

Preface

Since the often so-called 0th Congress in Innsbruck there have been many mechanics-related activities worldwide and it was a wise consequence to found in 1946 the International Union of Theoretical and Applied Mechanics, abbreviated IUTAM. In 2016 we can celebrate in Montreal, Canada, the 70th anniversary of IUTAM at the 24th International Congress on Theoretical and Applied Mechanics, abbreviated ICTAM. Besides these World Congresses, by the end of 2015 more than 380 symposia and summer schools have been organized by IUTAM.

Looking through the names of researchers involved in IUTAM, either as Officer, Bureau Member, General Assembly Member, Congress Committee Member, Symposia Panel Member, Symposia Organizer, or in another function for IUTAM, reads like a who-is-who in mechanics. So many famous scientists of the past have been actively involved that IUTAM can be truly proud to play such a prominent part in the history of mechanics. Also among the researchers currently active there are many famous names from all over the world. These people organize conferences, are editors of scientific journals, serve on all kinds of boards, lead big research programs, and supervise tens of thousands of doctoral students among various other contributions to our community. Research organized in IUTAM serves the promotion of science and the advancement of human society very actively and contributes to many urgent challenges and topics.

In 1988, the first edition of this book was published which covered the period until 1984. Stephen Juhasz worked for a long time to accurately collect all kinds of information related to the history of IUTAM and prepared a manuscript to report with many details about the creation and development of IUTAM. This book was published by Springer and turned out to be a most valuable reference. The basic structure of the original book was such that at first, several chapters related to IUTAM's history or certain organizational aspects were presented. Then, an extensive data and statistics part was included and, finally, photos from the history of IUTAM were shown.

Eminent scientists from mechanics contributed to the book and its structure proved to be useful. Colleagues who participated in the history of IUTAM found

the activities of themselves and their friends, but also the general audience saw clearly why mechanics plays such an important role in universities and engineering education all over the world.

When the first edition of this book became available, I had just entered the university. However, during my study times and later as a research assistant, IUTAM was showing up to me everywhere. I attended IUTAM symposia and ICTAM World Congresses and especially my close cooperation with Werner Schiehlen introduced me early to IUTAM's work and many of its key figures. Later, when I became Treasurer of IUTAM, I became interested in IUTAM's history but found it a pity that Stephen Juhasz' great collection of historical data became a bit outdated 30 years after its presentation to the public. The somehow naive idea came up, to create a new edition by just updating a few tables. This turned out to be not appropriate and a lot of intense work was required to prepare the now completed book.

The basic concept was kept. However, since the time J. Lighthill wrote his chapter on "What is Mechanics?" many new developments had occurred and so T. Pedley and V. Tvergaard contributed two new chapters on the topics that gained importance during the past decades. The description of ICTAMS's early history by G. Battimelli was left largely unchanged and also the description of IUTAM's history up to the mid-1980s by J. Hult and N. Hoff remained nearly unchanged. IUTAM's development since then was summarized by W. Schiehlen and it is fascinating to see that many good things of the past were preserved while IUTAM adjusted to modern requests and changed many things in the past decades. These existing chapters were just slightly revised and corrected and the other parts were fitted to the style of the complete book. Some figures were added or moved from the appendices to the main part of the book.

The chapters on the Congresses and Symposia originally written by S. Juhasz and also the parts about the General Assemblies, originally written by D. Drucker and S. Juhasz, and the Reports by F. Niordson and S. Juhasz, required major changes and updates to reflect the current state of our union.

All the tables and statistics have been reorganized, updated, and completed. This required a lot of efforts and many iterations and corrections. The collected IUTAM annual reports were the most important sources of information, but also a lot of library work was needed. In total, 22 appendices with more than 100 pages document now in great detail most aspects of IUTAM's history and especially honor all the current and past colleagues who contributed so much to the visibility of IUTAM.

Finally, the photo part was revised and extended. More than 30 pages now show photos from all epochs of IUTAM's history and most of its key players. While many things changed, it is visible that the friendship, the international attitude, and the sense of serving a fascinating community remained the same from the very beginning to today.

Of course, such a book project is not the work of a single person alone. It is very sad that Stephen Juhasz passed away in 2013 at the age of 99. He dedicated so much time and effort to the first edition of this book and I am still highly impressed. I deeply regret that we never met in person and that I was never able to talk with him about this project. However, I am confident that he would have been delighted about seeing the revised and updated version of his book about IUTAM's history.

I am fortunate to enjoy the friendship of Werner Schiehlen for more than 25 years. Already when I was his doctoral student, a deep personal relation developed and it is our mutual pleasure to see each other every week. Werner Schiehlen provided besides a new chapter also several photos and a lot of information and advice. Also, he did a very careful proofreading of the manuscript as did Carl Herakovich, Frederic Dias, and Dick van Campen.

I am indebted to all the contributors of chapters for the first and the new edition. Except G. Battimelli, sadly all contributors of the original chapters have passed away and I hope to have made the editorial changes and revisions in their spirit. In total, seven former or current presidents of IUTAM as well as some other famous scientists contributed to this book, and so it is my hope that it provides an appropriate framework for the description of IUTAM's history.

Aatje van Campen-Stuurman and Jim Phillips provided additional photos. Some further photos were taken from the ICTAM reports and web pages.

Several students of mine, Sibylle Berger and Annelie Schäd, as well as my former doctoral student Dr.-Ing. Trong Phu Do spent many weeks collecting information and updating tables and my doctoral student Dipl.-Ing. Philipp Wahl rearranged all photos. All these persons deserve my thanks and appreciation.

I also want to thank the IUTAM Bureau for providing some support to make it financially possible to provide this book free of any cost as downloadable Open-Access publication and at the same time as a printed book on paper. I am also indebted to Nathalie Jacobs, our editor at Springer. She strongly motivated me to start this project, provided scanned files of the first edition, and also provided very fair conditions to IUTAM. I know Nathalie for many years and from several joint projects and it is always a great pleasure to cooperate with her and Springer and to experience her enthusiasm and great professional abilities.

Despite all efforts and all proofreading there are certainly still some mistakes remaining in this book. Please send me all corrections by email to peter.eberhard@itm.uni-stuttgart.de or by regular mail. An erratum or updates will be provided at www.itm.uni-stuttgart.de/iutam-book-2016 and every advice and all comments are highly welcome.

It is the hope of all authors that this book might be a valuable source of information for everybody interested in the history of mechanics and especially of IUTAM. It is a characteristic of IUTAM that it preserves important traditions while at the same time it adjusts to new challenges and modernizes its structures and processes. IUTAM's history will go on and it will be highly interesting to see what

the future will bring. We are deeply convinced that mechanics will always be one of the most important foundations of engineering while also being at the forefront of advanced developments. Hopefully, in the future somebody will accept the duty to update again this book and I am looking forward to reading then about all developments which are by now still far in the future.

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Peter Eberhard



Photo: Book presentation by S. Juhasz (Grenoble 1988)

IUTAM

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