

SCHEDULE

of the

11TH ANNUAL CONFERENCE ON COMPUTER VISION AND INTELLIGENT SYSTEMS

on

DECEMBER 15TH AND 16TH, 2025

DAY 1 – MONDAY, DECEMBER 15, IN PSE (E7)-2317 & PSE (E7)-2357 (ONLINE / IN-PERSON HYBRID).

TIME	EVENT	TITLE / AUTHOR(S)
08:30 – 08:50	Registration & Coffee	
08:50 – 09:00	Opening Remarks	Fernando J. Pena Cantu , CVIS 2025 Chair, PhD.
09:00 – 10:00	Oral Presentations	<p><i>Towards Maximizing Storage Efficiency in Pathological Whole Slide Imaging: ROI-Based Hybrid Image Compression by Faruk, Omor*; Hasan, Mahmud.</i></p> <p><i>Real-Time Physics Simulation with Dynamic Mesh-Gaussian Reconstructions by Adrian, Ramlal*; Zelek, John S.</i></p> <p><i>Video-Based Player Re-Identification in Ice Hockey via Non-Contextual Implicit Features by Iaboni, Evan*; Nazemi, Amir; Chen, Yuhao; Clausi, David A.</i></p>
10:00 – 11:00	Academic Keynote	<i>Conformal Prediction: From Images to Agents. Dr. Jesse Cresswell, Staff Machine Learning Scientist, Layer 6 AI, Toronto.</i>
11:00 – 11:20	Oral Presentations	<i>A Physics-Informed Digital Twin Framework for Calibrated Sim-to-Real FMCW Radar Occupancy Estimation by Trinh, Huy*; Ratto V., Sebastian; Creager, Elliot; Shaker, George.</i>
11:20 – 11:40	Industry Lightning Talk	<i>Eaige</i>
11:00 – 12:00	Oral Presentations	<i>Pre-train to Gain: Robust Learning Without Clean Labels by Szczecina, David*; Pellegrino, Nicholas; Fieguth, Paul W.</i>
12:00 – 13:00	Lunch	
13:00 – 14:00	Oral Presentations	<p><i>Real-Time Food Instance Segmentation for Assistive Robotic Feeding: A Comparative Study by Ghulam, Zeyad*; Abdullah, Hussein.</i></p> <p><i>Learning Where the Manifold Ends: Contrastive Flow Matching with Negative Examples by Pena Cantu, Fernando Jose*; Chen, Yuhao; Wong, Alexander.</i></p> <p><i>Tracking the Untrackable: Failure Modes of Object Trackers on Ice Hockey Puck by Salass, Liam*; Clausi, David A.; Zelek, John S.</i></p>
14:00 – 15:00	Academic Keynote	<i>Artificial Intelligence for Music, from Audio to Video, from Cyber to Physical. Prof. Yung-Hsiang Lu, Professor, Purdue University, and Prof. Kristen Yeon-Ji Yun, Clinical Associate Professor, Purdue University.</i>
15:00 – 17:00	Poster Session & Industrial Showcase	

*Indicates the first author of the paper.

DAY 2 – TUESDAY, DECEMBER 16, IN PSE (E7)-2317 & PSE (E7)-2357 (ONLINE / IN-PERSON HYBRID).

TIME	EVENT	TITLE / AUTHOR(S)
09:30 – 09:45	Registration & Coffee	
09:45 – 10:00	Opening Remarks & Welcome	Fernando J. Pena Cantu , CVIS 2025 Chair, PhD.
10:00 – 11:00	Oral Presentations	<p><i>Explainable Chain-of-Thought Object Counting in Vision-Language Models using Reinforcement Learning</i> by Zeng, E. Zhixuan*; Saeejith, Nair; Lei, Junfeng.</p> <p><i>Anisotropic Kernels for Neural Implicit Surface Reconstruction</i> by Jang, Soyeon*; Ramlal, Adrian; Fieguth, Paul W.; Chen, Yuhao;</p> <p><i>Lightweight Range–Angle Imaging Based Algorithm for Quasi-Static Human Detection on Low-Cost FMCW Radar</i> by Trinh, Huy*; Shaker, George.</p>
11:00 – 12:00	Oral Presentations	<p><i>Player Pose-Driven Handedness Prediction for Ice Hockey</i> by Kevin, Wei*; Evan, Iaboni; Amir, Nazemi; Clausi, David A.</p> <p><i>GC360IQ: Gradient-Detail Consistency Model for 360-degree Stitched Image Quality Assessment</i> by Zhou, Jinghan*; Wang, Zhou.</p> <p><i>Optical Flow-Enhanced Thermal Targeting for Real-Time UAV Interception from Mobile Platforms</i> by Bob, Maser*; Zelek, John S; Khan, Areel.</p>
12:00 – 13:00	Lunch	
13:00 – 14:00	Academic Keynote	Dr. Wojtek Fedorko , Deputy Department Head of Scientific Computing, Triumpf.
14:00 – 15:00	Academic Keynote	<i>From Research to Reality: Four Lessons for Lasting Impact in Robotics.</i> Ryan Gariepy , Vice President, Robotics for Rockwell Automation.
15:00 – 15:30	Awards Ceremony & Closing Remarks	

*Indicates the first author of the paper.

