

**Subject:** Invited session proposal for SPAC 2021

**Proposed Session Name:** Guidance, Control, and Coordination of Unmanned Marine Vehicles

**Aim and Scope:** During the past decades, unmanned marine vehicles have attracted considerable attention due to their capability of performing various operations with minimal or without human supervision. Because of the salient features of high autonomy and mobility, they are vitally important tools for numerous applications in civilian and military missions. Sophisticated modelling, guidance, control, and coordination methods are highly desirable for future design and development of unmanned marine vehicles. This section aims to provide a chance for researchers and practitioners in the field of marine control to share their latest thoughts and ideas. The topics of this special session include but not limited to the following topics.

- Learning and adaptive control of marine vehicles
- Neural network and fuzzy control of marine vehicles
- Reinforcement learning control of marine vehicles
- Distributed optimization and control of autonomous marine vehicles
- Optimization-based and optimal control of marine vehicles
- Network-based/networked control of marine vehicles
- Fault detection and fault-tolerant control of marine vehicles
- Intelligent model predictive control of marine vehicles
- Disturbance estimation and rejection control of marine vehicles
- Data-driven modelling and control of marine vehicles
- Point stabilization, target tracking, trajectory tracking and path following of marine vehicles
- Guidance control of marine vehicles
- Coordinated control of marine vehicles

Yours sincerely

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