Preface

The book *TransMath: Innovative Solutions from Mathematical Technology* has been conceived as a powerful tool to spread and champion the transfer of mathematical knowledge and techniques to the industrial sector and society. This publication presents two technological maps, developed in the Consolider i-MATH CSD2006-00032 Project (Ministry of Science and Innovation – Government of Spain). Firstly, the i-MATH Map of Demand for Mathematical Technology (TransMATH Demand Map), with data obtained from a survey carried out with around 5,200 Spanish firms, details the level of knowledge, use and demand for mathematical technology in industry[1] in Spain. Secondly, the i-MATH Map of Supply of Mathematical Technology (TransMATH Supply Map) shows the experience acquired in technology transfer to business and industrial sectors by a broad representation of those Spanish mathematical research groups with greatest capacity and background in collaborating with industry.

The book is mainly addressed to those companies with innovation needs that could be met using mathematical technology. A complete list of successful industrial projects, developed by Spanish research groups, is therefore included to help readers determine the level of implementation and demand for mathematical technology in other companies and sectors of economic activity. Furthermore, it illustrates the benefits of using mathematical techniques to enhance innovation in industry.

In regards to professional readers, all information collected in this publication is classified by economic activity. Eleven sectors are considered in particular, as the majority of supply and demand for mathematical technology corresponds to companies belonging to these sectors: *Biomedicine & Health*, *Construction*, *Economics & Finance*, *Energy & Environment*, *Food*, *Information & Communication Technology (ICT)*, *Logistics & Transport*, *Management & Tourism*, *Metal & Machinery*, *Public Administration*, and *Technical Services*.

[1] In this book the term "industry" is used in a broad sense of the word, to denote all kinds of business and commercial firms with economic activity and non-profit R&D organisations with activities outside the realm of education and academic research (including financial institutions, public administration and hospitals).

For readers interested in state of the art Spanish mathematical technology transferred to business and industrial sectors, two dedicated websites http://www.math-in.net, and http://www.i-math.org/ provide further information.

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