



# Research Experiences for Teachers Programs Directory

2006-07

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Additional programs may be found at <http://www.retnetwork.org>.

This directory has been compiled by the Research Experiences for Teachers program at Northeastern University for distribution at the NSF RET Networking Meeting at NSTA Area Meeting in Baltimore, MD on 3 November 2006.  
<http://www.ret.neu.edu>

# CASPER's Summer Research Experience for Teachers

<http://www.baylor.edu/casper/index.php?id=20536>

Institution **Baylor University**

Mailing Address **One Bear Place #97310**

City **Waco**

Phone **(254) 710.3763**

State **TX**

ZipCode **76798**

fax **(254) 710.7309**

Primary Contact **Truell W. Hyde**

Contact email **Truell\_Hyde@baylor.edu**

## Brief description of program

CASPER's Summer Research Experiences for Teachers Program (sponsored by the National Science Foundation, Baylor University, the Physics Department and CASPER) offers elementary school, middle school and high school teachers an opportunity for active research participation with Baylor University faculty in the Center for Astrophysics, Space Physics & Engineering Research. The primary purpose of the Summer RET Program is to allow teachers to develop new curriculum while interacting in a working research environment. This is part of a nation-wide effort to enable public school teachers the opportunity to infuse cutting edge science and technology into the classroom. The eight-week program will begin around the first of June and end around the middle of August. (The starting and ending dates are flexible and may be adjusted to fit ISD schedules.) RET Fellows will be paid up to two months of their current annualized salary for the eight-week period.

## Program prerequisites

Current teachers in math or any of the physical sciences (or education majors interested in pursuing a career in STEM) are eligible. Applicants will be considered for appointment without regard to race, creed, color, sex, national origin, age, handicap status or any other non-merit factor. Appointment selection is competitive on a national scale and will be based upon the following criteria: (1) career objectives and scientific interest, (2) match of applicant interest with available projects within the Center or the Department and (3) letters of recommendation. The program is pending funding by the National Science Foundation and applications for the summer of 2007 are now being accepted. For final confirmation of appointment, successful applicants must sign a letter of acceptance (or rejection) of the offer to participate within one (1) week of notification.

Program dates **June-August, 2007**

Application due date **March 2, 2007**

## Other pertinent information (cost, etc.)

Applications are processed via the Web (except for recommendation letters which must be sent via snail-mail. References must be on school letterhead and in a sealed envelope. RET Fellows will be paid up to two months of their current annualized salary for the eight-week period.

# Summer Research Program for Science Teachers

<http://www.ScienceTeacherProgram.org>

Institute **Columbia University**

Mailing Address 630 W. 168 Street 11-444

City **New York**

Phone (212) 305-6899

Primary Contact **Jay Dubner**

State **NY**

ZipCode **10032**

fax (212) 305-5775

Contact email [jd109@columbia.edu](mailto:jd109@columbia.edu)

## Brief description of program

The primary aim of the program is to provide science teachers with sustained hands-on experience in scientific research so they can better understand the practice of science, and better transmit to their students and fellow teachers a feeling for its practice. Each teacher spends two consecutive summers working as a laboratory research assistant under the supervision of a Columbia faculty mentor. Opportunities are available in astronomy, biological sciences, chemistry, earth sciences, engineering, environmental sciences, genetics, material science and engineering, medicine, microbiology, nanotechnology, physics, physiology, toxicology, and other specialties.

## Program prerequisites

Middle or high school science teacher in the New York metropolitan area.

Program dates **June 29 - third week in August**

Application due date **Mid-February**

## Other pertinent information (cost, etc.)

Each successful applicant receives a stipend of \$6,000, \$1,000 for classroom supplies and funds to attend a professional conference.

# Research Experiences for Teachers in Areas of Innovative & Novel (RETAIN) Technologies in the Delaware Valley

<http://www.coe.drexel.edu/ret>

Institution **Drexel University**

Mailing Address 3141 Chestnut St., MEM Dept.

City Philadelphia

State PA

ZipCode 19104

Phone (215) 895-2288

fax (215) 895-1478

Primary Contact Joanne Ferroni, Director of Outreach

Contact email [jmh49@drexel.edu](mailto:jmh49@drexel.edu)

Brief description of program

Research Areas: Biotechnology, Nanotechnology, Information Technology

As an RET Fellow you will:

- Gain hands-on experience working in a research laboratory
- Develop lesson plans for your classroom based on your research experience
- Build your own website
- Learn what goes into a winning grant proposal
- Attend field trips that illustrate engineering in action
- Receive a \$5,000 stipend and opportunities for graduate and/or Act 48 credits

Program prerequisites

Applicants must have:

- An appointment as a teacher of science or mathematics in grades 7-12
- An interest in including emerging technologies into your courses
- Demonstrated creativity in teaching
- Basic computer technology skills
- No research experience necessary

Program dates July 9-August 10, 2007

Application due date April 1

Other pertinent information (cost, etc.)

