Introduction

P. Balasubramaniam

Department of Mathematics,
Gandhigram Rural Institute (Deemed to be University),
Gandhigram – 624302, Tamil Nadu, India
Email: balugru@gmail.com

Kuru Ratnavelu

Institute of Computer Science & Digital Innovation,
UCSI University,
Kuala Lumpur, 56000, Malaysia
Email: Kurunathan@ucsiuniversity.edu.my

Fathalla A. Rihan

Department of Mathematical Sciences,
College of Science,
United Arab Emirates University,
P.O. Box 15551, Al Ain, UAE
Email: frihan@uaeu.ac.ae

P. Muthukumar

Department of Mathematics,
Gandhigram Rural Institute (Deemed to be University),
Gandhigram – 624302, Tamil Nadu, India
Email: pmuthukumargri@gmail.com

Biographical notes: P. Balasubramaniam is Professor of Mathematics, Gandhigram Rural Institute (GRI), Tamilnadu, India, since 2006. He received his PhD in Mathematics from Bharathiar University, Tamilnadu, India, in 1994. He was Visiting Professor of University of Malaya, Malaysia, during 2011 to 2012 and Pusan National University, South-Korea during 2001 and 2006. His research interest includes control theory, stochastic fractional systems, soft computing, stability analysis, cryptography, neural-networks, image processing. He received the Mid-Career Award by the UGC, Government of India in 2019, and is recognised among the top 2% scientists in India listed in artificial intelligence and image processing by Stanford University, USA, 2020.

Kuru Ratnavelu is Director, Institute of Computer Science and Digital Innovations, UCSI University, Malaysia. He served as Deputy-Dean, Science and Deputy Vice-Chancellor (Development), and Head of UM Strategic Planning Unit, University of Malaya. He involved in the HIR Program, University of Malaya. He received his PhD in Atomic Physics from Flinders University, Australia, with Flinders Scholarship in 1990. He is a Council Member of the Association of Asia-Pacific Physical Societies (2016–2019,

2020–2023). He received 19th Fellow of Persatuan-Sains-Matematik Malaysia (2018) and the Malaysian Toray Science Foundation Science and Technology Award (2004). His research interest is theoretical atomic collision processes.

Fathalla A. Rihan is Professor in the Department of Mathematical Sciences,UAE University. He received his PhD degree in 2000 from the School of Mathematics, The University of Manchester (UK). His research interests include numerical analysis; mathematical biology; and quantitative analysis of delay differential equations. He published a considerable number of research articles in highly impacted journals. He is in the Editorial Board of international journals and reviewer for American Mathematical Society. He was among the top 2% of researchers classified by Stanford University for 2019–2020. He is an expert in quality assurance and accreditation of higher education institutes.

P. Muthukumar received his PhD in Mathematics GRI on 2009. He was a Visiting Faculty in Kunsan National University, South-Korea during 2018 and The University of Texas at Arlington Research Institute, Texas, USA during 2012. Since 2010, he has been an Assistant Professor of Mathematics, GRI. He served as a Resource Person in 10-day In-Service Teachers Training programme during 2009, at Kandy, Sri Lanka. His current research interests include control theory, stochastic differential systems, and nonlinear control and its applications. He was the recipient of IUSSTF Research Fellow-2012 from DST, UGC-SAP Project Fellow-2005 and the CSIR-SRF-2009 awards from Indian Government.

Mathematical modelling is an activity by which a problem involving the real world is translated into Mathematics to form a model, which can then be used to provide information about the original real problem. Computing techniques, also known as scientific computing or scientific computation, is a rapidly growing field that uses advanced computing capabilities to understand and solve complex problems. It is an area of science that spans many disciplines, but at its core, it involves the development of models and simulations to understand natural systems.

Dynamical systems and mathematical modelling are promising, hot areas of current research and development, which can provide significant advantages to users. It also plays a vital role in Mathematics as far as applications are concerned. Almost all mathematicians, industrialists, scientists, engineers, and researchers in science disciplines apply mathematical modelling and computing techniques. Many new concepts, methods, and algorithms have emerged frequently with many real-life applications in the past few decades.

Owing to these facts, the Department of Mathematics of The Gandhigram Rural Institute (Deemed to be University), Gandhigram, Dindigul, Tamil Nadu, India, has organised an International Conference on Dynamical Systems, Mathematical Modelling and Computing Techniques (ICDSMMCT 2019) held during 14–16 February, 2019. ICDSMMCT 2019 is intended to provide a common forum for researchers, scientists, engineers, and practitioners throughout the world to share their ideas, latest research findings, developments, and applications, including their links to dynamical systems, mathematical modelling, computing techniques, information sciences, and so forth. This conference is a refereed conference emphasising different mathematical modelling,

computing techniques, and their science and engineering applications. It will focus on developing dynamical systems, analysis, and applications from theoretical and numerical perspectives involving different applied sciences and engineering.

Based on the scientific committee's reviews that composed of many field experts from all over the world, we accepted only 44 papers for presentation at ICDSMMCT 2019. After that all the papers were submitted for the peer-review process. Out of 44 of selected and presented papers, we shortlisted very few papers with original research contributions for publication in the special issue of the journal IJDSDE.