

# IEEE IRI 2026 Program

|                | Friday (July 31st)                                                                                                      |                                                                                                     | Saturday (Aug 1st)                                                                                           |                                                                                                             | Sunday (Aug 2nd)                                                                                                       |                                                                                     |
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| 8:20-9:30am    | <b>Opening &amp; Keynote 1</b><br>Dr. Bhavani Thuraisingham<br>Chair: Chengcui Zhang<br>Room: Discovery Hall (DISC) 061 |                                                                                                     | <b>Keynote 2:</b><br>Dr. Roger Barga<br>Chair: Chengcui Zhang<br>Room: Discovery Hall (DISC) 061             |                                                                                                             | <b>Keynote 3</b><br>John Y. Choe, University of Washington<br>Chair: Chengcui Zhang<br>Room: Discovery Hall (DISC) 061 |                                                                                     |
| 9:30-9:45am    | Coffee Break                                                                                                            |                                                                                                     | Coffee Break                                                                                                 |                                                                                                             | Coffee Break                                                                                                           |                                                                                     |
| 9:45-11:30am   | <b>A1: AI Systems, Agents &amp; Cloud-Native Orchestration</b><br>Chair:<br>Room: DISC 162                              | <b>A2: Explainable AI &amp; Trustworthy Systems AI Systems</b><br>Chair:<br>Room: DISC 252          | <b>D1: Healthcare AI I: Diagnostics &amp; Risk Prediction</b><br>Chair: <b>Min-Yuh Day</b><br>Room: DISC 162 | <b>D2: Distributed Systems &amp; Model Efficiency</b><br>Chair: <b>Emily (Shuya) Feng</b><br>Room: DISC 252 | <b>G1: Computer Vision II &amp; Human-Centered Sensing</b><br>Chair:<br>Room: DISC 162                                 | <b>G2: RAG &amp; Knowledge Graphs</b><br>Chair: <b>Foss David</b><br>Room: DISC 252 |
| 11:30am-1:00pm | Lunch Break                                                                                                             |                                                                                                     | Lunch Break                                                                                                  |                                                                                                             | Lunch Break                                                                                                            |                                                                                     |
| 1:00-3:00pm    | <b>B1: LLM Fine-Tuning, Evaluation &amp; Reasoning</b><br>Chair: <b>Siva Bayyavarapu</b><br>Room: DISC 162              | <b>B2: Time Series Forecasting &amp; Energy Analytics</b><br>Chair: <b>Yan Lu</b><br>Room: DISC 252 | <b>E1: Applied Data Science &amp; Decision Support</b><br>Chair: <b>Md Saifur Rahman</b><br>Room: DISC 162   | <b>E2: NLP, Sentiment &amp; Multimodal Reasoning</b><br>Chair: <b>Foss David</b><br>Room: DISC 252          | <b>H1: Applications in Environment &amp; Public Safety</b><br>Chair:<br>Room: DISC 162                                 | <b>H2: Invited Papers</b><br>Chair: <b>Min Chen</b><br>Room: DISC 252               |
| 3:00-3:15pm    | Break                                                                                                                   |                                                                                                     | Break                                                                                                        |                                                                                                             |                                                                                                                        |                                                                                     |
| 3:15-5:00pm    | <b>C1: Security, Privacy &amp; Adversarial ML</b><br>Chair: <b>Siva Bayyavarapu</b><br>Room: DISC 162                   | <b>C2: Computer Vision I</b><br>Chair: <b>Yan Lu</b><br>Room: DISC 252                              | <b>F1: EM-RITE Workshop</b><br>Chair: <b>Min-Yuh Day</b><br>Room: DISC 162                                   | <b>F2: AIHC Workshop</b><br>Chair: <b>Brendan Toscano</b><br>Room: DISC 252                                 |                                                                                                                        |                                                                                     |
