



# THE 11<sup>TH</sup> ANNUAL WUT-KNU JOINT RESEARCH WORKSHOP

WARSAW UNIVERSITY OF TECHNOLOGY

FACULTY OF ELECTRONICS AND INFORMATION TECHNOLOGY

THE FACULTY CONFERENCE MAIN HALL, WARSAW, JUNE 13, 2019



8H15	REGISTRATION AND MORNING TEA
9H00	<b>Workshop Welcome</b> - Prof. Krzysztof Zaremba, Dean, Faculty of Electronics and Information Technology (FEIT), WUT - Prof. You-Ze Cho, Dean, College of IT Engineering (CITE), KNU - VP Youngmin Lee, Managing Director, Samsung Electronics R&D Institute Poland
<b>MORNING SESSION 1 CHAIR: Prof. You-Ze Cho</b>	
9H15	<b>"Monochrome CMOS Image Sensor with Offset Pixel Apertures for Depth Extraction"</b> Prof. Jang-Kyoo Shin, School of Electronics Engineering, CITE
	<b>"On-line Visual Pattern Acquisition, Modeling and Search in Images and Video"</b> Prof. Włodzimierz Kasprzak, Dr. Artur Wilkowski, Maciej Stefańczyk MEngSc, Paweł Piwowarski MEngSc, Institute of Control and Computation Engineering, FEIT
	<b>"An Indoor Positioning Using IMU Sensor"</b> Prof. Dong Seog Han, School of Electronics Engineering, CITE
	<b>"Ink Jet Printed Humidity Sensors"</b> Michał Marzęcki MEngSc, Institute of Telecommunications, FEIT
	<b>"Optimization of Ultra-thin Magnetron Sputtered Conductive Films"</b> Prof. Robert Mroczyski, Institute of Microelectronics and Optoelectronics, FEIT
	<b>"Innovating Consumer Electronics with AI: Academia and Industry Collaboration"</b> VP Adam Roś, Samsung Electronics R&D Institute Poland
COFFEE BREAK	
<b>MORNING SESSION 2 CHAIR: Prof. Krzysztof Zaremba</b>	
11H00	<b>"Intelligent Interactive Technology Based on Deep Learning with Context Understanding"</b> Prof. Minh Lee, School of Electronics Engineering, CITE
	<b>"Efficient Methods for Reinforcement Learning and Parameterless On-line Learning in Neural Networks"</b> Prof. Paweł Wawrzyński, Institute of Computer Science, FEIT
	<b>"Machine Learning Models and Feature Engineering for Predicting Customer Decision"</b> Prof. Robert Nowak, Institute of Computer Science, FEIT
	<b>"Heuristic Hyperparameter Optimization for Multilayer Perceptron with One Hidden Layer"</b> Łukasz Neumann MEngSc, Institute of Computer Science, CITE
	<b>"Evolutionary Algorithms"</b> Dr. Rafał Biedrzycki, Institute of Computer Science, FEIT
NETWORKING LUNCH	

<b>AFTERNOON SESSION 1 CHAIR: Prof. Jang-Kyoo Shin</b>	
13H45	<b><i>"Multi-Dimensional Modeling and Automated Learning for Surgical Robotics Applications"</i></b> Prof. Kalyana C. VELUVOLU, School of Electronics Engineering, CITE
	<b><i>"General Robotic System Controller Design Methodology"</i></b> Prof. Cezary Zieliński, Institute of Control and Computation Engineering, FEIT
	<b><i>"Implementation of OpenGL SC 2.0 Compliant Graphics Drivers"</i></b> Prof. Nakhoon Baek, School of Computer Science and Engineering, CITE
	<b><i>"Content Classification of Hyperspectral Images"</i></b> Dr. Łukasz Dąbała, Dr. Marcin Lewandowski, Prof. Przemysław Rokita, Institute of Computer Science, FEIT
	<b><i>"Architecture Exploration of Monolithic 3D Integration for High-Performance and Energy-efficient Processor Caches"</i></b> Prof. Joonho Kong, School of Electronics Engineering, CITE
	<b><i>"Analysis of I-V Characteristics of Forward-biased GaN Schottky Diodes at Reduced Temperatures"</i></b> Prof. Lidia Łukasiak, Dr. Jakub Jasiński, Dr. Piotr Kruszewski, Dr. Paweł Prystawko, Institute of Microelectronics and Optoelectronics, FEIT
COFFEE BREAK	
<b>AFTERNOON SESSION 2 CHAIR: Prof. Piotr Tatjewski</b>	
15H45	<b><i>"Detecting and Avoiding Dangerous Area for UAVs Using Public Big Data"</i></b> Prof. Sung-Ho Kim, School of Computer Science and Engineering, CITE
	<b><i>"Concept and Meaning of Parallel Processing for Big Data"</i></b> Prof. Marcin Kowalczyk, Institute of Telecommunications, FEIT
	<b><i>"Clustering-based Optimization Method of Reference Set Selection for Improved CNV Callers Performance"</i></b> Wiktor Kuśmirek MEngSc, Institute of Computer Science, FEIT
	<b><i>"Differential Evolution Strategy"</i></b> Dariusz Jagodziński MEngSc, Institute of Computer Science, FEIT
	<b><i>"Searching for Ultra-wideband Microwave and Millimeter-wave Planar Components"</i></b> Prof. Kang Wook Kim, School of Electronics Engineering, CITE
	<b><i>"Application of Microwave Measurements to Soil Moisture Content and Salinity Characterization"</i></b> Dr. Arkadiusz Lewandowski, Institute of Electronic Systems, FEIT
	<b><i>"InGaAs Nanoelectronics: From Logic to THz"</i></b> Prof. Dae-Hyun Kim, School of Electronics Engineering, CITE
	<b><i>"Simultaneous Monitoring of the Phenomena of Chromatic Dispersion, Crosstalk and ASE Noise in the Physical Layer of the Optical Network as an Example of an Expert System Using a Deep Learning Algorithm"</i></b> Tomasz Mrozek MEngSc, Institute of Telecommunications, FEIT
18H20	<b><i>Closing Remarks</i></b>
19H00	NETWORKING DINNER