

Preface

The present volume *Recent Trends in Intelligent and Emerging System Design* to be published in the Signals and Communication Technology Series of Springer is a compilation of the recent trends in research and development in the related areas.

The book attempts to cover trends in intelligent and emerging system design using a range of tools, including soft-computation. The book intends to include discussion and experimental work in the areas of communication, computation, vision sciences, device design, fabrication, upcoming materials and related process design, etc. Its objective is to provide a glimpse to the reader of the recent trends in research in the areas of intelligent and emerging system design and related areas. The book shall be a valuable compilation of recent research works in these areas. The contents are likely to encourage young science and engineering pass-outs to consider research a viable career option.

The audience of this book is students and researchers who deal with intelligent and emerging system design through mathematical and computational modeling and experimental designs. Specifically, audiences that are broadly involved in the domains of electronics and communication, electrical engineering, mathematics, computer science, other applied informatics domains, and related areas.

The work included in the book broadly covers all areas of Electronics and Communication Engineering and Technology, Soft-computational applications, Human Computer Interaction (HCI) Designs, and Social and Economic Dynamics. Certain works included in the work reflect the current trends in design and development. The works included in the volume has been grouped into Intelligent Applications in Communication, Selected Issues in Biomedical and Social Science, HCI and Bio-inspired System Design, Soft Computing and Hybrid System-based Speech Processing Applications, and Review Chapters on Selected Areas. These groupings constitute five different segments. In Part I, five works covering trends in communication system design have been included. Two works constitute Part II, where contributions related to HCI and bio-inspired designs have been included. In the next part, there are works related to biomedical and social science domains. Here, three works are included. In Part IV, works related to speech processing,

especially that of recognition and synthesis are included. The final part is based on three review papers.

The works of Basab Bijoy Purkayastha et al., Hemashree Bordoloi et al., etc., reflect innovative applications of already known approaches of system design. Works by Jumi Kalita et al. and Deepak Goswami et al. represent applications of soft computing tools for social issues and related dynamics. Some of the familiar human–computer interaction applications are highlighted using speech and gesture recognition-based designs by Pallabi Talukdar et al. and Dharani Mazumdar et al. All papers have been passed through multiple rounds of review, modification, and correction in order to ensure quality in the finally compiled form. The editors expect the compilation will be interesting to read.

The editors are thankful to the contributors, reviewers, Springer, and the series editor for making the compilation possible.

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