| 7:00-9:00pm    |                                                                                                                         |                                                                                                     | Banquet and Awards                                                                                           |                                                                                                             |                                                                                                                        |                                                                                     |

## Detailed Program

### IEEE IRI Conference Day 1: Friday, July 31, 2026

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|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8:20-9:30am    | Welcome, Conference Opening Remarks (General Chairs, PC Chairs) Keynote 1:   Session Chair:                                                                               |
| 9:30-9:45am    | Coffee Break                                                                                                                                                              |
| 9:45-11:30am   | Session A                                                                                                                                                                 |
|                | <b>Session A1</b><br><b>AI Systems, Agents &amp; Cloud-Native Orchestration</b><br>Session Chair:                                                                         |
| IRI 8 (15 min) | SLA-Aware Incident Detection and Alert Routing via MCP in Distributed Systems<br><i>Bayyavarapu, Siva Rama Krishna Varma, Venganti, Vijayakumar, Hiremath, Vishwanath</i> |
| IRI 9 (15 min) | Event-Related MCP Agents for Asynchronous Enterprise Systems<br><i>Bayyavarapu, Siva Rama Krishna Varma, Venganti, Vijayakumar, Hiremath, Vishwanath</i>                  |
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| IRI 53 (15 min)       | RESO-Net: A Reusable Event-Driven AI Framework for Intelligent Network Slice Orchestration in Cloud-Native Telecom Systems<br><i>MARIMUTHU, GOPALAKRISHNAN</i>                                                                  |
| IRI 118 (15 min)      | Toward Reusable AI for Edge Offloading: An Empirical Study Under Varying IoT Workloads<br><i>Zhang, Yixin, Tran, Hai Anh, Tran, Truong</i>                                                                                      |
| IRI 188 (10 min)      | A Lightweight Causal Evidence Pipeline for Root-Cause Localization in Cloud-Native Systems<br><i>Dua, Mukesh, Gautam, Aniruddha Singh, Chowdhury, Raju, Kundu, Tarun</i>                                                        |
| IRI 43 (15 min)       | Skill-Based Architecture for Reusable, AI-Native Enterprise Modules: An Empirical Study<br><i>Jathar, Nikhil</i>                                                                                                                |
|                       | <b>Session A2</b><br><b>Explainable AI &amp; Trustworthy Systems</b><br><b>Session Chair:</b>                                                                                                                                   |
| IRI 148 (10 min)      | Quantifying the Affective Gap: A Zero-Shot Evaluation of LLMs on Fine-Grained Emotion Taxonomies<br><i>Obiwewewi, Lawrence, Rechowicz, Krzysztof J., Johnson, Jessica M., Ashok, Vikas, Shetty, Sachin, Jayarathna, Sampath</i> |
| IRI 161 (10 min)      | Epistemic Edge: Subjective Logic Guardrails for LLM-Driven IoT Actuation<br><i>Syed, Muntaser, Silaghi, Marius</i>                                                                                                              |
| IRI 177 (10 min)      | Harmonizing Mass-Shooting Databases for Cross-Source Risk Classification<br><i>Sharma, Neha, Sharma, Ritesh</i>                                                                                                                 |
| IRI 183 (10 min)      | Evaluating Classical Deepfake Detection Paradigms on the DF40 Image Benchmark<br><i>Alfaro Purisaca, Barbara Karina, Cama Castillo, Yulian Andre, Suman, Reeta</i>                                                              |
| IRI 201 (10 min)      | Routing Collapse in Classification-Head-Based Mixture-of-Experts Models for Aspect-Based Sentiment Analysis<br><i>Nagothu, Pranav, Kube, Mario Michael, Kuzmin, Kiril</i>                                                       |
| IRI 202 (10 min)      | Comparison of Explainable AI Techniques for Early Detection of Potential Prediction Failures<br><i>Suthaharan, Shan</i>                                                                                                         |
| IRI 203 (10 min)      | Tracing the Origin Source Attribution of Social Media Profile Images Using Deep Ensemble Learning<br><i>Bokolo, Biodoumoye, Qingzhong, Liu</i>                                                                                  |
| <b>11:30am-1:00pm</b> | <b>Lunch Break</b>                                                                                                                                                                                                              |
| <b>1:00-3:00pm</b>    | <b>Session B</b>                                                                                                                                                                                                                |
|                       | <b>Session B1</b><br><b>LLM Fine-Tuning, Evaluation &amp; Reasoning</b><br><b>Session Chair:</b> Siva Bayyavarapu                                                                                                               |
| IRI 55 (15 min)       | Benchmarking SLM and LLM in Feature Generation for Interpretable Automated Essay Scoring<br><i>Chovanec, Kevin, Fields, John, Madiraju, Praveen</i>                                                                             |
| IRI 135 (15 min)      | Latent Confidence Alignment for LLM Self-Assessment<br><i>Chen, Ting-Yu, Yu, Tingting, Huang, Pei-Cing, Hsu, Chan, Lin, Ming-Yen, Kang, Yihuang</i>                                                                             |
| IRI 147 (15 min)      | ADVENT: LLM-Driven Automatic Predicate Invention for ILP<br><i>Yu, Tingting, Huang, Pei-Cing, Hsu, Chan, Ku, Chan-Tung, Kang, Yihuang</i>                                                                                       |
| IRI 152 (15 min)      | When Not to Edit: Reliability Diagnostics for Activation-Space Interventions in Language Models<br><i>Osafo, Nana, Yaw, Doku, Ronald, Rawat, Danda</i>                                                                          |
| IRI 157 (15 min)      | Evaluating and Improving Pedagogical Fit in LLM-Based AI Tutors with the Pedagogical Suitability Index<br><i>Barlog, Benjamin, Craig, Hudson, Peng, Zedong</i>                                                                  |
| IRI 228 (15 min)      | <b>Machine Learning Evaluation of Generative AI Debugging Feedback Plausibility for Introductory Python Programming</b><br><i>Bouzar-Benlabiod, Lydia, Toscano, Brendan, Benoit, Darcy</i>                                      |
|                       | <b>Session B2</b><br><b>Time Series Forecasting &amp; Energy Analytics</b><br><b>Session Chair:</b> Yan Lu                                                                                                                      |

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| IRI 101 (15 min)   | CAP-STN: Continuous Adaptive Spatial Propagation for Large-Scale Spatio-Temporal Forecasting<br><i>Akbari Lor, Mohammadreza, Chen, Shu-Ching, Shyu, Mei-Ling</i>                                                     |
| IRI 115 (15 min)   | Improving Zero Shot Forecasting with Support Series and Multivariate Sensor Context<br><i>Thayer, Harrison, Panangadan, Anand</i>                                                                                    |
| IRI 156 (15 min)   | STAR: Spectral and Trend Adaptive Regime-Guided Forecasting for Multivariate Time Series<br><i>Abujar, Sheikh, Zhang, Chengcui</i>                                                                                   |
| IRI 139 (15 min)   | Risk-Aware Multi-Task Graph Neural Surrogate for Operational Event Prediction in Distribution Feeders<br><i>Hou, Bodong, Xu, Wangjie, Foo, Simon, Chen, Wei-Bang, Xiang, Xuanchen</i>                                |
| IRI 200 (10 min)   | Understanding the Limitations of Machine Learning for IoT Anomaly Detection under Extreme Class Imbalance<br><i>Dutta, Juli</i>                                                                                      |
| <b>3:00-3:15pm</b> | <b>Coffee Break</b>                                                                                                                                                                                                  |
| <b>3:15-5:00pm</b> | <b>Session C</b>                                                                                                                                                                                                     |
|                    | <b>Session C1</b><br><b>Security, Privacy &amp; Adversarial ML</b><br><b>Session Chair:</b>                                                                                                                          |
| IRI 126 (15 min)   | Cross-Cutting Security Analysis of LLM-Generated Code via Metamorphic Testing and Association Rule Mining<br><i>Peng, Zedong, Wang, Chenggang, Zhu, Shangyue</i>                                                     |
| IRI 56 (15 min)    | A Privacy-Preserving Framework Using Remote Data Science for Inter-Institutional Student Retention Prediction<br><i>Fields, John, Thota, Ruchiha, Chen, Victor, Madiraju, Praveen, Islam, K M Sajjadul</i>           |
| IRI 132 (15 min)   | Which Genes Leak? Feature-Level Privacy Auditing for Synthetic Single-Cell RNA-Seq Data<br><i>Feng, Shuya, Geng, Baocheng</i>                                                                                        |
| IRI 211 (10 min)   | Learning-based Denial-of-Key-Generation (DoKG) Attack Against Quantum Key Distribution<br><i>Awasthi, Shradha, Islam, Shafkat, Hossain, Md Tamjid</i>                                                                |
| IRI 213 (10 min)   | E3TR: Encrypted Evidence-Based Event Timeline Reconstruction Using Multi-Artifact Correlation for Network Forensics<br><i>Yahaya, Ayodeji, Liu, Qingzhong</i>                                                        |
| IRI 15 (10 min)    | Towards Lightweight Defense against Gradient-Based Adversarial Attacks in Internet of Medical Things (IoMT) Systems<br><i>Liang, Hengshuo, Qian, Cheng, Mulo, John, Qian, Mian, Lu, Chao, Yu, Wei</i>                |
| IRI 204 (10 min)   | MobileTransfer: Cross-Dataset Transfer Evaluation for Mobile-Money Fraud Detection<br><i>Jia, Xiaoke, Peng, Zedong, Wang, Chenggang</i>                                                                              |
|                    | <b>Session C2</b><br><b>Computer Vision I: Detection, Segmentation &amp; Generation</b><br><b>Session Chair:</b>                                                                                                     |
| IRI 50 (15 min)    | Mitigating Task Interference in Multimodal Glioma Segmentation via Region-Specific Modality Gating<br><i>Savaria, Evan, Sun, Jiangwen</i>                                                                            |
