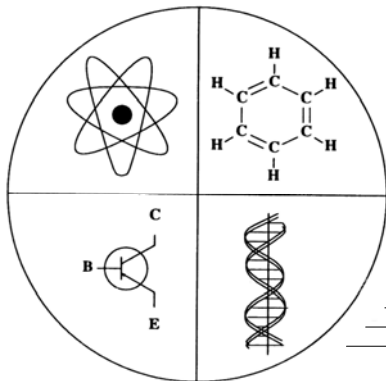


NORTH JERSEY REGIONAL SCIENCE FAIR

A nonprofit, volunteer organization

Science Fair Co-Director: Ken Lyons (973) 360-8663 [FAX: 866-629-2835; kbl@research.att.com]
AT&T Shannon Labs, Bldg. 103, Room E215, 180 Park Ave., Florham Park, NJ 07932

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Registration Contact: Ulrike Schroeder [ulrschr@hotmail.com]

Judging: Lenore Neigeborn (732) 932-7731

Site prep: Dan Stevans (973) 972-6704

Publicity: Rose Kopf [Rose.Kopf@alcatel-lucent.com]

Fund Raising: Ken Lyons (973) 360-8663

Safety Review: Mathew Toth [mtothnjrsf@comcast.net]

NJRSF Home Page: NJRSF.org

NJRSF Judging Schedule

31th Annual North Jersey Regional Science Fair

Rutgers, the State University of New Jersey, College Avenue Campus, New Brunswick

Friday, March 14

Please arrive by 6:30 p.m.

6:30-7:00 p.m. Judges' briefing. Refreshments provided.
7:00-9:30 p.m. Category judging, students at projects.
9:30-10:30 p.m. Judges' conference for project evaluations and rankings.

Saturday, March 15

Please arrive by 8:30 a.m.
(Captains: please arrive at 8am)

8:30-9:00 a.m. Judges' briefing. Continental Breakfast provided.
9:00 a.m. - Noon Judging for special awards and symposium finalists. Students at projects.
Noon-1:00 p.m. Judges' conference for project rankings. (Lunch for ISEF Panel provided).
1:30-4:30 p.m. ISEF Finalist Symposium in auditorium. Open to public.
1:00-6:00 p.m. Exhibits open to public.
6:30-7:00 pm Science Puzzler in auditorium
7:00-8:30 p.m. Awards ceremony in auditorium, open to public.

In the event you need to CANCEL your judging assignment, please send a message to Lenore Neigeborn at neigeborn@sas.rutgers.edu or leave a message at (732) 421-3359.

In case of a WEATHER EMERGENCY call 973-360-8663 for a recorded message.

Directions to the College Avenue Gym and Rutgers Student Center, Rutgers College, College Avenue Campus (126 & 130 College Avenue), New Brunswick

From Garden State Parkway Southbound

Turn off at Exit 129 for the New Jersey Turnpike and head south. Turn off Exit 9, bear right after the tollbooths and follow signs for "Route 18 North - New Brunswick." Stay to the left to continue on Route 18 North. Proceed along on Route 18 North and take the exit marked "George Street-Rutgers University" (approximately 2.6 miles from Turnpike). At the top of the exit ramp, turn right onto George Street. Continue along George Street and bear left at the jug handle onto Huntington Street. Continue along Huntington Street for one block. Turn left at the first traffic light onto College Avenue. The College Avenue Gym and Rutgers Student Center will be 2 blocks along College Avenue on the right hand side. Parking Lot #26 is behind the Rutgers Student Center.

From Garden State Parkway Northbound

Turn off at Exit 105 and follow signs for Route 18 North. After approximately 24 miles, you will pass the entrance for the New Jersey Turnpike. Continue on Route 18 North. Proceed along Route 18 North and take the exit marked "George Street-Rutgers University" (approximately 2.6 miles from the Turnpike). At the top of the exit ramp, turn right onto George Street. Continue along George Street and bear left at the jug handle onto Huntington Street. Continue along Huntington Street for one block. Turn left at the first traffic light onto College Avenue. The College Avenue Gym and Rutgers Student Center will be 2 blocks along College Avenue on the right hand side. Parking Lot #26 is behind the Rutgers Student Center.

