

Creation of ITMATI: The three Galician Universities found the Technological Institute for Industrial Mathematics (ITMATI)

ITMATI is born with the aim of becoming a technological centre and an international reference point in the field of industrial mathematics.



After more than one year of work, in the last february 2013 the three universities of Galicia in Spain, took one more step and the Rectors of the University of the Coruña, the University of Santiago de Compostela and the University of Vigo signed the agreement of collaboration for the constitution of the Consortium Technological Institute for Industrial Mathematics (ITMATI).

The Technological Institute for Industrial Mathematics (ITMATI) was founded with the aim of becoming a worldwide reference center of technological research in the field of industrial mathematics. Its mission is to contribute to strengthening and enhancing competitiveness in the industrial and business environment to achieve excellence in research and technology oriented to mathematical transfer to industry. This will generate innovations that create added value for companies.

This consortium supposes an important milestone of aggregation of resources between the 3 universities to promote technological mathematics knowledge

transfer and to give efficient and flexible solutions to meet the demand from companies, industry and public administrations. Its primary mission is to contribute to the strengthening and boosting of competitiveness in the sphere of industry and business and to support innovation within the manufacturing sector, through the achievement of excellence in research and the development of advanced mathematical technology oriented towards knowledge transfer to industry. The aim of this initiative is clear: join all the knowledge and the experience of the research groups and departments that work in the field of the industrial mathematics, and put them at the service of the companies and the public administrations.

The leadership position currently occupied by the Galician Industrial Mathematics is recognized nationally and internationally because of the intense work transfer to industry over these last 20 years, his current position is the recognition and excellence. Therefore in order to be a flexible and inclusive dedicated to providing solutions to the needs of the industry created the Industrial Mathematics Institute of Technology that will consolidate in the Mathematics Galician pole-Industry, bringing the capabilities of the Galician groups as an international benchmark.

The priority of ITMATI activity is to enhance competitiveness and innovation in the industrial environment through the application of techniques and mathematical methods in the production sector, operating as a center of mathematical technology transfer to companies, governments and industry in general. The specific aims of the Institute are:

- To approach and coordinate basic and applied research, operating as a center for technology transfer to industry at regional, national and international levels.
- To create technological knowledge and contribute to its implementation for the development and strengthening of the competitiveness of the companies in the field of technology and innovation.
- To act as facilitator and promoter for the introduction and application of techniques and mathematical methods in the production sector Galician, Spanish and international.
- To promote the production, and dissemination of knowledge, especially in the field of Applied Mathematics, Statistics and Operations Research and the training of technical and scientific expertise in technologies and related methods.
- To contribute to the strengthening of the relationship between knowledge agencies and businesses to provide support services to business innovation.
- To promote scientific and academic collaborations with universities and research and transfer centers from Spain and foreign countries, in the field of mathematics and other disciplines, promoting interdisciplinarity.



ITMATI is promoted for eleven researchers from nine research groups in Applied Mathematics, Statistics and Operations Research, of the three Galician universities, and gathers to more than 150 researchers of these groups. The developers team benefits from wide-ranging experience and recognition for the development of solutions for the world of business, either working independently, in collaboration with companies themselves or with teams from other areas of knowledge. Although the three universities financially support the Consortium, its contribution will gradually decrease from the first to the fifth year, because the objective of the institute is to be self-sustaining by 2017.

The creation and implementation of the Consortium Technological Institute for Industrial Mathematics is another step forward in the consolidation of Galician Industrial Mathematics as a leader in its field. Both nationally and internationally its position has been recognised thanks to the intensity of the work over the last 20 years by Galician research groups in technological knowledge transfer to companies and other agents across all manufacturing sectors. As such, this hub for Industrial Mathematics in Galicia has been financed and strengthened to the extent that it has become a national and international reference point, exponentially increasing the impact on companies, and generating a measurable leap forward both qualitatively and quantitatively in terms of companies' investment in R&D and innovation.

The nine groups included in this Consortium deal different research areas such as numerical simulation and optimization of devices, products or processes, quality control, management and planning of resources or exploitation of information from large databases. The University of Santiago de Compostela offers four groups: Statistics, Computing, Biology and Medicine group, the Mathematical Engineering, the group of Mathematical Models and Numerical Simulation in Solid Mechanics, and finally the Optimization, Decision, Statistics and Applications. In the case of the University of Vigo the institution provides three groups: Simulation and Control, Statistical Inference, Decision and Operational Research and Differential Equations and Numerical Simulation. Finally, add two groups of the University of A Coruña: Mathematical and Numerical Models in Engineering and Applied Sciences and Modeling, Optimization and Statistical Inference.

Mathematics provides a fundamental toolkit and a universal framework for innovation. The cross-cutting nature of mathematical and statistical techniques has favoured to ITMATI for interaction with a large number of industrial sectors. ITMATI has an extensive experience in knowledge transfer broken down by sector of economic. The ITMATI objective is to provide mathematical solutions for innovative companies, by transferring technology, and to contribute decisively to the creation of economic value in many industrial sectors of the society.



ITMATI has interacted and established partnerships with industrial organizations for transferring knowledge or technology to all reference sectors. Its priority areas of action: Agriculture; Marine Resources; Aquaculture; Food; Construction; Materials; Transport; Aeronautics; Automotive; Naval; IT & Communications; Tourism; Leisure; Services; Energy; Environment; Biomedicine and Pharmaceuticals; Health; Social Studies; Administration; Economy and Finance.

ITMATI staff and its extensive network of partners provide: scientific excellence, experience in developing solutions for the productive system to give a personalized service to its customers. The portfolio of services offered includes a wide range of innovative solutions from mathematical technology such as development of products and solutions, technology consulting, high level scientific advisory, R&D&I collaborative projects, development of customized software.

In order for ITMATI to accomplish these aims it has made a great commitment in terms of human capital by incorporating an organization oriented specifically to business and industry within its ranks, enabling it to respond to problems and needs flexibly and efficiently as they arise. As well as scientific personnel, in ITMATI will have staff specialized in project management and knowledge transfer in technology and innovation. In this manner, the transmission of knowledge generated at universities in the field of industrial mathematics is optimized for its application in manufacturing sectors.

ITMATI will be located in the "Campus Vida" at the University of Santiago de Compostela in Galicia's capital in Spain, and from there, ITMATI will approach to the Galician companies, to the Spanish productive system and will get its projection in the international field.

NOTE TO EDITORS. - For further information, please contact the website www.itmati.com and contact with the Director of ITMATI Peregrina Quintela Estevez on the phone (+34) 881 813 223.