



# NewsLetter

## The New Jersey Academy of Science

Kean University, Center for Science, Technology & Math Education

1000 Morris Ave. T-117, Union, NJ 07083

Volume 41, Number 1

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### 54<sup>TH</sup> ANNUAL MEETING

The 54<sup>TH</sup> Annual Meeting of the Junior and Senior Academies of the New Jersey Academy of Science will be held on April 18, 2009 at Rutgers University, Cook/Douglas Campus, New Brunswick.

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### NJAS HAS THE FOLLOWING OPEN POSITIONS

**Executive Secretary:** Responsible for keeping the Executive Board aware of deadlines for varied activities of the Academy, as well as procedural deadlines for elections and similar functions.

**Junior Academy Director:** Work to oversee the high school student membership constituents of the NJAS, specifically to expand the membership base of participating high schools in the state in the many NJAS high school orientated initiatives like Science for Breakfast and Grant in Aid. The Jr Acad director will play a large role in the organization of the annual NJAS meeting.

**Grant-In-Aid Chairperson:** GIA chair handle the yearly Grant-in-Aid program that is funded by AAAS to accept science/math research proposals from high school students each fall that are reviewed by senior scientists. Highest-ranking proposals are awarded small funds to offset the cost of the student's research project. GIA chair works with the participating high school science/math sponsoring teachers to encourage all GIA participants to present their research at the annual NJAS meeting.

**Program Development Coordinator:** Works to keep NJAS activities up-to-date, and continuously advancing. Keeps abreast of programs sponsored or developed by other State Academies, the National Academy, educational organizations, and similar groups in order for the NJAS to engage in program partnership opportunities as they arise.

**Science For Breakfast Coordinator:** Once or twice a year the NJAS hosts a Science for Breakfast program for high school students in different areas throughout the State. The coordinator maintains contact with interested schools, arranges for scientist in various disciplines to be present for the event, coordinates advertisement of the event, maintains registration and similar activities which are required to host a successful event.

**Web Manager:** Web Manager: Maintains the NJAS official web page and makes changes to the site as requested by the Executive Board. Keeps the web site up-to-date and interesting for Academy members.

Nominations should be sent to Dr. Laura Lorentzen, NJAS President at [llorentzen@hotmail.com](mailto:llorentzen@hotmail.com) or to the NJAS directly at Kean University, CSTME, Townsend Hall, T117, 1000 Morris Ave, Union, NJ 07083

Volunteers should contact Dr. Laura Lorentzen, NJAS President at [llorentzen@hotmail.com](mailto:llorentzen@hotmail.com) or contact the NJAS at: 908-737-3420 or [njacadsc@rci.rutgers.edu](mailto:njacadsc@rci.rutgers.edu)

## NJAS GRANT-IN-AID (GIA) 2009 WINNERS

The NJAS GIA program accepts research proposals from high school students each fall. Senior scientists evaluate and review the science/math proposals. Top-ranking proposals are funded up to \$100 provided the student completes the project and presents their work at the annual NJAS spring meeting. The GIA program is funded in part through the American Association for the Advancement of Science (AAAS).

<p><b><u>Anca Marinescu</u></b>            “Effect on growth of <i>Saccharomyces cerevisiae</i> cultures grown in sabouraud agar medium vs. petrifilm pre-made medium”            High Technology High School</p>	<p><b><u>Jessica Phan</u></b>            “Air exchange and PM 2.5 levels in relation to house age”            John F. Kennedy Memorial High School</p>
<p><b><u>Janie Gu</u></b>            “Effect of modeling atmospheric pollution on solar cell electricity generation”            High Technology High School</p>	<p><b><u>Ritesh Patel</u></b>            “Effects of sulfur deprivation, copper supplementation and SR2+ on hydrogen production in <i>Chlamydomonas reinhardtii</i>”            John F. Kenney Memorial High School</p>
<p><b><u>Emily Fineberg</u></b>            “Investigation of sounds produced by B flat soprano clarinet with different ligatures”            High Technology High School</p>	<p><b><u>Khushboo Patel AND Alicia Chan</u></b>            “Longer lasting fruits”            Dwight Morrow High School, Academies at Englewood</p>
<p><b><u>Sidney Buchbinder</u></b>            “Effect of blade design on wind turbine efficiency”            High Technology High School</p>	<p><b><u>Calvin Chang</u></b>            “Effect of light vs. light on the precision of infrared LED pens tracked by a Wii mote”            High Technology High School</p>
<p><b><u>Isamar Valenzuela</u></b>            “Application of controlled symbolic images as a form of visualization to alleviate test anxiety in adolescents”            The Science Academy at Morristown High School</p>	<p><b><u>Jacqueline Viotto</u></b>            “Using stroop task to measure mental acuity in adolescents in varied humidity environments”            The Science Academy at Morristown High School</p>
<p><b>Proposals for the GIA 2010 program will be due in November 2009. Please visit <a href="http://www.njas.org">www.njas.org</a> in September 2009 for full program details. The GIA program needs senior scientists each year who are willing to volunteer as reviewers to evaluate proposals. Special thanks to all scientists who served as evaluators this year.</b></p>	<p><b><u>Special thanks to the high school teachers sponsoring the students’ work:</u></b>   <b>Erin Colfax, Science Academy at Morristown HS</b>  <b>Mike Roche, High Technology High School</b>  <b>Cathryn Crego, JFK Memorial High School</b>  <b>C. Kennedy, The Academies at Englewood</b></p>