From Interstate 287

Turn off at Exit 9 "River Road, Bound Brook, Highland Park." Proceed East on River Road toward Highland Park. Make a right onto Route 18 South (exit after the traffic light at Landing Lane). Cross the Raritan River on the John Lynch Memorial Bridge. Stay in the right lane and take the exit which is marked "George Street - Rutgers University, New Brunswick, Route 27." Turn right at the first traffic light onto Huntington Street. Continue along Huntington Street for one block. Turn left at the first traffic light onto College Avenue. . The College Avenue Gym and Rutgers Student Center will be 2 blocks along College Avenue on the right hand side. Parking Lot #26 is behind the Rutgers Student Center.

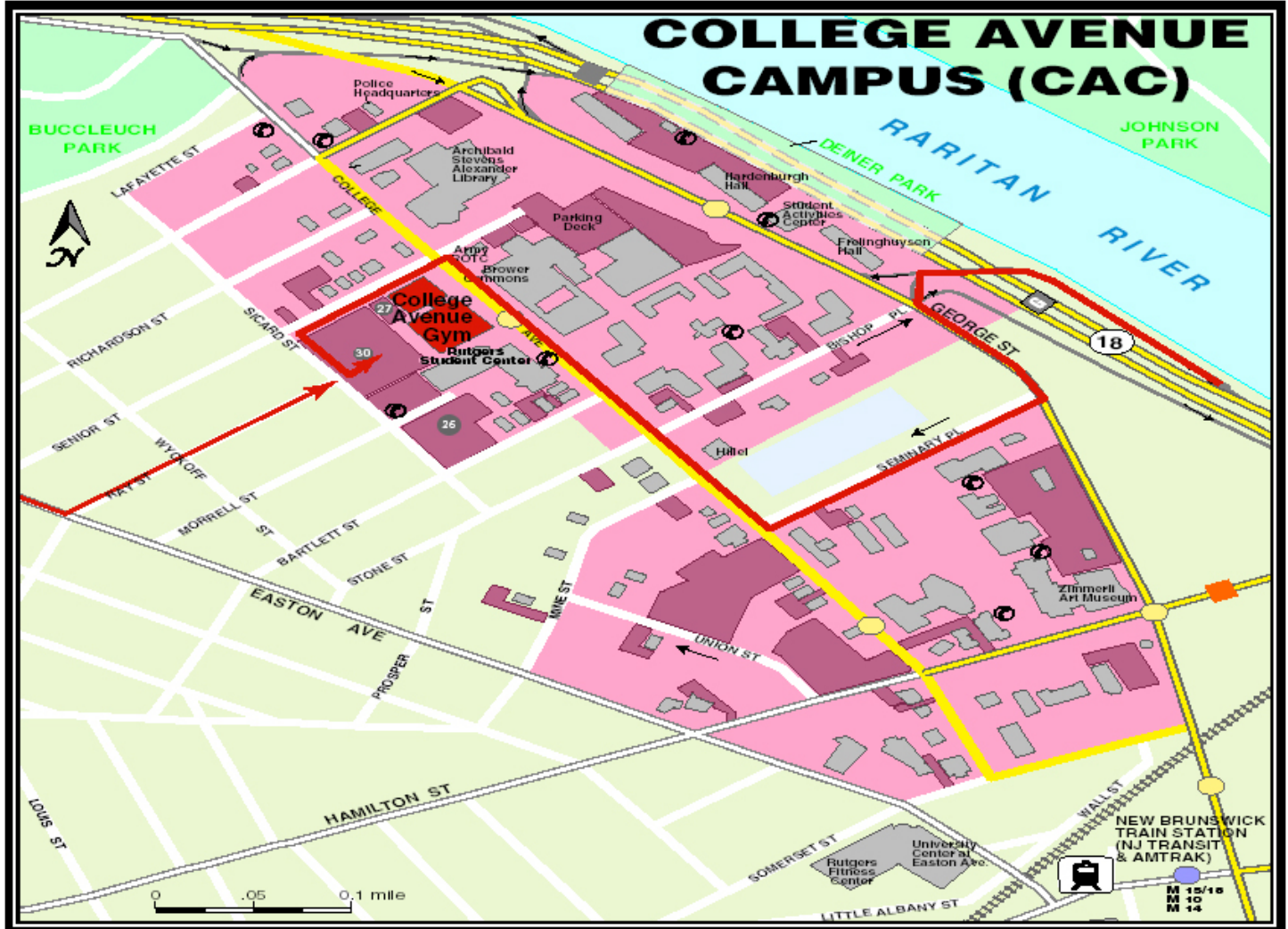
From New Jersey Turnpike

Turn off at Exit 9, bear right after the tollbooths and follow the signs for "Route 18 North - New Brunswick." Stay to the left to continue on Route 18 North. Proceed along Route 18 North and take the exit marked "George Street - Rutgers University" (approximately 2.6 miles from the Turnpike). At the top of the exit ramp, turn right onto George Street. Continue along George Street and bear left at the jug handle onto Huntington Street. Continue along Huntington Street for one block. Turn left at the first traffic light onto College Avenue. . The College Avenue Gym and Rutgers Student Center will be 2 blocks along College Avenue on the right hand side. Parking Lot #26 is behind the Rutgers Student Center.

