



Guest Editorial

Special Issue: Selected Papers From 2021 IDETC-CIE MSND Conference

It is with great pleasure that we bring to the readership of the ASME *Journal of Computational and Nonlinear Dynamics* (JCND) a special issue dedicated to select papers from the 17th International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC), held during the ASME International Design Engineering Technical Conferences and Computers and Information in Engineering (IDETC-CIE) Conferences (Online, Virtual) on Aug. 17–20, 2021.

MSNDC is a premier meeting event for professional networking and research exchange across the multibody systems and nonlinear dynamics technical community and provides an international venue where our colleagues present an early glimpse into their highest-quality research. To adapt to the COVID-19 global situation, the 17th MSNDC conference was held virtually so that scholars, experts, and students around the world could still disseminate their latest research during the pandemic.

We strongly believe that this JCND special issue will help the MSNDC conference, the JCND journal, and most importantly, the community at large. Indeed, we hope that through the publication of this special issue, the journal's readership will be exposed to some of the conference highlights and reminded of its continued impact over the years. Also, we hope that through appropriate recognition for novel work in the conference, this special issue will attract scholars to participate yet again, or perhaps for the first time, in this annual gathering. JCND also stands to benefit from bringing to its readership a selection of the best papers presented at the conference. The biggest winner, though, is the community at large. First, those who missed the virtual conference will find in this special issue the best papers in this conference. Second, it is appropriate to recognize, through this additional avenue, a group of colleagues who took the time and diligence to present the highest quality recent research and work at the conference.

The selection process started with recommendations made by the conference paper reviewers, which were then down-selected by the MSNDC conference and symposium organizers, before a final set of papers was short-listed by our four-person group. The manuscripts went through a new round of reviews that comply with the standard JCND review process. The twelve manuscripts

that cleared this last hurdle to make up this special issue, covering original research in motion planning and dynamics of robots, nonlinear dynamics of smart structures and systems, modeling of flexible multibody dynamics, vehicle dynamics, machine learning, sensitivity analysis and uncertainty quantification, time-varying and delay systems, lie group methods, computational methods in multibody systems, and nonlinear dynamics. We hope you will enjoy them.

We are indeed very happy to have had the opportunity to organize this special issue. Special thanks to Prof. Bogdan I. Epureanu for giving us this opportunity and to Amy Suski for helping us greatly at every step of the process. It was great working as a team on this special issue and we are excited to bring it to fruition.

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