



# NewsLetter

## The New Jersey Academy of Science

Rutgers University, Beck Hall, Room 215, 99 Avenue E, Piscataway, NJ 08854-8040

Volume 38, Number 1

Winter Issue 2006

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### **51<sup>TH</sup> ANNUAL MEETING**

**SATURDAY, APRIL 8, 2006**

#### **NEW JERSEY INSTITUTE OF TECHNOLOGY**

The 51<sup>st</sup> Annual Meeting of the New Jersey Academy of Science will be held on Saturday, April 8, 2006 on the campus of New Jersey Institute of Technology in Newark. Dr. Michael Baltrush (baltrush@adm.njit.edu) will be the Chairperson of the Science Program and the Local Coordinator. The Junior and Senior Academies will meet together, and as in the past, there will be both paper and poster presentations.

The Senior Academy pre-registration form is included in this NewsLetter and can also be found on our website at [www.njas.org](http://www.njas.org). Registration fees for the Senior Academy meeting are \$20.00 for members, and \$10.00 for graduate and undergraduate students. The abstract form for Senior Academy presentations is included in this NewsLetter and is also on our website. All abstracts must be submitted in both electronic and paper form. The electronic submission should be sent as an attachment to baltrush@adm.njit.edu. The paper submission should be sent directly to the NJAS at the address at the top of this NewsLetter. Senior Academy abstracts and the abstract fee of \$15 along with the registration fee must be received by March 3, 2006 to be included at the Annual Meeting.

Junior Academy (High School Students) can obtain pre-registration and abstract forms from their science teachers or on our website. Junior Academy registration and abstract fees are \$30.00 for members and \$5.00 for family and guests. All abstracts must be submitted in both electronic and paper form. Full instructions for abstract preparation are also on our website.

**All presenters must be academy members and must be pre-registered by the above date in order to present at the meeting.**

### **JOHN ALLISON, PH.D.**

#### **TO BE KEYNOTE SPEAKER AT NJAS ANNUAL MEETING**

Our keynote speaker in 2006 will be Dr. John Allison, founder of the forensic chemistry program at the College of New Jersey. The title of Dr. Allison's presentation will be "Forensic Science's Battle for Legitimacy: It's Not CSI, But is it Science?"

The CSI television shows have recruited record numbers of students into Forensic Science college programs, and they are changing the way jurors approach trials and evidence. However, real Forensic Science is far from the television show. For many decades the legal system has wrestled with scientific and pseudoscientific expert testimony, at times focusing squarely on the legitimacy of Forensic Science as a Science. Forensic Science developed within the legal system, very different from other disciplines known as Sciences. As the courts seriously question concepts as common as fingerprint analysis, the future directions of Forensic Science are becoming an exciting point of discussion for those both in and out of the field.

Dr. John Allison received a B.S. in Chemistry from Widener University and a Ph.D. in Chemistry from the University of Delaware. He was an NSF Post-Doctoral Fellow at Stanford University, working with Professor Richard N. Zare. In 1979, he joined the Chemistry Department at Michigan State University, where he taught for 25 years. In his last several years there, he focused on the development of new instrumental methods for the Forensic Sciences. Upon retiring from MSU, he joined the faculty at The College of New Jersey, and started a new program in Forensic Chemistry. He is active in the research areas of analytical mass spectrometry and questioned document analysis. Much of his work involves analysis of compounds of color - from the dyes used in pen inks to the pigments used in art.

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Directions, including a map to NJIT, are available at: <http://www.njit.edu/about/visiting/index.php>.

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<http://www.njas.org>

## TO THE MEMBERSHIP,

I am writing to ask you to serve as a judge at the **New Jersey Academy of Science 51st Annual Research Meeting, which will be held on Saturday, April 8, 2006 at New Jersey Institute of Technology in Newark.** At this meeting, Senior Academy and Junior Academy of Science students will present both oral and poster presentations on their scientific research in the following disciplines: biology; chemistry/biochemistry; environmental science; mathematics/computing/physics & engineering; medicine/health; and psychology/animal behavior.