From US Route 1

Turn off at exit marked "Route 18 North – New Brunswick." Proceed along Route 18 North and take the exit marked "George Street – Rutgers University" (approximately 2.4 miles from Route 1). At the top of the exit ramp, turn right onto George Street. Continue along George Street and bear left at the jug handle onto Huntington Street. Continue along Huntington Street for one block. Turn left at the first traffic light onto College Avenue. . The College Avenue Gym and Rutgers Student Center will be 2 blocks along College Avenue on the right hand side. Parking Lot #26 is behind the Rutgers Student Center.

For additional information, please contact Colonel Henry or call 732-445-INFO.



Directions to Judges' Room

Judges should park in Lot #26 or 30 behind the College Avenue Gym and Rutgers Student Center. The judges' room is in the "Red Lion Café" inside the Rutgers Student Center. From the parking lot, proceed to the front of the building. Go in the front door and down the stairs to the lowest level. The "Red Lion Café" is on the right as you come down the stairs.

Info for Judges

- Examine the quality of the student's work, and how well the student understands his or her project and area of study. The physical display is secondary to the student's knowledge of the subject. Look for evidence of laboratory, field or theoretical work, not just library research or gadgeteering.
- Judges should keep in mind that competing in a science fair is not only a competition, but an educational and motivating experience for the students. The high point of the Fair experience for most of the students is their judging interviews.
- Students may have worked on a research project for more than one year. However, for the purpose of judging, ONLY research conducted within the current year is to be evaluated. Although previous work is important, it should not unduly impact the judging of this year's project.
- As a general rule, judges represent professional authority to students. For this reason, judges should use an encouraging tone when asking questions, offering suggestions or giving constructive criticism. Judges should not criticize, treat lightly, or display boredom toward projects they personally consider unimportant. Always give credit to the student for completing a challenging task and/or for their success in previous competitions.
- Compare projects only with those competing at this Fair and not with projects seen in other competitions or scholastic events.
- It is important in the evaluation of a project to determine how much guidance was provided to the student in the design and implementation of his or her research. When research is conducted in an industrial or institutional setting, the student should have documentation, most often the Intel ISEF Form 1C, that provides a forum for the mentor or supervisor to discuss the project. Judges should review this information in detail when evaluating research.
- Please be discreet when discussing winners or making critical comments in elevators, restaurants, or elsewhere, as students or adult escorts might overhear. Results are confidential until announced at the awards ceremony.

Intel ISEF Judging Guidelines - 2013

The following evaluation criteria will be used for judging at the Intel ISEF 2013. It has been extensively reviewed and revised by the Intel ISEF Judge Advisory Committee, with additional input from science, engineering and educational experts. One of the most significant changes from the previous guidelines is the use of different criteria for science and engineering projects. As shown below, both criteria have five sections as well as suggested scoring for each section. Each section includes key items to consider for evaluation both before and after the interview. Students are encouraged to design their posters in a clear and informative manner to allow pre-interview evaluation and to enable the interview to become an in-depth discussion. Judges should examine the student notebook and, if present, any special forms such as Form 1C (Regulated Research Institution/Industrial Setting) and Form 2 (Qualified Scientist). Considerable emphasis is placed on two areas: *Creativity* and *Presentation*, especially the *Interview* section, and are discussed in more detail below.

Creativity: A creative project demonstrates imagination and inventiveness. Such projects often offer different perspectives that open up new possibilities or new alternatives. Judges should place emphasis on research outcomes in evaluating creativity.

Presentation/Interview: The interview provides the opportunity to interact with the finalists and evaluate their understanding of the project's basic science, interpretation and limitations of the results and conclusions.

- If the project was done at a research or industrial facility, the judge should determine the degree of independence of the finalist in conducting the project, which is documented on Form 1C and Form 2.
- If the project was completed at home or in a school laboratory, the judge should determine if the finalist received any mentoring or professional guidance.
- If the project is a multi-year effort, the interview should focus ONLY on the current year's work. Judges should review the project's abstract and Form 7 (Intel ISEF Continuation Projects) to clarify what progress was completed this year.
- Please note that both team and individual projects are judged together, and projects should be judged only on the basis of their quality. However, all team members should demonstrate significant contributions to and an understanding of the project.

