IMVIP2022 Schedule

Wednesday 31st August

Registration 13.00-13.30
Location: David Keir Building ("The Bridge" [DKB/0G/012])

Welcome 13.30-13.40
Location: David Keir Building ("The Bridge" [DKB/0G/012])

Keynote Lecture 13.40-14.40: Dr Mairéad Grogan - Unleashing the power of the artist with Machine Learning

Break 14.40-15.00

Oral session 1 15.00-16.40

IPRCS AGM 16.50-17.30
Location: David Keir Building ("Student Hub" [DKB/LG/020B])

Welcome reception starting at 18.00
Location: Queen's University Graduate School

Thursday 1st September

Late Registration 09.30-10.00
Location: David Keir Building ("The Bridge" [DKB/0G/012])

Keynote Lecture 10.00-11.00 Prof Amos Storkey - On Robust Machine Learning for Natural and Medical Computer Vision

Break 11.00-11.10

Oral Session 2 11.10-12.30

Lunch 12.30-13.45
Location: David Keir Building DKB/0G/533 (Malone Road Entrance)

Special Session: 25 years of IMVIP: 13.45-14.00

BCS Northern Ireland Poster Session 14.00-15.10
Location: David Keir Building ("Student Hub" [DKB/0G/011B] and [DKB/LG/020B])

Oral Session 3: 15.10 – 16.50

Conference Dinner 18.30-20.30
Location: Deanes at Queen's Restaurant

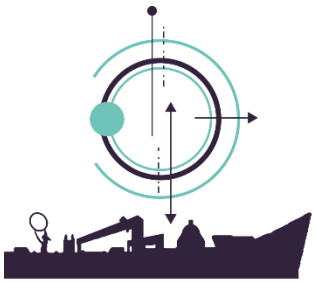
Friday 2nd September

Keynote Lecture 09.30-10.30 Dr Sandra Scott-Hayward - 99.99% accurate - What's the problem?
Location: David Keir Building ("The Bridge" [DKB/0G/012])

Break 10.30-10.40

Oral Session 4: 10.40-12.20

Awards and Conference Closure 12.20-12.30



IMVIP 2022

24th Irish Machine Vision and Image Processing Conference

Belfast, 31st August - 2nd September

IMVIP2022 Conference Presentations

Oral Session 1

Towards Temporal Stability in Automatic Video Colourisation
Rory Ward *and John Breslin*

Fast and Efficient Scene Categorization for Autonomous Driving using VAEs
Saravanabalagi Ramachandran*, Jonathan Horgan, Ganesh Sistu, and John McDonald*

Detection and Isolation of 3D Objects in Unstructured Environments
Dylan Do Couto*, Joseph Butterfield, Adrian Murphy, Karen Rafferty, and Joseph Coleman*

View Sub-sampling and Reconstruction for Efficient Light Field Compression
Yang Chen*, Martin Alain, and Aljosa Smolic*

A Comparative Study of Traditional Light Field Methods and NeRF
Pierre Matysiak*, Susana Ruano, Martin Alain, and Aljosa Smolic*

Oral Session 2

Diversity Issues in Skin Lesion Datasets
Neda Alipour*, Ted Burke, and Jane Courtney*

Pre- and Post-Operative Analysis of Planar Radiographs in Total Hip Replacement
Oscar Denton*, Christopher Madden-McKee, Janet Hill, David Beverland, Nicholas Dunne, and Alex Lennon*

A Data Augmentation and Pre-processing Technique for Sign Language Fingerspelling Recognition
Frank Fowley*, Ellen Rushe, and Anthony Ventresque*

A machine vision system for avian song classification with CNN's
Gabriel R. Palma*, Ana C. M. M. Aquino, Patricia F. Monticelli, Luciano M. Verdade, Charles Markham, and Rafael A. Moral*

Oral Session 3

High-Fidelity Face Swapping with Style Blending
***Xinyu Yang**, Zhijin Guo, Chengxi Zeng, Mowen Xue, and Zijian Shi*

On the Feasibility of Privacy-Secured Facial Authentication for low-power IoT Devices – Quantifying the Effects of Head Pose Variation on End-to-End Neural Face Recognition
***Wang Yao**, Viktor Varkarakis, Joseph Lemley, and Peter Corcoran*