| IRI 81 (15 min)    | SOM2IMG: Self-Organizing Map Based Tabular-to-Image Transformation for Deep Learning<br><i>Kim, Wooyoung, Selke, William</i>                                                                                         |
| IRI 97 (15 min)    | CoDiM: Contrastive Distillation into Generative Models for Scalable Dataset Distillation<br><i>Hoang, Quang Duy, Hoang, Nam Thang, Nguyen, Huy Hieu, Tran, Hai-Anh, Tran, Truong</i>                                 |
| IRI 104 (15 min)   | PMRR: AI-assisted Prototype-guided Mask Registration and Restoration Network for Quantum Ghost Imaging<br><i>Khan, Shaan, Shyu, Mei-Ling, Chen, Shu-Ching, Kahassai, Nathnael, Hassan, Ahmed, Guerboukha, Hichem</i> |
| IRI 119 (15 min)   | Graph Generation through Self-alignment in Transformer-based Discrete Diffusion Mode<br><i>Lu, Kang, Xiao, Bohan, Liu, Lihui, Dong, Ming</i>                                                                         |
| IRI 130 (15 min)   | FC-Siamese-xView2: Fully Convolutional Siamese Networks for Pixel-Level Building Change Detection in Earthquake Damage Assessment<br><i>Lu, Yan, conner., ian, Ardiles-Cruz, Erika</i>                               |

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| 8:20-9:30am         | Awards (General Chairs, PC Chairs) Keynote 2:   Session Chair:                                                                                                                                                                                                                                                                                                                                                 |
| 9:30-9:45am         | Coffee Break                                                                                                                                                                                                                                                                                                                                                                                                   |
| 9:45-11:30am        | Session D                                                                                                                                                                                                                                                                                                                                                                                                      |
|                     | <b>Session D1</b><br><b>Healthcare AI I: Diagnostics &amp; Risk Prediction</b><br><b>Session Chair:</b>                                                                                                                                                                                                                                                                                                        |
| IRI 92 (15 min)     | Identifying Patients at Risk of Sudden Cardiac Arrest using Graph Representation Learning on Electronic Health Records<br><i>Ghaffarpour, Fatemeh, Mohammed, Emad A., Far, Behrouz H.</i>                                                                                                                                                                                                                      |
| IRI 114 (15 min)    | Machine Learning Models for Predicting Cardiac Mortality in Chronic Heart Failure Patients<br><i>Ben Shabat, Itay, Zuviet, Chelsea, Khoshgoftaar, Taghi</i>                                                                                                                                                                                                                                                    |
| IRI 137 (15 min)    | Stochastic k-Simplex Embedding in High-Dimensional Mass-Spectrometry Cancer Classification<br><i>Curtis, Ethan, Billion-Polak, Preston, Khoshgoftaar, Taghi</i>                                                                                                                                                                                                                                                |
| IRI 149 (15 min)    | The Multi-modal Frontier: Synergizing Proteomics and Imaging for Precision Diagnostics and Mechanistic Discovery in Alzheimer's Disease<br><i>Baker, Dominic, Goh, Naven, Kadambi, Prad, Belnavis, Alexander, Steinhauer, Holly, Akpan, Idara, Watkins, Kelsi, Mallick, Ditsa, Tallino, Savannah, Mukherjee, Sujato, Vanhof, Haley, Nordbeck, Abigail, Cho, Yun Xin, Wu, Teresa, Klein-Seetharaman, Judith</i> |
| IRI 155 (15 min)    | Investigating Class Imbalance and Feature Importance for Predictive Diabetes Analysis<br><i>Seliya, Naeem</i>                                                                                                                                                                                                                                                                                                  |
| IRI 60 (15 min)     | Raw EEG Image Representation for CNN-Based Dementia Classification<br><i>Sonko, Salleh, Korani, Wael, O'Connor, Brian, Hossain, Gahangir</i>                                                                                                                                                                                                                                                                   |
| IRI 62 (15 min)     | Automated and Interpretable Grading for Embryo Fragmentation via Deep Learning<br><i>Lee, Ming-Jhe, Wang, Jung-Hua, Wu, Chang-Hong, Chen, Ming-Jer, Yi, Yu-Chiao, Lee, Tsung-Hsien</i>                                                                                                                                                                                                                         |
| EMRITE2601 (15 min) | The Impact of Paid Generative AI on Quality of Life: A Poverty Premium Perspective<br><i>Wei-Lun Chang and Yan-Yi Huang</i>                                                                                                                                                                                                                                                                                    |
|                     | <b>Session D2</b><br><b>Distributed Systems &amp; Model Efficiency</b><br><b>Session Chair:</b>                                                                                                                                                                                                                                                                                                                |
| IRI 91 (15 min)     | SplitBench: Reusable Benchmarking for Split Learning and Split Federated Learning<br><i>Trepac, Samuel, Mills, Joseph, Amannejad, Yasaman</i>                                                                                                                                                                                                                                                                  |
| IRI 136 (15 min)    | MUC-FL: Block-Wise Marginal Utility Contribution for Communication-Efficient Federated Learning<br><i>Mhatre, Akshay, Karthick, Vikram, Gupta, Deepti, Zou, Jia</i>                                                                                                                                                                                                                                            |
| IRI 154 (15 min)    | Predicting Performance for Co-Hosted DNNs in Frequently-Updating Environments<br><i>Shah, Sarah, Amannejad, Yasaman, Krishnamurthy, Diwakar</i>                                                                                                                                                                                                                                                                |
| IRI 140 (15 min)    | On Optimal Modality Compression for Bandwidth Constrained Multimodal Fusion<br><i>Fan, Mengchen, Zhao, Fei, Zhang, Chengcui, Feng, Shuya, Geng, Baocheng</i>                                                                                                                                                                                                                                                   |
| IRI 112 (15 min)    | Comparing Encoding Architectures for Supervised Contrastive Learning in Tabular Classification<br><i>Billion-Polack, Preston, Khoshgoftaar, Taghi</i>                                                                                                                                                                                                                                                          |
| IRI 173 (15 min)    | <b>Inference Under Opposition: Counterfactual Evaluation for Answer Stability in Large Language Models</b><br><i>Akhand, Md Nafis Tahmid, Akbar, Khandakar Ashrafi, Thuraisingham, Bhavani</i>                                                                                                                                                                                                                 |
| IRI 116 (15 min)    | A Data Science Approach for Evaluating Experience Variables in Insurance Risk Modeling<br><i>Hu, Naibo</i>                                                                                                                                                                                                                                                                                                     |
| 11:30am-1:00pm      | Lunch Break                                                                                                                                                                                                                                                                                                                                                                                                    |
| 1:00-3:00pm         | Session E                                                                                                                                                                                                                                                                                                                                                                                                      |
|                     | <b>Session E1</b>                                                                                                                                                                                                                                                                                                                                                                                              |

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|                     | <b>Applied Data Science &amp; Decision Support</b><br><b>Session Chair:</b>                                                                                                                                                    |
| IRI 48 (15 min)     | A Data-Driven Optimization Framework for Profitable E-Waste Refurbishment in U.S. Recycling Systems<br><i>Rahman, Md saifur, Mahmud, MD Abdullah Al</i>                                                                        |
| IRI 103 (15 min)    | AI-Augmented Catastrophe Modeling with An Intelligent Orchestration Workflow<br><i>Patel, Jainil Anilkumar, Wang, Tianyi, Hamid, Shahid, Shyu, Mei-Ling, Chen, Shu-Ching</i>                                                   |
| IRI 121 (15 min)    | A CatBoost-Based Ablation Study of Scheduling Heuristics in Automobile Repossession<br><i>Sinclair, Andy, Billion-Polak, Preston, Khoshgoftaar, Taghi</i>                                                                      |
| IRI 145 (15 min)    | Risk-Stratified Explainability of Attorney Involvement in Workers' Compensation Claims<br><i>Zuvieta, Chelsea, Vivian, Gonzalo, Khoshgoftaar, Taghi</i>                                                                        |
| IRI 150 (15 min)    | TeleHSupport: A Multimodal, Literacy-Aware AI-enabled Kiosk for User-Centered Care Planning<br><i>Poursardar, Faryaneh; Dabhi, Saumya; Montemayor, Ariana; Haislip, Connor; Clarke, Janelle; Barthold, Grace; Gustin, Tina</i> |
| IRI 117 (15 min)    | MARS: Multi-Agent Re-ranking for Repeat-Order Food Delivery Recommendation<br><i>Tian, Jiahao, Wang, Zhenkai</i>                                                                                                               |
| IRI 194 (10 min)    | An Integration Framework Reusing Geochemical Surveys in Crop Nutrient Management<br><i>Jaware, Sahana</i>                                                                                                                      |
|                     | <b>Session E2</b><br><b>NLP, Sentiment &amp; Multimodal Reasoning</b><br><b>Session Chair: Dr. Foss David</b>                                                                                                                  |
| IRI 52 (15 min)     | The Challenges and the Potential of Multimodal Large Language Model-based Psychological Examination Tools<br><i>Joh, Hwayeon, Jung, Joohee, Ryu, SeongGyeong, Sohn, SungHee, Oh, Uran</i>                                      |
| IRI 57 (15 min)     | Detecting Memorization in LLM Generated Music<br><i>Galajda, Jacob, Hua, Kien</i>                                                                                                                                              |
| IRI 65 (15 min)     | Silicon Sampling via Cross-Survey Transfer<br><i>Ku, Chan-Tung, Hsu, Chan, Huang, Pei-Cing, Liu, Frank Cheng-shan, Cheng, I-Ling, Kang, Yihuang</i>                                                                            |
| IRI 78 (15 min)     | The .causal Format: Embedded Deterministic Inference for Domain-Agnostic Knowledge Graph Amplification<br><i>Foss, David</i>                                                                                                   |
| IRI 109 (15 min)    | SentimentLens: Reconciling Sentiment and Ratings via Dual-Modality in the Hospitality Sector<br><i>Jayakody, Dineth, Thenahandi, Pasindu, Jayarathna, Sampath</i>                                                              |
| IRI 214 (15 min)    | Blockchain Governance in the Era of Artificial Intelligence<br><i>Thuraisingham, Bhavani</i>                                                                                                                                   |
| IRI 138 (15 min)    | ForEx: A Formal Verification Framework for Explainable Reasoning in Logical Fallacy Detection and Annotation<br><i>Huang, Pei-Cing, Liu, Chienyu, Hsu, Chan, Chen, Ci-Siang, Lee, Pei-Ju, Kang, Yihuang</i>                    |
| <b>3:00-3:15pm</b>  | <b>Break</b>                                                                                                                                                                                                                   |
| <b>3:15-5:00pm</b>  | <b>Session F</b>                                                                                                                                                                                                               |
|                     | <b>Session F1</b><br><b>EM-RITE Workshop</b><br><b>Session Chair: Min-Yuh Day</b>                                                                                                                                              |
| EMRITE2602 (15 min) | VeriPromiseESG4K: A Traditional Chinese ESG Promise Verification Dataset for AI CUP 2026<br><i>Min-Yuh Day, Wei-Chen Huang, Hsin-Ting Lu, Wen-Ze Chen, Yu-Han Huang, Ching-Tai Chen and Yohei Seki</i>                         |
| EMRITE2604 (15 min) | A Reusable Edge AI System for Multimodal AI Companion: Performance and Response Evaluation<br><i>Yi-Cing Lu and Huang-Chia Shih</i>                                                                                            |
|                     | <b>Session F2</b><br><b>Artificial Intelligence for HealthCare (AIHC) Workshop</b><br><b>Session Chair:</b>                                                                                                                    |
| AIHC3 (15 min)      | Comparing Clinical and Machine Learning Approaches for Cardiac Mortality Risk Prediction<br><i>Romina Gotzmann, Chelsea Zuvieta and Taghi Khoshgoftaar</i>                                                                     |

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| AIHC5 (15 min)  | Optimizing ResNet-50 for Multi-Class Diabetic Retinopathy Grading: An Explainable AI Approach<br><i>Srinjoy Maji, Vishal Vilas Shinde and Sampson Akwafuo</i>                                                                                                   |
