9th International Workshop on Image Mining. Theory and Applications (IMTA-IX-2024)

December 1, 2024 – Sunday, UTC + 5.5

ZOOM link https://us02web.zoom.us/j/82069079670?pwd=1VT2qCWHMTG5bEaPIFWEcapQrJykoS.1
Meeting ID: 820 6907 9670
Access code: 852633

8:00-9:00		**Registration**
9:00-9:15		**Workshop Opening**
9:15-9:30	**ID6**	Ashi Agarwal*, Seba Susan **Two-Way Transfer Learning using Mobile-Dense Network for Occluded Face Emotion Recognition: A Soft Decision Fusion Approach** *Department of Information Technology, Delhi Technological University, Delhi, 110042, India*
9:30-9:45	**ID18**	Najla AL-Qawasmeh*, Ching Y. Suen **A Comprehensive Approach to Handwriting Analysis for Alzheimer's Detection** *Department of Computer Science and Software Engineering Concordia University, Montreal, Canada*
9:45-10:00	**ID20**	Maedeh Safar*, Ching Y. Suen **Revealing Personality Through Handwriting: A Fusion of Graphology and Machine Learning Techniques** *Concordia University, Montreal QC H3G 1M8, Canada*
10:00–10:15	**ID2**	Yan Xu*****, Yufang Tang, and Ching Y. Suen **Optimizing Granularity for Enhanced Handwriting Analysis** *Concordia University, Montreal, Quebec H3G 1M8, Canada* *Shandong Normal University, Jinan, Shandong, China 250014*
10:15-10:30	**ID8**	Yuzhong Huang*, Fred Morstattera **OrientDream: Streamlining Text-to-3D Generation with Explicit Orientation Control** *Information Science Institute, University of Southern California, 4676 Admiralty Way, Marina del Rey, CA 90292, USA*
10:30-10:45	**ID26**	Jayasree Thazhath Veedua, Rajesh Reghunadhana* **Multi-source Data Fusion for Flood Classification Using SAR Images with ESA World Cover Map and Global Surface Water Probability** *Department of Computer Science, Central University of Kerala, Periya, Kasaragod, Kerala, India, 671320*
10:45-11:00	**ID39**	Aman Verma*, Deva Satya Sriram Chintapenta, Saikat Majumder **Towards Reconstruction of Pulsed-wave Doppler Signals from Non-invasive Fetal ECG** *Department of Electronics and Communication Engineering, National Institute of Technology Raipur, India, 492001*
11:00-11:30		Coffee-break
11:30-11:45	**ID45**	Igor Gurevich, Vera Yashina* **Multialgorithmic Hierarchical Image Analysis System. Standard Scenarios** *Federal Research Center Computer Science and Control, Russian Academy of Sciences, Building 2, 44, Vavilov str., Moscow, 119333, Russian Federation*