DAY 1 – POSTER SESSIONS, IN PSE (E7)-EVENT SPACE (IN-PERSON ONLY),
15:00 – 17:00.

1. *BASTE: Baybayin Scene Text Detection and Recognition based on CRAFT and CRNN* by **Aggarao, John Eric; Tomas, Rock Christian V.**
2. *A Physics-Informed Digital Twin Framework for Calibrated Sim-to-Real FMCW Radar Occupancy Estimation* by **Trinh, Huy; Ratto V., Sebastian; Creager, Elliot; Shaker, George.**
3. *GC360IQ: Gradient-Detail Consistency Model for 360-degree Stitched Image Quality Assessment* by **Zhou, Jinghan; Wang, Zhou.**
4. *Whole-Slide Image Compression and On-Demand Viewing using Reference-Based Super-Resolution* by **Yang, Wenbo; Shin, Seungho; Zhu, Richard Y.; Wang, Zhou.**
5. *Tracking the Untrackable: Failure Modes of Object Trackers on Ice Hockey Puck* by **Salass, Liam; Clausi, David A.; Zelek, John S.**
6. *Event Detection in Ice Hockey Using Game-Aware Representations: A Dataset and Baseline Study* by **Nsiempba, Ken Mangouh; Nazemi, Amir; Zelek, John S.; Clausi, David A.**
7. *Effects of Initialization Biases on Deep Neural Network Training Dynamics* by **Pellegrino, Nicholas; Szczecina, David; Fieguth, Paul W.**
8. *Structured Clinical Interpretation of Lung Computed Tomography Using Florence-2: A Post-Detection Application of Vision Language Models* by **Dutta, Pramit; Manokaran, Jenita; Mittal, Richa; Ukwatta, Eranga.**
9. *PortionNet: Distilling 3D Geometric Knowledge for Food Nutrition Estimation* by **Bright, Darrin; Raj, Rakshith; Keisham, Kanchan.**
10. *Severity-Aware Multimodal Network for Chest X-Ray Triage and Disease Captioning* by **Ghulam, Zinah; Mittal, Richa; Ukwatta, Eranga.**
11. *Self-Supervised Learning by Curvature Alignment* by **Ghojogh, Benyamin; Sepanj, M.Hadi; Fieguth, Paul W.**
12. *AI Sensor Interfaces: Modern Architectures Enabling Intelligent Perception* by **Ojha, Anjan Kumar.**
13. *Spatial Refinement for 3D Human Mesh Recovery in Ice Hockey Broadcast Videos* by **Wang, Zhibo; Rambhatla, Sirisha; Chen, Yuhao; Clausi, David A.**
14. *Object ReID in an office environment: An empirical study* by **Klepachevskyi, Dmytro; Rambhatla, Sirisha; Chen, Yuhao.**
15. *Dissecting the Trade-offs between accuracy and completeness in SLAM for Large Outdoor Scenes: A Comparative Study of Pi-Long and VGGT-Long* by **Wu, Quanyun; Mao, Dayou; Chen, Yuhao; Clausi, David A.; Li, Jonathan.**
16. *Pre-train to Gain: Robust Learning Without Clean Labels* by **Szczecina, David; Pellegrino, Nicholas;**

Fieguth, Paul W.

