

New Perspectives and Applications of Modern Control Theory

Julio B. Clempner · Wen Yu
Editors

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In Honor of Alexander S. Poznyak

 Springer

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ISBN 978-3-319-62463-1 ISBN 978-3-319-62464-8 (eBook)
<https://doi.org/10.1007/978-3-319-62464-8>

Library of Congress Control Number: 2017949137

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The registered company is Springer International Publishing AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

To Dr. Alexander S. Poznyak on the occasion of his seventieth birthday. He is an excellent colleague, mentor and friend. We greatly benefited from his persistent advice, criticism, clear-thinking, constant availability, prompt feedback and rigorous standards.

Preface

With enormous pleasure, we bring you this book of Control Theory to honor Prof. Dr. Alexander S. Poznyak. Since Dr. Poznyak turned seventy this year, it is a good occasion to celebrate his accomplishments in control theory. We requested chapters from researches around the world. Dr. Poznyak is a relevant researcher and it is fitting that we are able to bring out this book to honor him.

Dr. Poznyak interest in control theory stated from the beginning in his carrier and he realized important and significant contributions. Dr. Poznyak was graduated from Moscow Physical Technical Institute (MPhTI) in 1970. He earned Ph.D. and Doctor Degrees from the Institute of Control Sciences of Russian Academy of Sciences in 1978 and 1989, respectively. From 1973 to 1993, he served this institute as researcher and leading researcher, and in 1993 he accepted a post of full Professor (actually 3-F) at CINVESTAV of IPN in Mexico. He is Regular Member of Mexican Academy of Sciences and System of National Investigators (SNI-Investigador Nacional Emerito from 2014). During 8 years, he was the Head of the Automatic Control Department. He is the Director of 42 Ph.D. thesis (37 in Mexico). It is impossible to summarize in this shot foreword all of his accomplishments. He has published 10 books, more than 220 papers in scientific journals and numerous papers for national and international conference proceedings. He has delivered several invited speeches at various universities across the world as a well as at many national and international conferences. He also serves as an Associate Editor of diverse scientific journals, member of various national and international scientific committees. He has also served as General Chairman program and Chairman program of numerous scientific international conferences. Dr. Poznyak was contemporary to very important people in the control arena, some of them were among founders of control theory, the others made contributions in its chapters: Ya. Z. Tzypkin, V.A. Yakubovich, V.G. Boltyanski, M.A. Krasnoselskii, V.I. Utkin, R. Sh. Liptser, K. Furuta, V.G. Sragovich, V.L. Kharitonov, G.A. Leonov, A.L. Fradkov, B.T. Polyak, V. Razvan, K. Najim, V.B. Kolmanovski, Yu.B. Shtessel, H. Sira-Ramirez, S.K. Spurgeon, Yu. V. Orlov, A. Levant, A. Polyakov, L.M. Fridman and many others.

Dr. Poznyak personal qualities of commitment, integrity, leadership and initiative leave lasting impression on his colleagues, students and friends, including those who are honouring him with the following chapters. Much of the research presented for the contributors in this book draw extensively too in their colleagueship and friendship over the years with Dr. Poznyak, for which they remain deeply grateful. It is in this spirit that we offer this book in honour of Prof. Dr. Alexander on his seventieth birthday.

We wish Dr. Poznyak the best of health, wealth, happiness, prosperity and success in all his endeavours, and we count on his contributions to control theory for many years to come.

Mexico city, Mexico
May 2017

Dr. Julio B. Clempner
Dr. Wen Yu

Acknowledgements

The act of completing a book is in fact a hard work. However, to be satisfied with the result is still harder. For the success and the completion of this project, we are grateful to many people.

We are most grateful to all the contributors and reviewers for their patience and efficiency with meeting the requirements of a rigorous and time-constrained review process. We are proud to have put together such a collection of chapters of excellent quality and variety in the field of control theory. We believe that this book offers a unique and wonderful glimpse in this classical but lively field of research.

A special gratitude to Alin Cârsteanu and César Solis who helped us in solving editorial and technical problems. We would like to thank the Department of Automatic Control at CINVESTAV-IPN for their continuous support. Julio B. Clempner also would like to acknowledge the financial support of the project 20170245 of the Secretaría de Investigación y Posgrado del Instituto Politécnico Nacional. Finally, to all those who we forget to mention please accept our apologies and thanks.

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