



Press release

Thursday, July 18

## Launch of the world's first public laboratory dedicated to certifying the reproducibility of scientific research

HEC Paris, University of Orléans, and the French National Center for Scientific Research (CNRS) are launching *cascad*, Certification Agency for Scientific Code and Data, the world's first public laboratory specialized in the certification of the reproducibility of scientific research ([www.cascad.tech](http://www.cascad.tech)). A non-profit certification agency, *cascad* will allow researchers to signal the reproducibility of their research. The public laboratory has been featured in an article published in *Science* on July 12.

Scientists often build upon past research. However, several recent studies show that researchers struggle to reproduce published results. This situation has important repercussions on the academic world, and ultimately society, as it stalls overall scientific progress.

HEC Paris Professor and *cascad* co-founder, Christophe Pérignon says that “*two main reasons explain the low reproducibility rate: computer code and data shared by researchers are not systematically checked and many researchers use confidential data, which cannot be publicly shared.*”

For example, most of the economics research published today is of an empirical and computational nature as they heavily depend on computer data analyses. While only 10% of research articles on economics were of an empirical nature in the 1970s, today the number is up to over 75%.

These numbers show the urgency to finding a solution to the issue of reproducibility. *cascad* has designed a certification process to warrant that the results reported in a scientific publication can be reproduced using the computer code and the data used by the authors of this publication.

In a [paper](#) just published in *Science*, it is shown that the *cascad* certification can be used even when researchers use confidential data, such as sensitive information on individuals' income, taxes or health. Such data can only be analyzed by accredited researchers and within a secure computing environment.

For the authors, the biggest challenge to the success of *cascad* will be building trust. Trust by data producers makes the process feasible, and trust by academic journals makes the process

useful and worthwhile. *“To build trust and increase credibility, cascadi implements a transparent and detailed certification process. The next step for us is to convince the researchers and journals.”* says Prof. Pérignon.

### **ABOUT HEC PARIS**

Specializing in education and research in management sciences, HEC Paris offers a complete and unique range of academic programs for the leaders of tomorrow: the Grande Ecole program, Specialized Masters and MSc, Summer School programs, the MBA, Executive MBA and TRIUM Global Executive MBA programs, the Ph.D. program and a wide range of programs for executives and managers. Founded in 1881 by the Paris Chamber of Commerce and Industry, HEC Paris has a full-time permanent faculty of 140 professors, 4,500 students and 8,000 managers in executive education programs every year.

### **ABOUT CNRS**

The French National Centre for Scientific Research is Europe's largest public research institution. It produces knowledge for the benefit of society, innovates and creates companies. With some 32,000 employees, a budget of 3.4 billion euros in 2017 and offices throughout France, the CNRS is present in all scientific fields through its 1100 laboratories. With 22 Nobel laureates and 12 Fields Medal winners, the organization has a long tradition of excellence. It carries out research in mathematics, physics, information sciences and technologies, nuclear and particle physics, Earth sciences and astronomy, chemistry, biological sciences, the humanities and social sciences, engineering and the environment.

### **ABOUT UNIVERSITY OF ORLEANS**

The university has 3 faculties, 1 engineering university school (Polytech), 4 University Institutes of Technology (IUT), 1 Higher School for Professors and Educators (ESPE) and 1 Observatory of the Sciences of the Universe (OSUC). Over 19,000 students, including over 2,000 foreign students, attend one of the university's sites.

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