

Conf.dr.ing. Roxana Rusu-Both

Nr.crt.	Titlu lucrare	Scurta descriere	Cerinte	Nivel (licenta/master)
1	Image Data Augmentation for Machine Learning – in collaboration with Bosch	Image Processing. Data augmentation techniques implementation. Control system development. Testing and Validation	Image processing, Data Augmentation techniques, Machine Learning, Programming	Licenta
2-4	Industrial process control – in collaboration with Emerson	Process modeling and identification. Control system design and implementation. Testing and Validation	Control engineering, DeltaV	Licenta si Master
5	Control solutions for Self-balancing motorcycle	Experimental set-up design and implementation. Process modeling and identification. Control system design and implementation. Testing and Validation	Control engineering, mathematics, electronics, programming	Licenta
6	Computer aided diagnosis system for lung cancer – in collaboration with UMF	Medical Criteria evaluation algorithm development. Diagnosis system development. Testing and Validation	Image processing, Machine Learning, Programming	Licenta si Master
7-8	Computer aided system for identification of metastatic lymph nodes – in collaboration with UMF	Medical Criteria evaluation algorithm development. Diagnosis system development. Testing and Validation	Image processing, Machine Learning, Programming	Licenta si Master
9-10	EEG Signal Analysis for Disease Diagnosis	EEG data acquisition. Feature extraction. Diagnosis system development. Testing and Validation	Data acquisition, Signal Processing, Machine Learning, Programming	Licenta si Master
11-12	EEG Signal Processing Methods for Brain Controlled Robots	EEG data acquisition. Feature extraction. Diagnosis system development. Testing and	Data acquisition, Signal Processing, Machine Learning, Programming	Licenta si Master

		Validation		
13	EMG Signal Processing for prostetic control	EMG data aquisition. Feature extraction. Constrol system design and implementation. Testing and Validation	Data aquisition, Signal Processing, Machine Learning, Programming	Licenta
14-15	Assistive autonomous robots	Various topics for autonomous robots that assist disabled persons. Experimental set-up design and implementation. Control system design and implementation. Testing and Validation.	Control engineering, mathematics, electronics, programming	Licenta
16	Automation robot for class scheduling application	Design and implementation of automation robots for class scheduling application.	Machine Learning, Programming	Licenta
17	Automation solutions for Smart Homes	Various topics for user centric Smart home systems. Experimental set-up design and implementation. Control system design and implementation. Testing and Validation.	Electronics, Control engineering, Programming	Licenta