Participants will receive a \$5,000 stipend and the opportunity to purchase graduate credits upon completion of the program.

# Research Experiences for Teachers in Nanotechnology a Drexel University/University of Pennsylvania Partnership

<http://nano.materials.drexel.edu/ret/t>

Institution **Drexel University & University of Pennsylvania**

Mailing Address 3141 Chestnut St.

Drexel Nanotechnology Institute

City Philadelphia

State PA

ZipCode 19104

Phone (215) 895-6630

fax (215) 895-6760

Primary Contact Holly Burnside, Nanotechnology Program Coordinator

Contact email [hcb23@drexel.edu](mailto:hcb23@drexel.edu)

Brief description of program

As an RET Fellow you will:

- Gain hands-on experience working in a research laboratory
- Develop lesson plans for your classroom based on your research experience
- Build your own website
- Learn what goes into a winning grant proposal
- Attend field trips that illustrate engineering in action
- Receive a \$5,000 stipend and opportunities for graduate and/or Act 48 credits

Program prerequisites

Applicants must have:

- An appointment as a teacher of science or mathematics in grades 9-12 or as a Community College faculty member
- An interest in including nanotechnology and emerging technologies into your courses
- Demonstrated creativity in teaching
- Basic computer technology skills
- No research experience necessary

Program dates July 5-August 10, 2007

Application due date April 1, 2007

Other pertinent information (cost, etc.)

Participants will receive a \$5,000 stipend and the opportunity to purchase graduate credits upon completion of the program.

## Summer Teacher Experience in Packaging- Utilizing Physics

<http://www.prc.gatech.edu/academics/pre-college/step-up.htm>

Institution **Georgia Institute of Technology**

Mailing Address School of Electrical and Computer Engineering  
777 Atlantic Drive

City Atlanta

State GA

ZipCode 30332-0250

Phone (404) 385-0439

fax (404) 894-4641

Primary Contact Dr. Leyla Conrad

Contact email [leyla.conrad@ece.gatech.edu](mailto:leyla.conrad@ece.gatech.edu)

Brief description of program

The program has three components: (1) to enables teachers to fully take advantage of their subsequent research experience, a two-week course on modern physics, with a laboratory component is given; (2) a three-day module course on applications of modern physics concepts to microelectronics; and (3) a five and a half week summer research experience. Workshops are also held during the teachers' stay at Georgia Tech to help them with the development of lesson plans and classroom material derived from their research experience.

Program prerequisites

Program is open to metro-Atlanta in service physics teachers.

Program dates June 4 - July 27, 2007

Application due date March 16, 2007

Other pertinent information (cost, etc.)

A summer stipend of \$5,700 as well as \$1,000 of funds to acquire materials and supplies will be provided to each participating teacher.

## CMSE Research Experience for Teachers

<http://mit.edu/cmse/educational/research.html>

Institution **Massachusetts Institute of Technology**

Mailing Address Center for Materials Science and Engineering  
77 Massachusetts Ave., Room 13-2082

City Cambridge

State MA

ZipCode 02139

Phone (617) 253-0916

fax (617) 258-6478

Primary Contact Susan Rosevear

Contact email [susang@mit.edu](mailto:susang@mit.edu)

Brief description of program

Middle and high school science teachers spend seven summer weeks at MIT's Center for Materials Science and Engineering engaged in cutting-edge materials research as a member of a faculty-led research team. A broad range of research topics are available in the fields of chemistry, chemical engineering, electrical engineering, mechanical engineering, materials science and engineering, biomaterials, and physics. Participants are encouraged to return for a second summer devoted to developing classroom material based on the previous year's research experience.

Program prerequisites

Applicants must be middle or high school science teachers who are US citizens or permanent residents. Preference is given to applicants who teach at schools within commuting distance of MIT.

Program dates late June to mid-August

Application due date March 15, 2007

Other pertinent information (cost, etc.)

Participants are awarded a \$7,000 stipend for the initial research summer.