Texture improvement for human shape estimation from a single image
***Jorge González**, Susana Ruano, Archana Swaminathan, David Smyth, and Aljosa Smolic*

Box Supervised Video Segmentation Proposal Network
*Tanveer Hannan, Rajat Koner, **Jonathan Kobold**, and Matthias Schubert*

KinePose: A temporally optimized inverse kinematics technique for 6DOF human pose estimation with biomechanical constraints
***Kevin Gildea**, Clara Mercadal-Baudart, Richard Blythman, Aljosa Smolic, and Ciaran Simms*

Oral Session 4

Grad-CAM++ is Equivalent to Grad-Cam with Positive Gradients
Miguel Lerma** and **Mirtha Lucas

Dynamic Channel Selection in Self-Supervised Learning
***Tarun Krishna**, Ayush K. Rai, Yasser A. D. Djilali, Alan F. Smeaton, Kevin McGuinness, and Noel E. O'Connor*

Unsupervised Scale-Invariant Multispectral Shape Matching
***Idan Pazi**, Dvir Ginzburg, and Dan Raviv*

An NLP approach to Image Analysis
Guillermo Martínez

Classification of electromagnetic interference induced image noise in an analog video link
***Anthony Purcell** and Ciarán Eising*

******Best Oral Presentation Award Sponsored by BCS Northern Ireland******

BCS Northern Ireland Poster Session

Random Data Augmentation based Enhancement: A Generalized Enhancement Approach for Medical Datasets
***Sidra Aleem**, Teerath Kumar, Suzanne Little, Malika Bendechache, Rob Brennan, and Kevin McGuinness*

Influence of Magnification in Deep Learning Aided Image Segmentation in Histological Digital Image Analysis
***Kris D. McCombe**, Stephanie G. Craig, Jacqueline A. James, and Richard Gault*

Sign2Speech: A Novel Sign Language to Speech Synthesis Pipeline
***Dan Bigioi**, Théo Morales, Ayushi Pandey, Frank Fowley, Peter Corcoran and Julie Carson-Berndsen*

Geometrically reconstructing confocal microscopy images for modelling the retinal microvasculature as a 3D cylindrical network
***Evan P. Troendle**, Peter Barabas, and Tim M. Curtis*

Deep Multi-Task Networks For Occluded Pedestrian Pose Estimation
***Arindam Das**, Sudip Das, Ganesh Sistu, Jonathan Horgan, Ujjwal Bhattacharya, Edward Jones, Martin Glavin, and Ciarán Eising*

Reality Analagous Synthetic Dataset Generation with Daylight Variance for Deep Learning Classification
***Thomas Lee**, Susan McKeever, and Jane Courtney*

A Comparison of Feature Extraction Methods Applied to Thermal Sensor Binary Image Data to Classify Bed Occupancy
***Rebecca Hand**, Ian Cleland and Chris Nugent*

Recurrent Super-Resolution Method for Enhancing Low Quality Thermal Facial Data
***David O'Callaghan**, Cian Ryan, Waseem Shariff, Muhammad Ali Farooq, Joseph Lemley, and Peter Corcoran*

Beyond Social Distancing: Application of real-world coordinates in a multi-camera system with privacy protection
*Frances Ryan, Feiyan Hu, **Julia Dietlmeier**, Noel E. O'Connor, and Kevin McGuinness*

Acoustic Source Localization Using Straight Line Approximations
***Swarnadeep Bagchi** and Ruairí de Fréin*

Integrating feature attribution methods into the loss function of deep learning classifiers
***James Callanan**, Carles Garcia-Cabrera, Niamh Belton, Gennady Roshchupkin, and Kathleen M Curran*

Distance measurement between smartphone within an ad-hoc camera array using audible PRBS
***Pádraic McEvoy**, Damon Berry and Ted Burke*

Triple Loss based Satellite Image Localisation for Aerial Platforms
***Eduardo Andres Avila Herrera**, Tim McCarthy, and John McDonald*

******Best Poster Award Sponsored by BCS Northern Ireland******