



The 2010 NNIN REU Program

June - August

find the application online at: <http://reu.nnin.org/>

ONLINE APPLICATION DEADLINE:

Please note the online options go off-line Wednesday, February 10th at 8pm EST, 5pm PST.

APPLICATION MATERIALS DEADLINE:

All materials MUST BE RECEIVED:

Wednesday, February 17th, 2010

MAIL ALL APPLICATION COMPONENTS TO:

Ms. Melanie-Claire Mallison

NNIN REU Program Assistant

250 Duffield Hall, CNF

Cornell University, Ithaca NY 14853-2700

Email: mallison@cnf.cornell.edu

Phone: 1-607-254-4858 • FAX: 1-607-255-8601

AWARD PROCESS BEGINS:

Thursday, March 11th, 2010

Dear Student:

During the summer of 2010, the **National Nanotechnology Infrastructure Network** will host a Research Experience for Undergraduates (NNIN REU) Program from June through August. Engineering and science students with broad interests across disciplines focusing on nanotechnology are eligible to apply (see restrictions and eligibility requirements below).

The chosen undergraduates taking part in this ten-week program will receive hands-on nanoscience and technology experience through research with applications to bio-engineering, chemistry, electronics, materials science, optics, optoelectronics, physics, and the life sciences. The research projects are designed and supervised by the faculty and technical staff at the participating NNIN research facilities. Interns work with faculty and graduate students on projects using the unique resources offered at their award site.

Find information on the NNIN sites at http://www.nnin.org/nnin_sitedescriptions.html.

A scientific convocation, attended by all NNIN REU interns, is held in August to allow interns the opportunity to present their work to their peers in a concise scientific presentation. Interns also must complete a written report, akin to a research paper, summarizing the findings of their research project. These reports are published as the **NNIN REU Research Accomplishments** and distributed to the interns and sites, The National Science Foundation (NSF) and many others.

Participants receive a \$4,000 stipend, plus housing and all travel expenses to their research site and the convocation site. They may be responsible for their own meals. Full participation in the site program, network convocation and reporting is mandatory.

Restrictions and Eligibility Requirements for NNIN REU Interns:

- 1] If you have already participated in an NNUN or NNIN REU Program, you are NOT eligible to participate again.
- 2] Undergraduate student interns must be citizens of the United States of America or its possessions OR, if citizens of another country, must be permanent residents of the United States. If you are a permanent resident, a copy of your green card is required as part of your application.
- 3] An undergraduate student is a student who is enrolled in a degree program (part-time or full-time) leading to a baccalaureate or associate degree. Students who are transferring from one college or university to another and are enrolled at neither institution during the intervening summer may participate. Students who have already received a college degree of any kind or will receive their degree before the end of the program in August 2010 ARE NOT eligible to participate.
- 4] Liability and the use of hazardous materials in research demands that our interns be 18 years of age or older.

APPLICATION REQUIREMENTS:

**Along with your completed four-page application,
we require the following materials RECEIVED BY Wednesday, February 17th, 2010:**

- 1. Your Current Official College Transcript(s).** Request that your college(s) mail an official transcript to Ms. Melanie-Claire Mallison directly and make your request early—transcripts can take quite awhile to arrive. Frosh: Feel free to send a high school transcript also, as back up to your college transcript. However, even if your college transcript has no grades on it yet, we **MUST** have your official college transcript.
- 2. A Personal Essay.** Your personal essay is critical to the selection process. It is through your words that we ascertain your ‘fit’ with our program. Please submit a well-written essay, 1-2 pages long, in which you discuss the relationship between your present studies and a career in engineering or scientific research. As preparation, you may wish to discuss your career interests with one or more professors, and include any insights you gain from these discussions, and any other sources, which explain how this program might help you prepare for your future. Note any honors and awards that you have received that are relevant, as well as any prior research experience and / or any research field you are most interested in. If you do not believe your grades reflect your potential, please explain them in this essay. You may also send your resume, but a resume is not a substitute for the essay!
- 3. A Letter of Recommendation** from a member of faculty who knows you well and can comment with authority on your research potential. **OR** If you can identify a person better qualified to evaluate your abilities, i.e., a graduate student TA, a co-op adviser or industry mentor, please feel free to have that person write your recommendation. Recommendations can be submitted online, following the instructions on the appropriate web page or they can be mailed to Ms. Mallison, to arrive no later than Wednesday, February 17th, 2010. ***E-mailed recommendations are unacceptable***, but last minute letters can be faxed to 607-255-8601. Be sure the fax is followed up with the original recommendation. More than one recommendation is acceptable but not necessary.
- 4.** If you are a citizen of another country AND a permanent resident of the USA, you **MUST** include a copy of your Green Card (both sides) in your application materials. You may snail mail the copy or email it to Ms. Mallison as a PDF attachment. (If you are a citizen of another country and you ARE NOT a permanent resident, you are not eligible for our program!)