## Research Experiences for Teachers

<http://www.ret.neu.edu>

Institution **Northeastern University**

Mailing Address 716 Columbus Place, Suite 378

City **Boston**

Phone (617) 373-8380

Primary Contact **Claire Duggan**

State **MA**

ZipCode **02115**

fax (617) 373-8496

Contact email [c.duggan@neu.edu](mailto:c.duggan@neu.edu)

Brief description of program

The Research Experiences for Teachers (RET) program at Northeastern University is a six-week summer research experience funded by the National Science Foundation for middle and high school mathematics and science teachers and community college STEM faculty. Participants work in research laboratories affiliated with the Colleges of Arts & Sciences and Engineering, the Gordon Institute for Sensing and Imaging at Northeastern University, and the Center for High-rate Nanomanufacturing at Northeastern University and the University of Massachusetts-Lowell. The professional development component of the summer program is provided by Northeastern's Center for STEM Education. Teachers are encouraged to share program information with colleagues within their respective institutions.

Program prerequisites

Completion of formal application, letters of recommendation. Candidates will be interviewed.

Program dates **June 28 - Aug 2, 2007\***

Application due date **Apr 23, 2007**

Other pertinent information (cost, etc.)

Participating teachers will be required to prepare and present a research poster and develop a classroom lesson or connection based on their research experience. Additionally, participants will be required to commit to attendance at both pre- and post- professional development sessions. Electronic support is continued throughout the academic year. Cross-school district collaboration is encouraged. Participants receive a stipend of \$1000 per week. Graduate credits are available. This is a non-residential program; out-of-state participants will be responsible for their own housing and transportation.

\*Contingent upon continued funding.

## National Radio Astronomy Observatory

<http://www.nrao.edu>

Institution **National Radio Astronomy Observatory**

Mailing Address PO Box O, 1003 Lopezville Rd

City **Socorro**

Phone (505) 835-7243

Primary Contact **Robyn Harrison**

State **NM**

ZipCode **87801**

fax (505) 835-7027

Contact email [rharriso@nrao.edu](mailto:rharriso@nrao.edu)

Brief description of program

An eight-week program in which a K-12 teacher is paired with a scientist to study astronomical data acquired from the Very Large Array, the Very Long Baseline Array, or the Green Bank Telescope

Program prerequisites

**K-12 teacher**

Program dates **flexible, summer 2007**

Application due date **see website**

Other pertinent information (cost, etc.)

**see website**

# Chemistry Research Experiences for Teachers

<http://www.chem.rochester.edu/REU-RET/RET-2006/index.htm>

Institution **University of Rochester, Dept. of Chemistry**

Mailing Address PO Box 270216

City Rochester

State NY

ZipCode 14627

Phone (585) 275-8286

fax (585) 276-0205

Primary Contact Marguerite Weston

Contact email [weston@chem.rochester.edu](mailto:weston@chem.rochester.edu)

## Brief description of program

The primary focus of this program is full-time, hands-on research. Each teacher will be a working member of a specific research team in the Chemistry, Biochemistry, or Chemical Engineering Departments. One of the members of the team will work closely with the teacher to provide day-to-day guidance. The research work will be supplemented by a short course, seminars, discussion groups, and workshops that provide more structured opportunities for learning. This summer research program offers exceptional academic research, along with exposure to undergraduate and graduate education in a university setting. Teachers also participate in hands-on workshops on computer-based technologies useful for instruction. PowerPoint will be used for laptop-based oral presentations, and to prepare a 3'x4' poster at the end of the program. Workshops culminate with production of web sites. Workshops take place in a computer classroom and accommodate teachers without prior experience.

## Program prerequisites

Two years as a middle or high school teacher

Program dates 6/11-8/3/07

Application due date Feb. 20, 2007

## Other pertinent information (cost, etc.)

Travel funds are available; on-campus housing is provided. See website for application details.

# Rockefeller University's Precollege Science Education Program - Science Outreach

<http://www.rockefeller.edu/outreach>

Institution **Rockefeller University**

Mailing Address **Dr. Bonnie Kaiser, Director Precollege Science Education Programs**  
1230 York Avenue, Box 53

City **New York**

State **NY**

ZipCode **10021-6399**

Phone **(212) 327-7431**

fax **(212) 327-7431**

Primary Contact **Dr. Bonnie Kaiser**

Contact email **bonnie@rockefeller.edu**

Brief description of program

**TEACHERS:** This professional development program exceeds NSES by offering mentored lab research internships for K-12 science teachers from public, private and parochial schools in Greater New York City and across the nation. Designed as a 2-year program, 5 - 6 new positions become available each year. Teacher stipends are \$5,000/summer with an additional \$1,000 for travel where applicable. Returning teachers craft Action Plans with the help of Outreach staff that they present at Teacher Breakfast Seminars. Action Plans are awarded up to \$2,000 for supplies that help teachers translate their research experiences into inquiry-based learning for their students.