I anticipate that over 100 students from all over New Jersey will participate. Registration begins at 8:00 a.m., and the student research presentations run from 9:00 a.m. until 11:00 a.m. Judges are present during the 10 minute oral presentations to critique the students' presentations and then engage in a 5 minute question-answer session with the student. After the student presentations, judges confer with one another to select the winning presentations in each specific scientific category. All judges are invited to attend a luncheon at noon. At 1:15 p.m. there is a keynote speaker and awards ceremony for the student presentation winners.

If you would like to serve as a judge at our annual NJAS meeting, we would greatly welcome your effort and appreciate your time. **Please indicate your desired action on the response form included in this NewLetter.** Please mail the form to:

*New Jersey Academy of Science  
Rutgers, The State University of New Jersey  
215 Beck Hall, 99 Avenue E  
Piscataway, New Jersey 08854-8040*

If you wish to contact me with any questions or comments, feel free to do so. Thank you for your consideration.

Sincerely,

Sharon J. Sherman

Professor, The College of New Jersey and

State Director, New Jersey Academy of Science Junior Division

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## CALVERT AWARD FOR ENTOMOLOGY RESEARCH AT NJAS ANNUAL MEETING

Entomology projects are eligible for consideration for the American Entomological Society (AES) Calvert award. Students should submit application materials to AES, so that representatives of AES know to come to review the projects at the NJAS Annual Meeting. Recipients can be identified by the AES selection committee without prior application, but to insure consideration, students should apply for the Calvert Award. A completed application should include a description of the project with illustrations of it and at least one supporting letter provided by teacher or sponsor. Application/Nomination forms are available from The American Entomological Society, at The Academy of Natural Sciences of Philadelphia 19th and The Parkway, Philadelphia, Pennsylvania 19103. <http://www.udel.edu/chem/white/Odonata/CalvertAppl.html>

## SCIENCE TEACHER WORKSHOP TO BE HELD AT ANNUAL MEETING

At its Annual Meeting on April 8, the New Jersey Academy of Science will host a half-day FIRST Workshop. This workshop will involve an overview and discussion of the *FIRST* Robotics Program. *FIRST* (For Inspiration and Recognition of Science and Technology) is a multinational non-profit organization, that aspires to transform culture, making science, math, engineering, and technology as cool for kids as sports are today (<http://www.usfirst.org/>).

*FIRST* was founded in 1989 by Dean Kamen, inventor of the Segway Human Transporter. The *FIRST* program sponsors challenges in which teams of students, sponsored and assisted by local companies and volunteers, design, assemble, and test a robot capable of performing a specified task in competition with other teams.

*FIRST* operates the *FIRST* Robotics Competition and the *FIRST* Vex™ Challenge for high school students and the *FIRST* LEGO™ League for students 9-14 years old.

The workshop is open to teachers both currently involved in the *FIRST* program and those who are interested in learning more about the program. The workshop will provide a background about the *FIRST* program. The emphasis will be on the exchange of ideas about incorporating the *FIRST* program into the broader goal of technology education. TCNJ is in the planning stages of developing pre-engineering curriculum materials that can support and enhance the *FIRST* experience. This workshop will present our current plans which will be used as a jumping off point for our discussion.

To register for the workshop contact Sabera Munshi at the New Jersey Academy of Science ([njacadsc@aol.com](mailto:njacadsc@aol.com)). There is no charge for the workshop. To guarantee a spot pre-registration for the meeting and workshop is recommended. On site registration will be available if space permits. The necessary pre-registration form can be found and printed at Teacher Registration at the Annual Meeting link of the Academy's web site [www.njas.org](http://www.njas.org)

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### DID YOU KNOW THAT...

researchers have determined that dolphins are able to recognize their own reflection in a mirror? This type of self awareness has only previously been shown in humans and apes.

