



The Brazilian Society of Mechanical Sciences and Engineering

ABCM SYMPOSIUM SERIES IN MECHATRONICS

Vol. 1

Editors

Julio Cezar Adamowski
Edilson Hiroshi Tamai
Emília Villani
Paulo Eigi Miyagi

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Presentation

The first issue of the Symposium Series in Mechatronics includes the 82 papers presented at the Mechatronics Symposium of the 17th COBEM - International Congress of Mechanical Engineering, held on November 10–14, 2004 in São Paulo, SP, Brazil.

The scientific committee of the Mechatronics Symposium was composed by Prof. Julio C. Adamowski (Chair), Prof. Décio C. Donha, Prof. Luis O. Ferreira, Prof. Oswaldo Horikawa, Prof. Liu Hsu, Prof. Eduardo A. Misawa, Prof. Lucas A. Moscato, Prof. Diolino J. Santos Filho, Prof. Emilio C. Nelli Silva, Prof. José Reinaldo Silva, Prof. Alexander H. Slocum, Prof. Edilson H. Tamai (Co-Chair), Prof. Hans I. Weber, Prof. Walter L. Weingartner.

Papers included in this volume were submitted to a reviewing and selection process in which they were judged by at least two referees nominated by members of the scientific committee. In addition, they were further evaluated and recommended by the session chairmen during the congress.

The scope of this series symposium comprehends works in the following subjects (but not restricted to): micro systems; nano-technology; precision mechanics; robotics; digital signal processing; signal analysis; sensors, actuators; control; discrete and hybrid systems; applied computational mechanics; manufacturing automation; computer integrated manufacturing; CAD/CAE/CAM/CAPP; automatic systems and equipments; image processing. The papers of the symposium present theoretical, simulation and experimental results of research and applied work.

Papers are grouped into 6 main subjects:

- Section I - Robotics
- Section II - Control systems
- Section III - Discrete event dynamic systems
- Section IV - Signal analysis and estimation
- Section V - Sensors and actuators.

We are grateful to the referees and the authors. We would like to thank also Prof. Jun Okamoto Júnior and Prof. Ricardo Cury Ibrahim for providing and organizing the data and files used in this volume.

Editorial Committee

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