**2009 New Jersey Academy of Science (NJAS) Annual Meeting**  
**Registration & Abstract Submission Form**  
**Must Be Received By March 14, 2009**

**PART I. YOUR CONTACT INFO**

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

Organization/School: \_\_\_\_\_

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

\_\_\_\_\_

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

**PART II. REGISTRATION FOR ATTENDING THE ANNUAL MEETING**

If you will be attending the meeting you must register in advance (there is no on-site registration)

**Indicate your category of registration:**

- |   |  |
|---|--|
| ____ NJAS Member \$25   | ____ Non NJAS Member \$35              |
| ____ Graduate Student Member \$15                                   | ____ Undergraduate Student Member \$15 |
| ____ High School Teacher Member \$15                                | ____ High School Student Member \$10   |
| ____ Family member of high school student presenting at the meeting | \$5                                    |

MEMBER means that you have paid 2009 NJAS membership dues. You may make payment for 2009 NJAS membership dues via the membership application or membership renewal paperwork and submit along with this annual meeting registration paperwork. If you as a high school student in Fall 2008 submitted a GIA (grant-in-aid) application then you have already paid 2009 NJAS membership dues.

**If you are not presenting at the meeting, then proceed to PART IV.**

**INFO regarding LUNCH at the annual meeting:**

Lunch is available for purchase at the Rutgers University Douglas Dining Hall that is within walking distance of Hickman Hall where the annual meeting is being held. The lunch for purchase menu includes pizza, hamburgers, hotdogs and chicken sandwiches. You may opt to bring your own brown bag lunch.

**PART III. ABSTRACT SUBMISSION FOR PRESENTATION AT ANNUAL MEETING**

**If you wish to present, you must be a NJAS member & submit an abstract. If you are not a 2009 dues paid NJAS member, submit the membership application & payment at this time.**

There is a standard \$10 fee for each abstract submission. Abstracts are published in the *NJAS Bulletin*, with the exception of high school students whose abstracts are printed in NJAS Newsletter.

Please indicate your 1st & 2nd choice of subject category for your abstract. In order to keep the program balanced, be aware that reassignment of abstracts may be necessary by the NJAS executive committee.

- |   |  |
|---|--|
| <input type="checkbox"/> Ecology or Environmental science | <input type="checkbox"/> Mathematics                           |
| <input type="checkbox"/> Health or Medicine               | <input type="checkbox"/> Earth Science, Geology or Meteorology |
| <input type="checkbox"/> Cell or Molecular Biology        | <input type="checkbox"/> Microbiology                          |
| <input type="checkbox"/> Chemistry or Biochemistry        | <input type="checkbox"/> Marine Science                        |
| <input type="checkbox"/> Physics or Engineering           | <input type="checkbox"/> Science or Math Education             |
| <input type="checkbox"/> Computational Science            | <input type="checkbox"/> Botany                                |
| <input type="checkbox"/> Psychology or Animal behavior    | <input type="checkbox"/> Other _____                           |

**College students, graduate students (masters or doctoral), or science or math professionals (holding a master's or doctoral degree) may present posters. Indicate your category of poster presentation:**

- |  |   |
|--|---|
| <input type="checkbox"/> High School Teacher    \$10   | <input type="checkbox"/> Post doc    \$10                 |
| <input type="checkbox"/> Ph.D. student    \$10         | <input type="checkbox"/> Ph.D. or equivalent    \$10      |
| <input type="checkbox"/> Undergraduate student    \$10 | <input type="checkbox"/> Master's degree students    \$10 |

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 aka self-standing** on the tabletop. Posters are displayed during the entire day. Should a poster stand be required, you the presenter must supply your own.