## NORTH JERSEY REGIONAL SCIENCE FAIR

The 2006 North Jersey Regional Science fair will be held on March 24-25, 2006 at the College Avenue Campus. NJRSF is a great opportunity to promote science education and encourage scientific literacy in New Jersey. In order for the fair to be a success, help is needed in the judging process. Please consider helping out this year as a judge on Friday evening and/or Saturday morning. This year, we expect to have the highest level of participation in the history of the Fair. Unfortunately, judging registration has been slower than usual - and YOUR HELP IS REALLY NEEDED!!! As always, the first judging round on Friday night (6:30-9:30 pm) will center on category judging, with a team assigned to each category. The judging on Saturday morning will be special awards (8:30 am - 12 noon) and the selection of the finalists for the ISEF trips. Saturday afternoon the finalists will present their work at the ISEF Finalist Symposium, and then the team captains from each category will select the winners of the trip awards. Judges are needed for all categories on either day - or, join us for both days! We need all the judges we can get! New judges will set up a password as they register at <http://njrsf.org/njrsf.html>. Please consider participating in the 2006 NJRSF as a judge. If you have specific questions, please direct them to Lenore Neigeborn at: [<neigebor@rci.rutgers.edu>](mailto:<neigebor@rci.rutgers.edu>)

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## ICE WORMS SHED LIGHT ON SURVIVAL IN COLD ENVIRONMENTS

Research under way in Camden might help humans keep their energy levels up in cold climates. Daniel Shain, an Associate Professor of biology and Brittany Morrison a graduate student in biology, are identifying the mechanism that allows ice worms to thrive in glaciers. Just as it's more difficult to start a car during the winter, it's harder for animals and humans to stay active in cold weather. By isolating genes and examining biochemical pathways in the glacial organisms, the research team hopes to identify the mechanisms that allow these creatures to adapt to extreme conditions. Shain discovered that ice worms produce more ATP – a universal energy molecule – in low temperatures. NASA, which provided funding for the study, is interested in Shain's research for other environments in the solar system such as two of Jupiter's moons, Europa and Callisto.

–Cathy K. Donovan (Adapted from Rutgers' FOCUS Newspaper)

## MAGIC RULES FOR GIVING AN ILLUSTRATED TALK

By David Pearson, Ph.D., Biology Department, California State University at Los Angeles

It should not be very difficult to organize yourself to communicate effectively if you have the following...

1. A good idea of how your work fits into the "big picture" of a major scientific research program. In other words,
  - o Why is it important?
  - o A definition of what you were attempting to investigate.
  - o Define your project.
2. Knowledge of the methods you used and why you used them.
3. A clear description of your findings, even if (as is often the case) the work is incomplete.

### PUTTING IT TOGETHER

1. Start planning early.
2. Gather your references, lab book, other data, scratch paper, and writing tool. Sit in a quiet place with a large surface so you can spread your materials.
3. Make a rough outline with a few words or statements under each heading. At each point, make a note of the visuals you might want to use. You might want to include quick sketches of the visuals. Introduction and, background- Here you include the "big picture" information and define your project.
4. Methods- how did you proceed? Conclusions: What does the above mean? Why is it important? What will happen next?
5. Acknowledgments: It is always better to give too much credit to those who helped you than not enough.
6. Take the outline to your mentor and let her/him critique it. Come to an agreement on what should be included.
7. When you have decided what to present, refine the outline. Do not write the talk out word for word: the best talks usually come from the briefest outlines.
8. Prepare your visuals.
9. Practice, practice, practice:
  - o Go into a room alone with your outline and your visuals.
  - o Stand.
  - o Decide on an opening sentence or two and memorize them.

- o Speak aloud even though no one can hear you.
- o Stop and start over as often as necessary to make it sound right. Practice using your visuals as you talk.
- o Use a pointer to direct attention precisely.
- o If necessary, decide what to eliminate to pare your talk down to the required length.
- o Practice the talk until you are comfortable with it.
- o Finally, work with audiences such as science classes, science club, teachers, mentors, and family who will listen and give you feedback on your presentation.

