

As a follow-up of the initiative **Forward Look Mathematics in Industry** supported by the European Science Foundation
http://www.esf.org/fileadmin/Public_documents/Publications/mathematics&industry.pdf
(http://www.esf.org/fileadmin/Public_documents/Publications/mathematics&industry.pdf), the European Mathematical Society (EMS, via its Applied Mathematics Committee) and European Consortium for Mathematics in Industry (ECMI) promoted the foundation of

European Service Network of Mathematics for Industry and Innovation (EU-MATHS-IN).

EU-MATHS-IN is conceived as a network of *National Networks* that exist or will be formed in European countries. At the moment of the foundation (26th of November, 2013) six NNs joined: AMIES (France), KoMSO (Germany), Math-In (Spain), Smith Institute (Great Britain), Sportello Matematico (Italy), and PWN (The Netherlands). Few weeks later, the Polish and Hungarian NNs were incorporated in the network. Other countries are expected to join in the coming weeks. The Executive Committee of EU-MATHS-IN is formed by: Mario Primicerio (President), Volker Mehrmann (Secretary), Wil Schilders (Treasurer), Maria J. Esteban (for the Applied Mathematics Committee of EMS), and Magnus Fontes (for ECMI).

We all know that mathematics has become a key enabling technology in all areas of science and applications. The development of new products or production processes today is dominated by the use of simulation and optimization methods that, based on a detailed mathematical modeling, support or even replace the costly production of prototypes and classical trial-and-error approaches. In the new EU program Horizon2020 the projects are to be focused, as a rule, not on the development of particular disciplines but on facing the emerging challenges in science, technology and society in general.

On the other hand, it has to be noted that mathematical modelling and simulation of the truly challenging real world problems using the mathematics *conserved* in the form of the software packages *used as black boxes* represents a dangerous illusion which will fire back in the form of failures. Even worse, such failures may not be immediately observable. Under the (false) assumption that the challenges which are identified *today* can be addressed by routine applications of the state-of-the-art mathematical results available, it may seem that further development of mathematics as a discipline is not a priority which can be justified by economically measured efficiency. As justified by repeated studies, just the opposite is true. Even more importantly, without such development, *how the challenges which will emerge twenty years from now will be solved?* Definitely not by black box routine applications of the decades old mathematical results, petrified in the form of the obsolete software.

The new organization EU-MATHS-IN has been established to increase the impact of mathematics on innovations in key technologies and to foster the development of new modeling, simulation and optimization tools. It aims (both for companies and for scientists of other disciplines) to become a dedicated one-stop-shop and service unit to coordinate and facilitate the required exchanges in the field of application-driven mathematical research and its exploitation for innovations in industry, science and society.

EU-MATHS-IN aims to leverage the impact of mathematics on innovations in key technologies by enhanced communication and information exchange between and among the involved stakeholders on a European level. It shall become a dedicated one-stop shop (both for companies and for scientists of other disciplines) to coordinate and facilitate the required

exchanges in the field of application-driven mathematical research and its exploitation for innovations in industry, science and society.

For this it shall build an e-infrastructure that provides tailored access to information and facilitates communication and exchange by player-specific sets of services. It will act as facilitator, translator, educator and link between and among the various players and their communities in Europe.

For further information on the strategic and short-term goals of EU-MATHS-IN, on its structure and activity, you are invited to visit the website <http://www.eu-maths-in.eu/>