</i>					
	In Tai Kim	Univ. of Texas-Austin	Physics	Spring 2012	Briggs Atherton
	Matt McCormick	Univ. of Texas-Austin	Physics	Spring 2012	John Porter
	Sonal Patel	Univ. of Michigan	Nucl. Eng.	Spring 2013	Mike Lopez
<i>Awarded 2010</i>					
	Derek Schaeffer	UCLA	Physics	Spring 2013	Briggs Atherton

Fellowships administered through the National Physical Sciences Consortium (NPSC)





# NPSC Homepage

<http://www.npsc.org/>



NATIONAL PHYSICAL SCIENCE CONSORTIUM  
graduate fellowships in the physical sciences

[ABOUT NPSC](#) [CONTACT NPSC](#) [HOME](#)



[STUDENTS](#)

[INDUSTRY & LABS](#)

[UNIVERSITIES](#)

[ACCESS APPLICANTS](#)

[CONSORTIUM MEMBERS](#)

[RECOMMENDERS](#)

[INFO ALUMNI](#)

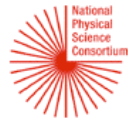
Welcome to the National Physical Science Consortium. If you aspire to a graduate degree and career in the physical sciences, biochemistry, computer science, and related fields of science and engineering, you may be a potential NPSC Fellow. If you represent an agency, business, industry, or laboratory looking to enhance your pool of talented young scientists, especially women and underrepresented minorities, we hope you'll consider becoming a Fellowship sponsor. Created by a national task force, and with a 17-year record of success, the NPSC brings today's industry leaders together with tomorrow's most promising science scholars.

Since inception in 1989, NPSC has awarded 374 graduate fellowships. Of those fellows, 148 have received a PhD, 79 have received a Master's Degree, and 78 are currently enrolled. Ninety-two percent of NPSC fellows have been female or members of underrepresented minority groups or both. Between 2000 and 2007, current employers selected the following number of fellows: LANL (6), LLNL (8), NSA (48), Sandia-California (14), Sandia-NM (33).

NPSC is pleased to announce the membership of National Security Technologies, LLC. NSTec manages and operates the Nevada Test Site and related facilities. Please consult their website at [www.nstec.com](http://www.nstec.com).



# NPSC Unique Features



## NATIONAL PHYSICAL SCIENCE CONSORTIUM

graduate fellowships in the physical sciences

[ABOUT NPSC](#)

[CONTACT NPSC](#)

[HOME](#)

- [FELLOWSHIP INFORMATION](#)
- [UNIQUE FEATURES](#)
- [FEATURED FELLOWS](#)
- [FAQ](#)
- [UNIVERSITY COMMITMENT](#)
- [SIGNATORY INSTITUTIONS](#)
- [JOIN THE CONSORTIUM](#)

## UNIVERSITIES

### Unique Features

Unique Features

[NPSC's Renewable Fellowships](#)

[About Tuition, Fees and Stipend](#)



### Unique Features of the NPSC Program

An NPSC Fellowship is a full-time study, portable, renewable, doctoral-track fellowship program. It offers:

- Paid tuition and fees plus a substantial stipend for each academic year at one of well over 100 nationally recognized Ph.D.-granting universities.
- Paid summer employment and technical experience for at least two years from leading national employers in the U.S.
- Mentors on campus and at the worksite.
- A commitment for the first two or three years of graduate school, depending on the employer, with the possibility of continuation up to a total of six years.
- Opportunity to build a relationship with leading scientists from both major research laboratories and universities.
- An NPSC staff whose goal is the success of each NPSC Fellow.

← Tuition and fees waived by the university

© Copyright 2004, National Physical Science Consortium.



# NPSC Participating Universities

FELLOWSHIP INFORMATION
UNIQUE FEATURES
FEATURED FELLOWS
FAQ
UNIVERSITY COMMITMENT
SIGNATORY INSTITUTIONS
JOIN THE CONSORTIUM

