



SC08 Education Program Awards

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Dr. Mary Ellen Verona Computational Science Teacher Leader Award

The Verona Award is open to those who demonstrate computational science leadership and education, either in a formal classroom setting or in an afterschool program.

Description

This award recognizes those individuals who demonstrate computational science leadership through their use of computer-based models, simulations, and visualizations to enhance student learning in K-12 classroom or after-school settings and their active participation in sharing their strategies and methods with others.

Award Background

Dr. Mary Ellen Verona, a visionary in the use of computational science for secondary science education, spent the last eight years of her life providing opportunities for high school science teachers who shared her commitment to the highest quality education for students. Mary Ellen believed that teachers were the key to providing students with access to the computational science tools and methods that scientists use on a regular basis. She understood that by providing classroom teachers with the background and support needed to create and use computer-based models, simulations, and visualizations, thousands of students would be able to experience the same technology-rich approaches used to solve complex problems in research labs around the world. This award, created in her honor, is meant to recognize those individuals who not only use computational science tools with K-12 students in classroom or after-school settings, but who also provide support and training to others who seek to use computational tools with K-12 students.

Categories

A Mary Ellen Verona award will be given in each of the following categories:

- * Outstanding K-12 classroom teacher submission
- * Outstanding K-12 outreach program submission

Selection Criteria

Submissions will be judged by a committee of individuals involved in the application of computational science tools and methods in K-12 education. Criteria will include:

- * The educational impact of computational science tools and methods on K-12 students
- * Leadership in helping others use computational tools and methods with K-12 students
- * Quality of submitted materials

Award

The Mary Ellen Verona Award will consist of the following:

- * A cash prize
- * Travel expenses to the SC07 Conference in Austin, TX in November 2008
- * An award certificate

Dr. Robert M. Panoff Student Award for Explorations in Science Through Computation

The Panoff Award is open to high school, undergraduate, and graduate students exploring science made possible through computation.

Description

Dr. Robert M. Panoff, founder and Executive Director of The Shodor Education Foundation, Inc., has been steadfast in the promotion and support of science education through computation. The Panoff Award program promotes excellence in student-driven explorations in science made possible through the use of computation. This program is intended to encourage science exploration at all academic levels and to recognize students that have woven insight and discovery together through the use of computation modeling, simulation, and/or data analysis.

Categories

One Robert M. Panoff award will be given in each of the following categories:

- * Outstanding High School Student submission
- * Outstanding Undergraduate Student submission
- * Outstanding Graduate Student submission

Top candidates from the written submissions in each category will be invited to the SC conference as part of the presentation criteria. Candidates will present their scientific discoveries at a special open session of the yearly SC conference to an audience of their peers and the award judges.

Selection Criteria

Submissions will be judged on written and presentation components. The written component should describe the student's scientific discovery, combining both insight and technology. The judging criterion for the written component is an evaluation of

- * Scientific insight
- * Use of technology
- * The extent to which the insight and technology enabled scientific discovery which would not otherwise have been possible
- * Innovation
- * Quality of submitted materials

Award

The Dr. Robert M. Panoff Award for Explorations in Science Through Computation will consist of the following:

- * Travel expenses to the SC Conference will be provided to the top candidates who are invited to present during the special session.
- * An award certificate will be given to the top finalists in each category.
- * Winners in each category will be offered a paid summer internship at the Shodor Education Foundation (<http://www.shodor.org>).
- * Pending final award sponsorship, it is anticipated that winners in each category will receive sponsor-supported computational resources.

Undergraduate Computational Engineering and Sciences (UCES) Award

The UCES Award, hosted by the Krell Institute, is open for undergraduate faculty who have developed computational science curricula.

Description

The UCES Award. The program will encourage further development of innovative educational resources and programs, recognize the achievements of CES educators, and disseminate educational material and ideas to the broad scientific and engineering undergraduate community. The UCES 2005 and UCES 2006 awards provide examples of CES education that the UCES Award Program seeks to recognize.

CES involves the use of contemporary computer technology to advance the state of knowledge in a particular scientific or engineering discipline. Computational science emphasizes the use of the computer as an essential tool to solve problems. Representative projects in CES include computer predictions of environmental changes, structural responses to earthquakes, multidimensional international monetary fluctuations, and data mining of biological databases. Computational science should not be confused with computer science which focuses on the hardware and software aspects of the computer itself.

Award Background

The UCES award has been hosted and sponsored by the Krell Institute since the 1990's. Krell will continue to sponsor the award, and has graciously allowed the UCES Award to now also be one of the awards of the SC Education Program.

Eligibility

Eligibility for the awards is limited to people working within the United States at the time of proposal submission. It is anticipated that candidates for the awards will primarily be faculty members at colleges and universities. Applications will be also accepted from undergraduate and graduate students and non-academic computational scientists.

Selection Criteria

Submissions will be judged by a committee of faculty members involved in computational engineering and science. Criteria will include:

- * focus on computational engineering and science
- * innovation
- * educational impact
- * breadth of appeal
- * quality of the submitted material

Award

The UCES Award will consist of the following:

- * A \$1,000 cash prize
- * An award certificate
- * Travel expenses to attend the award ceremony at SC08 in Austin, TX

