PREFACE

It is with my great satisfaction that my colleagues from the Chair of Manufacturing Technology and Automation at ATH in Bielsko-Biała present papers resulting from their research activity on the field of the manufacturing technology, materials science, metrology and the industrial processes optimization. The papers presented in a collection are considered as a contribution to the 40 years Anniversary of our Bielsko-Biała University (early Branch of University of Technology in Lodz, since 2001 Akademia Techniczno-Humanistyczna), the University with 5 faculties and 8000 students.
Papers contain the new developments, concepts and results obtained by:
1. Stanisław Płonka, D.Sc. Eng., ATH Professor and Jacek Postrożyń, Ph.D. Eng., they are giving their research results of the food packing process optimization when thermoforming machines, vacuum technique and protective gas atmosphere are used.
2. Władysław Jakubiec, D.Sc. Eng., is the author of the first from the series of papers dealing with the analytical evaluation of coordinate measurement uncertainty.
3. Roman Stryczek, Ph.D. Eng., presents a metaheuristic approach to the computer-aided planning of manufacturing processes.
5. Jacek Pezda, Ph.D. Eng., presents in two papers results of his experiments with Al-Si and ultra-light magnesium alloys.
6. Tomasz Ciucia, Ph.D. Eng., reports the method applying the analysis AlSi9Mg alloy crystallization.

I would like to acknowledge my gratitude to Authors and to express my convincing that the papers are of good quality and that they will compose the base for successful industrial applications.

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