

Preface

Dear distinguished delegates, guests and readers of this book:

In modern times where globalization and competition know no limits and have stopped being friendly in the marketplace, Logistics has already come to play a primordial role at each business level and dimension. The main problems we usually find in Logistics can be defined as design, planning, optimization and control problems. Nowadays the improvement of such logistic aspects not only encompass all those conventional techniques based on the expert knowledge and best practices, but also modern approaches like the Artificial Intelligence, Evolutionary Computation, Fuzzy Logics, and the use of specialized software, among others.

Taking all this into account and having a solid experience in the logistic field, The Institute of Production Systems and Applied Mechanics, belonging to the Faculty of Materials Sciences and Technology (MTF) of the Slovak University of Technology (STU) organized the 2012 Central European Conference on Logistics (**CECOL 2012**). The event took place in the city of Trnava, Slovak Republic, during November 28th-30th, 2012.

The **CECOL 2012** proceedings book is aimed at publishing scientific achievements in the field of logistics as well as at enhancing the worldwide cooperation among young and senior academicians and/or practitioners, and specially those of the central European region. This present edition has been enriched taking into account previous experiences, resulting from the scientific collaboration among higher education centers of such central European zone and two previous successful editions of the conference held in Miskolc, Hungary (2010) and Częstochowa, Poland (2011). Some of the main topics included in the book are those related to manufacturing process design, optimization and control of logistic processes, manufacturing automation, manufacturing process simulations, analysis of the material flow, maintenance, production planning, production scheduling, new teaching and research approaches, intelligent manufacturing systems and cells, robots implementation into the logistic processes, among others. This way, the book also constitutes a valuable reference and study material for all the persons working and studying logistics.

During the process of revision, edition and analysis of the contents of these proceedings book, we have had the chance of acquiring a rich overview on the trends and research lines of Logistics. We have also felt fulfilled when having had the chance of putting all of our effort, modest knowledge and experience in the improvement and adequacy of the contents. At the same time we have been enriched both as human beings or logisticians throughout this process and thus, we strongly believe, it could be a material from which you will certainly acquire knowledge in a similar way. The book is structured in sessions and in each one of them the reader can find similar topic-related works.

Finally, we would like deeply thank the organizing committee for its valuable and persistent work even out of working time and days, we would also like to thank the scientific committee for its valuable expertise, advises and chairing activities during the conference and last but not least, our sponsors for their contributions to this successful edition of the **CECOL 2012**.

With our warmest and most sincere regards,

Prof. h.c. Prof. Karol Velíšek

Assoc. Prof. Peter Košťál

Assoc. Prof. František Pecháček