

**45th IEEE International Conference on Distributed Computing Systems 2025
(ICDCS 2025)
20-23 July 2025, Glasgow, UK**

Detailed Programme

Saturday, 19 July 2025	
16:00-17:00	Exclusive Distillery Whiskey Tasting Tour 1 (Optional)

Sunday, 20 July 2025	
08:00-09:00	Breakfast (Radisson Blu)
09:00-17:00	Posters Megalith 1
09:00-10:30	Workshops & Tutorials (Morning Session 1)
09:00-10:30	Tutorials
	T1: Federated Learning and Network Security: Foundations, Potential, and Resilience Megalith 2
	T5: AI-Native Joint Communication and Computation in 6G Networks and Beyond Room 2
	T6: Network Simulation Bridge: Bridging Distributed Applications with Network Simulators Room 1
	T2: Integrating Knowledge Graphs and Large Language Models for Advancing Scientific Research Finnieston
09:00-10:30	Workshops
	Federated Learning for Web Technologies Workshop (FL4WEB) Megalith 3
	1st Workshop on Distributed Computing Systems for Smart Logistics (DCSSL) Room 4
	Security, Privacy and Resilience in Converged Networked Systems Workshop (SPARCSNet) Room 4
	1st Workshop on High Performance and Energy Efficient Architectures for 3D Chiplets (HiPER3D) Room 5
	4th International Workshop on Autonomous Network Management Systems (ANMS) Room 7
	2nd Workshop on Engineering Techniques for Distributed Computing Continuum Systems (EDCCS) Room 3
	5th International Workshop on Distributed Infrastructure for Common Good (DICG) Room 6

10:30-11:00	Coffee break
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11:00-12:30	Workshops & Tutorials (Morning Session 2)
11:00-12:30	Tutorials
	T1: Federated Learning and Network Security: Foundations, Potential, and Resilience Megalith 2
	T5: AI-Native Joint Communication and Computation in 6G Networks and Beyond Room 2
	T6: Network Simulation Bridge: Bridging Distributed Applications with Network Simulators Room 1
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12:30-13:45	Lunch
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13:45-15:15	Workshops, Tutorials, and Doctoral Consortium (Afternoon Session 1)
13:45-15:15	Tutorials
	T3: Serverless Orchestration on the Edge-Cloud Continuum: From Small Functions to Large Language Models Megalith 2
	T4: Trustworthiness and Consensus in Distributed and Connected Autonomous Systems Room 2
	T7: Redefining Telecommunications: Data Engineering and Blockchain for B5G/6G Networks Room 1
	T8: Distributed Multi-Agent AI Systems: Scalability, Challenges, and Applications Finnieston
13:45-15:15	Workshops
	Federated Learning for Web Technologies Workshop (FL4WEB) Megalith 3

	Distributed Generative AI for Wireless (DGAIW) Room 4
	1st International Workshop on Federated Learning for Wireless Edge Artificial Intelligence (FedEdgeAI) Room 5
	Workshop on Federated and Privacy Preserving AI in Biomedical Applications (FPPAI) Room 7
	1st Workshop on Hot Topics in Distributed Machine Learning (HotDiML) Room 3
13:45-15:15	Doctoral Consortium (DC) Room 6
	DC 1: Core Advances in Distributed AI & Federated Learning
	#85 Multi-Modal Personalized Federated Learning for Human Intent Prediction <i>Maximilian Forstenhäusler</i>
	#87 A Robust Byzantine-Resilient Framework for Federated Learning <i>Ke Xiao</i>
	#75 Optimization of Knowledge Distillation in Heterogeneous Federated Problems <i>Wenhao Li and Kevin Bryson</i>
	#80 Bridging Mobility and Federated Learning: Toward Dynamic Client Orchestration in Distributed Edge Systems <i>Qiyuan Wang</i>
	#84 CRS-FL: A Novel Framework for Communication Efficient, Reliable, and Scalable Decentralized Federated Learning <i>Vahideh Hayyolalam and Öznur Özkasap</i>

