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## Introduction

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**Biographical notes:** N. Shankar Ganesh is a Professor from the Department of Mechanical Engineering at the Kingston Engineering College, Vellore, Tamil Nadu, India. He received his MTech in Energy Systems Engineering and PhD in Power Generation Cycles from the Vellore Institute of Technology in 2002 and 2014. He has published more than 40 research papers in various reputed international and national journals as well as conference proceedings. He has contributed one book and two book chapters. He has also published a patent on a thermodynamic cycle-based power generation system. His research areas include processes simulations for advanced combined cycle power plants, modelling of heat recovery steam generators, and solar thermal power technology. He is currently developing cogeneration system with his research scholars.

N. Keerthivarman is an Assistant Professor from the Department of Mechanical Engineering at the Kingston Engineering College, Vellore, Tamil Nadu, India. He received his BE and ME in Mechanical and Thermal Power Engineering from the SKP Engineering College and Annamalai University in 2007 and 2013, respectively. He has taught a number of subjects on thermal science over years as well as more general engineering subjects. His main area of interest is the study of thermal sciences includes advanced thermodynamics, heat and mass transfer, gas dynamics and jet propulsion, power plant engineering and thermal engineering.

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Mechanical engineering is one of the major activities in the engineering profession and its principles are involved in the design, study, development and construction of nearly all of the physical devices and systems. The field of virtual engineering has gained significance in recent years with the availability of numerical procedures and software developed to support designers and analysts.

The use of more and more realistic digital mock-ups increases designer productivity and allows detailed evaluation of the design choices at an early stage. With the development of science and technology, the demands on the performance of mechanical products are higher and the machines are more complex than ever. The proposed subject of the special issue will covers the major specific areas in mechanical engineering not confined to a smaller objective. The special issue is intended to provide a common platform for the conglomeration of researchers, academicians, industrial experts and students to develop and share innovative technologies in the field of mechanical engineering. Review the existing knowledge of thermal, energy, manufacturing, design, etc. disseminate latest findings for better use of the modern techniques. This volume will

incorporate a representation of virtually every field that surrounds the use of developing technologies in diverse fields. This issue will be distinguished from others in its integrative nature. The issue will carry revised and substantially extended versions of selected papers presented at 1st International Conference on Recent Advances in Mechanical Engineering (ICRAME 2017).