**STUDENTS:** High school interns, who must be at least 16, may apply. Most student internships are unpaid but some stipends are available. Non-residential for students.

**BOTH:** Free. The formal program extends seven weeks from July to mid-August. Our Scientific Reading And Writing Course (STRAW) teaches the specialized communication skills essential for understanding one's research. All write a research report and present a poster to Rockefeller scientists, family and friends. Our Monday Afternoon Seminar Series: Topics in Biomedicine, introduces participants to the range of research beyond their Host Labs. Applications and STRAW can be downloaded from the website.

**CONTENT:** Research in Neuroscience, Medical Sciences, Human Genetics, Immunology, Microbiology, Biochemistry, Structural Biology, Chemistry, Physics, Mathematics, Computer Sciences, Molecular, Cell & Developmental Biology.

Program prerequisites

None for teachers, however high school students must be at least 16 years old.

Program dates **7 weeks - July to mid-August**

Application due date **February 1<sup>st</sup> for teachers.**

Other pertinent information (cost, etc.)

**Free.** Please see above or Web site for more information. Science Outreach receives no funding from the NSF.

## Center on Polymer Interfaces and Macromolecular Assemblies RET

<http://www.stanford.edu/group/CPIMA/education>

Institution **Stanford University**

Mailing Address CPIMA/Dept. of Chemical Engineering, 381 North-South Mall

City **Stanford**

State **CA**

ZipCode **94305-5025**

Phone **(650) 725-3351**

fax **(650) 725-5558**

Primary Contact **Marni Goldman**

Contact email **mgoldman@stanford.edu**

Brief description of program

The program is part of the larger university-wide Summer Program of Professional Development for Math and Science Teachers. It is an eight-week program in which participants spend Tuesday—Friday working on individual projects determined by their faculty hosts. For the CPIMA RET teachers, the projects are performing cutting edge research in a scientific laboratory (directly or indirectly related to CPIMA) with direct interactions with research scientists, post-doctoral scholars, and graduate students. On Mon., come together for program activities. These include faculty talks, tours of campus labs and facilities as well as guidance on ways in which they can bring their summer experience back to their classrooms as all participants are required to develop an education transfer plan (ETP).

Program prerequisites

Bachelor's degree in a science or engineering discipline, full time teacher, U.S. citizen or permanent resident

Program dates **6/18/07-8/10/07**

Application due date **3/31/07**

Other pertinent information (cost, etc.)

**\$6400 stipend, some travel and housing subsidy for out-of-town participants; deliverables include a poster on individual project and education transfer plan**

## Animated Real-time Traveler Information Visualization for Broadcast and the Internet

<http://www.trianglesoftware.com>

Institution **Triangle Software LLC**

Mailing Address **1901 S. Bascom Ave, Suite 900**

City **Campbell**

State **CA**

ZipCode **95008**

Phone **(408) 879-5805**

fax **(408) 879-5810**

Primary Contact **Andre Guezic**

Contact email **andre@TriangleSoftware.com**

Brief description of program

Supported by a NSF SBIR Phase II Award, Triangle Software LLC has developed models for forecasting traffic flow and visualizing real-time and predictive traffic information using three-dimensional animated maps. Triangle Software's system received a Top Innovation Award by Television Broadcast magazine upon its launch at the NAB conference and trade show.

Teachers participating in the RET program will integrate our team and help expand our forecasting model or our three-dimensional mapping system.

Program prerequisites

Experience programming in a language such as C/C++/Java or C#. Expertise in advanced statistics or in geometric computing and cartography.

Program dates **01/2006-12/2007**

Application due date **02/07. you are welcome to apply before**

Other pertinent information (cost, etc.)

**\$10,000 stipend per teacher**

## International Research Experience for Teachers

<http://mse.arizona.edu/reu-ret/>

Institution **University of Arizona and**

**King Mongkut's University of Technology, Thonburi, Bangkok, Thailand**

Mailing Address RET Director, Materials Science and Engineering, University of Arizona

City **Tucson**

State **AZ**

ZipCode **85721**

Phone **(520) 237-7259**

fax **(520) 621-8059**

Primary Contact **Gary Chandler**

Contact email **gwc@u.arizona.edu**

Brief description of program

Six weeks research experience in Thailand at KMUTT University. Rich cultural and scientific experience.

