



**34th Irish Conference on
Artificial Intelligence and
Cognitive Science (AICS 2026)**

O'Connor Centre for Learning, University College Dublin

Programme (Preliminary)

Day 1 - 15th October 2026

Registration and Opening	
09:00 - 10:00	Welcome and Coffee
10:00 - 10:15	Opening
Session 1: Privacy, Security and Robustness [Student papers] Chair: TBD	
10:15 - 10:25	When Adaptive Clipping Fails to Transfer: Adaptive Hyperparameter Optimisation for Differentially Private Vertical Federated Learning Dionysios Stolis and Ruairi O Reilly
10:25 - 10:35	In-Context Co-Evolution of Adversarial LLM Agents for Zero-Day Malware Detection on Windows Endpoints Julien Jessmon
10:35 - 10:45	Multi-Branch Deep Learning Framework for Real-Time QUIC Traffic Classification Parth Khajgiwale and Dr. Jawad Manzoor
10:45 - 10:55	Measuring and Balancing Utility, Fairness and Privacy in Synthetic Healthcare Data Generation Pradyumna Shee, Muhammad Asad, Ayushi Kashyap, Bairbre A. McNicholas and Michael G. Madden
10:55 - 11:10	Crop Disease Detection Under Realistic Environmental Distortions Using Synthetic Water Droplet Augmentation Aarti Bandgar and Priyanka Verma
Coffee Break	
11:10 - 11:40	Coffee Break
Session 2: Applications [Non-student papers] Chair: TBD	
11:40 - 11:55	Observation-Calibrated Downscaling of Regional Particulate Matter Forecasts Qizhi Wang, Arun Sampath, Sen Yan, Emma Delemere, Shirley Coyle, David O'Connor and Mingming Liu

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11:55 - 12:10	A Preliminary Investigation on Cross-Corpus and Cross-Lingual Evaluation of Acoustic Vocal Biomarkers for Cognitive Decline Detection Giulio Gabrieli, Damon Berry, Harish Kambampati, Patricia Lucha Farina, Emma Murphy, Jonathan Turner and Dympna O'Sullivan
12:10 - 12:25	Evaluating Auditory Transduction Features for Polyphonic Audio-to-Score Eoin Cummins, Cathal Ó Faoláin and Andrew Hines
12:25 - 12:40	costream: A Streaming Evaluation Protocol for Wearable Fall Detection Timilehin Aderinola, Ilaria D'Ascanio, Luca Palmerini, Lorenzo Chiari, Jochen Klenk, Clemens Becker, Brian Caulfield and Georgiana Ifrim
12:40 - 12:55	Context-Aware LLM Forecasting of Infant Chest X-Ray Share: Applying Context-is-Key to Clinical Time Series Prateek Mathur, Simon Clifford, Aonghus Lawlor and Brendan Kelly
Lunch	
13:00 - 14:00	Lunch
Session 3: Explainable AI and Fairness [Student papers] Chair: TBD	
14:00 - 14:10	SHAP-LIME Explanation Concordance Across a Model Opacity Ladder Matthew Houston, Raymond Bond, Huiru Zheng and Jun Liu
14:10 - 14:20	What Subjective Ratings Miss: A Between-Subjects Study of Adaptive XAI in Credit Decisions Debora Sormin
14:20 - 14:30	A Model-Agnostic Pipeline for Systematic Fairness Evaluation and Mitigation in High-Stakes Decision Domains Shubin Li, Lamaan Kayum Shaikh and Tai Tan Mai
14:30 - 14:40	Privacy-Preserving Synthetic Face Generation for Ethnic Groups : A Fairness evaluation using soft-biometrics Sukrit Roy Chowdhury, Mark Daly and Niall Murray
14:40 - 15:10	DermaXplain: Evaluating Explainable AI Methods Against Clinically Structured Pseudo-Concepts in Skin Lesion Classification Thierry Beliere, Janavi Ravi and Suzanne Little
Coffee Break and Poster Session	
15:10 - 16:10	Poster Session