### A FEW SPECIAL THINGS TO REMEMBER:

1. *Voice*: Do not shout, but do speak up and project.
2. *Eye contact*: Try to establish individual eye contact with as many people as possible.
3. *Body language*: Stand straight; smile; move around a little; have a good time.
4. *Pointer*: Remember to use it effectively.
5. *Audience questions*: It is great if you know the answer; if you do not, do not fake it. Just say, "I don't know."
6. *Visuals*: Place 2 x 2 slides correctly into your carousel so they do not project upside down! Transparencies should have simple diagrams/outlines.

### PRESENTING IT:

1. Establish yourself as a person with your audience before you have the lights turned off and start showing slides.
2. Neither write out your talk word for word nor memorize it.
3. Use effective graphics.
4. Do not try to impress anyone with how much you know by using scientific jargon or many technical terms, especially if you have not clearly defined them.
5. **DO NOT PANIC!** Look out at the audience; take one more slow, deep breath and **SMILE** before you say a word.

"EVERYTHING ELSE WILL TAKE CARE OF ITSELF." D. Pearson

## STEAMBOAT FLOATING CLASSROOM TAKING GROUP RESERVATIONS

Now is the time to plan a group trip on the REAL steamboat "SPLASH". (acronym for Student Participation in Learning Aquatic Science and History). The steamboat SPLASH offers a unique, exciting, safe, educational field trip on the Delaware River at Lambertville NJ. with any of the following interactive activities:

- a) Biology and Environmental Education (watershed demonstration, microscopic organisms, macro-invertebrates, bird spotting, food chain, clean vs. polluted water, Project WET activities with optional training seminar.
- b) Physics and Chemistry (real steam engines in operation, water testing for oxygen and pH, bridge construction, AC and DC electricity in operation)
- c) American History (George Washington's use of the river for his first successful battle, role playing as colony representatives, confederation vs federation, foundations of democracy)
- d) Social Studies (Abe Lincoln's use of the canals and river in the Civil War, local communities and "river civics", whose water is it? who drinks it? who protects it?).
- e) You design it (Tell us what you want. We can arrange pre-trip lesson plans and student teachers from Princeton University).

The cost for up to 49 passengers is typically \$695 for the Coast Guard certified steamboat, crew and insurance. This is a trip that students or adults will NEVER forget.

Reply to [info@steamboatClassroom.org](mailto:info@steamboatClassroom.org).



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## 2006 FISH ART AND WRITING CONTEST

Elementary and Middle School teachers take note: The 2006 Fish Art and Writing Contest information is now posted on the Division of Fish and Wildlife website. Your students in grades 4 - 8 can learn about NJ's fish while honing their artistic skills. The division's website also has lots of online resources that your students can search to learn about NJ's fish as they do the research for the biography piece.

The Aquatic WILD activity "Fishy Who's Who"

can be used to introduce the contest to students. The activities done through the contest help meet NJ Core Curriculum Content Standards for Science 5.5 (Grade 4) A.1, (Grade 6) B.1, (Grade 8) B.1, B.2, B.3, and Science 5.10 (Grade 6), A.1.

The winning entrants in each grade are invited to the Pequest Trout Hatchery and Natural Resource Education Center in Oxford (along with their immediate family and their teacher!) to fish at the education pond on Opening Day of Trout Season, 2006 and to receive their awards at a special luncheon. The contest is sponsored by NJ chapters of Trout Unlimited.

For more information, see

<http://www.njfishandwildlife.com/fishart.htm>

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## INTELLIGENT DESIGN DEFEATED IN PA

HARRISBURG, PA. - In one of the biggest courtroom clashes between faith and evolution since the 1925 Scopes Monkey Trial, a federal judge barred a Pennsylvania public school district Tuesday from teaching "intelligent design" in biology class, saying the concept is creationism in disguise.

U.S. District Judge John E. Jones delivered a stinging attack on the Dover Area School Board, saying its first-in-the-nation decision in 2004 to insert intelligent design into the science curriculum violates the constitutional separation of church and state.

