

Oliver Romberg
Nikolaus Hinrichs

Don't Panic with Mechanics!

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**Fun and success in the "loser discipline"
of engineering studies!**

Translated by Joe Steen, Jennifer L. Jenkins
and Carola Kasperek



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Foreword (no one reads it anyway)

While writing the book, we, the authors, met regularly in Hannover's bar scene for the purpose of discussing mechanics, for brainstorming and especially for other reasons. The most fundamental part was: Every evening a new bar. We were able to derive stimulation for a non-academic presentation of mechanics from these work-related meetings, some of which lasted until the wee hours. We would like to express our thanks to each buyer of this book: We hope, by means of the well-deserved profits, to be able at some point to pay the huge number of remaining open bar tabs.

But yet another book about the basics of Technical Mechanics. *Why? This book has been a long time in coming!* In the forewords of "the others", "simple access to mechanics" has been proclaimed as well as "getting rid of academic rigidity" and "giving the reader simple access to the basic ideas of mechanics". What many such authors dream of in their greatest fantasies has become reality in this book! The authors have rigorously eliminated any theoretical blow ups^a. The fact is often disregarded that mechanics is simply the mathematical description and generalization of everyday observations. On the following pages, the fundamentals of mechanics are presented in a manner that makes them understandable for almost everybody. And again, most importantly: ***Reading this book should be fun!*** The examples, supported by a lot of cartoons, help to learn by associations and practical experiences. A similar textbook has not existed before - the terms "Technical Mechanics" and "Fun" have always been contradictory. Here, we would like to organize a quick tour through the "building of mechanics" in the most enjoyable manner possible, one that emphasizes the entire beauty and simplicity of the conceptual construction.

Furthermore, in view of the actual worldwide reorganization of lectures in engineering studies (Bachelor & Master instead of various Diploma, Degrees or Graduates), this book contributes well to the international harmonization of learning. The value of other textbooks is, however, in no way to be diminished here. On the contrary: The reading of more advanced academic books is strongly suggested to anyone who would like to get an idea of the solid foundations of the construction and the lovely arrangement of the details.

^a...which Dr. Hinrichs, regarding the work in question here, often realized with his face contorted in pain.

One more thing needs to be made clear here: We did not develop contexts ourselves in this book. We have simply ripped off the content (as far as mechanics is concerned). The sources listed in the bibliography served as a model. The ideas for the exercises are mostly based on the holdings of the Institute for Mechanics at the University of Hannover. But what is new is... well, you'll see! Another external source had to be used for the translation of the book from the original very successful German edition. This work has been done by the native English speaking engineer Joe Steen as well as by Jennifer L. Jenkins and Carola Kasperek...hey Joe and Mrs. Jenkins, Mrs Kasperek, ...thanks for that!

If some of the readers get the feeling that we, the authors, react in a somewhat allergic manner to one another over the course of the book and try as often as possible to get the best of one another, then... really now,... it's most certainly not meant that way!^{b,c}

And finally, here is a short request: This book is still in an experimental phase. We and the Postal Service always appreciate comments, criticism and suggestions!

Hannover (sometime early in the morning),

Dr. Oliver Romberg

Dr. Nikolaus Hinrichs

^b Dr. Hinrichs would like to expressly emphasize here that despite everything, he finds Dr. Romberg a very sociable, funny short guy.

^c Dr. Romberg regrets that he is not able to exactly return this flattering compliment, but he would like to emphasize that he considers Dr. Hinrichs a ~~boring~~ remarkable scientist.

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