Judging Criteria for Science Projects

I. Research Question (10 pts)

- ___ clear and focused purpose
- ___ identifies contribution to field of study
- ___ testable using scientific methods

II. Design and Methodology (15 pts)

- ___ well designed plan and data collection methods
- ___ variables and controls defined, appropriate and complete

III. Execution: Data Collection, Analysis and Interpretation (20 pts)

- ___ systematic data collection and analysis
- ___ reproducibility of results
- ___ appropriate application of mathematical and statistical methods
- ___ sufficient data collected to support interpretation and conclusions

IV. Creativity (20 pts)

- ___ project demonstrates significant creativity in one or more of the above criteria

continued

V. Presentation (35 pts)

a. Poster (10 pts)

- logical organization of material
- clarity of graphics and legends
- supporting documentation displayed

b. Interview (25 pts)

- clear, concise, thoughtful responses to questions
- understanding of basic science relevant to project
- understanding interpretation and limitations of results and conclusions
- degree of independence in conducting project
- recognition of potential impact in science, society and/or economics
- quality of ideas for further research
- for team projects, contributions to and understanding of project by all members

Judging Criteria for Engineering Projects

I. Research Problem (10 pts)

- description of a practical need or problem to be solved
- definition of criteria for proposed solution
- explanation of constraints

II. Design and Methodology (15 pts)

- exploration of alternatives to answer need or problem
- identification of a solution
- development of a prototype/model

III. Execution: Construction and Testing (20 pts)

- prototype demonstrates intended design
- prototype has been tested in multiple conditions/trials
- prototype demonstrates engineering skill and completeness

IV. Creativity (20 pts)

- project demonstrates significant creativity in one or more of the above criteria

V. Presentation (35 pts)

a. Poster (10 pts)

- logical organization of material
- clarity of graphics and legends
- supporting documentation displayed

b. Interview (25 pts)

- clear, concise, thoughtful responses to questions
 - understanding of basic science relevant to project
 - understanding interpretation and limitations of results and conclusions
 - degree of independence in conducting project
 - recognition of potential impact in science, society and/or economics
 - quality of ideas for further research
 - for team projects, contributions to and understanding of project by all members
-

Project Number: _____

Creative Ability (Individual 30 points/Team 25 points)

Does the project show creative ability and originality in

1. selection of the project?
 2. the approach to solving the problem?
 3. analysis of the data ?
 4. interpretation of the data?
 5. the use of equipment or the construction or design of new equipment?
-

Scientific Thought and Engineering Goals (Individual 30 points/Team 25 points)

1. Is the problem stated clearly and unambiguously?
 2. Was the problem sufficiently limited to allow plausible approach
 3. Was there a procedural plan for obtaining a solution?
 4. Are the variables clearly recognized and defined?
 5. If controls were necessary, did the student recognize their need and were they correctly used?
 6. Are there adequate data to support the conclusions?
 7. Does the student or team recognize the data's limitations?
 8. Does the student/team understand the project's ties to related research?
 9. Does the student/team have an idea of what further research is warranted?
 10. Did the student/team cite scientific literature, or only popular literature?
-

Thoroughness (Individual 15 points/Team 12 points)

1. Was the purpose carried out to completion within the scope of the original intent?
 2. How completely was the problem covered?
 3. Are the conclusions based on a single experiment or replication?
 4. How complete are the project notes?
 5. Is the student/team aware of other approaches or theories?
 6. How much time did the student or team spend on the project?
 7. Is the student/team familiar with scientific literature in the studied field?
-

Skill (Individual 15 points/Team 12 points)

1. Does the student/team have the required skills to obtain supporting data?
 2. Where was the project performed?
 3. Was the project completed under adult supervision, or did the student/team work largely alone?
 4. Where did the equipment come from
-

Clarity (Individual 10 points/Team 10 points)

1. How clearly does the student discuss his/her project and explain the purpose, procedure, and conclusions?
 2. Does the written material reflect the student's or team's understanding of the research?
 3. Are the important phases of the project presented in an orderly manner?
 4. How clearly are the data and results presented?
 6. How well does the project display explain the project?
 7. Was the presentation done in a forthright manner, without tricks or gadgets?
-

Teamwork (16 points – team projects only)

1. Are the tasks and contributions of each team member clearly outlined?
 2. Was each team member fully involved with all aspects of the project?
-

Total Score : _____

Notes: