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MONOGRAPHICAL BOOKLETS

in Appled & Computer Mathematics
of the Pannonian Applied Mathematical Meetings
as Interuniversity Network in Central Europe,

Edited by F. Fazekas,
Caretaken by the PAMM Centre at Budapest University of Technology and Economics (BUTE)
Balatin Göd Budapest

In the Preface to the series MB we can read the following or-in-Chief's words:

"Lectori salutem! The kind reader begins to study the first volume of a new series. Worthy to look at the present circumstances of this starting: a) the series MB with matters; b) from the Applied & Computing Mathematics (ACM) is starting onto its way; c) just in the Millecentenary Year (MCY) of the Hungarian Conquest (HC) in the Danube Basin (DB); d) by our Pannonian society PAMM; e) having its Centre at the Technical University of Budapest (TU-Bp); f) namely as Interuniversity Network (IN) in Central Europe; g) at my Editor in Chief's (ECh) activity and h) printed by the Publisher of (TU-Bp). These brougt along-inevitably – the mentioned starting and will yield – hopefully – the birth of many booklets till the Millenary Year 2000 of the Hungarian State too".

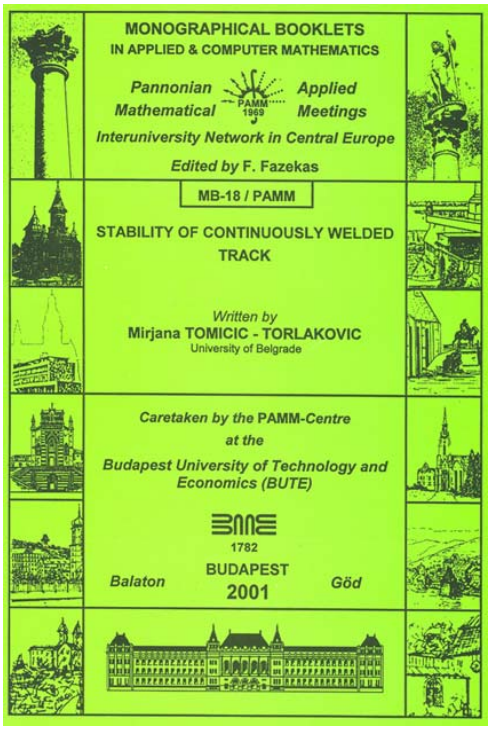
Useful to consider the past circumstances of the 35 years old life of PAMM: a) its rich working experiences, b) the professional-amical cooperation in its suitable frame IN by engineers-mathematicians, c) arrived mostly from the DB's universities of technics and sciences, d) the PAMM's periodical "Bulletins for Applied Mathematics" (BAM).

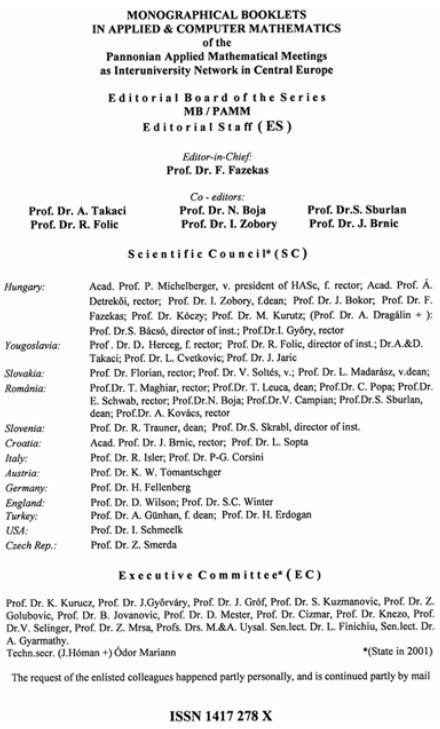
One question: *For which readers are recommended these booklets*? It follows from the former pupose that these are written and proposed for engineers, physicists, economists, biologists..., for such doctorands, postgraduates, lecturere, occasionally for eminent graduate students too.

Initial volume of the series MB/PAMM published in 2001 was Approximate solutions of partial differential equations written by professors D & A. Takaci, from University of Novi Sad.

Editor in Chief of this series MB/PAMM is Francis Fazekas from Technical University of Budapest. Hi is the head of PAMM-Centre at the Department of Transp. Automatics and main organizer of the traditional Pannonian Applied Mathematical Meetings founded in 1969.

This review contain the presentation of the three published monograph booklets written by authors from Serbia.





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Techn.secr. (J.Hóman +) Ódor Mariann *(State in 2001)

The request of the enlisted colleagues happened partly personally, and is continued partly by mail

ISSN 1417 278 X

Stability of Continuously Welded Track
written by Mirjana Tomičić-Torlaković

Monographical Booklets in Appled & Computer Mathematics, Pannonian Applied Mathematical Meetings, Interuniversity Network in Central Europe, Edited by F. Fazekas, MB-18/PAMM, Budapest 2001, p. 99.

This book is based on the author's longtime work on the stability problems of continuously welded track. The results of these investigation are implemented in solving the practical problems. The author makes the survey of current knowledge of the continuously welded track thermal stability. The solutions of the theoretical investigation are presented by means of the energy method, finite element method, linearized differential equations method, probabilistic method and some specialized method for engineering applications.

Reviewers are: Slavko Ranković and Branislav Kolundžija.

References 51. Author's references 13.

Contribution to the Conversion of Bond Graph Models into State Space Equations and Block Diagram Simulation Models

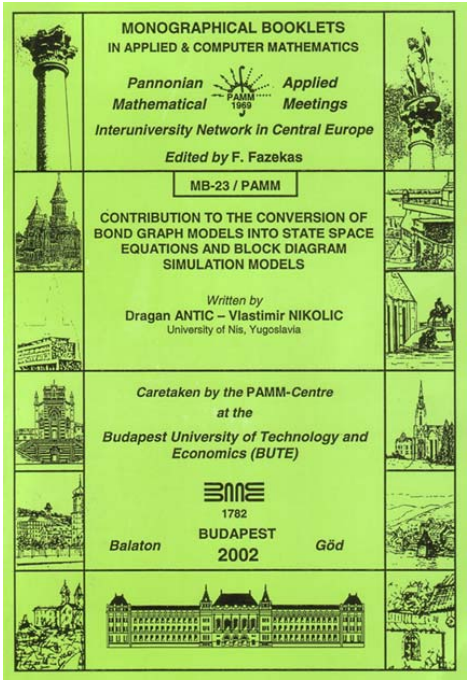
written by Dragan Antić and Vlastimir Nikolić

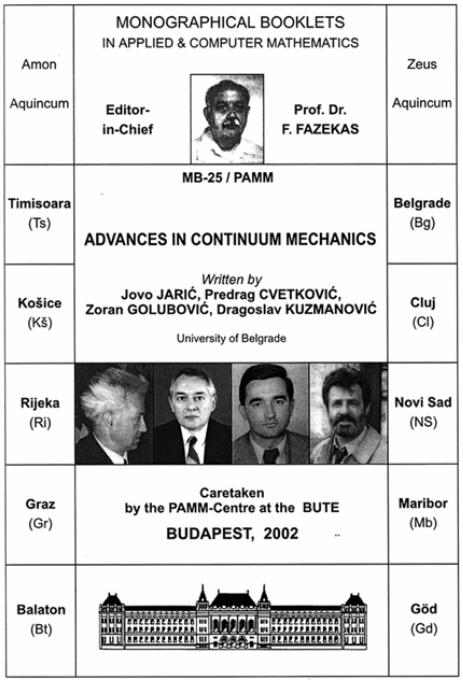
Monographical Booklets in Appled & Computer Mathematics, Pannonian Applied Mathematical Meetings, Interuniversity Network in Central Europe, Edited by F. Fazekas, MB-23/PAMM, Budapest 2002, p. 118.

The book comprises reserch results in the area of the state'space model and block diagram formation, based on bond graph model. These results were presented in the form of szstematic procedures which could be easilz applied to optional complex system and bond graph models. These procedure provide a simple and effective computer implementation of bon graph models.

Following some fundamental observations about bond graph modeling given in the first chapter. A new approach of deriving state-space models from the bond graph models based on the theory of signal flow graphs is presented in the second chapter. A direct transformation of a causal bond graph model into block diagrams using Breedveld's and Fakri's transformations is described in the third chapter, as well as Bondsim-Simulink library. The application of the previously proposed procedure for modeling and simulation of different dynamical systems using bond graphs is presented in the four chapter.

References: 87. First author's coauthor-references: 49.





Advances in Continuum Mechanics

written by Jovo Jarić, Predrag Cvetković, Zoran Golubović and Dragoslav Kuzmanović

Monographical Booklets in Appled & Computer Mathematics, Pannonian Applied Mathematical Meetings, Interuniversity Network in Central Europe, Edited by F. Fazekas, MB-25/PAMM, Budapest 2002, p. 189.

This book is designed as a companion text on continuum mechanics. This book is intended to contribure to effective teaching at a graduate level and to sreve as a reference volume for researchers in science and engineering. The text require a basic understanding of tensor calculus.

The book is divided into two main parts: Some contemporary problems in Continuum Mechanics and Applied Nonlocal Theory.

First chapter contain the basic notation of geometry and kinematics of surface. The second part deals with concept of material displacement derivative. Authors present very general approach and derive the set of formulas of the importance for research problems of the surface of discontinuity.

Chapter four of second book part contain the physical basis of nonlocal theory given by Edelen and Eringen (1976). In the next chapter deals with general balance laws written for single and for multicomponental bodies.

References: 123. Co-author's references: J. Jarić - 8, P. Cvetković-9, Z. Golubović-8 and D. Kuzmanović-7.