“HOUR OF CODE” KICKS OFF TO INTRODUCE K-12 STUDENTS TO COMPUTER PROGRAMMING

The IEEE Computer Society joins nonprofit Code.org in promoting computer science education by calling on every K-12 student in America to join the “Hour of Code” campaign. Schools, teachers, and parents across the country can help introduce more than 10 million students to computer programming during Computer Science Education Week, 9-15 December 2013.

“Thanks to the amazing support of new partners and donors, the Hour of Code campaign will launch our long-term mission to give every student the opportunity to learn computer science,” said Hadi Partovi, co-founder and CEO of Code.org. “This isn’t just about the tremendous job opportunities in software—every 21st-century child can benefit from learning this foundational field.”

The Hour of Code campaign aims to demystify computer science for students across the country by taking them through introductory tutorials that can be completed online, on a smartphone, or even unplugged. Code.org will offer online tutorials authored by numerous educational groups and challenges teachers, parents, and even employers to encourage students of all ages to participate during Computer Science Education Week.

Code.org’s own tutorial, created in collaboration with engineers from Microsoft, Google, Twitter, and Facebook, teaches basic coding principles through gameplay. It features guest lectures by technologists including Bill Gates and Mark Zuckerberg and artwork from popular games like Rovio’s Angry Birds and PopCap Games’ Plants vs. Zombies.

To achieve its goal of reaching 10 million students, Code.org encourages schools, corporations, and individuals nationwide to take action. See hourofcode.com for details on how anyone can recruit teachers, schools, employers, and community organizations to join the effort. The IEEE Computer Society is a promotional partner.

NEW STANDARDS WORKING GROUP

The IEEE Computer Society kicks off new working groups to create standards for the EPEAT (Electronic Product Environmental Assessment Tool) registry.

In July, IEEE announced its plan to move the IEEE 1680 standards forward. Since then, working groups have been established for IEEE P1680.1, Standard for Environmental Assessment of Personal Computer Products, and IEEE P1680.4, Standard for Environmental Assessment of Servers. These working groups, composed of a broad coalition of key constituents from the academic, environmental, business, government, and consumer communities, will ensure that balance, openness, and inclusivity are part of the development process. IEEE’s standards process is globally respected and accepted as an established framework for driving environmentally friendly innovations across the globe.

“The IEEE Standards Association … has a history championing the development of the IEEE 1680 family of standards used to qualify products for the EPEAT registry,” said Konstantinos Karachalios, managing director of the association. “The organization has successfully developed the standards in partnership with the IEEE Computer Society for the first three product categories in the registry. We are confident that these new working groups will continue to make great strides for the future development of environmentally friendly standards for electronic products.”

“Developing standards for the EPEAT registry needs to remain an open and inclusive process that involves all key stakeholders to continue to transform how technology products are manufactured in a highly environmentally conscious manner,” said Chuck Walrad, Vice President of Standards for the IEEE Computer Society. “We are looking forward to driving that process … to develop standards that may be used to qualify products for the EPEAT registry and that will continue to benefit humanity throughout the world.”
**Christopher Johnson to Receive Sidney Fernbach Award**

Christopher Johnson, founding director of the University of Utah’s Scientific Computing and Imaging (SCI) Institute, will receive the 2013 IEEE Computer Society Sidney Fernbach Award for his work in scientific visualization and computing.

Johnson is a Distinguished Professor of Computer Science at the University of Utah and also holds faculty appointments in the departments of physics and bioengineering. In 1992, he founded the SCI research group, which has since evolved into the 200-person SCI Institute.

“Dr. Johnson is regarded internationally as a leading authority on the application of computer graphics, imaging, and visualization to address critical problems in biomedicine,” said Rich Belgard, IEEE Computer Society Awards Chair.

“His pioneering research has applied visualization to improve the performance of complex supercomputers in solving problems in science, engineering, and medicine, and has been an inspiration to computational scientists worldwide.”

Johnson’s research in scientific visualization and scientific computing is important not only because it is innovative, said his nominators, but also because it has important real-world applications in a number of areas, including scalar and vector field visualization, problem-solving environments, and biomedical computing and visualization. His dedication to visualization has motivated many others to excel, and his efforts continue to have major national and international impact.