**High school, college, or graduate degree-seeking students may present 10 min talks in competition. Indicate your category of oral presentation:**

- |   |                               |
|---|-------------------------------|
| <input type="checkbox"/> Doctoral degree student                                    | \$10                          |
| <input type="checkbox"/> Master's degree student                                    | \$10                          |
| <input type="checkbox"/> Undergraduate student                                      | \$10                          |
| <input type="checkbox"/> High School student  | \$ 0 (abstract fee is waived) |
| <input type="checkbox"/> High School student who is a 2009 NJAS Grant-In-Aid Winner | \$0 (fee waived)              |
- NJAS Grant-In-Aid winners must submit an abstract & present.***

Talks are to be PowerPoint; bring slides on a USB flash drive, a CD, your own laptop. It is highly suggested that YOU BRING YOUR OWN LAPTOP COMPUTER to then connect to the portable projector in the classroom. If you cannot do your talk as PowerPoint and require an overhead transparency, you must indicate that by checking here \_\_\_\_\_). Oral presentations should be 10 minutes in length, then 5 minutes for question/answer.

**PART IV. PAYMENT TALLY – Meeting registration PLUS abstract submission fee**

***Make checks payable to: NJAS. Send meeting registration & abstract submission paperwork along with fees (and any NJAS 2009 membership application or renewal paperwork and fees) by March 14 to:***

NJAS c/o Kean University  
 ATTN: Dr. Laura Lorentzen  
 1000 Morris Ave. T-117 CSTME  
 Union NJ 07083

***NOTE that the actual electronic copy of the abstract for presentation is to be emailed by March 14 to [kennish@marine.rutgers.edu](mailto:kennish@marine.rutgers.edu)***

## **Abstract Format Guidelines for Presentations**

**NJAS Meeting 18 Apr 2009**

**Held at Rutgers University, Cook/Douglass Campus, Hickman Hall**

**Follow these instructions (improperly prepared abstracts/missing info may cause rejection of your abstract):**

1. We will only accept abstracts that are submitted in electronic form. The preferred format is MSWord, Arial font, size 10, fully justified. RTF format is also acceptable.
2. Abstracts should be sent via an attachment to an e-mail message to Dr. Michael Kennish at [kennish@marine.rutgers.edu](mailto:kennish@marine.rutgers.edu)
3. While the abstract is sent as an attachment, you must write in the text of the email the following information:
  - a. Your full name and your school or university affiliation
  - b. If your abstract is for a POSTER or an ORAL presentation
  - c. State if you are high school, college, master's or doctoral student
    - i. If you are a student, also give name and email for your sponsoring mentor
4. The abstract should be approximately 200 words long, excluding title, author and school or institution affiliation information.
5. Type the title in bold and all capitals, except for scientific names.
6. Start authors with the first author. Underline the name of the presenting author. The presenting author must be an active NJAS member. If the presenting author is a student, type (student) after the presenter's name. The presenting author must complete the information requested below the example of a typical abstract.
7. Leave a blank line before the text.
8. **All abstracts and abstract fees MUST be received by March 14, 2009 to be guaranteed a room assignment. In order to have the printed programs ready for the meeting, late submissions CANNOT be accepted for any reason.**
9. You will be notified by e-mail after the abstract has been received and accepted.

*Example of typical abstract:*

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

Joe Smith (student), Jane Doe, Chemistry Department, Kean University, Union NJ 07083

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

**Application For NJ Academy of Science (NJAS) Membership**

**NOTE: if you have already paid your 2009 NJAS membership dues, proceed directly to Annual Meeting Registration & Abstract Submission Form. If you have not yet paid your 2009 membership dues to NJAS, you will need to complete this form and send along with payment when you register for the April 2009 NJAS annual meeting.**

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

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

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

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

**Phone:** \_\_\_\_\_ **Fax:** \_\_\_\_\_

**E-mail:** \_\_\_\_\_

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

**Signature:** \_\_\_\_\_ **Date** \_\_\_\_\_

**Please check type of annual membership:**

**Regular Member**                      **\$40.00**

Post doc

Ph.D/M.S. in Academia

Ph.D./M.S. not in Academia

High School Teacher

Other science or math professional [Please indicate \_\_\_\_\_]