15:15-15:45	Coffee break
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15:45-17:15	Doctoral Consortium (DC) Room 6
	DC 2: Distributed AI in Real-World Systems
	#54 Improving Healthcare AI-Support Systems for Skin Lesion Diagnosis With tinyML <i>Tess Watt, Christos Chrysoulas and Rob Stewart</i>
	#83 Distributed Temporal Graph Learning with Provenance for APT Detection in Supply Chains <i>Zhuoran Tan and Jeremy Singer</i>
	#86 Towards Sustainable Synchronization of Digital Twins in Next-Generation IoT Networks <i>Yasith Ruwanga Wanigarathna Wanigarathna Arachchige, Roberto Morabito and Sasu Tarkoma</i>
	#113 An energy-aware priority-based AI-enabled offloading framework in Edge-to-Cloud continuum <i>Jaber Pournazari, Ahmed Al-Dubai and Xiaodong Liu</i>
	#79 Digital Currency and Blockchain <i>Uwe A. Kuehn</i>

19:00	Conference Welcome Reception (Radisson Blu)

Monday, 21 July 2025	
07:45-08:30	Breakfast (Radisson Blu)
08:30-09:00	Opening Ceremony
09:00-10:00	Keynote 1: Peter Druschel Megalith 2 & 3
10:00-10:30	Coffee break
10:30-12:00	Technical Morning Sessions 1
10:30-12:00	AI/ML 1: Decentralized and Collaborative Learning Megalith 2 Session Chair: Sonia Ben Mokhtar, LIRIS CNRS
	#284 PRISAM: Efficient Personalization via BN Masks in Heterogeneous Decentralized Federated Learning <i>Shan Chang, Xianbo Wang, Hao Yu, Denghui Li, Guanghao Liang, Hongzi Zhu and Bo Li</i>
	#296 Few-Shot Domain Adaptation for Effective Data Drift Mitigation in Network Management <i>Seyed Soheil Johari, Massimo Tornatore, Raouf Boutaba and Aladdin Saleh</i>
	#318 FedShapleX: Shapley Value Driven Context-Aware Model-Heterogeneous Federated Learning <i>Jifeng Chen, Haibo Zhang and Amanda Barnard</i>

	#409 PairUpLight: A Multi-agent Reinforcement Learning Approach for Coordinated Multi-intersection Traffic Signal Control <i>Wenlu Du, Jing Li and Guiling Wang</i>
10:30-12:00	Edge 1: Efficient and Adaptive Edge Computing Megalith 3 Session Chair: Ming Zhao, Arizona State University #67 NeRFlex: Resource-aware Real-time High-quality Rendering of Complex Scenes on Mobile Devices <i>Zhe Wang and Yifei Zhu</i> #132 Multipath Parallel Reverse Segment Download (MPRD) for Peer to Peer Content Delivery <i>Suresh Srinivasan and Ehsan Aryafar</i> #289 TACO: Tackling Over-correction in Federated Learning with Tailored Adaptive Correction <i>Weijie Liu, Ziwei Zhan, Carlee Joe-Wong, Edith C.-H. Ngai, Jingpu Duan, Deke Guo, Xu Chen and Xiaoxi Zhang</i> #363 Plan-Based Scalable Online Virtual Network Embedding <i>Oleg Kolosov, Gala Yadgar, David Breitgand and Dean Lorenz</i>
10:30-12:00	BC&DB 1: Security and Fairness in Blockchain Finnieston Session Chair: Muoi Tran, Chalmers University of Technology and University of Gothenburg #187 EquiBFT: A Framework for Achieving Fairness in BFT Consensus <i>Siwei Cai, Lei Fan, Shengyun Liu and Hong-Sheng Zhou</i> #209 Mosaic: Client-driven Account Allocation Framework in Sharded Blockchains <i>Yuanzhe Zhang, Shirui Pan and Jiangshan Yu</i> #228 Asynchronous Dynamic Committee Proactive Secret Sharing for Large Data <i>Zhenliang Lu, Tianyi Zhang, Alan Fekete, Kwok Yan Lam and Qiang Tang</i> #247 Depermissioning Web3: a Permissionless Accountable RPC Protocol for Blockchain Networks <i>Weihong Wang and Tom Van Cutsem</i>

12:00-13:15	Lunch
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13:15-14:45	Technical Afternoon Sessions 1
13:15-14:45	DS4AI/ML 1: Sustainable and Efficient Training and Deployment Megalith 2 Session Chair: Reza Farahani, University of Klagenfurt #50 LLMsSched: Uncertainty-Aware Workload Scheduling for Compound LLM Applications <i>Botao Zhu, Chen Chen, Xiaoyi Fan and Yifei Zhu</i> #85 Communication-Efficient MoE Fine-Tuning with Locality-Aware Expert Placement <i>Chenghao Hu, Yufei Kang and Baochun Li</i>

	#90 Shuffle-Exchange: Enhancing Collective Communication Efficiency for Large Model Training <i>Zhihang Tang, Chenxi Li, Xiang Yang, Bo He, Qi Qi, Jingyu Wang and Laiping Zhao</i> #157 GreenFL: Carbon-efficient Federated Learning over RE Powered Edge Computing Systems <i>Hanlong Liao, Yu Zhang, Lailong Luo, Deke Guo and Guoming Tang</i>
13:15-14:45	S&P 1: Attacks and Defense in Collaboration Megalith 3 Session Chair: David Mohaisen, University of Central Florida #95 InverCRS: Generative Audio Inversion Attack in Collaborative Recognition Systems <i>Xianglong Zhang, Haoming Luo, Mingda Han, Qihao Dong, Guoming Zhang, Yanni Yang, Qianli Li and Pengfei Hu</i> #103 BEyes: Unseen Eyes Snooping Pattern Lock via BFI <i>Hao Chen, Penghao Wang, Feng Hong, Zhongwen Guo and Chao Liu</i> #136 Too Clever by Half: Detecting Sampling-based Model Stealing Attacks by Their Own Cleverness <i>Xin Yao, Chenyang Wang, Yimin Chen, Kecheng Huang, Jiawei Guo and Ming Zhao</i> #203 HarDTAPE: Hardware Dedicated Trusted transAction Pre-Executor <i>Sirui He, Zhibo Sun, Yuan Chen, Yajin Zhou and Cong Wang</i>
13:15-14:45	Cloud 1: Optimizing Cloud Networking and Systems Finnieston Session Chair: Aleksander Slominski, IBM Research #106 Efficient Serverless Cold Start: Reducing Library Loading Overhead by Profile-guided Optimization <i>Syed Salauddin Mohammad Tariq, Ali Al Zein, Soumya Sripad Vaidya, Arati Khanolkar, Zheng Song and Probir Roy</i> #122 P4CEMaker: automated hardware acceleration of consensus protocols <i>Paul Breuil and Baptiste Lepers</i> #212 PEE: Precise ECN Encoding for Efficient Congestion Control in Data Center Networks <i>Changlin Jiang, Yi Wu, Hanling Wang, Feixue Han, Dayi Zhao, Yong Jiang, Gareth Tyson and Qing Li</i> #246 Octopus: Decentralized Workflow-granular Scheduling for Serverless Workflow <i>Keming Wang, Liaoliao Feng, Ligang He, Chenlin Huang, Fengyuan Yu and Tao Xie</i>

14:45-15:15	Coffee break
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15:15-16:45	Technical Afternoon Sessions 2
15:15-16:45	AI/ML 2: Efficient Training and Resource Management Megalith 2 Session Chair: Hai Huang, Atlassian #456 Mast: Efficient Training of Mixture-of-Experts Transformers with Task Pipelining and Ordering <i>Wenxiang Lin, Xinglin Pan, Shaohuai Shi, Xuan Wang, Bo Li and Xiaowen Chu</i>

