

Where is mathematics in Europe?

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Europe needs an Institute of Industrial Mathematics to tighten the link between maths and industry as an enabler of innovation – putting maths at the heart of Europe's innovation, according to the European Science Foundation in a report launched today in Brussels at the "Maths and Industry" Conference.

Such an Institute would help not only to overcome the fragmentation that currently characterises mathematics research in Europe, but also to act as a magnet for excellence and innovation much like Europe's Centre for Nuclear Research (CERN) gave the world both the world wide web and the Large Hadron Collider to investigate the big bang.

"It may often be invisible in the final product or to the final consumer, but mathematics is the fundamental ingredient to many [innovations](#) that help us respond to a rapidly changing economic landscape," said Andreas Schuppert from Bayer Technology Services GmbH who contributed to the report. "Creating a 'CERN for mathematics', the European Institute of Mathematics for Innovation, will promote industry and academic collaboration, stimulating innovation, growth and job creation. As such, it could help achieve Europe's 2020 objectives of sustainable growth through a knowledge-based economy."

The Institute would be designed as a vast network of world-class mathematicians, making them easily accessible for collaboration with companies seeking novel solutions. The institute would connect hubs of academic excellence, as well as resources such as databases and libraries. As a centralised resource, this Institute would be particularly useful for

small and medium enterprises (SMEs) that often struggle to tap into the continent-wide pool of industrial mathematicians, but which represent Europe's main driver of innovation and a major source of job creation.

"Bringing together mathematicians in one organisation will make it easier for companies to access the expertise they need, while at the same time facilitating access to funds by eliminating overlap at national level," said Mario Primicerio from Università degli Studi di Firenze, Italy who chaired the ESF report, "Maths and Industry".

In addition to setting up the Institute, the report also recommends allocating EU funds for a specific industrial and applied mathematics project under the upcoming 8th R&D Framework Programme, the next EU-wide funding initiative for science. In addition, it advises for the implementation of an industrial policy that includes an EU-wide 'Small Business Act in Mathematics' which would fund spin-off companies based on [mathematics](#) as is already the case in Germany and Sweden.

More information: The report is available online:
www.esf.org/publications

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