

A video made by the BSC wins the International Science Visualization challenge promoted by the National Science Foundation and the *Science* magazine

- Today, the National Science Foundation (NSF) announced the winning proposals from among 200 projects submitted from 18 countries
- The prestigious American publication will publish an extensive report with all the winning initiatives tomorrow

Barcelona, 31st January 2013- The [Science](#) magazine and the [National Science Foundation](#) (NSF) today announced the winners of the 10th annual international science and technology visualization challenge. The visualization team from the Barcelona Supercomputing Center – Centro Nacional de Supercomputación (BSC-CNS) has been the winner in the category on visualization videos with the video '[Alya Red: a computational heart](#)' that explains the center's project to simulate a human heart. The prize involved is the publishing of a report on this project and the other winning ones in the magazine's February issue, which will see the light tomorrow.

The jury of the event received over 200 proposals on science visualization submitted by researchers, illustrators, photographers, programmers and graphic arts specialists from 18 countries, among which was Alya Red.

At a later stage, a committee made up of members from the magazine and NSF made a selection with the most prominent works and published them on a website for the audience to cast their votes. According to the NSF, a total of over 3,150 individual votes were cast. The Alya Red video received the jury's award and the audience award.

The BSC-CNS has a science visualization team that, in close collaboration with researchers, prepares videos to help interpret the data and to give them a greater visualization. This team is a combination of scientists, engineers and graphic designers who try to get representations of the numerical data to try and project science in an adequate and visually attractive way.

'*Alya Red: a computational heart*' explains the research carried out by scientists from the center and their collaborators, paying special attention to the complexity of the issue and describing the modern techniques used to tackle it. The argumentation frame of the video explains the motivation, means and goals of the project. The underlying point is the long standing issue of the heart and the use of supercomputing to try understanding it, which is reflected through a combination of old medical images and 3D representations of computer-generated simulations.

Alya Red, one of the star projects of the BSC-CNS

Alya Red, a project on Biomechanics, takes its name from the Alya System, the simulation tool developed exclusively at BSC-CNS. Its objective is to develop a computing model to simulate how a human heart works and it is being developed by a multi-disciplinary team of doctors, bioengineers and researchers in supercomputing and medical imaging. Currently, thanks to Alya Red, the scientists working on the project can simulate ventricular models coming from real geometries.

Another objective is to create a new tool to help better understanding of how the cardiovascular system works to doctors carrying out clinical and pharmaceutical research. This tool will be a technological simulation infrastructure linked to high performance computing (HPC).

The winning projects are divided into five categories and are the following www.nsf.gov/news/special_reports/scivis/index.jsp