- 17. Beyond Static Gaussians: An Empirical Investigation of Architectural Paradigms for Dynamic 3D Scene Reconstruction** by **Ramlal, Adrian; Zelek, John S.**
- 18. Anisotropic Kernels for Neural Implicit Surface Reconstruction** by **Jang, Soyeon; Ramlal, Adrian; Chen, Yuhao; Fieguth, Paul W.**
- 19. Neuro-Symbolic Reasoning: A Roadmap of Unsolved Core Questions** by **Dhayalkar, Sahil Rajesh.**
- 20. ZoomGate: Scale-Aware Action Recognition Across Mixed Zoom Levels** by **Buzko, Kseniia; Clausi, David A.; Zelek, John S.; Chen, Yuhao.**
- 21. Temporally Stable Rink Homography Estimation via 3D Reconstruction and Segmentation Fusion** by **Salass, Liam; Dai, Bowen; Chen, Yuhao; Clausi, David A.; Zelek, John S.**
- 22. Lightweight Range–Angle Imaging Based Algorithm for Quasi-Static Human Detection on Low-Cost FMCW Radar** by **Trinh, Huy; Shaker, George.**
- 23. Player Pose-Driven Handedness Prediction for Ice Hockey** by **Wei, Kevin; Iaboni, Evan; Nazemi, Amir; Clausi, David A.**
- 24. Understanding vision transformer quantization robustness through the lens of out-of-distribution detection** by **Kuang, Joey; Wong, Alexander.**
- 25. Video-Based Player Re-Identification in Ice Hockey via Non-Contextual Implicit Features** by **Iaboni, Evan; Nazemi, Amir; Chen, Yuhao; Clausi, David A.**
- 26. Evaluating the Gemini 2.5 Flash Model for Use in Dietary Monitoring** by **Tamlin, Anna-Margret; Chen, Yuhao.**
- 27. Explainable Chain-of-Thought Object Counting in Vision-Language Models using Reinforcement Learning** by **Zeng, E. Zhixuan; Nair, Saejith; Lei, Junfeng.**
- 28. Reducing Closeup Frequency Artifacts for Level-of-Detail 3D Gaussian Splatting** by **Zhou, Leonardo; Mao, Dayou; Lin, Yuchen; Ebadi, Ashkan; Wong, Alexander; Chen, Yuhao.**
- 29. Towards Maximizing Storage Efficiency in Pathological Whole Slide Imaging: ROI-Based Hybrid Image Compression** by **Faruk, Omor; Hasan, Mahmud.**
- 30. Deep Learning-Based Nuclei Segmentation for Label-Free Histology Using Photon Absorption Remote Sensing Microscopy** by **So, Gloria J.; Ali, Umar; Tummon Simmons, James A.; Tweel, James E.D.; Ecclestone, Benjamin R.; Haji Reza, Parsin.**
- 31. An Empirical Study of Attention-Based and LLM-Enhanced Approaches for Large-Scale Floorplan Recognition** by **Lin, Yuchen; Mao, Dayou; Chen, Yuhao; Ebadi, Ashkan.**
- 32. Automated Gas Identification from Long-Wavelength Infrared Spectra using a Convolutional Neural Network** by **Gulsayin, Ozge; Singh, Arpan R; Iheme, Kenneth K.; Daun, Kyle J.**

- 33.** *Optical Flow-Enhanced Thermal Targeting for Real-Time UAV Interception from Mobile Platforms* by **Maser, Bob; Zelek, John S.**
- 34.** *End-to-End BrATS Segmentation Pipeline with Advanced Architectures, ET-Focused Fine-Tuning, and Ensemble Optimization* by **Riyazat, Mohammadreza; Ukwatta, Eranga.**
- 35.** *PMAF Loss: Probabilistic Margin-Aware Focal Loss for Robust Medical Image Classification* by **Sagar, Abhinav.**
- 36.** *Learning Where the Manifold Ends: Contrastive Flow Matching with Negative Examples* by **Pena Cantu, Fernando Jose; Chen, Yuhao; Wong, Alexander.**
- 37.** *From Regression to Classification: Exploring the Benefits of Distributional Representations of Energy in MLIPs* by **Ali, Ahmad.**
- 38.** *Training-Free Robot Pose Estimation using Off-the-Shelf Foundational Models* by **Liang, Laurence.**
- 39.** *Deep Sequence Model for Genome Wide Discovery of Coding and Regulatory Element Signatures* by **Shabani Nia, Rayhaneh; Karkehabadi, Ali.**
- 40.** *AnytimeGS: Controllable Sized Frequency Ordered Gaussians for Compact Levels-of-Detail Representation* by **Mao, Dayou; Zhou, Leonardo; Ebadi, Ashkan; Wong, Alexander; Chen, Yuhao.**
- 41.** *Real-Time Food Instance Segmentation for Assistive Robotic Feeding: A Comparative Study* by **Ghulam, Zeyad; Abdullah, Hussein.**
- 42.** *Modeling Football Player Trajectories During Passes Using Graph-Structured Recurrent Networks* by **McGuigan, Kiernan; Hsiao, Jayden; Scott, K. Andrea; Rambhatla, Sirisha; Clausi, David A.; Xu, Lincoln Linlin.**
- 43.** *Real-Time Physics Simulation with Dynamic Mesh-Gaussian Reconstructions* by **Ramlal, Adrian; Zelek, John S.**