eStream 2025
CONFERENCE PROGRAM
April 24, 2025, Thursday
Conference room P1-416, Plytinės 25, Vilnius, Lithuania
Faculty of Electronics, VILNIUS TECH

OPENING KEYNOTE (hybrid) 9.00-9.30

AI and Systems Engineering
Vijitashwa Pandey, Oakland University, United States of America

Teams meeting link here.

I PLENARY SESSION *Semiconductor Advances* (hybrid) 9.30 – 11.00 P1-416

Chairman: Assoc. prof. Artūras Medeišis

Teams meeting link here.

A Low-Power 10-bit 72 MS/s Continuous Successive-Approximation Analog-to-Digital Converter
Ji-Hau Chiou, National Sun Yat-sen University

Utilizing a 1-GHz Phase-Locked Loop with Phase-Frequency Detectors Featuring Dead-Zone and Blind-Spot Elimination
Chieh (Katniss) Chuang, National Taipei University of Technology

FPGA-based SNN Accelerator Design for Neuromorphic Computing
Tzu-Yi Pang, National Taiwan University of Science and Technology

Wide Tuning Range X-Band LC-VCO Designed in 90 nm CMOS Technology
Benas Petrulis, Vilnius Gediminas Technical University

Design and Analysis of a Wide Input Voltage Range Low-Dropout Regulator in TSMC 180nm BCD Technology
Lukas Šalavėjus, Vilnius Gediminas Technical University

Multiobjective Forensic-based Investigation Optimized Multi-Criteria Desicion-Making in Facade-Integrated Photovoltaic Design
Jurgis Zagorskas, Vilnius Gediminas Technical University

Unmanned Aerial Vehicle Object Tracking in Urban Traffic Control: Adressing Congestion and Safety Issues
Dainius Udris, Vilnius Gediminas Technical University

Coffee break 11.00-11.30

II PLENARY SESSION *Measurements and Material Science* (In-person) 11.30 – 13.00 P1-416

Chairman: Assoc. prof. Inga Morkvėnaitė-Vilkončienė

Method of removal of ultrafine polydisperse particulate matter from gas in a newly developed agglomeration and precipitation apparatus
Aleksandras Chlebnikovas, Vilnius Gediminas Technical University

Development and research of solutions for the reduction of emissions of harmful compounds formed in exhaust gases using renewable fuels
Artūras Kilikevičius, Vilnius Gediminas Technical University

Dynamic process research in precise measuring systems and solution for the dynamic error compensation
Jonas Matijošius, Vilnius Gediminas Technical University

Position measurement errors of high-precision feedback systems
Artūras Kilikevičius, Vilnius Gediminas Technical University

Detection of biomarkers DPP-IV by electrochemical probes and scanning electrochemical microscopy
Tomas Mockaitis, Center for Physical Sciences and Technology

Laser treatment on copper current collector and its interfacial effects in anode-free lithium metal batteries
Nikolaj Višniakov, Vilnius Gediminas Technical University

Lunch time 12.30-13.30

I BREAK-OUT SESSION 13.30-15.00 (In-person) P1-416

Chairman: Assoc. prof. Vytautas Abromavičius

Comparative Analysis of High-Voltage High-Frequency Pulse Generator Architectures for Pockels Cells
Edgard Aleinikov

Research of the Frequency Characteristics of the Semiconductor Linear Microstrip Patch Antenna
Valentinas Breivė

Trends and challenges of multimodal solutions for text and image context extraction
Tautvydas Kvietkauskas

Holistic View on Design Making in Cyber Defense Exercises: A Case Study Based in Amber Mist
Karina Čiurlienė

PET Neuroimaging Enhancements for Improved Mild Cognitive Impairment Detection
Ovidijus Grigas

Feature Importance analysis for encrypted brute-force attack detection based on machine learning techniques
Vsevolod Kapustin

Predicting Neurological Outcomes After Cardiac Arrest Using Machine Learning
Martynas Mikalauskas

II BREAK-OUT SESSION 15.30-17.00 (In-person) P1-416

Chairman: Assoc. prof. Artūras Medeišis

Challenges and Methods for Preparing IT Support Datasets for Machine Learning Models
Roman Jevsejev

