Since the beginning of our civilization, the human race has had to confront numerous technological challenges such as finding the optimal solution of various problems including control technologies, power sources construction, and energy distribution, amongst others. These examples encompass both ancient as well as modern technologies like automatic theatre controlled by special programmes in ancient Greece, the first electrical energy distribution network in USA, mechanical, electronical, as well as computational controllers, et cetera. Technology development of those and related areas has had and continues to have a profound impact on our civilization and lifestyle.

The topics discussed in this book are of these mentioned areas and mutually joined into a comprehensive text, which while discussing the specific selected topics, give a deeper insight to the interdisciplinary fusion of those modern and promising areas of emerging technologies. This book discusses the mutual intersection of interesting fields of research, as hybrid renewable energy and energy saving, solar and fuel cells, power systems, chaos and power quality, soft computing, simulators, and software engineering, amongst others. Novel techniques are also discussed in this book, which are able to handle tasks such as control of various technological and energetical systems, optimization by means standard, as well as novel methods. Together with many interesting emerging technologies, a reader will also find in the book various mathematical and algorithmical methods used for proposed technologies including models like fuzzy logic, neural network, evolutionary algorithms, or Hybrid System Optimization.

Therefore, this book titled “Innovation in Power, Control and Optimization: Emerging Energy Technologies,” edited by Pandian Vasant, Nader Barsoum, and Jeffrey Webb, is a timely volume to be welcomed by the community focused on power control and optimization as well as computational intelligence community and beyond. This book is devoted to the studies of common and related subjects in intensive research fields of emerging technologies. For these reasons, I enthusiastically recommend this book to our scientists and engineers working in the above mentioned fields of research and applications.

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Ivan Zelinka (born 1965) is currently working at the Technical University of Ostrava (VSB-TU), Faculty of Electrical Engineering and Computer Science. He graduated consequently at Technical University in Brno (1995 – MSc.), UTB in Zlin (2001 – Ph.D.) and again at Technical University in Brno (2004 – assoc. prof.) and VSB-TU (2010 - professor). Before academic career he was employed as TELECOM technician, computer specialist (HW+SW) and Commercial Bank (computer and LAN supervisor). During his career at UTB he proposed and opened 7 different lectures. He also has been invited for lectures at 7 universities in different EU countries plus role of the keynote speaker at the Global Conference on Power, Control and
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