## UNIVERSITIES

### NPSC Signatory Institutions

#### Ph.D. Granting Institutions

- Alabama A & M University - Normal, AL -
- Arizona State University - Tempe, AZ =
- Auburn University - Auburn, AL
- Boston College - Chestnut Hill, MA
- Boston University - Boston, MA
- Brandeis University - Waltham, MA
- Brown University - Providence, RI
- California Institute of Technology - Pasadena, CA
- Carnegie Mellon University - Pittsburgh, PA
- City University of NY (CUNY) - New York, NY
- Clark Atlanta University - Atlanta, GA -
- Clarkson University - Potsdam, NY
- Clemson University - Clemson, SC
- College of William and Mary - Williamsburg, VA
- Colorado State University - Fort Collins, CO
- Columbia University - New York, NY
- Cornell University - Ithaca, NY
- Dartmouth College - Hanover, NH
- Drexel University - Philadelphia, PA
- Duke University - Durham, NC
- Florida State University - Tallahassee, FL
- George Washington University - Washington, DC
- Georgia Institute of Technology - Atlanta, GA
- Georgia State University - Atlanta, GA
- Harvard University - Cambridge, MA
- Howard University - Washington, DC -
- Indiana University - Bloomington, IN
- Iowa State University - Ames, IA
- Johns Hopkins University - Baltimore, MD
- Kansas State University - Manhattan, KS
- Lehigh University - Bethlehem, PA
- Louisiana State University - Baton Rouge, LA
- Michigan State University - East Lansing, MI =
- Michigan Technological University - Houghton, MI
- Montana State University - Bozeman, MT
- New Mexico State University - Las Cruces, NM +
- North Carolina State University - Raleigh, NC
- Northeastern University - Boston, MA
- Northwestern University - Evanston, IL
- Ohio State University - Columbus, OH
- Oklahoma State University - Stillwater, OK
- Old Dominion University - Norfolk, VA
- Oregon State University - Corvallis, OR
- Penn State University - University Park, PA =
- Princeton University - Princeton, NJ
- Purdue University - West Lafayette, IN
- Rensselaer Polytechnic Institute - Troy, NY
- Rice University - Houston, TX
- Rutgers University - New Brunswick, NJ
- Southern Methodist University - Dallas, TX
- Stanford University - Stanford, CA
- SUNY (State Univ. of New York) - Buffalo, NY
- SUNY (State Univ. of New York)-Stony Brook, NY
- Syracuse University-Syracuse, NY
- Temple University - Philadelphia, PA
- Texas A & M University - College Station, TX =
- Tulane University - New Orleans, LA
- University of Alabama-Birmingham - AL
- University of Alabama-Tuscaloosa - AL
- University of Alaska-Fairbanks - AK
- University of Arizona - Tucson, AZ =
- University of Arkansas - Fayetteville, AR
- University of California-Berkeley - CA
- University of California-Davis - CA
- University of California-Irvine - CA =
- University of California-Los Angeles - CA =
- University of California-Riverside - CA
- University of California-San Diego - CA =
- University of California-Santa Barbara - CA
- University of California-Santa Cruz - CA =
- University of Chicago - IL
- University of Colorado-Boulder - CO =
- University of Connecticut - Storrs, CT
- University of Delaware - Newark, DE
- University of Florida - Gainesville, FL =
- University of Georgia - Athens, GA
- University of Hawaii - Honolulu, HI
- University of Idaho - Moscow, ID
- University of Illinois-Urbana Champaign - IL
- University of Iowa-Iowa City - IA
- University of Kansas - Lawrence, KS
- University of Maryland-Baltimore - MD
- University of Maryland-College Park - MD
- University of Massachusetts Amherst - MA
- University of Michigan - Ann Arbor, MI =
- University of Mississippi - University, MS
- University of Missouri-Columbia - MO
- University of Missouri-Rolla - MO
- University of Nebraska - Lincoln, NE
- University of New Mexico - Albuquerque, NM +
- University of North Carolina at Chapel Hill - NC
- University of North Dakota - Grand Forks, ND
- University of Notre Dame - South Bend, IN
- University of Oregon - Eugene, OR
- University of Pennsylvania - Philadelphia, PA
- University of Pittsburgh - PA
- University of Rochester - NY
- University of South Carolina - Columbia, SC
- University of South Florida - Tampa, FL
- University of Southern California - Los Angeles, CA
- University of Southern Mississippi - Hattiesburg, MS
- University of Southwestern Louisiana - Lafayette, LA
- University of Texas at Arlington - TX
- University of Texas at Austin - TX =
- University of Texas at El Paso - TX +
- University of Utah - Salt Lake City, UT
- University of Virginia - Charlottesville, VA
- University of Washington - Seattle, WA
- University of Wisconsin-Madison - WI
- Vanderbilt University - Nashville, TN
- Virginia Polytechnic Institute - Blacksburg, VA
- Washington State University - Pullman, WA
- Washington University - St. Louis - MO
- Wayne State University - Detroit, MI
- Wesleyan University - Middletown, CT
- West Virginia University - Morgantown, WV
- Yale University - New Haven, CT



# Students can apply directly, or be nominated by the government lab

## IMPORTANT NOTICES:

A. NPSC's online application typically opens August 25 and closes November 5.

B. NPSC offers two programs, as explained on the other pages of this site. Each program uses the same online application:

1. Traditional NPSC Program. Initial support may be for two or three years, or for a full six years, depending on the employer-sponsor. Students typically apply while seniors in college.
2. Dissertation Support Program. A fellowship program that provides support while the graduate student conducts dissertation research. Students should apply in the year prior to the beginning of their dissertation research program, but not before they can describe their intended research in general terms.

We use this option →

**If you have interned at a government agency or laboratory, ask your mentor/research supervisor to nominate you directly for an NPSC fellowship, obviating the application-selection process. Contact NPSC for details.**

**All graduate students will benefit from downloading and studying the free [NPSC Graduate Student Handbook](#).**