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Sommario/riassunto	The fundamentals of mechanical system dynamics were established before the beginning of the industrial era. The 18th century was a very important time for science and was characterized by the development of classical mechanics. This development progressed in the 19th century, and new, important applications related to industrialization were found and studied. The development of computers in the 20th century revolutionized mechanical system dynamics owing to the development of numerical simulation. We are now in the presence of the fourth industrial revolution. Mechanical systems are increasingly integrated with electrical, fluidic, and electronic systems, and the industrial environment has become characterized by the cyber-physical systems of industry 4.0. Within this framework, the status-of-the-art has become represented by integrated mechanical systems and supported by accurate dynamic models able to predict their dynamic behavior. Therefore, mechanical systems dynamics will play a central role in forthcoming years. This Special Issue aims to disseminate the latest research findings and ideas in the field of mechanical systems dynamics, with particular emphasis on novel trends and applications.