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	Keynote Lecture
16:10 - 17:30	Nitesh Chawla University of Notre Dame, and Georgiana Ifrim, University College Dublin
	Dinner
17:30 - 19:00	Reception [Details TBD]



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Day 2 - 16th October 2026

Registration and Opening	
09:00 - 9:15	Opening
Session 1: Explainable AI and Cognition [Non-student] Chair: TBD	
09:15 - 09:30	Evaluating Cross-Video Transfer in ECG-Based Affect Recognition Zachary Dair, Samantha Dockray and Ruairi O'Reilly
09:30 - 09:45	Relating Feature Complexity and Understanding in Machine Learning Nicola Rossberg, Barry O'Sullivan, Luca Longo and Andrea Visentin
09:45 - 10:00	EfficientNetV2S with XAI and LLM-Assisted Reporting for Eight-Class Retinal OCT Diagnosis Avinash Vadlamudi and Muhammad Salman Pathan
10:00 - 10:15	Temporal Dynamics and Latent-Space Interpretability of Generative EEG Microstate Segmentation Saheed Faremi, Andrea Visentin and Luca Longo
10:15 - 10:35	When Ensembles Beat Items: Conditional Aggregate Dominance in Ensemble Perception Joss Armstrong
Coffee Break	
10:35 - 11:05	Coffee Break
Session 2: Applications [Student] Chair: TBD	
11:05 - 11:15	Investigating Controllable Synthetic Pathological Speech in English with Italian Cross-Lingual Analysis Kesego Mokgosi, Milad Dadgar, Cathy Ennis and Robert Ross
11:15 - 11:25	Domain Adaptation for Real-Time Traversability Estimation in Legged Robots Threvikram Janardhanan, Naveen Prakash Ramesh, Yanzhi Wang and Nazre Batool
11:25 - 11:35	Sparse, Dense, and Hybrid Retrieval for EU Climate Statutes: A Leakage-Controlled Evaluation Rameez Shafat Wani, Ananya Warior and Mohammed Amine Togou
11:35 - 11:45	Swarm Based Meta Heuristics for Multi Objective Route Optimisation in Micromobility Systems Ben Crane, Hemandh Babu Babu and Suzanne Little



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11:45 - 12:00	On-Device Driving Style Classification Using Standardised OBD-II Parameters: A Novel Labelled Dataset and Machine Learning Evaluation Kristian Ratnikov and Frank Glavin
Lunch	
12:00 - 13:00	Lunch
Session 3: Trustworthy AI & AI Ethics [Non-student] Chair: TBD	
13:00 - 13:15	Knowledge-Generated Test Suites for LLM Components: Specification-Derived Targets with Human-Certified Stimuli Gareth McConomy, Raymond Bond, David H. Glass, Jun Liu and Holly Toner
13:15 - 13:30	Fairness Robustness in Criminal Justice AI: A Decision Support Framework for Fairness-Aware Recidivism Risk Prediction Michael Mayowa Farayola, Malika Bendeche, Takfarinas Saber, Regina Connolly and Irina Tal
13:30 - 13:45	The Generative AI Conformity Card: A Self-Administered Assessment Tool for SMEs under the EU AI Act Ipek Edis and Alireza Dehghani
13:45 - 14:00	Privacy-Preserving Violence Detection with Compressed-Sensing Measurement Matrices Ashmaan Balan Shaikh, Arun Sankar, Oisin Cawley and Rejwanul Haque
14:00 - 14:20	Co-Designing an LLM-Based Child Grooming Signposting Agent: A Thematic Analysis of Professional Stakeholder Insights Lin Yuan Chong, Malik Awais Khan, Dylan Schouten, Matt Bowden and Christina Thorpe
AICS Closing and AIAI Steering Committee	
14:20 - 14:35	Closing Remarks
14:35 - 14:50	AIAI Steering Committee