11:45-12:00	**ID15**	Igor Gurevich, Adil Tleubaev*, Vera Yashina **The Interface of an Algorithmic Software Package for Automating the Analysis of Ophthalmic Images in Remote Mode. Version 2.1** *Federal Research Center Computer Science and Control, Russian Academy of Sciences, Building 2, 44, Vavilov str., Moscow, 119333, Russian Federation*
12:00-12:15	**ID27**	Artyom Firstkov* **A Deep Learning Approach to Antigenic Modelling for Rapidly Mutating Viruses** *N.N. Krasovskii Institute of Mathematics and Mechanics of the Ural Branch of the Russian Academy of Sciences, 16 S.Kovalevskaya Str., Yekaterinburg, 620108, Russian Federation* *Ural Federal University named after the first President of Russia B.N. Yeltsin, 620062 Yekaterinburg, Russian Federation*
12:15-12:30	**ID35**	Nikita Andriyanov*, Vitaly Dementiev **Using Image Captioning for Prompting Large Language Models** *Ulyanovsk State Technical University, Ulyanovsk, Russian Federation*
12:30-12:45	**ID37**	Vitaly Dementiev, Nikita Andriyanov***** **Effective processing of satellite images for estimating vegetation index** *Ulyanovsk State Technical University, Ulyanovsk, Russian Federation*
12:45-12:55	**ID38**	Natalya Ilyasova, Alisa Selezneva*, Nikita Demin, Aleksandr Kapishnikov, Evgeniy Surovcev **Algorithm for Evaluating Morphological Features of Magnetic Resonance Images of Primary Extra-axial Brain Tumors for their Differential Diagnosis** *IPSI, NRC "Kurchatov Institute", 151 Molodogvardeyskaya, Samara 443001, Russian Federation* *Samara National Research University, 34 Moskovskoye Shosse, Samara 443086, Russian Federation* *Samara State Medical University, 89 Chapaevskaya st., Samara 443099, Russian Federation*
12:55-13:05	**ID40**	Natalya Ilyasova, Kamil Tadzhitdinov*, Nikita Demin, Valeria Pavlova, Eduard Alekhin **Algorithm for Evaluating the Geometric Features of Vertebral Bodies Using Computed Tomography Data for the Diagnosis of Osteoporosis** *Samara National Research University, 34 Moskovskoye Shosse, Samara 443086, Russian Federation* *IPSI, NRC "Kurchatov Institute", 151 Molodogvardeyskaya, Samara 443001, Russian Federation* *Tyumen State Medical University, 54 Odesskaya, Tyumen 625023, Russian Federation*
13:05-13:15	**ID41**	Natalya Ilyasova, Nikita Demin*, Kamil Tadzhitdinov, Valeria Pavlova, Eduard Alekhin **Information Technology for Evaluating Changes of the Structure of Vertebral Bodies Using Computed Tomography Data to Determine the Degree of Vertebral Deformity in Patients with Osteoporosis.** *Samara National Research University, 34 Moskovskoye Shosse, Samara 443086, Russian Federation* *IPSI, NRC "Kurchatov Institute", 151 Molodogvardeyskaya, Samara 443001, Russian Federation* *Tyumen State Medical University, 54 Odesskaya, Tyumen 625023, Russian Federation*
13:15-13:30	**ID17**	Giacomo Ignesti*, Massimo Martinelli, Davide Moroni **You've Got the Wrong Outfit: Evaluating Deep Learning Paradigms on Digit and Fashion Recognition**

		University of Pisa, Pisa, 5123, Italy, *Institute of Information Science and Technologies, National Research Council, Pisa, 51264, Italy*
13:30-14:30		Lunch
14:30-15:00	**K**	Associate Professor PhD. Stefania Sardellitti **Topological Signal Processing over Cell Complex Spaces** *Faculty of Engineering in Computer Science, Universitas Mercatorum, University of Italian Chambers of Commerce, Rome*
15:00-15:15	**ID19**	Oscar Papini*, Enrico Cecapolli, Filippo Domenichetti, Michela Martinelli, Gabriele Pieri, Marco Reggiannini, Lorenzo Zacchetti **Machine Learning Approaches for Automated Detection of Nephrops norvegicus Burrows in Underwater Surveys** *Institute of Information Science and Technologies (ISTI), National Research Council of Italy, 56124 Pisa, Italy* *Institute for Marine Biological Resources and Biotechnology (IRBIM), National Research Council of Italy, 60125 Ancona, Italy* *Department of Biological, Geological, and Environmental Sciences (BiGeA), Alma Mater Studiorum – University of Bologna, 40126 Bologna, Italy*
15:15-15:30	**ID44**	Viacheslav Antsiperov **An Image Contour Detection Method Inspired by Marr's Computer Vision Paradigm** *Kotelnikov Institute of Radioengineering and Electronics of RAS, Mokhovaya 11-7, Moscow, 125009, Russian Federation*
15:30-15:45	**ID13**	Sergey Eremeev **Study of Image Component Properties after Topological Decomposition Using Matrix Algebra** *Murom Institute (Branch) of Vladimir State University, 23, Orlovskaya st., Murom, 602264, Russian Federation*
15:45-16:00	**ID36**	Sergey Eremeev **Topological Data Analysis for Detecting Regular Structures in an Image** *Murom Institute (Branch) of Vladimir State University, 23, Orlovskaya st., Murom, 602264, Russian Federation*
16:00-16:15	**ID9**	Ludmila Manilo, Anatoly Nemirko, Ekaterina Evdakova* **Approaches to Classify Ventricular Arrhythmias: Classical Methods and Neural Networks** *St. Petersburg Electrotechnical University "LETI", St. Petersburg, 197376, Russian Federation*
16:15-16:30	**ID23**	Daniil Matalov*, Sergey Usilin, Vladimir V. Arlazarov **Edge Computing Approach for Real-Time Event Detection in Special Facilities Following Local Features Analysis** *Federal Research Center "Computer Science and Control" of Russian Academy of Sciences, Moscow, Russian Federation*
16:30-16:45	**ID34**	Arseniy K. Mokin*, Alexander V. Gayer, Anastasia S. Ingacheva, Alexander V. Sheshkus and Vladimir V. Arlazarov ***BPCS: Multi-view Bus Passenger Counting System*** *Lomonosov Moscow State University, Moscow, Russia* *Federal Research Center "Computer Science and Control" of RAS, Moscow, Russia* *Institute for Information Transmission Problems, Russian Academy of Sciences, Moscow, Russian Federation*
16:45-17:00	**ID21**	Evgeny Myasnikov **Generation of Compact Representations of Hyperspectral Images Using Neural Network and Spectral Features**

