54TH ANNUAL MEETING

The 54TH 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.

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 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 or contact the NJAS at: 908-737-3420 or 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).

<table>
<thead>
<tr>
<th>Name</th>
<th>Proposal Title</th>
<th>School</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anca Marinescu</strong></td>
<td>“Effect on growth of <em>Saccharomyces cerevisiae</em> cultures grown in sabouraud agar medium vs. petrifilm pre-made medium”</td>
<td>High Technology High School</td>
</tr>
<tr>
<td><strong>Jessica Phan</strong></td>
<td>“Air exchange and PM 2.5 levels in relation to house age”</td>
<td>John F. Kennedy Memorial High School</td>
</tr>
<tr>
<td><strong>Janie Gu</strong></td>
<td>“Effect of modeling atmospheric pollution on solar cell electricity generation”</td>
<td>High Technology High School</td>
</tr>
<tr>
<td><strong>Ritesh Patel</strong></td>
<td>“Effects of sulfur deprivation, copper supplementation and SR2+ on hydrogen production in <em>Chlamydomonas reinhardtii</em>”</td>
<td>John F. Kenney Memorial High School</td>
</tr>
<tr>
<td><strong>Emily Fineberg</strong></td>
<td>“Investigation of sounds produced by B flat soprano clarinet with different ligatures”</td>
<td>High Technology High School</td>
</tr>
<tr>
<td><strong>Khushboo Patel AND Alicia Chan</strong></td>
<td>“Longer lasting fruits”</td>
<td>Dwight Morrow High School, Academies at Englewood</td>
</tr>
<tr>
<td><strong>Sidney Buchbinder</strong></td>
<td>“Effect of blade design on wind turbine efficiency”</td>
<td>High Technology High School</td>
</tr>
<tr>
<td><strong>Calvin Chang</strong></td>
<td>“Effect of light vs. light on the precision of infrared LED pens tracked by a Wii mote”</td>
<td>High Technology High School</td>
</tr>
<tr>
<td><strong>Isamar Valenzuela</strong></td>
<td>“Application of controlled symbolic images as a form of visualization to alleviate test anxiety in adolescents”</td>
<td>The Science Academy at Morristown High School</td>
</tr>
<tr>
<td><strong>Jacqueline Viotto</strong></td>
<td>“Using stroop task to measure mental acuity in adolescents in varied humidity environments”</td>
<td>The Science Academy at Morristown High School</td>
</tr>
</tbody>
</table>

Proposals for the GIA 2010 program will be due in November 2009. Please visit [www.njas.org](http://www.njas.org) 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.

Special thanks to the high school teachers sponsoring the students’ work:

- Erin Colfax, Science Academy at Morristown HS
- Mike Roche, High Technology High School
- Cathryn Crego, JFK Memorial High School
- C. Kennedy, The Academies at Englewood
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.
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:

- High School Teacher $10
- Ph.D. student $10
- Undergraduate student $10
- 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:

- Doctoral degree student $10
- Master’s degree student $10
- Undergraduate student $10
- High School student $0 (abstract fee is waived)
- 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
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

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: NJAS c/o Kean University
Make check payable to NJAS 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 53rd 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 Education
___ Computational Science ___ Botany
___ Psychology or Animal behavior
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), 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

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@fdu.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 Liaison:
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), 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

NJAS, Kean University
CSTME
1000 Morris Ave., T-117
Union, NJ 07083