Do not include your social security number on any document. It is illegal for us to distribute your SS#!

APPLICATION NOTES:

- You will be notified via email when your application arrives and when it is complete.
- USPS express mailed originals are greatly preferred, but last minute components can be faxed to 607-255-8601. FedEx is very expensive and should be avoided!

MAIL ALL APPLICATION COMPONENTS TO:

Ms. Melanie-Claire Mallison
NNIN REU Program Assistant
250 Duffield Hall, CNF
Cornell University, Ithaca NY 14853-2700

Good Luck!
And thank you for your interest in our program.

Dear NNIN REU Applicants:

As a service to you, please note the following advices:

PRINT CLEARLY!!!

USE A TYPEWRITER IF YOU CAN FIND ONE!!!

1. Capitalize proper names correctly — Your Name, Your Street and City.
2. Tell us your complete name! If your preferred first name is not your given name, please fill out "Preferred First Name", especially if you rather be called something completely other than your given name. Likewise, if you have two last names, include both in your application. We receive transcripts and recommendations which use your nickname and one or both last names, and it only causes confusion if you have not informed us. Please be clear and complete with your name!
3. Spell out your college's name and your field of study. Acronyms are not always understood.
4. Put your full name as a footer on every page of your essay and resume. **DO NOT** include your social security number!
5. Before submitting your essay, take advantage of your college's writing assistance program or career office where they often offer typing and proofing services.
6. Respond to any emails from the program with your full name within your email.
7. Paying for FedEx or other overnight service is too expensive! The United States Postal Service is often just as speedy, but much less expensive. Use your best judgment if you must send something to us quickly. Most anything can be faxed: 1-607-255-8601.
8. We only require the four pages named "2010 NNIN REU Program Application Form." There is no need to pay for returning the cover letter and these advices!

MAIL ALL APPLICATION COMPONENTS TO:

Ms. Melanie-Claire Mallison
NNIN REU Program Assistant
250 Duffield Hall, CNF
Cornell University, Ithaca NY 14853-2700

Thank you for taking the time to fill out and submit your application fully and accurately.

2010 NNIN REU Program Application Form - Page I of 4

THIS PROGRAM IS RESTRICTED TO US CITIZENS AND PERMANENT RESIDENTS

Please Type or Print Clearly:

Salutation: (circle one) Mr. / Ms.

Name: _____
(First Name) (Preferred First Name) (Last Name)

E-mail Address: _____
(PRINT CLEARLY & COMPLETELY !!)

Enrolled at: _____
(Full Name of Institution)

Field of Study: _____ **GPA:** _____

Faculty Advisor: _____ **Advisor's Email (complete):** _____

Present Class: (circle one) FR SO JR SR **Graduation Date:** (MM/YYYY) _____

of Undergrads Attending Institution: _____ **Highest Degree Offered:** AS BA/BS MS Ph.D.

Are you a U.S. citizen? Y / N **OR have in your possession your U.S. permanent residency?** Y* / N
(*If YES, you must include a copy of your green card, both sides, in your application materials)

Concise summary of your educational and long-range career plans:

(Please DO NOT leave blank!)

