Foreword

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I am delighted to write the foreword to this book, as its scope and content provide commercial and technical enterprises with the essential ingredients for implementing and managing power and energy systems techniques and management schemes. The recent advances in the power and energy technology, especially in the distribution power systems operation, control, optimization, renewable, energy management through analysis and simulation allowed a potentially enormous market for energy management and conversion. With advances in the latest field of electrical engineering including: operation and control, energy system security, energy efficiency, optimization and renewable energy resources have contributed to the solution of recent energy problems for any nation and the environmental issues. However, now the major challenge is to maintain the high energy efficiency during operation and to explore sustainable energy resources. To deal with the technical challenges, two major areas in power and energy technologies are being identified:

1. Modern Distribution Power System Operation
2. Modern and Smart Distribution Power System Control

This book provides answers to many challenging questions dealing power and energy system optimization. It addresses a variety of issues related to the energy management and the recently developed optimization techniques. This book comprised of 18 chapters divided into two parts as per the information providing according to the above areas. I recommend this book to researchers and practitioners in the field, and for scientists and engineers involved in power system operation and control. I really appreciate the efforts of all the Editors to compile this book. The managing editors, Dr. Baseem Khan & Dr. Hassan Haes Alhelou, and their team have meticulously collected the chapters, reviewed and place them in appropriate way for better in depth understanding. I believe the readers of power and energy system will be benefited from the work presented in this book.

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