The ruling was a major setback to the intelligent design movement, which is also waging battles in Georgia and Kansas. Intelligent design holds that living organisms are so complex that they must have been created by some kind of higher force.

Jones decried the "breathtaking inanity" of the Dover policy and accused several board members of lying to conceal their true motive, which he said was to promote religion.

A six-week trial over the issue yielded "overwhelming evidence" establishing that intelligent design "is a religious view, a mere re-labeling of creationism, and not a scientific theory," said Jones, a Republican and a churchgoer appointed to the federal bench three years ago.

The school system said it will probably not appeal the ruling, because the members who backed intelligent design were ousted in November's elections and replaced with a new slate opposed to the policy.

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## DID YOU KNOW THAT...

african honeybees protect themselves from invading hive beetles by trapping them in prison-like cells?

**Application For Membership**

Dr., Miss, Ms., Mrs., Mr. (Please Circle One)

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_ MI. \_\_\_\_\_

Organization/Ed. Unit: \_\_\_\_\_

Mailing Address: \_\_\_\_\_  
\_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ E-mail: \_\_\_\_\_

Professional Field(s): \_\_\_\_\_

Educational Level (circle one):      high school    undergraduate    graduate    faculty

Signature: \_\_\_\_\_

Please check type of annual membership:

|  |          |   |          |
|--|----------|---|----------|
| <input type="checkbox"/> Regular Member          | \$ 40.00 | <input type="checkbox"/> Student Member   | \$ 15.00 |
| <input type="checkbox"/> Life Member (1 payment) | \$250.00 | <input type="checkbox"/> Retired/Emeritus | \$ 15.00 |

**2006 Senior Academy Preregistration**  
**Must Be Received By March 3, 2006**

Dr., Miss, Ms., Mrs., Mr. (Please Circle One)

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_

Organization/Ed. Unit: \_\_\_\_\_

Mailing Address: \_\_\_\_\_  
\_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ E-mail: \_\_\_\_\_

General Meeting Registration Fee:

|   |      |  |      |
|---|------|--|------|
| <input type="checkbox"/> Member                       | \$20 | <input type="checkbox"/> Abstract Fee        | \$15 |
| <input type="checkbox"/> Graduate Student Member      | \$10 | <input type="checkbox"/> Lunch               | \$10 |
| <input type="checkbox"/> Undergraduate Student Member | \$10 | <input type="checkbox"/> HS Teacher Workshop | free |
| <input type="checkbox"/> High School Teacher          | \$10 | <input type="checkbox"/> Non Member          | \$25 |

Make checks payable to:              New Jersey Academy of Science

Send the application and fees to: NEW JERSEY ACADEMY OF SCIENCE  
Rutgers University  
Beck Hall, Room 215  
99 Avenue E  
Piscataway, New Jersey 08854-8040

***NJAS Annual Meeting Saturday April 8, 2006***  
***Abstract Form for Oral/Poster Presentations***  
***Senior Academy 2006 Annual Meeting Abstract Form***

Please follow these instructions (improperly prepared abstracts or missing information may cause rejection of your abstract):

1. This year we will not be accepting any abstracts that are not submitted in both electronic and paper form. The preferred format is MSWord, Arial font, size 10, fully justified. RTF format is also acceptable. Abstracts sent via an attachment to an e-mail message are preferred and should be submitted to Dr. Michael Baltrush at baltrush@adm.njit.edu or mab@cis.njit.edu, but floppy disks/CD-ROM are also acceptable.
2. The abstract should be approximately 200 words long, excluding title, author and affiliation information.
3. Type the title in bold and all capitals, except for scientific names.
4. Start authors with the first author.
5. Underline the name of the presenting author. If the presenting author is a student, type (student) after the presenter's name.
6. Leave a blank line before the text.

Example of typical abstract:

**SYNTHESIS AND IDENTIFICATION OF TERPENYL ETHERS - A COOPERATIVE COLLEGIATE-INDUSTRY PRODUCT**

Thomas Gilligo (student), Paul S. Cohen, Chemistry Department, The College of New Jersey, Trenton, NJ 08625 and Mark Pavlin, Union Camp Corporation, Princeton, NJ.

