

# Head of the Class

## New Award Honors Top Math, Science Students

By Symone C. Skrzycski

Governor Mitch Daniels is going back to high school. At least that's where he's finding students to honor as part of the Hoosier High School Math and Science Awards program he introduced this year to recognize the state's leading academic performers.

"We all recognize the hard work and prestige that goes into, say, a Mr. or Miss Basketball award," explains Marcie Brown, policy director for education with the governor's office. "The governor wanted to create an award of equal prestige for those who excel in math or science."

Two seniors, Samuel Dittmer (2008 valedictorian of Zionsville Community High School) and Swara Kopparty (2008 co-valedictorian of Terre Haute South Vigo High School), earned the titles of Mr. Indiana Math and Miss Indiana Science, respectively. In May, Daniels visited their schools to personally congratulate them and present their award. Only their parents and a few administrators knew in advance that the governor was the "special guest" slated to appear at school-wide assemblies.

Each award category drew approximately 200 applicants. The competition was open to any high school student in an Indiana school district, as well as those in charter and private schools. Self nominations were acceptable, as were nominations from teachers and individuals who had worked with students in a school setting.

Among criteria were grades received on advanced placement course exams, participation in math or science competitions (and awards) and test scores on the SAT and ACT college entrance exams. Judges included high school science or math teachers and professors, as well as math and science professionals.

Each honoree received a \$2,000 academic scholarship from McGraw-Hill Education.

Applications for the next round of the program are slated to be available in early 2009, with winners announced in the spring.

### Winning formula

Janet Dittmer wasn't surprised when her son was named Mr. Indiana Math.

"He won a previous national math contest in 2006, so we were a little used to it," she says proudly, referring to the 31st annual American Region's Mathematics League competition.

More than 1,650 mathematics students participated at that event, broken up into three locations





**Swara Kopparty's work on a variety of university-level research projects contributed to her selection as Miss Indiana Science. Her research project at Indiana State University involved metal-carbonyl complexes** (photo courtesy of Indiana State University).

(Pennsylvania, Iowa and Las Vegas) competing simultaneously. It consisted of team competitions and an individual round. Dittmer not only won the individual round, but was the only student nationwide who got a perfect score on a timed exam consisting of eight complex mathematical problems.

Further, he earned a perfect score of 800 on the SAT II and placed 25th in the nation in the United States of America Mathematical Olympiad (USAMO) test. Only the top 12% are invited to attend the USAMO, an annual international competition among pre-collegiate students in approximately 90 countries. Both Samuel and Swara have brothers who have represented the U.S. in the event.

Currently attending Brigham Young University in Utah, Samuel is studying math, with a minor in computer science.

"The great thing about math," he declares, "is that there are always problems to solve out there."

He says his dream job would involve working for Google as a software engineer.

"It's sort of a nice encouragement in the sense that it is some kind of validation," Samuel asserts when considering his honor as the first Hoosier High School Math Award winner. "In my field, you don't get the same kind of recognition that an athlete may have. I'm used to working on my own, but it's fun to have that kind of recognition."

His mother adds, "Sam loves math. He loves to challenge himself and work out new problems, so it was fun to see him honored for that passion he has."

She (a nationally published author) and her husband Phil (a medical physicist in the radiology oncology department at Indiana University Medical Center), provided an untraditional upbringing for Samuel and his six siblings.

"My husband and I have never owned a television," she comments. "We made the choice that we would do other things in our family besides watch TV. We would always rent or borrow one for the Olympics as part of a tradition, but have never owned one."

## Getting a head start

Kopparty was "flattered and honored" by her distinction as

the 2008 Hoosier High School Miss Indiana Science recipient.

"It means a lot (to me)," she remarks. "I'm happy that such an award has been instituted because I feel that academics deserve recognition similar to the way sports are recognized."

Always a voracious reader of classics, Swara's parents originally thought she would eventually choose a literature-related career. But her mother, Surekha Rao Kopparty, Ph.D., notes that once Swara began to develop an interest in science at the age of eight or nine, "there was no stopping her."

Swara's parents are both professors. Her mother teaches in the school of business and economics at Indiana University Northwest in Gary, while her father teaches mathematics at Indiana State University in Terre Haute.

When she was a sophomore, Swara began working on university-level research projects in areas such as computational chemistry (at Indiana State University) and math combinatorics (at the Rose-Hulman Institute of Technology).

Among other accomplishments are scoring a perfect 800 on the SAT physics exam and recognition as a semifinalist in the 2008 Intel Science Talent Search (there were more than 1,600 entrants from 504 high schools in the U.S., Puerto Rico, the Virgin Islands and two overseas schools). She took first place in the annual Indiana Regional Junior Science and Humanities Symposium in March for the research project she developed at Indiana State University entitled, "The Nature of Bonding in Metal-Carbonyl Complexes."

In addition, she attended the Research Science Institute, a research camp at the Massachusetts Institute for Technology, working on a chemical engineering project last year. She traveled to Israel this past summer to conduct research involving astrophysics at the renowned Weizmann Institute of Science.

"Physics is sort of my initial interest," Swara confides when describing her focus at Harvard University. "It might change to something else. I've always had a career with NASA in mind, or something with academic research."

"We are just so proud of her," her mother shares. "She worked hard all of these years, and she really deserved the award. Getting this award has only encouraged her to achieve more in science."