Special Session
Military Robotics

Description/Scope

Recent events in Eastern Europe made clear to all a trend that has been raising in the last decade: the widespread use of robotics in military applications. The use of advanced technology in a military environment raises many problems from the technical and technical/ethical point of view, but is undoubtedly a fast growing and very technologically advanced area. Military robots are used In peacekeeping (e.g. unmanned surveillance), armed combat (e.g.Unmanned Combat Air Vehicles), and demilitarization (e.g. mine clearing).

Topics (but are not limited to)

- **Autonomous systems for defense**: development and deployment of autonomous systems in military applications encompassing, e.g., unmanned aerial vehicles (UAVs), unmanned ground vehicles (UGVs), and unmanned maritime vehicles (UMVs, UUVs, USVs).
- **Tactical robotics**: application of robotics technologies and systems for tactical purposes, such as surveillance, reconnaissance, and information gathering in military missions and operations.
- **Human-robot teaming in defense**: integrating robotic systems with human operators in operational combat and training scenarios to enhance decision-making, situational awareness, and mission effectiveness.
- **Robotics for hazardous environments**: application of robotic solutions, including explosive ordnance disposal (EOD), chemical, biological, radiological, nuclear (CBRN) operations, or mine clearance.
- **AI-enabled robotics in military missions and operations**: using AI/ML for command and control, decision support, mission planning, or resource allocation to enhance operational effectiveness and efficiency of military robotics applications.
- **Ethical and Legal Considerations**: considerations on ethical, legal, and policy implications concerning the use of robotics in the military domains, addressing topics such as responsibility, accountability, explainability and protecting civilian lives.

Organizers

Co-Organized with the Portuguese Chapter of AFCEA.
Scientific Committee:

- Prof. Victor Lobo, AFCEA, CINAV, and Portuguese Naval Academy
- Prof. José Borges, AFCEA, CINAMIL, and Portuguese Military Academy
- LT.COR. Luis Felix, CIAFA, and Portuguese Air Force Academy
- Geert de Cuber, Royal Military Academy of Belgium