Various definitions of mechatronics have been developed over time, each of which emphasizes a slightly different origin and aim. One of the most accurate definition of mechatronics is given by Kyura and Oho. Mechatronics is the synergistic integration of mechanical engineering with electronics and intelligent computer control in the design and manufacturing of industrial products and processes. Mechatronics integrates mechanical systems (mechanical elements, components, machines), electronic systems (microelectronics, sensor and actuator technology) and information technology. In this manner, mechatronic systems are a complex integration of extremely advanced technological components able to perform tasks with high accuracy and flexibility. This special issue is devoted to exploit some advancements in the wide field of mechatronics. It cannot be conclusive or exhaustive but would be a stimulus for further research.