

# Preface

The present book is published to honor the outstanding scientist, the founder of the modern theory of gearing, Prof. Faydor L. Litvin, who celebrated his 100th birthday in 2014. The International Symposium “Theory and Practice of Gearing” was dedicated to this event. It was held during January 21–23, 2014 in Izhevsk, Russia. The idea of organizing this Symposium was supported by the Executive Council of International Federation for the Promotion of Mechanism and Machine Science (IFTToMM). The book comprises results of scientific research which were discussed at the Symposium and supplemented later with new information. The contributors to this book are scientists in the field of the theory and practice of gearing, many of whom were students of Prof. F. Litvin.

The book is prefaced by two contributions dedicated to the work of Prof. Litvin in different periods of his life in Russia and USA. These two papers comprise an almost complete list of his publications within these periods. The greatest part of the contributions touches upon issues of development of the theory of gearing and practice of design, research and contact quality control for different types of gears—helical and asymmetrical cylindrical, worm and spiroid, bevel and hypoid, planetary and composite gears. A number of papers present the development of gear generating methods and methods of designing the applied machine tools. One paper is devoted to the description of a new concept of design process for gearboxes and gearbox systems.

The book will be of interest and advantage to scientists and practical engineers dealing with gear design, research and production and also to young researchers and students interested in new perspective directions of creating and applying the progressive gears and methods of their synthesis and analysis.

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Veniamin Goldfarb

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In Honor of Professor Faydor L. Litvin

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