		Samara National Research University, 34, Moskovskoye shosse, Samara, 443086, Russian Federation
17:00-17:15	**ID5**	Aleksei Samarin*, Aleksei Toropov, Alexander Savelev, Aleksandra Dozortseva, Alexander Motyko, Egor Kotenko, Artem Nazarenko, Alina Dzestelova, Elena Mikhailova, Valentin Malykh **Filter-based Preprocessing Neural Network Model for Microorganism Detection Improvement** *ITMO University, St. Petersburg, 197101 Russian Federation* *b St. Petersburg Electrotechnical University "LETI", St. Petersburg, 197022 Russian Federation* *c St. Petersburg State Institute of Technology, St. Petersburg, 190013 Russian Federation*
17:15-17:30	**ID11**	Aleksei Samarin*, Aleksei Toropov, Alexander Savelev, Egor Kotenko, Artem Nazarenko, Alexander Motyko, Alina Dzestelova, Elena Mikhailova, Valentin Malykh **Custom Descriptors Applications for Endoscopy Images Classification** *ITMO University, St. Petersburg, 197101, Russian Federation*
17:30-17:45	**ID7**	Shiping Ye, Viktoria Sorokina*, Sergey Ablameyko **Detection and Matching of Similar Clothing Images Using Improved YOLO Network** *Belarusian State University, Minsk, 220050, Belarus* *Zhejiang Shuren University, Hangzhou 310015, China* *International Science and Technology Cooperation Base of Zhejiang Province: Remote Sensing Image Processing and Application, Hangzhou 310000, China* *United Institute of Informatics Problems of the National Academy of Sciences of Belarus,Minsk, 220012, Belarus*
17:45-18:00	**ID31**	Egor Surkov*, Oleg Seredin, Andrei Kopylov, Olesia Kushnir **Standardizing Skeletal Models for Fall Detection** *Tula State University, Tula, 300012, Russian Federation*
18:00-18:15	**ID42**	Sergey Taranov*, Alexander Gneushev, Ivan Matveev **Method of combining face image embeddings by clustering according to their quality** **Authors:** *Federal Research Center "Computer Science and Control" of the Russian Academy of Sciences, Moscow, Russian Federation*
18:15-18:30	**ID24**	A.P. Vinogradov **Searching for Hidden Patterns of Interacting Partial Regularities in Data** *Federal Research Center 'Computer Science and Control', Russian Academy of Sciences, Moscow, Russian Federation*
18:30-18:45	**ID12**	Tao Yang, Huiyan Wang*, Kai Huang, Shiyou Zhou, Qinghuan Liu, and Shengjie Li **Accurate Thin Film Defect Detection using Transformer and Guided Feature Fusion** *Zhejiang Gongshang University, Hangzhou, 310018, China* *Collaborative Innovation Center of Statistical Data Engineering Technology &* *Application, Zhejiang Gongshang University* *Zhejiang JW Precision Machinery Co.,Ltd., Quzhou,324000, China*
18:45-18:55	**K**	**Igor Gurevich**, Davide Moroni, Maria Antonietta Pascali, Vera Yashina **Image Mining: Current Problems in Theory and Applications** *Federal Research Center Computer Science and Control, Russian Academy of Sciences, Building 2, 44, Vavilov str., Moscow, 119333, Russian Federation*

		Institute of Information Science and Technologies, National Research Council, Pisa, 51264, Italy
18:55-19:00		**Workshop Closing**