**Student Member**                      **\$15.00**

High School

Bachelors

Masters

Doctoral

**Life Member (1 payment)** **\$250.00**

**Retired/Emeritus**                      **\$15.00**

**Corporate Member**                      **\$500.00**

**Corporate Sponsor**                      **\$1000.00**

**Corporate Benefactor**                      **\$2500.00**

Send the application and fee to:  
Make check payable to NJAS

NJAS c/o Kean University  
Center for Science, Tech & Math Educ  
1000 Morris Ave. T-117  
Union NJ 07083

**RESPONSE FORM FOR JUDGES FOR THE 2009 NJAS ANNUAL MEETING**

**If you are a science or math professional (hold at least a master's degree in science or math), please consider serving as a judge for the NJ Academy of Science's annual meeting and student competition on April 18, 2009 at Rutgers University (New Brunswick, NJ) from 8:00am to 2:00pm. Judges arrive by 8:30am. Lunch is provided to judges free of charge & their meeting registration is waived.**

Please complete and return this form to: NJAS c/o Kean University  
Center for Science, Tech & Math Educ  
1000 Morris Ave. T-117  
Union NJ 07083

\_\_\_\_\_ Yes, I am willing to judge oral 10 minute research presentations at the **NJAS 53<sup>rd</sup> Annual Research Meeting** to be held on Saturday, April 18, 2009 at Rutgers University in New Brunswick NJ.

**My Judging Preference is:** \_\_\_ **Junior Academy (high school student presentations)**  
\_\_\_ **Senior Academy (college or graduate student presentations)**  
\_\_\_ **Either, just place me where needed**

**NAME:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_

**CITY/STATE/ZIP:** \_\_\_\_\_

**DAYTIME PHONE NUMBER:** \_\_\_\_\_ **EVENING PHONE NUMBER:** \_\_\_\_\_

**EMAIL(S):** \_\_\_\_\_

**ACADEMIC INSTITUTION OR CORPORATION:** \_\_\_\_\_

**POSITION HELD:** \_\_\_\_\_

**DEGREES:** \_\_\_\_\_

**PLEASE DESCRIBE YOUR AREA OF EXPERTISE:** \_\_\_\_\_

**CHECK THE DISCIPLINE(S) YOU WOULD LIKE TO JUDGE:**

- |                                      |   |
|--------------------------------------|---|
| ___ Ecology or Environmental science | ___ Mathematics                           |
| ___ Health or Medicine               | ___ Earth Science, Geology or Meteorology |
| ___ Cell or Molecular Biology        | ___ Microbiology                          |
| ___ Chemistry or Biochemistry        | ___ Marine Science                        |
| ___ Physics or Engineering           | ___ Science or Math Educaton              |
| ___ Computational Science            | ___ Botany                                |
| ___ Psychology or Animal behavior    |   |

**NJAS EXECUTIVE COMMITTEE**

**President:**

Dr. Laura Lorentzen (2009)  
Kean University  
llorentzen@hotmail.com

**President-Elect**

Dr. Paul Bologna  
Montclair University  
bolognap@mail.montclair.edu

**Past-President:**

Gail P. Carter (2008)  
NJDEP

gcartographer@yahoo.com

**Executive Secretary/Liaison**

**Advisory Council:**

OPEN

**Secretary:**

Dr. Eric Iannacone (2009)  
Fairleigh Dickinson University  
erici@fd.edu

**Treasurer:**

Mr. Carl L. Evanouskas  
carlevanou@aol.com

**Editor, *The Bulletin*:**

Dr. Michael Kennish  
Rutgers University  
kennish@imcs.rutgers.edu

**Editor, *Newsletter*:**

Dr. Stephen J. Moorman  
Robert Wood Johnson Medical School  
stephen.moorman@umdnj.edu

**Junior Academy Director:**

OPEN

**Grant-In-Aid Chairperson:**

OPEN

**Science Program, Annual Meeting  
Chairman:**

Dr. Laura Lorentzen  
Kean University  
llorentzen@hotmail.com

**Member At Large:**

**Membership/Finance:**

Gail P. Carter (See Past-President above)

**Program Development Coordinator:**

OPEN

**High School Liason:**

Dr. Graham Cleaves  
Ridge High School

**Web Manager:**

OPEN

**Office Manager:**

Sabera M. Munshi  
njacadsc@rci.rutgers.edu

**Office:**

Center for Science, Technology &  
Mathematics Education, Kean University,  
Townsend Hall T-117, 1000 Morris Ave.,  
Union NJ 07083 Phone 908-737-3420  
njacadsc@rci.rutgers.edu  
<http://www.njas.org>

***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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