How did you find this program? (i.e., NNIN REU poster, web search, career center, etc.) _____

Have you participated in a formal research program before? YES / NO

IF "YES" – where? _____

ADDRESS: Please List Both Addresses, But CHECK The One You Prefer Us To Use:

() **Your Address while at School: Valid Until:** ___/___/____ **SAME AS HOME ADDRESS**

STREET, APT # _____

CITY, STATE, ZIP _____

CELL Phone #: () _____ Telephone #: () _____

() **Home Address:**

STREET, APT # _____

CITY, STATE, ZIP _____

HOME Telephone #: () _____

*We will notify you via email when we have received your application.
If you don't hear from us — we haven't heard from you!*

2010 NNIN REU Program Application Form - Page 2 of 4

SITE & TECHNICAL AREA PREFERENCES:

Please rank the following NNIN sites, numbering your **TOP FIVE CHOICES** with 1 as your first choice of site for your internship. We will take your preferences into account during the award process, **HOWEVER**, final decisions are based on faculty choice, and project compatibility and availability.

***PLEASE NOTE:** Students will not be considered for an internship at their home (NNIN) institution—i.e., Cornell students will **not** be accepted into the Cornell program. If you attend one of the 14 NNIN institutions, do not choose that site in your top five!*

| PREF # | NNIN SITE & INSTITUTION LOCATION | 2010 REU Program Dates |
|--------|--------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| | ASU NanoFab Arizona State University, Tempe, AZ | June 7-August 14 |
| | Cornell NanoScale Science & Technology Facility Cornell University, Ithaca, NY | June 8-August 14 |
| | Nanotechnology Research Center Georgia Institute of Technology, Atlanta, GA | June 7-August 14 |
| | Center for Nanoscale Systems Harvard University, Cambridge, MA | June-August |
| | Howard Nanoscale Science & Engineering Facility Howard University, Washington, DC | June 7-August 14 |
| | Penn State Nanofabrication Laboratory The Pennsylvania State University, University Park, PA | June 2-August 6 + Convocation, Aug. 11-14 |
| | Stanford Nanofabrication Facility Stanford University, Stanford, CA | June 7-August 14 |
| | Nanotech@UCSB University of California Santa Barbara, Santa Barbara, CA | June 7-August 14 |
| | Colorado Nanofabrication Laboratory University of Colorado, Boulder, CO | June 7-August 14 |
| | Lurie Nanofabrication Facility University of Michigan, Ann Arbor, MI | June 7-August 14 |
| | Minnesota Nanofabrication Center University of Minnesota, Minneapolis, MN | June 7-August 14 |
| | Microelectronics Research Center The University of Texas, Austin, TX | June 7-August 14 |
| | Center for Nanotechnology University of Washington, Seattle, WA | June 14-August 20 |
| | Nano Research Facility Washington University, St. Louis, MO | June 7-August 14 |

In addition, please indicate which TWO of the following technical areas most interests you.

- | | |
|--------------------------------------------------------------------|--------------------------------------------------------|
| <input type="checkbox"/> Biological Applications of Nanotechnology | <input type="checkbox"/> Chemistry |
| <input type="checkbox"/> Computation (Limited # of projects) | <input type="checkbox"/> Electronics & Optical Devices |
| <input type="checkbox"/> Materials Science | <input type="checkbox"/> Mechanical Devices |
| <input type="checkbox"/> Nanoscale Physics | |

We will do our best to match your site and technical interests to an internship.

2010 NNIN REU Program Application Form - Page 3 of 4

DEMOGRAPHICS:

For future reporting to the NSF, please check those items that apply. This page is entirely voluntary!

GENDER: (Also required for room assignment)

Female

Male

ETHNICITY AND RACIAL BACKGROUND:

The Office of Management & Budget (OMB), an executive office of the President of the United States of America, sets the race standards for all governmental forms. For our reporting to the National Science Foundation, please check each of the two sections below; Ethnic Group and Race. These are the minimum categories established in the 1997 OMB Standard for Federal Data. *Please note that nationalities and ethnicities are not the same as races.*

ETHNIC GROUP:

Hispanic or Latino: A person of Cuban, Mexican, Puerto Rican, South or Central American or other Spanish culture or origin, regardless of race.