Established in 1992 in memory of high-performance computing pioneer Sidney Fernbach, the Fernbach Award recognizes outstanding contributions in the application of high-performance computers using innovative approaches. The award consists of a certificate and a $2,000 honorarium. Johnson is being recognized “for outstanding contributions and pioneering work introducing computing, simulation, and visualization into many areas of biomedicine.”

**Jack Dongarra Receives Ken Kennedy Award**

Jack Dongarra will receive the ACM-IEEE Computer Society Ken Kennedy Award for his leadership in designing and promoting standards for mathematical software used to solve numerical problems common to high-performance computing (HPC). His work has led to the development of major software libraries of algorithms and methods that boost performance and portability in HPC environments, which rely on supercomputers and parallel processing techniques for solving complex computational problems.

Dongarra, Distinguished University Professor at the University of Tennessee, is the founder and director of the university’s Innovative Computing Laboratory, and holds positions at Oak Ridge National Laboratory and the University of Manchester. He will receive the Kennedy award on 19 November 2013 in Denver at SC13, the international conference on high-performance computing (http://sc13.supercomputing.org).

ACM President Vint Cerf cited Dongarra’s role in anticipating the staggering challenges facing the HPC world: “Jack saw the need to keep pace with the evolution in HPC hardware and software in a world that demands higher speeds and performance levels. His innovations have contributed immensely to the steep growth of high-performance computing and its ability to illuminate a wide range of scientific questions facing our society.”

IEEE Computer Society President David Alan Grier said Dongarra’s work remains authoritative: “I’m so pleased to see this award go to Jack Dongarra because he did such foundational work in scientific computing.”

Dongarra is a leader in research on implementing linear algebra algorithms for HPC architecture that has defined the mathematical software field. Many supercomputer vendors have adopted these software packages as the basis of their own numerical libraries. The software involves the use of memory hierarchies, performance-tuning parameters, and other techniques to achieve performance and portability.

The Kennedy Award cites Dongarra for “influential contributions to mathematical software, performance measurement, and parallel programming, and significant leadership and service within the HPC community.”

ACM and the IEEE Computer Society cosponsor the Kennedy Award, which was established in 2009 to recognize substantial contributions to programmability and productivity in computing and significant community service or mentoring contributions. It was named for the late Ken Kennedy, founder of Rice University’s computer science program and a world expert on high-performance computing. The Kennedy Award carries a $5,000 honorarium endowed by the ACM Special Interest Group on Computer Architecture (SIGARCH) and the IEEE Computer Society.
KEY HONORS TO VISUALIZATION ACHIEVEMENTS

The IEEE Computer Society Technical Committee on Visualization and Graphics (IEEE VGTC) has recognized Gregory M. Nielson of the University of Arizona and Kwan-Liu Ma of the University of California, Davis, for their achievements in visualization.

Nielson received the 2013 Visualization Career Award at the IEEE Conference on Visualization (VIS 2013) for his lifetime contributions to the visualization field. These include his seminal research in geometry/topology-based modeling algorithms for visualization and for cofounding the Visualization Conference and the IEEE Computer Society’s IEEE Transactions on Visualization and Computer Graphics (TVCG) journal.

Ma received the 2013 Visualization Technical Achievement Award at VIS 2013 in recognition of his ground-breaking work in large-scale data visualization and new visualization techniques. His work has stimulated research in new fields of visualization.

Nielson, a professor emeritus at Arizona State University, has conducted research in numerical analysis, computer-aided geometric design, and approximation theory. His paper on nu-splines introduced the concept of geometric continuity and tension parameters in conjunction with spline functions and interactive design. Later, Nielson introduced one of the very first methods for interpolating scattered multivariate data with his so-called “minimum norm network” method.

Ma is a professor of computer science at UC Davis, where he leads the Visualization and Interface Design Innovation (VIDI) research group, and directs the UC Davis Center for Visualization. Ma was a guest editor of both the 2001 and 2013 large-scale data visualization issues of IEEE Computer Graphics & Applications (CG&A) and has coauthored over 250 scientific publications. He is the recipient of a Presidential Early Career Award in Science and Engineering (PECASE) and an IEEE Fellow. Ma has served as an associate editor of TVCG and CG&A.

The IEEE Computer Society VGTC Visualization Career Award was established in 2004 and is awarded every year to recognize lifetime achievements in visualization. The IEEE Computer Society VGTC Visualization Technical Achievement Award was established in 2004 and is awarded annually in recognition for significant technical achievement in visualization.