

## Preface A

*It is with great pleasure that I greet the proceedings of the 6<sup>th</sup> Mediterranean Conference on Mathematics Education. This series of conferences started in January 1997 with the cooperation of the Cyprus Mathematical Society and the Pedagogical Institute of Cyprus. The 2<sup>nd</sup> conference was organized exactly three years later, in January 2000 in Cyprus again. The 3<sup>rd</sup> Mediterranean Conference 2003 took place in Athens, Greece, the 4<sup>th</sup> in Italy 2006 and the 5<sup>th</sup> in Rodhos Island in Greece in 2007.*

*The meeting of academics, researchers of mathematics and teachers contributes to the development of mathematical learning through the development and analysis of teaching methodology as well as the use of new technologies. Such conference contributes to the improvement of mathematics education in all levels and constitutes a forum of exchange of ideas as well as a starting point of new partnerships and new applications.*

*The Cyprus Mathematical Society intends to continue this series of conferences in the future, hoping that other Mediterranean countries will host the organization of the conference.*

*I wish to congratulate all the members of the organizing and scientific committees for their contribution in making this conference and proceedings very successful. I also like to thank the Plovdiv University "Paisii Hilendarski" for hosting the conference.*

Dr Gregory Makrides

President of the Cyprus Mathematical Society

Chairman of the Mediterranean Organizing Committee of MEDCONF6

Director of Research and International Relations – University of Cyprus

President – European Association of ERASMUS Coordinators

President – THALES Foundation

## Preface B

*The 6th Mediterranean Conference on Mathematics Education follows a successful series of five such conferences since 1997. This Conference has been organized by the Cyprus Mathematical Society and the Plovdiv University "Paisii Hilendarski".*

*What can the 6<sup>th</sup> Mediterranean Conference offer to Mathematics Education research and in the teaching and learning of Mathematics? Having in hand this volume we believe it can offer a lot. The sheer variety of the themes discussed and the fact that Mathematics educators from about ten different countries are participating in the Conference are strong evidence in support of this belief.*

*Over 60 articles were submitted to the 6<sup>th</sup> Mediterranean Conference for Research in Mathematics Education, of which 49 were accepted for publication. The decision about the acceptance or rejection of the papers was based on the review of two members of the Scientific Committee. It is a pleasure for the Editors to express their sincere thanks to all the members of the Scientific Committee. Special thanks to Assoc. Professor Asen Rahnev, Dean of the Faculty of Mathematics and Informatics with Plovdiv University "Paisii Hilendarski".*

*The articles in the volume cover a variety of subjects such as Representations and Visualization in Mathematics Education, Implementation of Technology in Mathematics Education, Problem Solving in Mathematics Education, Learning and Teaching in Geometry, Mathematics Education at University Level, Research in Various Topics of Mathematics Education.*

*The present volume is the result of an excellent collaboration that exists between researches in Mathematics Education in Cyprus and Bulgaria. We hope that this volume will contribute to a fruitful and constructive exchange of ideas regarding contemporary issues in Mathematics Education.*

Professor Athanasios Gagatsis

Dean of the Faculty of Social Sciences  
and Education  
University of Cyprus

Vice President of the  
Cyprus Mathematical Society

Professor Sava Grozdev

President of the Association for  
Development of Education

Academician of IHEAS

Member of the Boards of the Union  
of the Bulgarian Mathematicians and  
"Young Bulgaria" Foundation

## Preface C

*It is an honour and pleasure for me on behalf of the Ministry of Education and Science of the Republic of Bulgaria to welcome the participants and guests of the 6<sup>th</sup> Mediterranean Conference on Mathematics Education.*

*The 6th edition of the Mediterranean Conference on Mathematics Education, organized by the Cyprus Mathematical Society and the Plovdiv University "Paisii Hilendarski", continues a tradition that was initiated in 1997 and has reached far beyond the geographical scope of the Mediterranean region by attracting contributors from several continents. The conference greatly contributes to raising the awareness of the issues, success stories, and scientific findings in the teaching and learning of mathematics. Moreover, it is a springboard for new ideas and contacts to address the existing and the emerging challenges.*

*MEDCONF'2009 fits well in the world networks in the field of mathematics and its neighbouring fields. Plovdiv and Bulgaria span a bridge between mathematics and informatics by hosting within a few months both MEDCONF'2009 and the 21<sup>st</sup> International Olympiad in Informatics - IOI, involving participants from 83 countries. Bulgaria is not only an initiator of IOI, but has won medals in all its editions so far and it is no chance that all these activities going on in Plovdiv are under the auspices of IOI.*

*Both presenters and guests will have the opportunity to experience the ancient culture of Plovdiv and to immerse in the unique atmosphere of one of the oldest cities in Europe. I truly believe that you will feel the wholehearted hospitality of the Bulgarian people and will take back home loads of memorable impressions of your cultural encounters. Such events largely contribute to the intercultural enrichment of all stakeholders.*

*I would like to wish the participants and guests of the 6<sup>th</sup> international Conference lots of inspiration and strong will to implement their brave ideas.*

Kircho Atanasov

Deputy-Minister of Education and Science of the Republic of Bulgaria

Honorary Member of the Union of Bulgarian Mathematicians

Chair of the Organizing Committee of the 21<sup>st</sup> International Olympiad in Informatics