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SDSC/UC San Diego Achieves a Hat Trick with 2014 HPCwire Awards

Annual Awards Recognize Leaders in the Global HPC Community

The San Diego Supercomputer Center (SDSC) at the University of California, San Diego, has achieved a hat trick in garnering three awards for its university-wide WIFIRE project as part of the annual HPCwire Readers' and Editors' Choice Awards presented at the 2014 International Conference for High Performance Computing, Networking, Storage and Analysis (SC14), in New Orleans, Louisiana.

SDSC this week received the three awards in three separate categories for the WIFIRE project, the result of a multi-year, \$2.65 million grant from the National Science Foundation (NSF) to create a cyberinfrastructure to find ways to more effectively monitor, predict, and mitigate wildfires.

Participants in the WIFIRE project include researchers from SDSC, as well as UC San Diego's California Institute for Telecommunications and Information Technology's (Calit2) Qualcomm Institute, the Mechanical and Aerospace Engineering (MAE) department, and the Jacobs School of Engineering. The University of Maryland's Department of Fire Protection Engineering also is a participant.

SDSC, along its partners in the WIFIRE project, was recognized with the following honors:

- Readers' Choice: Best Application of Big Data in HPC: SDSC, UC San Diego, and the University of



Calit2 Director Larry Smarr (left) and Ilkay Altintas, Director of SDSC's Workflows for Data Science Center of Excellence and PI of WIFIRE (center) accept three awards for the WIFIRE project from Tom Tabor, CEO of Tabor Communications and publisher of HPCwire.

Maryland for building a cyberinfrastructure to better monitor, predict, and mitigate future wildfires.

- Editors' Choice: Best Application of Big Data in HPC: SDSC, UC San Diego, and the University of Maryland for building a cyberinfrastructure to better monitor, predict, and mitigate future wildfires.
- Editors' Choice: Best Data-Intensive System (End-user focused): SDSC, UC San Diego, and the University of Maryland for building a cyberinfrastructure to better monitor, predict, and mitigate future wildfires.

The WIFIRE project, started late last year, is already cataloging and integrating data related to dynamic wildfire models from a variety of resources including sensors, satellites, and scientific models, and creating visual programming interfaces for using that data in scalable wildfire models. WIFIRE will hold its first workshop for dynamic-data driven wildfire modeling in January 2015. A video from the NSF's Science Nation website featuring the project can be viewed [here](#).



Immersive technologies such as the NexCAVE at Calit2/Qualcomm Institute may play a central role in wildfire incident command center simulation and training. Image: John Hanacek, Calit2/UC San Diego

“These awards are truly wonderful news for the entire WIFIRE team,” said Ilkay Altintas, principal investigator for the WIFIRE project and director of SDSC’s Workflows for Data Science Center of Excellence. “We all are very grateful to HPCwire’s editors and readers for recognizing this project and the impact that it can have not only here in California but anywhere where wildfires can be a threat to the local populace and environment.”

The project is part of the NSF Hazards SEES program, which enhances sustainability through the use of advanced technologies and new methods. Additionally, the products of WIFIRE are being

shared with project collaborators including CAL FIRE, the U.S. Forest Service, and San Diego Gas & Electric (SDG&E). WIFIRE will be available for use by government agencies in the future to save lives and property during wildfire events, test the effectiveness of response and evacuation scenarios before they occur, and assess the effectiveness of high-density sensor networks in improving fire and weather predictions.

The WIFIRE encompasses the remote sensor network that is currently part of the High Performance Wireless Research and Education Network (HPWREN) project started at SDSC under NSF funding in 2000. HPWREN Director and co-founder Hans-Werner Braun is a co-PI of

WIFIRE, in addition to Larry Smarr, founding director of Calit2; and MAE Professor Raymond de Callafon.

According to Calit2's Smarr, WIFIRE is a logical progression in the fight against wildfires. "We are all based in southern California and wildfires represent one of the most intractable environmental threats we face on a regular basis," he said. "The technology we deploy for WIFIRE will make a substantial difference in our ability to detect, track, and respond to wildfires going forward."

The WIFIRE project is funded under NSF award no. 1331615. The Twitter account for WIFIRE is WIFIREProject. More information is at [SDSC News Center](#)

The list of winners were announced at the HPCwire booth at the event and on the HPCwire website, located at www.HPCwire.com. The annual awards are determined through a nomination and voting process with the global HPCwire community, along with a selection process in which the editors of HPCwire make selections. The awards are an annual feature of the publication and constitute prestigious recognition from the HPC community. These awards are revealed each year to kick off the annual supercomputing conference, which showcases high-performance computing, networking, storage, and data analysis.

"HPCwire readers are among the most informed in the HPC community and these awards are ultimately given to the organizations that are making the biggest impacts in advancing technology and humanity itself through high performance computing," said Tom Tabor, CEO of Tabor Communications, publisher of HPCwire. "The HPCwire Readers' and Editors' Choice Awards send a strong message of support and appreciation from those in the global HPC community. We are proud to be able to recognize these efforts each year and our congratulations go out to all the winners."

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