Evaluation of Contour-based Features for Eyeglasses Style Classification
Henrikas Giedra

Deep Reinforcement Learning-Enhanced Routing in Mobile Ad Hoc Networks: A Comprehensive Study
Amer Abu Salem

Evaluation of MoViNet Streaming Models for Real-Time Action Recognition in the Thermal Domain
Gabriela Vdoviak

Evaluation of Plane Reconstruction Distortions in Monocular Depth Maps
Ervinas Gisleris

Autoformer Neural Network Framework for Solid Particles Prognosis in Diesel Generator
Tomas Sirutavičius

Thermal Image Augmentation and Its Impact on Object Detection Accuracy
Viktor Smirnov

III BREAK-OUT SESSION 13.30-15.00 (In-person) P1-405

Chairman: Assoc. prof. Inga Morkvėnaitė-Vilkončienė

PET Neuroimaging Enhancements for Improved Mild Cognitive Impairment Detection
Ovidijus Grigas

Trends and Challenges of Multimodal Solutions for Text and Image Context Extraction
Tautvydas Kvietkauskas

Feature Importance analysis for encrypted brute-force attack detection based on machine learning techniques
Vsevolod Kapustin

An approach for building IT support dataset for machine learning models
Roman Jevsejev

Holistic View on Decision-Making in Cyber Defense Exercises: A Case Study Based in Amber Mist
Karina Čiurlienė

Polynomial Approximation Degree Influence on Implicit Network Regularization for Impedance Signal Reconstruction
Vadimas Ivinskij

1st ONLINE SESSION 13.30-15.30

Chairman: prof. Andrius Katkevičius

Teams meeting link here.

X-ray Lung Diseases Classification Using Deep Neural Network
Edita Mažonienė

Modelling the mixing process in YAG reactions
Arnas Vaicekauskas

Research on Hybrid Image Storage Models to Ensure Data Security and Privacy Evaluation of Deep Learning Systems in Medical Diagnosis
Iryna Kyrychenko

Parkinson's Disease Detection from Speech Signals Using Deep Learning Models
Muharrem Önal

OPeraTE.AI: OPTIMIZED PERSONNEL AND INMATE TRACKING EFFICIENCY THROUGH SIAMESE NEURAL NETWORK
Mark Ryan I. Hilario

Machine Learning Based Poverty Classification and Barangay Information Management System
Caren T. Macabodbod

Evaluating CNN, RNN, and Vision Transformer for Emotion Recognition: Strengths and Weaknesses
Artur Yushchenko

Senti Guide: A Machine Learning-Based Sentiment Analysis System for Student Feedback Evaluation
Angeline W. Ariño

FyrVISION: INTEGRATING DEEP LEARNING FOR FIRE DETECTION USING YOLOv11
Eulyses Betasolo

AI-BASED ADVANCEMENTS FOR COMPREHENSIVE MANGROVE ANALYSIS SUITABILITY MAPPING
Alme M. Aparicio

Enhancing Scholarship Allocation Through Machine Learning: A Review of Models and Techniques
Alvin T. Remolado

2nd ONLINE SESSION 13.30-15.30

Chairman: prof. Darius Plonis

Teams meeting link here.

Optimized Fruit Detection in Complex Environments Using YOLOv11 for Smart Agricultural Applications
Daryl B. Valdez

Enhancing Redis Cache Efficiency Based on Dynamic TTL and Adaptive Eviction Mechanism
Olena Shevchenko

Automatic Language Identification from Speech Using Transformer-Based Models
H.Hakan Kilinc

A comparative study of trigate FinFET 14 nm with different Fin materials for CMOS circuits
Lazzaz Abdelaziz

DESIGN AND DEVELOPMENT OF INTEGRATED HUMAN RESOURCE MANAGEMENT SYSTEM WITH FACE RECOGNITION ATTENDANCE
Harey D. Aparece

DEEP LEARNING APPROACH FOR WEED DETECTION TO DETERMINE SOIL CONDITION
Al Jastin N. Miñoza

A Systematic Framework for Resistor Tolerance Analysis to Improve Voltage Stability in Electronic Circuits
Pavan Kumar