Hispanic and /or Latino:

YES

NO

RACE: (Please note you may choose more than one option if applicable)

American Indian or Alaska Native: A person having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment.

Asian: A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent, including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand and Vietnam.

Black or African American: A person having origins in any of the black racial groups of Africa.

Native Hawaiian or Other Pacific Islander: A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

White: A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.

DISABILITIES OR SPECIAL NEEDS:

Do you have any disabilities or special needs? (Handicap Access, Diet Restrictions, Etc.)

No Yes, Please explain: _____

Your complete application includes: this 4-page form, your essay, official transcript, and one faculty recommendation.

2010 NNIN REU Program Application Form - Page 4 of 4

WAIVER FORM FOR LETTER(S) OF RECOMMENDATION:

The Family Education Rights and Privacy Act of 1974 and its amendments guarantee students access to educational records concerning them. Students are also permitted to waive their rights of access to recommendations.

**Applicant: Please fill in and sign the following statement regarding your recommendation(s).
Please note we only require one recommendation, but two can be sent.**

Applicant's Full Name: _____

Applicant's Complete Email or Phone: _____

- () **I do waive my right** to inspect the contents of the following recommendation(s).
() **I do not waive my right** to inspect the contents of the following recommendation(s).

Applicant's Signature: _____ **Date:** _____

Recommender's Full Name: _____

Recommender's Complete Email or Phone: _____

Recommender's Full Name : _____

Recommender's Complete Email or Phone: _____

If the applicant chooses to waive their right to read the recommendation(s), the waiver form does not have to accompany the recommendation(s). They can be mailed in separately.

Please note if you do NOT waive your right, it is your responsibility to obtain a copy of your recommendation from your recommender. The NNIN REU Program cannot be held liable.

RECOMMENDATIONS AND WAIVERS:

RECEIVED by Wednesday, February 17th, 2010

Last minute recommendations can be faxed to 607-255-8601,
but Express Mailed Originals Are Preferred!

Emailed recommendations are not acceptable at any time.

MAIL RECOMMENDATION(S) TO:

Ms. Melanie-Claire Mallison
NNIN REU Program Assistant
250 Duffield Hall, CNF
Ithaca NY 14853-2700

Your complete application includes: this 4-page form, your essay, official transcript, and one faculty recommendation.

2010 NNIN REU Program Instructions to Recommender

**Thank you for agreeing to submit a recommendation to the
National Nanotechnology Infrastructure Network
Research Experience for Undergraduates Program**

For: _____
(PRINT APPLICANT'S NAME)

INSTRUCTIONS FOR RECOMMENDATION:

Please write a letter of recommendation that reflects your estimate of the applicant's promise as an REU participant in a summer of research at an NNIN site as indicated by the applicant's academic achievements, intellectual independence, capacity for analytical thinking and preparation.

The NNIN complies with the provisions of the Rehabilitation Act of 1973 which prohibits discrimination on the basis of handicap. In writing your recommendation, please do not refer to any handicap the applicant may have.

Please mail the recommendation, printed on your letterhead and signed, to the address below, to be received by the deadline date, also below.

The NNIN also complies with the Family Education Rights and Privacy Act of 1974 and its amendments guaranteeing students access to educational records which concern them. Students are permitted to waive their rights of access to recommendations.

If the student requesting this recommendation DOES NOT choose to waive their right to read the recommendation, the recommendation must be read by the student and must be mailed with their signed waiver form. If the student waives this right, the waiver can be mailed separately from the recommendation.

SUBMITTING RECOMMENDATION:

- **RECEIVED** by Wednesday, February 17th, 2010
- Last minute recommendations can be faxed to 607-255-8601
- Once faxed, the original signed recommendation on letterhead must be mailed also.
- Express mailed originals are preferred over FedEx!
- *Emailed recommendations are not acceptable at any time.*

MAIL RECOMMENDATION TO:

Ms. Melanie-Claire Mallison
NNIN REU Program Assistant
250 Duffield Hall, CNF
Ithaca NY 14853-2700