

## **START COMPUTE 2018: launch of the Start Up HPC Challenge 1 million hours of high performance computing for the winning project**

Centrale Nantes is launching the first edition of the "START COMPUTE" Start-Up HPC Challenge on 2 July 2018. Start-ups, small and medium-sized businesses in the west of France can now submit their high performance computing project; the winner of the challenge will receive project support including training, assistance and use of the Centrale Nantes Supercomputer for 1 year.



Centrale Nantes' **High Performance Computing Institute (ICI)** is equipped with one of the most powerful regional tier-2 supercomputers in academia in France, and the most powerful in the Pays de la Loire region. Staffed with internationally-recognized high performance computing specialists, the ICI's researchers and engineers will be right at the heart of the winning project's development. The team will provide dedicated support throughout an entire year, thus helping the challenge winner to accelerate their design process as well as to optimize their products.

Numerous customers have made use of the supercomputer's resources since 2016 to advance their projects. Among them, the **IRT Jules Verne** with two key projects in shipbuilding and aeronautics. To date, they have consumed 2 million computing hours. Nextflow-Software, a startup incubated at Centrale Nantes, which develops software for optimizing ship hull performance, and INSERM's **ITUN**, Institute of Transplantation - Urology – Nephrology, are also among the partners who have taken advantage of ICI supercomputer hours.

### **A brief introduction to high performance computing (HPC)**

HPC is a key factor when it comes to addressing tomorrow's challenges: global warming, fight against disease, industrial innovation, artificial intelligence. Faced with growing volumes of available digital data, it can calculate faster with data of ever increasing volumes and reduce testing costs. HPC makes it easier to optimize performance and it boosts creativity and exploration of new solutions. Computing capabilities are also a reliable indicator of a region, or even a nation's research and development.

In the hypercompetitive supercomputer sector, France is one of the few countries to hold a significant place in the world's top 500 most powerful supercomputers (18 out of the 500 systems, as of June 2018). The most powerful French supercomputer – the Bull/ATOS Tera 1000 machine at the CEA - is ranked 14<sup>th</sup> today.

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### Challenge Schedule

- 2 July:** Challenge launches  
**24 August:** Applications close  
**14 September:** Shortlist is published  
**5 October:** Pitch and prize-giving

After the pitches to a panel in October, two prizes will be awarded: the 1st prize corresponds to one million supercomputer hours and for the panel's favourite 500,000 hours. The project must be undertaken in the year following the challenge.

Register and submit your application - online only:

**<https://startcompute.ec-nantes.fr>**

### **About Centrale Nantes**

*Founded in 1919, Centrale Nantes is a French engineering school and member of the Ecoles Centrale Group. Its undergraduate, Master and PhD programmes are based on the latest scientific and technological developments and the best management practices. At Centrale Nantes, research and training are organised into three key areas for growth and innovation: manufacturing, energy transition and healthcare. With research platforms ranging from digital simulation to prototyping using full scale models and an incubator with 20 years of experience in supporting start-up projects, the school has two major tools for innovation and creation, working hand in hand with industry. Centrale Nantes promotes its teaching and research capabilities at international level through around 100 partnerships with prestigious universities and schools worldwide. Centrale Nantes welcomes 2,320 students, including 1,550 undergraduate students, 200 Executive Education and ITII degree apprenticeship students, 260 PhD students and 400 Masters students, on its 40-acre campus.*

*For more information, visit [www.ec-nantes.fr](http://www.ec-nantes.fr)*

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