Editorial

C. Ramesh Kumar*

Automotive Research Centre,
Vellore Institute of Technology,
Vellore, 632014, India
Email: crameshkumar@vit.ac.in
*Corresponding author

Nalim Razi

Perdue School of Engineering and Technology,
IUPUI,
Indiana 46202, USA
Email: mnalim@iupui.edu

R. Vasudevan

School of Mechanical Engineering,
Vellore Institute of Technology,
Vellore, 632014, India
Email: vasudevan.r@vit.ac.in

Biographical notes: C. Ramesh Kumar has around 19 years of combined industry and teaching experience. He started his carrier as a service engineer, servicing large diesel engines used in off-road applications. He is with Vellore Institute of Technology for the past 15 years. Presently he is heading Automotive Research Centre of School of Mechanical Engineering, VIT, Vellore. His interests include internal combustion engines, thermal systems and battery thermal management system. He has published around 40 research papers in international journals. He has completed six consultancy projects from various Indian funding agencies and industries. He has guided three PhD scholars and one MS by Research Scholar at VIT. At present, he is guiding four PhD scholars. He is a member of Institute of Engineers, India and SAE.

Nalim Razi has worked in combustion engines and non-steady flow related areas in industry, academia, and government. His career began in IC engine emissions control, cogeneration systems, and engine testing. After his doctorate, he was a member of the wave rotor research team at the NASA Glenn Research Center, where he initiated constant-volume combustion research for gas turbine enhancement. He has several patents for non-steady wave devices, and has established a pioneering research program in non-steady flow and combustion processes. He has led a consortium of university and industry researchers to investigate constant-volume wave rotor combustors for gas turbines, in partnership with Rolls-Royce Corporation.

R. Vasudevan is a Professor and Dean of Mechanical Engineering, and Director of Centre for Innovative Manufacturing Research at VIT, Vellore. He has more than 20 years of combined research and teaching experience in India and Canada. His research focuses on problems in vehicle dynamics, mechanics of composite structures, active and semi-active vibration control, structural health monitoring, with applications in aerospace and automotive industries. He has published around 60 research articles in reputed international journals. He has finished four R&D projects sponsored by AR&DB, VRDE, SERB and one consultancy project and currently he is working on five research projects sponsored by various national and international funding agencies

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Over the past few decades the development of IC engines was driven by stringent regulatory norms of the country. Regulatory bodies expect automotive manufacturers to design fuel efficient vehicles that pollute less without compromising the vehicle cost and performance. Even more stringent future regulatory norms may open up alternatives to conventional engine powered vehicles. ICPAT-2019 highlighted new technologies to address evolving safety and environmental challenges in automotive domain. The conference was jointly organised by VIT, Vellore, India and IUPUI, Indiana, USA. The three-day conference provided a platform for the researchers and industrial experts to exchange their knowledge. The papers presented in the conference represent efforts taken by the research community towards future mobility. This special issue consist of six selected papers that were presented in ICPAT-2019 covering the experimental outcomes in the area of alternate fuels (both for CI and SI engines), exhaust gas after treatment, hydrogen storage and a review on automotive air conditioning system. We would like to express our appreciation to the authors who have made contributions to this issue.