	#458 Mitigating Contention in Stream Multiprocessors for Pipelined Mixture of Experts: An SM-Aware Scheduling Approach <i>Xinglin Pan, Rui Wang, Wenxaing Lin, Shaohuai Shi and Xiaowen Chu</i> #565 SimDC: A High-Fidelity Device Simulation Platform for Device-Cloud Collaborative Computing <i>Ruiguang Pei, Junjie Wu, Dan Peng, Min Fang, Jianan Zhang, Zhihui Fu and Jun Wang</i> #589 Congestion Control for Blockchain-enabled SDN in Web 4.0: A Reinforcement Learning Approach through Active Inference <i>Chenyang Wang, Xiaoxu Ren, Ying He, Fei Richard Yu and Victor C. M. Leung</i>
15:15-16:45	IoT&CPS 1: Mobile Agents and Perception in Autonomous Systems Megalith 3 Session Chair: Angelos Marnierides, University of Cyprus #98 U-Mesh: Deploying UAV-Mesh Network for Automatic Powerline Inspection in Remote Areas <i>Jieyu Zhou, Feng Lyu, Mingliu Liu, Fan Wu, Lijuan He, Huali Lu, Zaixun Ling and Yibo Cui</i> #109 CoPe: Taming Collaborative 3D Perception via Lite Network Attention across Mobile Agents <i>Shifan Zhang, Hongzi Zhu, Yunzhe Li, Liang Zhang, Shan Chang and Minyi Guo</i> #201 Saga: Capturing Multi-granularity Semantics from Massive Unlabelled IMU Data for User Perception <i>Yunzhe Li, Facheng Hu, Hongzi Zhu, Shifan Zhang, Liang Zhang, Shan Chang and Minyi Guo</i> #214 mmUAVsense: mmWave Radar-based UAV Detection via Fine-grained Rotary Sensing <i>Wenhao Xu, Chuyu Wang, Qiancheng Jin, Yanling Bu, Lei Xie and Sanglu Lu</i>
15:15-16:45	BC&DB 2: Smart Contracts and Consensus Finnieston Session Chair: Xiapu Luo, The Hong Kong Polytechnic University #339 Mahi-Mahi: Low-Latency Asynchronous BFT DAG-Based Consensus <i>Philipp Jovanovic, Lefteris Kokoris-Kogias, Bryan Kumara, Alberto Sonnino, Pasindu Tennage and Igor Zablotchi</i> #346 Uncovering Hidden Proxy Smart Contracts for Finding Collision Vulnerabilities in Ethereum <i>Cheng-Kang Chen, Wen-Yi Chu, Muoi Tran, Laurent Vanbever and Hsu-Chun Hsiao</i> #443 Enabling Bitcoin Smart Contracts on the Internet Computer <i>Ryan Croote, Islam El-Ashi, Thomas Locher and Yvonne-Anne Pignolet</i> #490 Lumi: Lightweight Blockchain Layer 2 Protocol from On-chain Coordination <i>Xin Wang, Shuhe Cao, Keting Jia, Qidi You and Sisi Duan</i>
16:45-17:00	Break
17:00-18:30	Women in Distributed Computing Systems (WiDCS) Event & Reception (Radisson Blu) Megalith 2

Tuesday, 22 July 2025	
08:00-09:00	Breakfast (Radisson Blu)
09:00-10:00	Keynote 2: Ling Liu Megalith 2 & 3
10:00-10:30	Coffee break
10:30-12:00	Technical Morning Sessions 1
10:30-12:00	DS4AI/ML 2: Distributed Training and Inference Megalith 2 Session Chair: Marco Levorato, University of California, Irvine #194 SOLB: Synchronization-Objective Load Balancing for Distributed DNN Training <i>Jingling Liu, Zixi Wang, Zhong He, Rui Cui, Hao Fang and Jiawei Huang</i> #252 Demystifying Distributed Training of Graph Neural Networks for Link Prediction <i>Xin Huang and Chul-Ho Lee</i> #257 S2M3: Split-and-Share Multi-Modal Models for Distributed Multi-Task Inference on the Edge <i>Jinyi Yoon, Jiho Lee, Ting He, Nakjung Choi and Bo Ji</i> #288 CAFGD: Reduce Fragmentation in Large-Scale Multi-tenant Clusters for GPU Sharing Workloads <i>Huazheng Lao, Rui Xu, Long Chen and Jinquan Zhang</i>
10:30-12:00	S&P2: Security and Privacy in AI and ML Megalith 3 Session Chair: Shahid Raza, University of Glasgow #673 On Securing Data Privacy in Federated Learning Using Noise-assisted Aggregated Multi-Key Homomorphic Encryption <i>Yuxiao Ma, Wei Lou and Song Guo</i> #324 PDSL: Privacy-Preserved Decentralized Stochastic Learning with Heterogeneous Data Distribution <i>Lina Wang, Yunsheng Yuan, Chunxiao Wang and Feng Li</i> #427 Physical Backdoor Attacks against mmWave-based Human Activity Recognition <i>Ziqian Bi, Amit Singha, Hongfei Xue, Tao Li, Yimin Chen and Yanchao Zhang</i> #478 Attributing ChatGPT-Transformed Synthetic Code <i>Soohyeon Choi, Ali Alkinoon, Ahod Alghuried, Abdulaziz Alghamdi and David Mohaisen</i>
10:30-12:00	FT1: Resilience in Distributed Learning and Communication Finnieston Session Chair: Yu Liu, The Hong Kong Polytechnic University #140 RAPIDSCRIBE: Bandwidth-aware Parallel Snapshots for Distributed Neural-Network Training <i>Wenxuan Liu, Qihang Chen, Shuotao Xu, Hua Yang, Yuqing Yang and Peng Cheng</i> #305 ECCheck: Enhancing In-Memory Checkpoint with Erasure Coding in Distributed DNN Training <i>Guicheng Qi, Zongpeng Li, Chuan Wu, Zhuwei Peng and Yi Zheng</i>

