

## Special Session Proposal for the Polish Control Conference 2026

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### **Proposed Session Title: "Navigation and Control of Space Robots"**

### **Abstract:**

This special session is devoted to presenting and discussing ongoing activities related to navigation and control of autonomous space robots operating in orbital or planetary surface environment.

### **Description:**

Robots operating in a remote and harsh environment such as Earth's orbit or surface of another planet, bring many interesting scientific and technical challenges. Among others: the space debris on low Earth orbit problem, locomotion on planetary surfaces, on-orbit assembly of large structures and recently securing of orbital assets – these challenges is an opportunity for researchers to impact on our common world. The special session will create a valuable opportunity to discuss these issues on theoretical and experimental level. Poland is a member of the European Space Agency (ESA) and many Polish space activities are synchronized with broader European programs. Discussion on proposed session may create new possibilities for international cooperation and development.