



## Third edition of the French-American Science Festival in Chicago

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From Tuesday, May 13 to Thursday, May 15, 2014 the Office for Science and Technology (Chicago section), in partnership with the [Rick Morimoto Laboratory](#) and the [Alliance Française de Chicago](#) hosted the 3rd Annual French-American Science Festival in the Lurie Atrium of Northwestern University's Downtown Campus.



This unique event had the participation of over 40 renowned French and American institutions such as the [Ecole Normale Supérieure de Paris](#), [Institut Polytechnique de Paris](#), the [CERN](#), Northwestern University, the [University of Chicago](#), the [Field Museum](#), the [Illinois Institute of Technology](#), the [University of Illinois at Urbana Champaign](#) and [Argonne National Laboratory](#) among others.

Over 450 students from schools across the Chicago area and the Midwest attended to observe “hand-on” booths on a wide variety of subjects such as chemistry, nuclear energy, water and waste management, sustainable energy, biology, nanotechnology, tactical illusion, digital fabrication, particle physics and imagery.

The festival also included two scientific conferences, where keynote speakers from France and the U.S. covered the topics of global warming and the discovery of the Higgs Boson, confronting American and French point of view on such subjects. Both of the highlights were chosen in regard of the recent developments of sciences involving France and the U.S.:

- France has been selected to host the 21st Conference of the Parties on Climate Change in 2015;
- Peter Higgs and Francois Englert received the Nobel Prize in Physics in 2013 for the discovery of the Higgs boson, which has been revealed by the CERN in 2012.

The leading scientists involved were David Archer (University of Chicago), Scott Dodelson (Fermi National Accelerator Laboratory), Hervé Le Treut (Institut Pierre Simon Laplace, Paris), and Michel Spiro (CERN - European Organization for Nuclear Research).



Hands-on booths - 14 booths were managed by over 30 hands-on scientists:

1. **Biology:** Sue Fox, Laetitia Chauve and Renée Briemann, from Northwestern University, worked with students to visualize DNA and the tiny world of cells;
2. **Imaging:** Thomas Meehan of the Chicago Zoological Society and Jean-Manuel Nothias of Vizua 3D showed students various examples of veterinary cases and gave them the opportunity to interact with 3D renderings to better understand the anatomy and medical approach to these cases;
3. **Particle physics:** Christophe Royon from CEA and Emilien Chapon from CERN, presented how to measure the speed of light with detectors of fast flying time, as well as research carried at Fermilab on particle physics

- and the Large Hadron Collider;
4. **Math games:** Frédéric Mahieu, Editor in chief of Mathématiquement Vôtre and math teacher at the Lycée Français de Chicago presented on the real nature of mathematics and offered students KenKens, tangrams, enigmas, and other math-related games to play;
  5. **Nanotechnologies:** Carrie Kouadio and Joseph Muskin of the University of Illinois at Urbana-Champaign used a photoactive polymer, to “print” 3-D plastic objects using a technique developed to create nanosized structures called microstereo lithography;
  6. **Energy and Sustainability:** Sunanda Prabhu-Gaunkar of Northwestern University present on the tools, the structures, the measurements and the materials employed in nanotechnology that contributes to sustainable innovation;
  7. **Nuclear energy:** Nicolas Stauff and Florent Heidet from Argonne National Laboratory presented the importance of nuclear energy worldwide;
  8. **Superconductivity:** Maxime Leroux and Karen Kihlstrom from Argonne National Laboratory presented how a superconductor can make magnets levitate and transport electricity without any resistance when it is cooled down to -320 Fahrenheit;
  9. **Chemistry/Environment:** Jean-François Gaillard of Northwestern University gave students the chance to conduct three short experiments that demonstrate some of the chemical properties of CO<sub>2</sub> in relation to its involvement in the global biogeochemical cycle of carbon;
  10. **Batteries:** Aude Hubaud from Argonne National Laboratory displayed an overview of batteries and showed students how to fabricate battery with various fruits;
  11. **Meteorites :** Nicolas Dauphas of the University of Chicago and Philipp R. Heck of the Field Museum in Chicago presented on meteorites and terrestrial rocks and explained how the planet was made;
  12. **Les Petits Débrouillards :** Sandrine Dovin, Stéphane Bourles, Afaf Seddiki, and Lara Luthien from Les Petits Débrouillards Association presented on water sustainability and conducted fun experiments designed to show how to minimize the impact of construction.
  13. **Robotics:** Kori Bowns from the Illinois Institute of Technology came with several drones and robots built by the Illinois Tech Robotics;
  14. **Paleontology:** Nizar Ibrahim from the University of Chicago presented “Hunting Dinosaurs in the Sahara”