	#715 Exploring Dangerous Graphs with Byzantine Companions <i>Giuseppe Antonio Di Luna, Paola Flocchini, Debasish Pattanayak, Francesco Piselli, Giuseppe Prencipe and Nicola Santoro</i> #660 Bandwidth Optimized Scalable Designs with Inter-Layer Overlapping for MPI Broadcast <i>Yi Dai, Qi Zhu, Mingche Lai, Jiaqing Xu, Zhiquan Lai, Bo Yang and Dongsheng Li</i>
10:30-12:00	Industry 1 Room 4 Session Chair: Jordi Vilaplana-Mayoral, University of Lleida Industry Keynote 1: Mohamed Eldessouki #192 Name-based Quality for Name-based Networks <i>Ryo Yanagida, Jeremy Singer, Paul Harvey, Leon Wong and Colin Perkins</i> #197 Edge-First Language Model Inference: Models, Metrics, and Tradeoffs <i>Siyoun Jang and Roberto Morabito</i> #64 Optimizing Telco Networks with Foundation Models: A Scalable Approach for Tabular Data <i>Franck Le, Keith Grueneberg, Erich Nahum, Douglas Freimuth and Vadim Sheinin</i>

12:00-13:15	Lunch
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13:15-14:45	Technical Afternoon Sessions 1
13:15-14:45	DS4AI/ML 3: Privacy-preserving and Sustainable AI Megalith 2 Session Chair: Cong Wang, Zhejiang University #362 FedLTH: A Privacy-preserving Federated Learning Framework with Model Pruning on Edge Clients <i>Heyu Zhang, Yulai Xie, Shengshan Hu, Miao He, Peisong He, Jun Zheng and Dan Feng</i> #501 Carbon-Neutralizing Edge AI Inference for Data Streams via Model Control and Allowance Trading <i>Yining Zhang, Lei Jiao, Konglin Zhu, Yuedong Xu and Lin Zhang</i> #511 PARDON: Privacy-Aware and Robust Federated Domain Generalization <i>Dung Thuy Nguyen, Taylor T. Johnson and Kevin Leach</i> #530 ACME: Adaptive Customization of Large Models via Distributed Systems <i>Ziming Dai, Chao Qiu, Fei Gao, Yunfeng Zhao and Xiaofei Wang</i>
13:15-14:45	BC&DB 3: Cross-chain and Scalability Megalith 3 Session Chair: Thomas Locher, DFINITY Foundation #618 Tombolo: Towards a Decentralized Interconnected Blockchain Ecosystem using Cross-Chain Payment Channels <i>Siddharth Maurya, Nitin Awathare, Vinay Joseph Ribeiro and Umesh Bellur</i> #759 Fully Decentralized Collection of Attestations for Single-Slot Finality in Ethereum <i>Janos Tapolcai and Bence Ladóczki</i>