STREAMLINING FACULTY SUPPORT: BISU FACULTY MANUAL CHATBOT
Reneille Clark P. Nam-ay

INTELLIGENT TRAFFIC MONITORING AND ACCIDENT DETECTION SYSTEM USING YOLOV11 AND IMAGE PROCESSING
Russel Rey F. Lupian

Approaches to handling literary translation with large language models
Oleksii Trofimenko

Characterization of k-Carrageenan and Iron (III) Oxide Based Piezoresistive Film by Microrobotic System
Viktor Masalskyi

Introducing the IRES Tool: A Data-Driven Excel Model for Wind Farm Repowering
Mohamed Amin

3rd ONLINE SESSION 13.30-15.30

Chairman: Assoc. prof. Antanas Zinovičius

Teams meeting link here.

Improving Engineering Education for a Sustainable Future
Olga Ovtšarenko

Navigation of AI in orthopaedic surgery
Ashwani Raj

DECENTRALISED IOT AUTHENTICATION USING BLOCKCHAIN AND MACHINE LEARNING: THE TRUST CIRCLE FRAMEWORK
Bung Vidhi Jagdish

ADVANCED DEEP LEARNING APPROACHES FOR AUTOMATED DIAGNOSIS OF CARDIAC ARRHYTHMIA IN MULTI-LEAD ECG SIGNALS
MOHITH R

Web Vulnerabilities in Structured Query Language Injection (SQLi), Cross-site Scripting (XSS), and Cross-site Request Forgery (CSRF)
Abuda Carlojude

Design of Current Controller Gain Parameters for Improved Transient Response in Hybrid Microgrids
B. Sravan Kumar

BiLSTM-CNN with Bayesian Optimization for Accurate Long-Term Load Forecasting: Cross-Regional Insights from Morocco and Spain
Khaoula Boumais

A hybrid approach in developing a recommendation system for personalized selection of locations for a visit
Vladyslav Lapin

YOLOv8-Based Transfer Learning for Mangrove Species Classification Using Leaf Images Fire Classification and Detection Using a CNN-YOLO Hybrid Model for Early Warning Systems
Jannie Fleur V. Oraño

Research on the efficiency of applying WebGL and D3.js in the creation of graphical elements in web applications
Nataliia Ponikarovska

A Study of Blockchain Technology in Farmer's Portal
Dindugala Thrinesh Kumar

Enhancing Mango Leaf Disease Diagnosis Using Convolutional Neural Networks
Rey Anthony Godmalin

4th ONLINE SESSION 13.30-15.30

Chairman: Prof. Dalius Matuzevičius

Teams meeting link here.

Behaviour of particulate matter in combined treatment technologies
Tautvydas Juknevičius

Dempster-Shafer WASPAS Decision-Making Method for the Selection Structure of a Single-Family House
Romualdas Baušys

DIRECTIONS FOR OPTIMIZING THE PROCESS OF RECEIVING AND PROCESSING THERMOGRAMS USING A MOBILE APPLICATION
Kostiantyn Nechvolod

Comparative Analysis between BFS and DFS -Shortest Path Algorithms
Renad Al Kahtani

iBon: A Web Application for Aerial Fauna Identification and Counting Using Machine Learning.
A Comparative Study of Bird Species Classification Using K-Nearest Neighbors, Convolutional Neural Networks, and Support Vector Machines
John Stephen Buslon Malarejes

Development of Management Information System using Geospatial
Carlo Jude Abuda

Deep Learning-Enabled Inventory Detection for Facility Management System
Elif Seray Bilgin

Experimental Analysis of the Effect of Frequency on Power Transformer Size, Cost, and Losses
Kamran Dawood

A Systematic Framework of Resistor Tolerance Analysis for Improved Voltage Stability in Electronic Circuits
Y. V. Pavan Kumar

Improved MOS Current Mode Logic based tri-state buffer and its applications
Bharat Choudhary

Design of A Hybrid Model Based on Statistical and Machine Learning Techniques for Effective Forecasting of Smart Home Energy Consumption
Yamini Kodali

Deep Learning-Based PID Controller Tuning for Effective Speed Control of DC Shunt Motor
G. Pradeep Reddy