

Wednesday November 18th

9:00-9:30 **Welcome to IVCNZ 2026**

9:30-10:30 **Keynote: Dr Kevin Shedlock**

Seeing With, Not Seeing For: Computer Vision and Indigenous Knowledge

10:30-11:00 **Morning Tea**

11:00-12:15 **Oral Session: Detection & Recognition**

Weng, Yu-Chian; Lin, Hung-I; Yeh, Hao-Yun; Sun, Min-Te; Sakai, Kazuya; Ku, Wei-Shinn

Small Object Detection based on Spatial-Frequency Extraction and Attention-Guided Gated Fusion

Auer, Franziska; Kuruppanthara Mukundan, Parvathi; Meisen, Tobias

Lightweight Attention Enhancements for YOLOv7 Sonar Object Detection

Hines, Corey; Green, Richard

Real-Time Detection of Parking Lot Occupancy

12:15-13:30 **Lunch**

NZ Robotics and Automation Society AGM

13:30-15:15 **Oral Session: Best Paper Nominees**

Kaur, Asavri; Singh, Sonit; Hassanzadeh, Tahereh; Ho Shon, Ivan; Sowmya, Arcot

Context-aware Global-attention based Deep Learning model for Lymphoma Tumour Segmentation in FDG-PET/CT scans

Templeton, Charlie; Mills, Steven; O'Regan, Gerard

Deep Learning for Māori Rock Art: Detection, Classification, and Generalisation

Ciceklidag, Pasa; Mian, Ajmal; Hassan, Mubashar; Hong, Jin

RoadTwin: A Training-Free Drivable Hybrid Digital Twin of a 114 km Freeway from Mobile LiDAR

Rogers, Mitchell; Fischer, Johannes; Debski, Igor; Mischler, Claudia; Delmas, Patrice; Xue, Bing; Zhang, Mengjie

Counting and Verifying Nesting Albatross in Satellite Images

15:15-15:45 **Afternoon Tea**

15:45-17:00 **Online Session**

Tan, Shengsheng; Zhong, Liezhou; Lewis, Joshua R.; Shah, Syed Afaq Ali

Hierarchy-Risk-Aware Reference Gallery Curation for Fine-Grained Produce Recognition

Rehmat, Sadaf; Iqbal, Jamshaid; Jiyun, Li; Iman, Tuba; Noor, Fatima

Aerotrack-net: A Unified Architecture for Joint Detection and Tracking of Drones vs. Birds

Li, Hang; Fan, Jianan; Cai, Weidong

Semi-VGM: A Semi-Supervised Pixel-Level Contrastive Learning Framework for Medical Image Segmentation

Hassanzadeh, Tahereh; Singh, Sonit; Yang, Junyi

Topology- and Geometry-Aware 3D Circle of Willis Segmentation from CTA and MRA

Hassanzadeh, Tahereh; Singh, sonit; wu, Zizhang; Sowmya, Arcot

Multimodal CTA-MRA Fusion for 3D Circle of Willis Segmentation Across Reference Spaces

Younas, Umair; Ur Rehman, Saeed; Anas, Qazi

CRIS-Net: Continuous Resolution-agnostic Implicit Segmentation for Camouflaged Objects

17:30-19:00 **Conference Reception, St Margaret's College**

Thursday November 19th

9:00-9:30

Online Session

Patel, Shrey

Defect-Aware Masked Autoencoder Approach to Unsupervised Steel Surface Defect Recognition

Mäenpää, Timo; Bappy, Akash; Ariram, Siva; Bavirisetti, Durga Prasad; Tikanmäki, Antti

RangeGen PoleSight: A Benchmark Dataset and Scalable Range-Image Generation Framework for Roadside Pole Detection

Ghosh Chowdhury, Arnab; Smith, Amos; Atzmueller, Martin

Analyzing the Influence of MobileViT Blocks on Robustness to Image Corruption and Texture Reduction in Land Use Classification

9:30-10:30

Keynote: Prof Tanja Alderliesten

Beyond Accuracy: What It Takes for Medical Imaging AI to Succeed in Clinical Practice

10:30-11:00

Morning Tea

11:00-12:15

Oral Session: Applications

Lu, Yu; Deng, Xiaokang; Zhang, Wei; Huang, Bingding

EchoST-SAM: Semantic-Prompted Spatiotemporal LV Segmentation for Functional Analysis in

Mozhaeva, Anastasia; Fedorov, Vladimir; Chisholm, Kyle A.; Vinetsky, Vsevolod; Delmas, Patrice

Motion- and Perception-Adaptive Video Compression for Real-Time UAV Piloting

Fan, Xiang; Rogers, Mitchell; Zhao, Junhong ; Xue, Bing; Zhang, Mengjie

Cross-Zoo Transfer of Chimpanzee Pose Estimation and Chimp-Object Interaction Recognition

12:15-13:45

Lunch

IVCNZ Steering Group Meeting

13:45-14:30

Poster 'Barking' Session

Kumar, Pratul; Jain, Nandini; Sharma, Shaurya; Tyagi, Ashish; Kumar, Ajay; Kumar Dalela, Dr. Pankaj

QuAVF: Quality-Aware Adaptive Face Verification Under Degradation

Wang, Haoming ; Chakraborti, Tapabrata ; Choudhury, Zakia Zinat; McCane, Brendan; Coffey, Sean

Deconvolutional Vision Mamba in Crossmodal Medical Image Synthesis

Liang, Sendong; Nand, Parma; Yan, Wei Qi

DeepSymbol: A Multimodal Framework for Cultural Symbol Understanding

Lee, Nick; Schofield, Sam; Bainbridge-Smith, Andrew

ORB-SLAM3: Preventing Catastrophic Failure on Resource-Constrained Configurations