Program prerequisites

Participants must have previous research experience, such as RET.

Program dates Tentative dates: 05/31/07 - 07/13/07

Application due date 02/16/07

Other pertinent information (cost, etc.)

Participants will receive a stipend of \$4,500.00. Travel to and from Thailand and lodging is covered by the program. Weekend trips will be at participant's expense.

## Research Experience for Teachers

<http://www.mrl.ucsb.edu/mrl/outreach/educational/RET/>

Institution **Materials Research Laboratory, University of California Santa Barbara**

Mailing Address MRL, University of California Santa Barbara

City **Santa Barbara**

State **CA**

ZipCode **93117**

Phone **(805) 893 7928**

fax **(805) 893 8797**

Primary Contact **Martina Michenfelder**

Contact email **martina@mrl.ucsb.edu**

Brief description of program

This is a two-year program. For the first summer of participation, each teacher works on a research project for six weeks with MRL researchers. For the second summer of participation, teachers work for four weeks on their teaching units for publication and presentation to their colleagues.

Program prerequisites

Secondary science teacher

Program dates June 18, 2007 to July 27, 2007

Application due date March 31, 2007

Other pertinent information (cost, etc.)

This program serves mainly local teachers since only a small stipend for travel/housing is available.

## Research Experience for Greater Houston Science and Math Teachers

<http://www.egr.uh.edu/ret>

Institution **University of Houston**

Mailing Address E421 Engineering Building 2, Cullen College of Engineering

City **Houston**

State **TX**

ZipCode **77204-4007**

Phone **(713) 743-3299**

fax **(713) 743-8240**

Primary Contact **Dr. Julie Trenor**

Contact email **ret@egr.uh.edu**

Brief description of program

**Six-week summer program for teachers in Houston area**

Program dates **TBA; 2006 dates were June 8-July 19**

Application due date **TBA; 2006 deadline was 4/6**

## Chicago Science Teacher Research Program

<http://vienna.bioenr.uic.edu/RET/index.htm>

Institution **University of Illinois at Chicago (UIC)**

Mailing Address **851 Morgan St 218 SEO**

City **Chicago**

State **IL**

ZipCode **60607**

Phone **(312) 413-7743**

fax **(312) 996-5921**

Primary Contact **Andreas Linninger, PhD.**

Contact email **linninge@uic.edu**

Brief description of program

The UIC RET program is a seven-week full time research experience in the areas of nanotechnology, bioengineering, environmental engineering, and novel materials. Participants work alongside graduate students, REU students, and fellow RET participants with the support of UIC faculty.

Program prerequisites

The program is open to all K-14 Math and Science Teachers. Selection is based on applicant's resume, essay, and two reference letters.

Program dates **June 19 through August 4**

Application due date **January 31**

Other pertinent information (cost, etc.)

RET fellows will receive a stipend of up to \$8,000 for the full program. Additional funding for research projects and development of classroom projects is also available.

## Research Experiences for Teachers

<http://mrsec.wisc.edu/Edetc/index.html>

Institution **University of Wisconsin-Madison**

**Materials Research Science and Engineering Center on Nanostructured Interfaces**

Mailing Address 1550 Engineering Drive

City **Madison**

State **WI**

ZipCode **53706**

Phone **(608) 263-7128**

fax **(608) 261-1357**

Primary Contact **Greta M. Zenner**

Contact email **gmzenner@wisc.edu**

Brief description of program

The Research Experiences for Teachers (RET) program is funded by the National Science Foundation and is hosted by the Materials Research Science and Engineering Center (MRSEC) on nanostructured interfaces. The MRSEC RET program provides an intensive, five-week, full-time professional development opportunity for K-12 science teachers during the summer. RET teachers work with MRSEC faculty members and postdoctorals on a curriculum development project related to nanotechnology, technology at the scale of atoms. The program is a combination of research and curriculum development, and the resulting teaching modules are made available online. Applications to the program are available on the Web site.

Program dates **flexible**, but approximately mid/late June through July

Application due date **rolling**, but before April 15

Other pertinent information (cost, etc.)

Participants receive \$5,000, but there are no additional funds to cover housing, etc. Out-of-state residents have the possibility of receiving \$250-\$500 for travel, depending on circumstances.