

DISTINGUISHED FIGURES IN MECHANISM AND MACHINE SCIENCE

# HISTORY OF MECHANISM AND MACHINE SCIENCE

## Volume 1

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*Series Editor*

MARCO CECCARELLI

### *Aims and Scope of the Series*

This book series aims to establish a well defined forum for Monographs and Proceedings on the History of Mechanism and Machine Science (MMS). The series publishes works that give an overview of the historical developments, from the earliest times up to and including the recent past, of MMS in all its technical aspects.

This technical approach is an essential characteristic of the series. By discussing technical details and formulations and even reformulating those in terms of modern formalisms the possibility is created not only to track the historical technical developments but also to use past experiences in technical teaching and research today. In order to do so, the emphasis must be on technical aspects rather than a purely historical focus, although the latter has its place too.

Furthermore, the series will consider the republication of out-of-print older works with English translation and comments.

The book series is intended to collect technical views on historical developments of the broad field of MMS in a unique frame that can be seen in its totality as an Encyclopaedia of the History of MMS but with the additional purpose of archiving and teaching the History of MMS. Therefore the book series is intended not only for researchers of the History of Engineering but also for professionals and students who are interested in obtaining a clear perspective of the past for their future technical works. The books will be written in general by engineers but not only for engineers.

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*For a list of related mechanics titles, see final pages.*

# Distinguished Figures in Mechanism and Machine Science

Their Contributions and Legacies

Part 1

Edited by

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## **PREFACE BY THE SERIES EDITOR, PROFESSOR M. CECCARELLI**

This book is part of a book series on the History of Mechanism and Machine Science (HMMS).

This series is novel in its concept of treating historical developments with a technical approach to illustrate the evolution of matters of Mechanical Engineering that are related specifically to mechanism and machine science. Thus, books in the series will describe historical developments by mainly looking at technical details with the aim to give interpretations and insights of past achievements. The attention to technical details is used not only to track the past by giving credit to past efforts and solutions but mainly to learn from the past approaches and procedures that can still be of current interest and use both for teaching and research.

The intended re-interpretation and re-formulation of past studies on machines and mechanisms requires technical expertise more than a merely historical perspective, therefore, the books of the series can be characterized by this emphasis on technical information, although historical development will not be overlooked.

Furthermore, the series will offer the possibility of publishing translations of works not originally written in English, and of reprinting works of historical interest that have gone out of print but are currently of interest again.

I believe that the works published in this series will be of interest to a wide range of readers from professionals to students, and from historians to technical researchers. They will all obtain both satisfaction from and motivation for their work by becoming aware of the historical framework which forms the background of their research.

I would like to take this opportunity to thank the authors and editors of these volumes very much for their efforts and the time they have spent in order to share their accumulated information and understanding of the use of past techniques in the history of mechanism and machine science.

Marco Ceccarelli (Chair of the Scientific Editorial Board)  
Cassino, April 2007

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## PREFACE

This is the first volume of a series of edited books whose aim is to collect contributed papers in a framework that can serve as a dictionary of names of individuals who have made contributions to the discipline of MMS (Mechanism and Machine Science). This dictionary project has the peculiarity that, through descriptions of the ideas and work of these individuals, the papers will illustrate mainly technical developments in the historical evolution of the individual fields that today define the scope of MMS. Thus the core of each contribution will be a survey of biographical notes describing the efforts and experiences of these people.

Finding appropriate technical experts as authors for such papers and encouraging them to write them has been a challenge; it is a demanding and time-consuming effort to produce such in-depth articles that delve deeply into the historical background of their topics of expertise. This first volume of the dictionary project has been possible thanks to the invited authors who have enthusiastically shared the initiative and have spent time and effort in preparing papers that have the novel characteristics of survey and historical notes. The papers in this volume cover the wide field of the History of Mechanical Engineering with specific focus on MMS. I believe that a reader who takes advantage of the papers in this book, as well as future ones, will find further satisfaction and motivation for her or his work (historical or not).

I am grateful to the authors of the articles for their valuable contributions and for preparing their manuscripts on time. A special mention is due to the community of the IFToMM Permanent Commission for History of MMS and particularly to the past Chairperson (1990–1997) Professor Teun Koetsier (Vrije University in Amsterdam, The Netherlands) and the current Chairper-

son (2004–present) Professor Hong-Sen Yan (National Cheng Kung University in Tainan, Taiwan), both of whom supported my idea of the dictionary project, even during my chairmanship in the years 1998–2004. With their work in the IFToMM PC they have fostered both growth of interest in the field of History of MMS and wider participation by the science community at large.

I also wish to acknowledge the professional assistance of the staff of Springer and especially of Miss Anneke Pot and Miss Nathalie Jacobs, who have enthusiastically supported the project by offering their valuable advice through all stages of the organization and writing.

I am grateful to my wife Brunella, my daughters Elisa and Sofia, and my young son Raffaele. Without their patience and comprehension it would not have been possible for me to work on this book and the dictionary project.

Marco Ceccarelli (Editor)  
Cassino, March 2007