

## Preface

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In today's world, Computers, computing techniques and mathematical tools find application in all disciplines of Science and Engineering. A three day international conference on Computational Methods in Engineering and Health Sciences (ICCMEH2014) was organized in order to share the recent advances. This was also an occasion to bring together computational scientists, engineers and medical professionals from various interdisciplinary areas under a common forum. The theme of the conference was broad covering analytical and numerical techniques, and novel applications of computational techniques to solve problems in engineering, health sciences, and other disciplines

Over the last few decades there have been remarkable developments in the computing domain. Faster computers, development of sophisticated software and mathematical tools have enabled us to solve problems that were considered unsolvable. The significant developments in imaging technology like CT Scan, MRI etc. have aided better understanding of certain disease conditions by clinicians. The digital conversion of such scanned images was an enabling feature which helped Engineers to import the image to a computer. Once this was done, the geometry of the image was refined and made available for further analysis and simulation. Today a large group of people work in this interdisciplinary domain of application of engineering principles and technique's in health sciences. The purpose of this interdisciplinary research is to aid the clinicians to understand and take informed decision as when to intervene and perform a particular procedure or not perform it.

This issue of the journal covers a part of the papers that were presented in ICCMEH 2014. The selection of the papers was based on ranking that was given by the Chair and Co-chair of each session. More number of papers were presented in the Engineering sessions rather than in the Health Sciences sessions. In Engineering and Technology, topics that were presented included Computational Fluid Dynamics, Fluid Structure Interaction, Finite Element Analysis, application of these analysis techniques in Biomechanics, Mechanical Engineering, Aeronautical Engineering and Material Science. In the Health Science discipline the topics that are presented were from Dental Science, Biotechnology, Molecular Physics, Orthopaedics and Biomechanics of blood flow and nasal flows.

The quality of papers presented in the conference and recommended for publication in this journal was ensured by putting each full paper through a plagiarism check. A double blind review process was then followed for the content. A third reviewers help was used when there was a difference of opinion expressed by the two reviewers.

Many people have contributed to the conference by submitting papers, organizing the conference and in the review process for screening the papers published in this journal. The publishers and editor of Journal of Computational Methods in Sciences and Engineering (JCMSE) have supported the organizing committee in realizing the outcome in the form of published papers. On behalf of the organizing committee I thank each and every one who helped us in meeting the objectives that we started with.

It is hoped that the papers published in this journal will contribute significantly to the literature in Computational Method in Engineering and Health sciences. Since this is in an interdisciplinary area, I hope this will be useful to Scientists and Engineers working in diverse disciplines.

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**Guest Editor:**

Dr. Raghuvir Pai,  
Department of Mechanical and Manufacturing Engineering,  
Manipal Institute of Technology,  
Manipal University, Manipal, India  
E-mail: raghuvir.pai@manipal.edu

**Associate Editors:**

Dr. Satish Shenoy  
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Manipal Institute of Technology,  
Manipal University, Manipal, India

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