

**RESEARCH TOPICS OF THE
DOCTORAL SCHOOL OF MILITARY ENGINEERING
FOR THE ACADEMIC YEAR 2024/2025**

02. MILITARY TECHNOLOGY AND ROBOTICS

Head of the research area: Dr. Róbert Vég PhD, associate professor

1. Theory and Practice of Research and Development (R&D) in Military Technology, Hungary and NATO

Supervisor: Dr. György Kende DSc

2. Studying chess and its information technology background to find analogies and application possibilities regarding military strategy, battlefield operations, armaments development, decision making, military training and education

Supervisor: Dr. György Kende DSc

3. Analysis of military vehicle hybrid propulsions

Supervisor: Dr. Sándor Hennel PhD

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03. DEFENCE ELECTRONICS, ICT

Head of the research area: Dr. Zsolt Haig PhD, full professor

1. 4. ICT support for Command and Control
Témavezető: Dr. Tibor Farkas PhD

2. 5. Military use of 5G technology
Témavezető: Dr. Tibor Farkas PhD

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04. MILITARY ENVIRONMENTAL SECURITY

Head of the research area: Dr. László Földi PhD, full professor

1. Climate change and military security
Supervisors: Dr. József Padányi, DSc
Dr. László Földi, PhD
2. The relationship between environment and security
Supervisor: Dr. Klára Sipos Kecskeméthy, CSc
3. Methodological developments in river management and regulation
Supervisor: Dr. Enikő Anna Tamás, PhD
4. Modern urban water management
Supervisor: Dr. Tamás Karches, PhD
5. Soil conservation, research of the effects of military activities and environmental damage on the soil, development of prevention options, research of mitigation process
Supervisor: Dr. Dóra Beke, PhD
6. Artificial intelligence in water management
Supervisor: Dr. Péter Kozák, PhD
7. Biodegradation and biodeterioration in the built environment
Supervisor: Dr. Judit Knisz, PhD

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07. DISASTER MANAGEMENT RESEARCH FIELD

Head of the research field: Dr. Lajos Kátai-Urbán PhD, associate professor

1. Research and development of the implementation of the operator's and authorial tasks in the field of industrial safety
Supervisor: Dr. Lajos Kátai-Urbán PhD
2. Tactical possibilities and set of special equipment for managing disasters
Supervisor: Dr. Ágoston Restás PhD
3. Development of the system of procedures and tools aiming the increasing of industrial safety
Supervisor: Dr. Gyula Vass PhD
4. Research and development of the efficiency of disaster management and fire protection activities and equipment
Supervisor: Dr. Péter Pántya PhD
5. Research and development of modern tools and methods for reducing the environmental impact of industrial accidents and their elimination in the presence of dangerous substances
Supervisor: Dr. József Dobor PhD
6. Investigation of environmental aspects of industrial accidents
Supervisor: Dr. Zsolt Cimer PhD
7. Research and Development of Technical and Logistical Conditions for the Operation of Voluntary and Obligatory Civil Protection Organizations
Supervisor: Dr. István Endrődi PhD
Co-supervisor: Dr. László Teknős PhD

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08. AIR TRANSPORT AND AERONAUTICS RESEARCH FIELD

Head of the research field: Mátyás Palik PhD, associate professor

1. Drone applications supporting public service
Supervisor: Dr. Ágoston Restás PhD
2. Preliminary Computer Aided Design of the UAV Automatic Flight Control System
Supervisor: Dr. Róbert Szabolcsi PhD
3. Human Factors in flight safety, causes of sudden incapacitation and human error from the aspects of Human-System Integration, possible countermeasures and prevention by tools of ergonomics and technical-technological solutions
Supervisor: Dr. Sándor András Szabó PhD
4. The maintenance, economic and environmental issues of the engines built in aircraft of Hungarian Defence Forces
Supervisor: Dr. Béla Varga PhD