Liu, Chuning; Yan, Wei Qi

Parameter-Efficient Transfer Learning for Image Fragment Reassembly: Robustness Analysis of CNN and Vision Transformer Approaches

Guo, Xuan; Zhao, Junhong ; Xue, Bing; Zhang, Mengjie; Casanovas, Paula; Graham, Shaun; Hopkins, Grant
Learning Discriminative Features via Spatially Guided Attention for Animal Image Classification with Small Data

Mao, Weixi; McCane, Brendan ; Deng, Jeremiah

Foundation-Model-Assisted Semi-Automatic Annotation for Fish Tracking in Ecological Videos

Peng, Hao; March de Ribot, Francesc; Zhao, Junhong

Few-Shot CHRPE Classification: A Retinal Image Dataset and Comparative Evaluation

Rogers, Steven; Weti, Tainui; Delmas, Patrice ; Mozhaeva, Anastasia <i>PSNR-VR: A Full-Reference Quality Metric for Wide-Angle VR Video Incorporating Human Visual System Models</i>
Hwang, jaeyeon; Swain Ranjan, Bishal; Ko, Jaepil <i>Agentic reconstruction of mathematical diagram from scanned images</i>
Baron, Dominic; Green, Richard <i>Rowing Technique Analysis using Pose Detection</i>
Lindsay, Oscar; Green, Richard <i>Real-Time Face Swap</i>
Storey, Adam; Green, Richard <i>Gait Analysis for Dairy Cow Lameness Detection</i>
Huang, Yu-Chuan; Green, Richard <i>Accelerating Fabric Defect Detection in Videos while Improving Accuracy</i>
Macdonald, Isaac; Green, Richard <i>Automated Rubik's Cube State Extraction and Solving Using Deep Learning and Adaptive Colour Classification</i>

14:30-15:45

Posters and Afternoon Tea

15:45-17:00

Online Session

Hafeez, Huma; Garratt, Matthew; Plested, Jo; Iyer, Sankaran; Sowmya, Arcot <i>Count-Constrained Association for Real-Time Multi-Object Tracking in Fixed-Camera Panoramic Video</i>
Nandakumar, Adithya; George, Stellin John; Agarwal, Aditya; James, Arvin; J, Angel Arul Jothi; Rajasekar, <i>MalVisionNet: A Lightweight Image-Based Malware Detection Framework using CNNs for IoT Devices</i>
Adn, Taqiyudin; Bachtiar, Fitra <i>Validation-First Evaluation of Mobile Backbones and Paired Knowledge Distillation for Efficient Crowd Counting</i>
Islam, Rafiul; Sumayya, Rihila; Ahmed, Adib; Kushol, Rafsanjany; Kabir, Md. Hasanul <i>Neuro-Duo-MIL: A Dual-Branch DINOv3 Framework for Leakage-Aware Alzheimer's Disease Classification Using 2D MRI and Clinical Data</i>
Zia Ur Rehman, Muhammad; Aamir, Zuha; Janjua, Naeem ; Ul Islam, Shams <i>Cross-Scene Generalisation for Joint HSI-LiDAR Classification via Frozen Multimodal Representations</i>
Datta, Rohit; Islam, Syed <i>A Critical Review of Deep Learning Methods for Cardiovascular Risk Stratification from Retinal Fundus Images</i>

18:00-21:00

Conference Dinner, Tūhura Otago Museum

Friday November 20th

9:00-9:30	Online Session Jin, Qiyuan; Li, Huilin; Barodawala, Fakhruddin; Findlay, Rebecca; Black, Joanna; Turuwhenua, Jason <i>CGTA-CNN: A Lightweight Channel-Gated Temporal-Attention CNN for Participant-Independent Optokinetic Nystagmus Detection</i> Li, Huilin; Jin, Qiyuan ; Barodawala, Fakhruddin ; Black , Joanna ; Findlay, Rebecca ; Turuwhenua, Jason <i>High-accuracy Few-shot Model for Pupil Localization</i>
9:30-10:30	Keynote: Dr Philip McLeod <i>From Pixels to Poles: GeoCam's Vision-Based Pipeline for Mapping Infrastructure</i>
10:30-11:00	Morning Tea
11:00-12:15	Oral Session: Art, Culture, and Heritage Templeton, Charlie; Mills, Steven <i>Baseline Networks for 3D Lithic Fragment Part Segmentation</i> Zhan, Haolan; Xu, Zhiwei; Frermann, Lea; Drummond, Tom; Lau, Jey Han <i>Syn-Det: A Large-Scale Benchmark for Generalizable AI-Generated Image Detection</i> Hayes, Samantha; Green, Richard <i>Analysis of Turns in Artistic Roller Skating</i>
12:15-13:15	Lunch (NZ Robotics and Automation Society AGM)
13:15-14:30	Oral Session: Vegetation Lin, Yida; zhang, mengjie; xue, bing; green, richard; schofield, sam <i>Choosing a Pseudo-Ground-Truth Generator for Tree-Branch Depth Estimation: A Zero-Shot Benchmark of Deep Stereo Matching for Forestry UAVs</i> Lloyd Jones, Laurie; Whaanga, Hēmi; Varaine, Kerian; Mills, Steven <i>Reconstructing and Rendering Virtual Vegetation: Comparing Plant Models in Virtual Reality</i> Scott, Bradley ; Schofield, Sam; Green, Richard <i>Reachability-Driven Cut Selection and Ordering Towards UAV-Based Tree Pruning</i>
14:30-14:45	Conference Closing
15:00-16:30	HCI and Visual Computing Lab Tour