

## The power of unpredictability: Insubria University wins the Lombardia Start Cup with the Random Power project

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Produce, distribute and valorize unpredictability, that is everything that cannot be predicted: Random Power is based upon this fascinating concept, the project of the Insubria University that won the Lombardia Start Cup in the Information & Communication Technology category, winning 25 thousand euros to continue and the right to compete in the national stage.

Massimo Caccia, professor of experimental physics, coordinates the international research team and explains: “We work on unpredictability in the form of infinite bit strips, 0 and 1 of an absolutely random sequence. Not a game, but the basis of inviolable cryptographic keys. The project was born from an act of serendipity, during the development of innovative light sensors at extremely high sensitivity to see the dawn of the Universe and the mark left in the zoo of the elementary particles”.

The Random Power project, that could be translated as “power of randomness”, was born in 2018, developed rapidly, leading to a patent, which was conceded in Italy and is now in phase of international extension. In 2019 it was selected among the 170 “breakthrough projects” of Attract, an initiative of the European Commission within the scope of Horizon 2020, from which it receives a seed capital of 100 thousand euros for a year-long project.

“We are really satisfied with this Lombard recognition,” says Massimo Caccia, “and to coordinate such an innovative and wide-ranging project, which starts from basic research to arrive at a product of cyber-security sphere, with a truly significant potential to strengthen the security procedures on our data and information”.

The rector Angelo Tagliabue applauded this: “I personally find the challenge of governing the unpredictable very stimulating. I congratulate the entire Random Power group for having been able to transfer basic research and expertise in a market context, generating innovation and arousing interest around highly scientific issues”. And next week another initiative is immediately planned: Random Power, with a pool of international industrial and research players, is launching a 3-day hackathon, from 28 to 30 October, in search of a killer application that enhances the product.

The goal is to develop a platform which generates casual numbers, based on the quantum properties of matter, therefore a project that must answer in a brilliant and innovative way to the question: “What would you do with a pocket-sized quantum generator of casual numbers?”

The fifteen propositions that have been selected, all of them written in English and sent by young adults under 30 years of age, will be evaluated online and the first three will receive prizes for the value of 1000, 2000 and 1000 euro.

For further information about the project and to follow the hackathon:

[www.randompower.eu](http://www.randompower.eu)

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