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Motion Control of Robotic Systems

Guest Editor:

Dr. Anton A. Zhilenkov
Department of Cyber-Physical Systems, Saint Petersburg State Marine Technical University, St. Petersburg 195000, Russia

Deadline for manuscript submissions:
closed (24 June 2022)

Message from the Guest Editor

Motion control of robotic systems has continued to be a central field of research for many decades. The evolution of the methods used in this area is only being further intensified by the complexity of the problems being solved. Considering industrial manipulation robotic systems with complex kinematics, dynamics and the presence of singularities, soft robotics, new types of grippers, mobile ground, airborne, marine, and dual-medium robotics, as well as bio-inspired robotics, the objects of all these and other classes of robotic systems require the use of known actuators or development of new types of actuators as well as new methods of trajectory planning and the associated motion control. This Special Issue is seeking high-quality publications spanning (but not limited to) the following topics:

- The design of trajectory planning and motion control systems for robotic systems with traditional and novel actuators;
- Motion control in deformable and bio-inspired systems;
- Physically plausible modelling of mechanical systems motion;
- Geometrical control methods;
- Analysis and control on manifolds;
- Trajectory planning and motion control systems based on AI and ML.