| AIHC6 (15 min)  | Affordable Edge RGB+IR Fusion for Kitchen Safety Monitoring in Permanent Supportive Housing<br><i>Sola Lhim, Kiran George, Tabashir Nobari and Anand Panangadan</i>                                                                                             |
| AIHC7 (15 min)  | End-to-End Digital Twin System for Cardiac Arrest Risk Detection: Design, Implementation, and Feasibility Evaluation<br><i>Zahra Safari</i>                                                                                                                     |
| *AIHC8 (15 min) | Minerva: GPU-Accelerated HPC Infrastructure for Biomedical AI and Scientific Computing<br><i>Patricia Kovatch, S M Shamimul Hasan, Lili Gai, Tejas Rao, Wei Guo, Hyung Min Cho, Jielin Yu, Yiyuan Liu, Eric Rosenberg, Sumit Saluja and Joshua Baker-Lepain</i> |
| 7:00-9:00pm     | <b>Banquet</b>                                                                                                                                                                                                                                                  |

## IEEE IRI Conference Day 3: Sunday, August 2nd, 2026

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| 8:20-9:30am      | <b>Keynote 3:   Session Chair:</b>                                                                                                                                                                                                                                     |
| 9:30-9:45am      | <b>Coffee Break</b>                                                                                                                                                                                                                                                    |
| 9:45-11:30am     | <b>Session G</b>                                                                                                                                                                                                                                                       |
|                  | <b>Session G1</b><br><b>Computer Vision II &amp; Human-Centered Sensing</b><br><b>Session Chair:</b>                                                                                                                                                                   |
| IRI 59 (15 min)  | Adaptive Temporal Pooling for Environmental Sound Classification<br><i>Kim, Seowoo, Ju, Jeongin, Kim, Eojin, Kim, Ju Seong, Im, Sunghin</i>                                                                                                                            |
| IRI 232 (15 min) | Consulting Computer Vision Models Through Image Task Recommendation<br><i>Liu, Jianquan, Kawai, Ryo, Omi, Kazuki</i>                                                                                                                                                   |
| IRI 120 (15 min) | TRACE: Transformer for Regularized and Accurate Cortical ECoG Motor Decoding<br><i>Yu, Yifan, Billion-Polak, Preston, Khoshgoftaar, Taghi</i>                                                                                                                          |
| IRI 123 (15 min) | Scalable Multi-User Gaze Estimation for Co-located Environments Using Commodity Webcams<br><i>Thenahandi, Pasindu, Mahanama, Bhanuka, Thennakoon, Kumushini, Jayarathna, Sampath</i>                                                                                   |
| IRI 129 (15 min) | Egocentric Eye-Tracking in Collaborative Tasks: Quantifying Joint Visual Attention Using Wearable Glasses<br><i>Thennakoon, Kumushini, Abeysinghe, Yasasi, Mahanama, Bhanuka, Obadage, Rochana, Ashok, Vikas, Jayarathna, Sampath</i>                                  |
| IRI 111 (15 min) | A Reusable Ichthyometrics Framework for Monitoring Activity in High-Density Juvenile Fish Populations<br><i>Huang, Zhi-Wei, Wang, JungHua</i>                                                                                                                          |
| IRI 146 (10 min) | Touching and Feeling the Data: A Reusable Software Pipeline for Tactile Statistical Graphs in Accessible Education<br><i>Obiuwevw, Lawrence, Rechowicz, Krzysztof J., Johnson, Jessica M., Frydenlund, Erika F., Ashok, Vikas, Shetty, Sachin, Jayarathna, Sampath</i> |
|                  | <b>Session G2</b><br><b>Retrieval-Augmented Generation &amp; Knowledge Graphs</b><br><b>Session Chair:</b>                                                                                                                                                             |
| IRI 42 (15 min)  | Chronofy: A Temporal-Logical Decay Architecture for Information Validity in Time-Aware Retrieval-Augmented Generation<br><i>Syed, Muntaser, Silaghi, Marius, Abujar, Sheikh, Akter, Sharun</i>                                                                         |
| IRI 54 (15 min)  | Defending Against Knowledge Poisoning Attacks During Retrieval-Augmented Generation<br><i>Edemacu, Kennedy, Shashidhar, Vinay M., Abudu, Dan, Tuape, Micheal, Jang, Beakcheol, Kim, Jong Wook</i>                                                                      |
| IRI 100 (15 min) | SynthLineage: Provably Optimal Corpus Distillation and Knowledge Graph Provenance for Collapse-Resistant LLM Fine-Tuning<br><i>Kumar, Vikash</i>                                                                                                                       |
