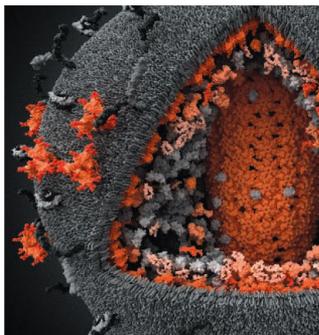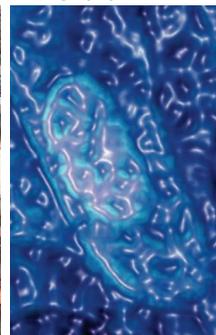Illustration

Informational Graphics

Photography

Noninteractive Media



# 2010 VISUALIZATION CHALLENGE

AN "OCEAN" COMPOSED OF A SINGLE LAYER OF MOLECULES; AN INTRICATE depiction of an HIV particle as a study in orange and gray; a phantasmagoria of fungi; a video tracing the long-distance travels of items dumped in the trash in Seattle: The four first-place winners in this year's International Science & Engineering Visualization Challenge grab your attention and draw you into unseen worlds in very different ways.

Researchers are generating mind-boggling volumes of data at exponentially increasing rates. The ability to process that information and display it in ways that enhance understanding is an increasingly important aspect of the way scientists communicate with each other and—especially—with students and the general public. That's why, for the past 8 years, *Science* and the U.S. National Science Foundation (NSF) have co-sponsored annual challenges to promote cutting-edge efforts to visualize scientific data, principles, and ideas. This year's awardees span scales from nanoparticles to colliding galaxies, and from microseconds to millennia.

We received 111 entries from 63 countries (U.S. entries came from 24 states). A committee of staff members from *Science* and NSF screened the entries, and an outside panel of experts in scientific visualization reviewed the finalists and selected the winners. The winning entries are featured on the following pages, in a slideshow at www.sciencemag.org/special/vis2010/, and at www.nsf.gov/news/scivis. Some entries were put together by large teams, not all of whose members could be listed in print; the online presentations provide full details. Tarri Joyner of NSF and Esther Chon of Crabtree + Company organized this year's challenge. Kristen Minogue of *Science*'s News staff wrote the text that accompanies the images in this special section.

We encourage you to submit applications for next year's challenge, details of which will be available on NSF's Web site, and to join us in celebrating this year's winners.

–JEFF NESBIT, DIRECTOR, OFFICE OF LEGISLATIVE AND PUBLIC AFFAIRS, NSF
COLIN NORMAN, NEWS EDITOR, *SCIENCE*

## Judges

Patrice Legro
Marian Koshland Science Museum
Washington, DC

Thomas Lucas
Thomas Lucas Productions
Ossining, NY

Alisa Zapp Machalek
National Institute of General Medical Sciences
Bethesda, MD

Corinne Sandone
The Johns Hopkins School of Medicine
Baltimore, MD

Tom Wagner
NASA Headquarters
Washington, DC

# Science

## 2010 Visualization Challenge

Jeff Nesbit and Colin Norman

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|---|---|
| **ARTICLE TOOLS** | http://science.sciencemag.org/content/331/6019/847 |
| **SUPPLEMENTARY MATERIALS** | http://science.sciencemag.org/content/suppl/2011/02/16/331.6019.847.DC1<br>http://science.sciencemag.org/content/suppl/2011/02/16/331.6019.847.DC2 |
| **RELATED CONTENT** | http://science.sciencemag.org/content/sci/331/6019/850.full<br>http://science.sciencemag.org/content/sci/331/6019/854.full<br>http://science.sciencemag.org/content/sci/331/6019/852.full<br>http://science.sciencemag.org/content/sci/331/6019/956.2.full<br>http://science.sciencemag.org/content/sci/333/6046/1093.2.full<br>http://science.sciencemag.org/content/sci/331/6019/848.full |
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