A series of terpenyl ethers was synthesized and analyzed for purity and structure. The ethers were submitted for aroma quality evaluation...

7. Please complete the **ABSTRACT SUBMISSION FORM**: (see below)
8. **Mail one paper copy of this form, one paper copy of the abstract, plus \$15 Abstract Fee, Meeting Registration Fee of \$20 Regular Member or \$10 Student Member, Appropriate NJAS Membership Fee of either \$40 for Regular Member or \$15 for Student Member and \$10 Lunch Fees to: New Jersey Academy of Science, Rutgers University, Beck Hall, Room 215, 99 Avenue E, Piscataway, NJ 08854-8040. Phone/ Fax: 732/463-0511. All questions about payment should be directed to this address.**
9. Mail another paper copy of this form, another paper copy of the abstract, and the electronic copy of the abstract to Dr. Michael Baltrush. E-mail: baltrush@adm.njit.edu or mab@cis.njit.edu.
10. **All abstracts and abstract fees MUST be received by March 3, 2006 to be guaranteed a room assignment. THIS IS A FIRM DEADLINE!!! In order to have the printed programs ready for the meeting, late submissions CANNOT be accepted for any reason!!!**

You will be notified by e-mail after the abstract has been received, and again after the presentation time has been established.

**Abstract Submission Check List**

Abstract in correct format

Abstract submitted

    Hard Copy and electronic copy to Dr. Baltrush

    Hard Copy with registration and abstract fees to NJAS Office

Authors Identified Correctly

Presentation type completed

Student Author Information completed

Instructional Media needs completed

Presentation Category completed

## **NJAS Senior Academy Abstract Submission Form**

Submit in writing (hard paper copy) and electronic format to:

Dr. Mike Baltrush, NJAS 2005 Meeting  
Computer Science Department  
New Jersey Institute of Technology  
University Heights  
Newark, NJ 07102  
baltrush@adm.njit.edu or mab@cis.njit.edu

Author presenting paper (MUST BE A NJAS MEMBER):

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Phone \_\_\_\_\_ Fax: \_\_\_\_\_ E-mail: \_\_\_\_\_

If the presenting author is a **student**, should the presentation be evaluated for a best student oral presentation award?      \_\_\_\_\_ yes      \_\_\_\_\_ no

Student Presenter      \_\_\_\_\_ Graduate      \_\_\_\_\_ Undergraduate

The Presentation will be:      \_\_\_\_\_ Oral      \_\_\_\_\_ Poster

Oral presentations last a total of 15 minutes, including time for questions. A slide projector and overhead projector will be available in each room. **If you need an LCD Projector (e.g., Power Point Presentation) we have limited numbers available and appreciate it if you might be able to bring one from your University. If insufficient LCD projectors are unavailable, Authors will need to present using overheads.**

Instructional Media Needs for Oral Papers:

\_\_\_\_\_ Overhead Projector      \_\_\_\_\_ Slide Projector      \_\_\_\_\_ LCD Projector

If you need an LCD Projector Please Indicate below:

\_\_\_\_\_ I will bring one from my University      \_\_\_\_\_ I will need one supplied

For posters, 6' long tables will be provided. Posters will be placed in a general meeting area for display. All posters must be self-supporting. Posters are usually displayed during the entire day.

Please indicate your first and second choices for sessions (note: to keep the program balanced and ensure an audience for each presentation, some reassignment of papers may be necessary).

|                                      |                                   |                       |
|--------------------------------------|-----------------------------------|-----------------------|
| ___ Archaeology/Anthropology         | ___ Ecology/Environmental Science | ___ Nursing           |
| ___ Biochemistry                     | ___ Geology                       | ___ Physics/Astronomy |
| ___ Biology                          | ___ Marine Science                | ___ Psychology        |
| ___ Chemistry                        | ___ Microbiology                  | ___ Science Education |
| ___ Computer Science/<br>Mathematics | ___ Neurobiology                  | ___ Other _____       |

