

Preface



Professor Alexander V. Manzhurov is one of the leading Russian researchers in solid mechanics and applied mathematics, a worldwide authority who has exerted a major influence on research in the areas of *Mechanics of Growing Solids*, *Mechanical Analysis of Additive Manufacturing*, *Contact Mechanics and Tribology*, *Viscoelasticity*, *Creep* and *Integral Equations and their Applications*. This volume of the Advanced Structured Materials Series is dedicated to his sixtieth birthday and contains a selection of research papers written by friends and colleagues from various countries, including China, Germany, India, Russia, South Africa, the UK, and the USA. Some of these papers deal with re-

search fields close to Prof. Manzhurov's scientific activities, while the other ones show new trends in solid mechanics which could be combined with his scientific interests in the future.

Professor Manzhurov was born on 24 May 1957 in Rostov-on-Don, Russia. His scientific carrier is related to different places:

- In 1979 he obtained his diploma (equivalent to M.Sc. degree) in Mechanics (Diploma with Honors) at the Rostov State University, Department of Mechanics and Mathematics, where he studied from 1974 - 1979
- In 1982 he was employed at the Institute for Problems in Mechanics of the Academy of Sciences of the USSR (at present the Ishlinsky Institute for Problems in Mechanics of the Russian Academy of Sciences)
- In 1983 he defends his doctoral thesis (candidate of physico-mathematical sciences) at the Moscow Institute of Electronic Engineering Industry (he was a PhD student at the Kuibyshev Moscow Institute of Civil Engineering from 1979 to 1982)

- In 1993 he defends his second doctoral thesis (doctor of physico-mathematical sciences, equivalent to the DSc degree or doctor habilitatus) at the Institute for Problems in Mechanics of the Russian Academy of Sciences) which was accepted by the Higher Attestation Commission of the Russian Federation
- Since 2014 he is Foreign Member of the National Academy of Sciences of the Republic of Armenia

In 1998 he obtained the certificate of professor in mathematics by the Higher Certification Committee of the Russian Federation.

At the moment he serves as Deputy Director and Head of Department for Modeling in Solid Mechanics at the Ishlinsky Institute for Problems in Mechanics of the Russian Academy of Sciences, as Head of Branch Department of Applied Mathematics at the Bauman Moscow State Technical University, as Professor of Department of Higher Mathematics at the National Research Nuclear University (Moscow Engineering Physics Institute) and as Professor of Department of Higher Mathematics at the Moscow Technological University.

At the same time he is Vice Chairman of the Solid Mechanics Scientific Council of the Russian Academy of Sciences, a member of the Mathematics and Mechanics Expert Council of the Higher Attestation Commission of the Russian Federation, and a member of the Mathematics, Mechanics and Computer Science Expert Council of the Russian Foundation for Basic Research. In addition, he is a member of:

- Russian National Committee on Theoretical and Applied Mechanics (RNCTAM)
- European Mechanics Society (EUROMECH)
- American Society of Mechanical Engineers (ASME)
- American Mathematical Society (AMS)
- Gesellschaft für Angewandte Mathematik und Mechanik (GAMM)
- International Association of Engineers (IAENG)
- Research Board of Advisors of the American Biographical Institute (ABI)
- Editorial Boards of about a dozen scientific journals, including Mechanics of Solids (MTT), Proceedings of National Academy of Sciences of Armenia - Mechanics, Computational Mechanics of Continua and of the scientific website The World of Mathematical Equations (EqWorld)

His main awards

- Russian State Scientific Scholarship for Outstanding Scientists 1997, 2003
- First Competition of the Science Support Foundation, 2001
- Certificate of Honor of the Russian Foundation for Basic Research, 2016
- Certificate of Honor of the Higher Certification Committee of the Ministry of Education and Science of the Russian Federation, 2016

He is an author or co-author of 19 books and textbooks in English, German and Russian including some best-selling handbooks. In addition, he published more than 200 research papers and obtained two inventor's certificates. Selected publications can be find at the end of the preface.

All of these publications, scientific achievements and other contributions have given us great respect for him, and we regard him as a perfect scientist. At the same time,

he is a man of humor. He is a husband, father of three beautiful girls, loves travelling and likes to get new and unexpected impressions. We are grateful to Prof. Manzhirov for his scientific contributions to solid mechanics and applied mathematics, and believe that he will continue to have an impact in research.

We have to thank all contributors for their perfect job. Last but not least, we gratefully acknowledge Dr. Christoph Baumann (Springer Publisher) for support of the book project.

Magdeburg, Moscow,
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60 Selected Publications of Prof. A. V. Manzhirov

Selected Monographs and Textbooks

- N. Kh. Arutyunyan, A. V. Manzhirov, and V. E. Naumov, Contact Problems in Mechanics of Growing Solids [in Russian], Nauka Publishers, Moscow, 1991
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- A. D. Polyanin and A. V. Manzhirov, Handbook of Mathematics for Engineers and Scientists, Chapman & Hall/CRC Press, Boca Raton–London, 2008
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- A. D. Polyanin and A. V. Manzhirov, *Integral Equations. In Two Volumes. Handbook for High School Students. Second Edition, Revised and Expanded* [in Russian]. Urait Publishing House, Moscow, 2017

Selected Papers

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