

## Preface

The 5<sup>th</sup> KKU International Engineering Conference 2014 (KKU-IENC 2014) was held during March 27-29<sup>th</sup>, 2014, in the City of Khon Kean, Thailand. The conference is held every other year to serve as a venue for academics, researchers, engineers, scientists and workers in various fields of science and technology, to exchange knowledge, ideas, experience and expertise.

All the papers submitted to this conference have been subjected to a rigorous peer-review process based on originality and quality. Of all the papers submitted, 317 papers have been accepted to the conference and published. In this book, we showcase results from researchers in:

- Chapter I: Material Science, Chemical Engineering and Biotechnology
- Chapter II: Building Materials and Technologies in Construction
- Chapter III: Urban Planning and Transportation
- Chapter IV: Environmental Materials, Engineering and Management
- Chapter V: Power and Electrical Engineering, Microelectronics and Communication
- Chapter VI: Energy and Energy Saving Technologies, Thermal Engineering
- Chapter VII: Mechatronics and Control
- Chapter VIII: Computer and Information Technology, Data Processing
- Chapter IX: Agricultural Engineering and Food Technology
- Chapter X: Industrial Engineering

The organizing committee must thank all the reviewers for their diligent comments that help improve manuscripts and every member of the organizing committee for their dedication.

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