

Preface

The Proceedings of AETA 2015, which you are holding in your hands, consist of selected papers from 10 different but related areas of modern engineering. The modern world is based on vitally important technologies that merge electronics, cybernetics, computer science, telecommunications, and physics together. Since the beginning of our technologies, we have been confronted with numerous technological challenges such as finding the optimal solution to various problems including controlling technologies, power sources construction, robotics, etc. Technological development of these and related areas has had and continues to have a profound impact on our civilization and on our future lifestyle.

Therefore, this proceedings book containing articles of the international conference AETA 2015, edited by Ivan Zelinka (Czech Republic), Vo Hoang Duy (Vietnam), Tran Trong Dao (Vietnam), Hyeung-Sik Choi (Korea), and Mohammed Chadli (France), is a timely volume to be welcomed by the community focused on telecommunication, power control, and optimization as well as the computational science community and beyond.

The book consists of 10 topic areas of selected papers such as telecommunication, power systems, robotics, control system, computer science, and more. Readers can find interesting papers on different topics that reflect the modern approach to interesting problems. All selected papers represent interesting ideas and state-of-the-art overviews.

Participations were carefully selected and reviewed, hence this book certainly is one of the few that discusses the benefits from intersection of those modern and fruitful scientific fields of research. We hope that this book will be an instructional material for senior undergraduates and entry-level graduates. The book can also be a resource material for practitioners who want to apply the discussed topics to solve real-life problems in their challenging applications. The important part of this book is the participation of two keynote speakers from the Russian Federation and Korea.

The decision to organize the AETA conference and to create this book was based on the fact that the technologies mentioned above, their use, and impact on life is an interesting area that is under intensive research from many other branches of

science today. The book contains simplified versions of experiments with the aim to show how, in principle, problems of power systems can be solved.

It is obvious that this book does not encompass all aspects of the discussed topics due to the limited space and time of the conference. Only the main ideas and results of selected papers are reported here. The authors and editors hope that the readers will be inspired to do their own experiments and simulations, based on the information reported in this book, thereby moving beyond the scope of it. For these reasons, we believe that this book will be useful for scientists and engineers working in the above-mentioned fields of research and applications.

At the end we *would like to thank* Ton Duc Thang University (Ho Chi Minh City, Vietnam), VŠB—Technical University (Ostrava, Czech Republic), Korea Maritime and Ocean University (Korea) and CIMEC Lab. (Korea) for their interest and strong support in the AETA conference organization. Also, *many thanks* to Springer publishing company for its highly professional, precise, and quick production process. Without all of this, it would be impossible to organize a successful conference with European and Asian participants.

This conference was supported by the Ton Duc Thang University (Ho Chi Minh City, Vietnam) and VŠB—Technical University (Ostrava, Czech Republic) and by the research groups NAVY (<http://navy.cs.vsb.cz/>) and MERLIN (<http://merlin.tdt.edu.vn/>) and CIMEC Lab.

Vietnam
Vietnam
Czech Republic
Korea
France
September 2015

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AETA 2015: Recent Advances in Electrical Engineering
and Related Sciences

Duy, V.H.; Dao, T.T.; Zelinka, I.; Choi, H.-S.; Chadli, M.
(Eds.)

2016, XIV, 917 p. 584 illus., 174 illus. in color.,

Hardcover

ISBN: 978-3-319-27245-0