**Abstract (Follow Example, 200 Word Limit)**

## RESPONSE FORM FOR JUDGES

**THE NJ ACADEMY OF SCIENCE'S ANNUAL MEETING AND STUDENT COMPETITION IS BEING HELD ON APRIL 8, 2006 AT NEW JERSEY INSTITUTE OF TECHNOLOGY, NEWARK, NJ FROM 8:00 AM UNTIL 2:00 PM. JUDGES ARRIVE BY 8:30 A.M. LUNCH IS PROVIDED TO JUDGES FREE OF CHARGE.**

Please complete and return this form to:

New Jersey Academy of Science  
Rutgers, The State University of New Jersey  
215 Beck Hall, 99 Avenue E  
Piscataway, New Jersey 08854-8040

\_\_\_\_\_ Yes, I am willing to judge presentations at the **NJAS 51st Annual Research Meeting** to be held on Saturday, April 8, 2006 at New Jersey Institute of Technology in Newark

**Preference:** \_\_\_ **Junior Academy** \_\_\_ **Senior Academy** \_\_\_ **Either**

\_\_\_\_\_ No, I am not able to judge presentations at the **NJAS 51st Annual Research Meeting** but please keep me on the mailing list.

**NAME:**

**ADDRESS:**

**CITY/STATE/ZIP:**

**DAYTIME PHONE NUMBER:**  
**NUMBER:**

**EVENING PHONE**

**EMAIL:**

**ACADEMIC INSTITUTION OR CORPORATION:**

**POSITION HELD:**

**DEGREES:**

**PLEASE DESCRIBE YOUR EXPERTISE:**

**CIRCLE THE DISCIPLINE(S) YOU WOULD LIKE TO JUDGE:** biology; chemistry/biochemistry; environmental science; mathematics; computing; physics; engineering; medicine; health; psychology; animal behavior; science, in general

**Would you consider sharing your expertise by attending a Breakfast with Scientists? Yes No**

**Would you consider hosting a Breakfast with Scientists at your place of employment? Yes No**

This involves providing breakfast for up to 20 high school students who will be accompanied by chaperones. It takes place on any weekday or weekend morning of your choice. Registration and advertisement are handled by NJAS.

### ***THE BULLETIN: CALL FOR MANUSCRIPTS***

Individuals seeking publication of their work are urged to consider submitting their manuscripts to *The Bulletin*, The peer-reviewed journal of the New Jersey Academy of Science. We are currently on a twice-yearly publication schedule, which consists of a spring and a fall issue.

Original papers and reviews in any field of science are considered for publication. Manuscripts should be submitted to Dr. Michael Kennish, Editor, Institute for Marine & Coastal Sciences, Rutgers University, 71 Dudley Rd. New Brunswick, NJ 08901. Instructions for contributors are printed on the inside back cover of each issue of *The Bulletin* and are now available on the NJAS website ([www.NJAS.org](http://www.NJAS.org)), in the Bulletin section. Anyone having questions about the review and/or publication process should contact the editor at (732) 932-6555, ext. 240 or [kennish@imcs.rutgers.edu](mailto:kennish@imcs.rutgers.edu).

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### **NEW JERSEY ACADEMY OF SCIENCE: MEMBERSHIP**

The New Jersey Academy of Science is a private, non-profit, scientific and educational organization of scientists and others interested in science. The purpose of the academy is to stimulate education and research in science throughout New Jersey. Membership in NJAS

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### **NEEDED: DIRECTOR FOR JUNIOR ACADEMY**

NJAS is recruiting a new Director for the Junior Academy. For responsibilities of the position contact Dr. Sharon Sherman at [shermans@tcnj.edu](mailto:shermans@tcnj.edu). If interested in the position, contact the NJAS at: 732-463-0511 or [njacadsc@rci.rutgers.edu](mailto:njacadsc@rci.rutgers.edu)

NJAS, Rutgers University  
Beck Hall, Room 215  
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Piscataway, NJ 08854-8040