

JSHS MN Science & Engineering Fair REAP



Fun was what it was all about: exciting research paper presentations, fascinating speakers, entertaining activities, networking with scientists, and making new friends at the 41st annual North Central Regional Junior Science & Humanities Symposium and the 72nd annual MN State Science & Engineering Fair - held at the Crowne Plaza Riverfront Hotel, St. Paul, MN March 28/29 and March 29-30.

The Junior Science and Humanities Symposium (JSHS) is a scientific research paper competition in which students present the results of their research paper in power point form to a group of judges. Following the National JSHS guidelines, the students have 12 minutes in which to present their research followed by a six minute Q & A by the judges. The North Central Regional JSHS is for students in grades 9-12 in the Tri-State (Minnesota, North Dakota and South Dakota) area.

JSHS has an emphasis both on sharing and doing science. The program is modeled after professional scientific symposia: students present the results of their independent research orally in a competition that is as much forensic as scientific. 71 students, (41% male / 59 % female) from 28 schools, representing 33 cities, presented 61 papers this year. The event was expanded in 2009 to include 14 additional presentations and 5 additional awards.

The North Central Regional JSHS welcomed participants and adults with an opening ceremony featuring keynote speaker Dr. Eugene Kwon, MD Associate Professor of Immunology from the Mayo Clinic, Rochester, MN. Dr. Kwon entertained both students and adults alike with his presentation on immune responses to treat relatively advanced forms of malignancy.

The Reid Kennedy Jazz Trio, <http://www.reidkennedy.com/> entertained during dinner while speakers from Mad Science of Minnesota, www.madsciencemn.org, were able to "electrify" the audience during an evening demonstration while students got to burst hydrogen balloons in balls of fire.

After two rounds of presentations, winners were announced at the Sunday morning awards ceremony. Six students, **Stephen Trusheim**, Breck School, Minneapolis; **Travis Spangler**, Breck School, Minneapolis; **Michael Cherkassky**, Edina Senior High; **Michael Crump**, Breck School, Minneapolis; **Sahar Hakim-Hashemi**, Breck School, Minneapolis; and **Sierra Danforth**, Breck School, Minneapolis won an all-expense paid trip to compete or attend the National Symposium in Colorado Springs, CO April 29-May 3. Two students, **Emily Nimmer**, Breck School, Minneapolis and **Sharmila Ahmed**, Burnsville High School, won an all-expense paid trip to attend the American Junior Academy of Science conference February 18-22, 2010. **Lena Swander**, Cloquet High School; **David Erdahl** and **Neil Erdahl**, Austin High School, were alternates.

Five students, **Anushua Bhattacharya**, Lake Junior High, Woodbury; **Madelaine Taft-Ferguson**, Breck School, Minnea-



polis; **Daniel Mokhtari**, Breck School, Minneapolis; **Raghav Chandra**, Century High School, Rochester; and **Riya Madan**, Century High School, Rochester, were recognized for Outstanding Student Achievement with a \$50.00 cash award.

Two Research & Engineering Apprentice Program (REAP) scholars presented their summer research from 2008 at the JSHS awards ceremony.

REAP is a program designed to encourage high school students to pursue careers in science, technology, engineering and math (STEM). This is accomplished by offering a hands-on experience in research and development activities to students who may choose to continue their education in those fields. Established in 1979 with grants from the research offices of the U.S. Army, REAP is administered by the Academy of Applied Science. **Juhee Kwon**, Maple Grove Senior High; **Michael Pickett-Leonard**, Burnsville High School; and Alternate **Riya Madan**, Century High School, Rochester won this year's REAP scholarships closing out the 41st Annual North Central Regional JSHS.

The **Minnesota State Science & Engineering Fair** is an annual event that showcases Minnesota's best and brightest students in the fields of Science, Technology, Engineering, & Math. It is the culmination of Regional MN Fairs occurring throughout the state. More than a competition, the MN State Science & Engineering Fair champions the

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research young scientists have conducted throughout the year (with teacher and mentor support) and provides the opportunity for them to present and dialogue about their work. Students conduct their own original research and present it before a number of judges at students' display boards. They learn individually and from others by discussing the nature of the scientific inquiry, defending their reasoning, and articulating their specific findings orally and graphically with a display board. Students are evaluated on four criteria: the process of science; the effectiveness of communication; the context of the project; and their scope of understanding.

From approximately 2,500 regional participants, about 450 are selected to present display boards at the MN State Science & Engineering Fair. At the fair, over 75 organizations and businesses present over 300 awards to students with outstanding projects. This year there were 442 students participating, 45% male, 55% female, with 382 projects. These students were from 105 schools representing 117 cities.

The students and adults had time to set up then unwind with opening ceremonies that included a welcome address from Assistant Commissioner of Education Karen Klinzing and the VP of 3M Foundation and Community Affairs Alex Cirrilo. Stu-

dents gave some great shout outs from their regions as all the regions and cities were acknowledged. Everyone then went over to the Science Museum of MN for a buffet dinner and exhibit walk through.

Along with judging of projects on Monday, students and adults were able to attend science demonstrations put on by the 3M Visiting Wizards, as well as educational workshops titled: *Financing Regional Science Fairs* and *Incorporating Science Fairs into Classroom Curriculum*.

The Monday night awards ceremony was emceed by Ed Neu and Rich Seger of Seagate Technology, and the keynote speaker was Chris Shaffer, Meteorologist from WCCO Channel 4 News. The first round of awards (both Seagate awards and MAS grand awards) took place on Monday evening followed by a dance for students. Special corporate, organization and government awards were announced Tuesday morning along with an exciting presentation about *Dragonfly TV* from Richard Hudson, Director of Science Production at Twin Cities Public Television.

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By Lisé Weegman, MSSEF Director

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