| IRI 105 (15 min) | ConstraintKG: Knowledge Graph-Grounded Detection and Repair of Structured Output Hallucinations in LLMs<br><i>Kumar, Vikash</i>                                                                                                                                        |

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| IRI 124 (15 min)      | From SQL to Knowledge Graphs: An LLM-Driven Multi-Agent Approach with Data Schema Improvement<br><i>Pham Dinh, Khanh, Dang, Quy Anh, Mai Thanh, Lam, Bui Dao Duy, Khanh, Hy, Son Truong</i>                                   |
| IRI 127 (15 min)      | Explainable AI Question-Answering Framework: Integrating RAG with Knowledge Graph Reasoning<br><i>Suman, Reeta, Barisua, Barile</i>                                                                                           |
| IRI 231 (15 min)      | <b>TrAFSP: Trace-Retrieval Augmented Few Shot Prompting for Link Generation</b><br><i>Chaulagain, Nabin, Niu, Nan, Reddivari, Sandeep, Zhang, Jianzhang</i>                                                                   |
| <b>11:30am-1:00pm</b> | <b>Lunch Break</b>                                                                                                                                                                                                            |
| <b>1:00-3:00pm</b>    | <b>Session H</b>                                                                                                                                                                                                              |
|                       | <b>Session H1</b><br><b>Applications in Environment &amp; Public Safety</b><br><b>Session Chair:</b>                                                                                                                          |
| IRI 63 (15 min)       | A Guideline-Based Approach for Creating Personalized Storybooks with Generative AI<br><i>Yang, Jiseon, Lim, Dahee, Huh, Jinyoung, Chang, Young, Oh, Uran</i>                                                                  |
| IRI 223 (15 min)      | Single Image Raindrop Removal for Maritime Images<br><i>Muhammad, Xeerak, Schlag, Justin, Wang, Yi, Tong, Yan</i>                                                                                                             |
| IRI 49 (15 min)       | DeepSPE: Predicting the Association between Photospheric Magnetic Field Parameters and Solar Proton Events Using Ensemble Deep Learning<br><i>O'Keefe, Patrick, Wang, Jason, Oria, Vincent</i>                                |
| IRI 205 (10 min)      | Machine Learning Based Modeling for Diabetes Prediction<br><i>Dammalapati, Chandra Sekhar, Wang, Xiaoliang</i>                                                                                                                |
| IRI 207 (10 min)      | Point & Play: A Mobile AR Campus Tour and Scavenger Hunt for Interactive Campus Exploration<br><i>Wright, John, Chen, Wei-Bang</i>                                                                                            |
| IRI 212 (10 min)      | Clusters Overlap Rate in Dirichlet Mixtures<br><i>Ouali, Mohammed, Rodriguez, Bautista</i>                                                                                                                                    |
| IRI 187 (10 min)      | FireDataForge: A Unified Framework for Multi-Source Wildfire Data Retrieval and Integration<br><i>Xia, Zeyu, Chen, Lexie, Liu, Ye, Huang, Huilin</i>                                                                          |
| IRI 40 (10 min)       | Semi-Automated, Open-Sourced Utility Network Reconstruction using LiDAR and OpenStreetMaps<br><i>Acquaviva, Ally, Haddad, Al-Idrisi, Tanuwidjaja, Owen, Vaidhynathan, Deepthi, Prabakar, Kumaraguru, Martinez Biro, David</i> |
| IRI 189 (10 min)      | Automated Detection of Venous Beading in Fundus Images Using Patch-Based Deep Learning for Diabetic Retinopathy Staging<br><i>Tabanjeh, Noor, Chen, Wei-Bang, Lu, Yongjin, Xiang, Xuanchen, Qu, Qian</i>                      |
|                       | <b>Session H2</b><br><b>Vision, Language &amp; Emerging Applications</b><br><b>Session Chair: Min Chen</b>                                                                                                                    |
| IRI 221 (15 min)      | <b>Position Sizing as a Risk-Control Variable: A Closed-Loop GRPO Framework for LLM Trading</b><br><i>Li, Dazhi, Chen, Min</i>                                                                                                |
| IRI 222 (15 min)      | <b>LI-VAD: Lightweight and Interpretable Video Artifact Detection</b><br><i>Palmer, Laurence, Xiao, Ziang, Li, Haiyi, Kuo, Jay</i>                                                                                            |
| IRI 224 (15 min)      | <b>MDF-MLLM: Deep Fusion Through Cross-Modal Feature Alignment for Fundoscopy Classification</b><br><i>Jordan, Jason, Akbari Lor, Mohammadreza, Koulen, Peter, Shyu, Mei-Ling, Chen, Shu-Ching</i>                            |
| IRI 225 (15 min)      | <b>Scientific AI Agents Must Learn and Share</b><br><i>Thomas Pan, Jake Y. Chen</i>                                                                                                                                           |
| IRI 229 (15 min)      | <b>Scene-First Vehicle-Evidenced Fusion for Urban Flood-Depth Estimation from Street Images</b><br><i>Guo, HUAQIANG, Li, Olivia, Tong, Yan</i>                                                                                |
| IRI 99 (15 min)       | TVDM-LLM: Schema-Aware Natural Language Querying for Transportation Surveillance Video Databases<br><i>Chen, Xin, Zhang, Chengcui</i>                                                                                         |