	#760 A Generic Framework for Cross-Chain Atomic Swaps of Digital Tokens <i>Janos Tapolcai, Bence Ladóczy and Lajos Rónyai</i> #895 A Novel Reputation-based Sharding Blockchain System in Edge Sensor Networks <i>Jiarui Zhang and Yuanyuan Yang</i>
13:15-14:45	Cloud 2: Reliable and Secure State Management Finnieston Session Chair: Patrizio Dazzi, University of Pisa #526 SGX-Enabled Encrypted Cross-Cloud Data Synchronization <i>Jia Zhao, Yanjing Ren, Jingwei Li and Patrick P. C. Lee</i> #802 Practical Considerations for Implementing State Machine Replication in the Cloud <i>Zhiying Liang, Vahab Jabrayilov, Abutalib Aghayev and Aleksey Charapko</i> #37 Spacker: Unified State Migration for Distributed Streaming <i>Mao Yancan, Shuhao Zhang and Richard Ma</i> #236 Asynchronous BFT Consensus Made Wireless <i>Shuo Liu, Minghui Xu, Tianyi Sun and Xiuzhen Cheng</i>
13:15-14:45	Industry 2 Room 4 Session Chair: Kostas Kolomvatsos, University of Thessaly #30 Incremental Learning Detection of Distributed Financially Motivated Attacks in Energy Markets <i>Ghadeer Alsharif, Christos Anagnostopoulos and Angelos Marnierides</i> #34 Distributed Quantum Bit-Phase-Flip Error Correction based on CSS Codes and GHZ States <i>Shahram Babaie and Chunming Qiao</i> #65 D-MGN: A Distributed Mesh Graph Neural Network for Scalable Engineering Simulation <i>Fu Lin, Jiasheng Shi, Weixiong Rao, Jiachuan Wang, Lei Chen, Chunyan Zhu, Haihua Wang and Suo Xie</i> #63 Snowpark: Performant, Secure, User-Friendly Data Engineering and AI/ML Next To Your Data <i>Brandon Baker, Elliott Brossard, Chenwei Xie, Zihao Ye, Deen Liu, Yijun Xie, Arthur Zwiegincew, Nitya Kumar Sharma, Gaurav Jain, Eugene Retunsky, Mike Halcrow, Derek Denny-Brown, Istvan Cseri, Tyler Akidau and Yuxiong He</i>

14:45-15:15	Coffee break
15:15-16:45	Posters & Demonstrations Megalith 1
16:45-17:00	Break

17:00-18:30	Technical Afternoon Sessions 2
17:00-18:30	IoT&CPS 2: Intelligent Computing and Sensing Megalith 2 Session Chair: Stefanie Roos, University of Kaiserslautern-Landau #224 Sdser: Online Deployment and Scheduling of Dynamic DAG Functions with Bayesian Prediction in Serverless Edge Computing <i>Wentao Liu, Ruiting Zhou and Yue Ma</i> #226 BaroAuth: Harnessing Ear Canal Deformation for Speaking User Authentication on Earbuds <i>Luo Zhou, Shan Chang, Jiusong Luo, Huixiang Wen, Hongzi Zhu and Li Lu</i> #317 TSAJS: Efficient Multi-Server Joint Task Scheduling Scheme for Mobile Edge Computing <i>Chaoqun Li, Rongsheng Fan, Hesong Wang, Mingda Han, Si Wu, Feng Li and Pengfei Hu</i> #479 Towards Visual-Inertial Integration: Multi-Modal Collaboration-based Video Stabilization <i>Chaoran Li, Yanling Bu and Lei Xie</i>
17:00-18:30	Edge 2: Edge Intelligence and Distributed Computing Megalith 3 Session Chair: Tao Li, Purdue University #444 Partitioning or Not? Hierarchical Task Offloading Optimization in Collaborative Satellite Edge Computing Networks <i>Yan Chen, Haiquan Wang, Jun Liu, Xiaolin Jia, Jiejie Zhao and Han Qiu</i> #459 HERACLES: Hierarchical Semantic Communications for Distributed Dynamic Sensor Fusion <i>Langtian Qin, Yashuo Wu, Sameh Najeh, Marco Levorato and Carla Fabiana Chiasserini</i> #507 Optimizing WebAssembly Garbage Collection in Go: Performance Insights, Tuning Tips, and Batch Execution Strategies <i>Safia Guellil and Marc Sanchez-Artigas</i> #858 Efficient Partitioning Vision Transformer on Edge Devices for Distributed Inference <i>Xiang Liu, Yijun Song, Xia Li, Yifei Sun, Huiying Lan, Zemin Liu, Linshan Jiang and Jialin Li</i>
17:00-18:30	Industry 3 Room 4 Session Chair: Athanasios Tziouvaras, University of Thessaly #51 Leveraging Federated Learning for Decentralized Semi-Supervised Task-Informed Representation Learning for Sequential Data <i>Maximilian Forstenhäusler, Daniel Külzer, Christos Anagnostopoulos, Shameem Puthiya Parambath and Natascha Weber</i> #173 AutoFairML: An Automated Middleware for Fairness Auditing in Real-world AI Pipelines <i>Dimitrios Tomaras, Vana Kalogeraki, Christos Varytimidis, Evangelos Anagnostopoulos, Rahul Nair, Elizabeth M. Daly, Jakub Marecek and Dimitrios Gunopulos</i> #39 TS-V2X: Trust-Based Safety V2X Middleware for Adaptive Situation Awareness in Autonomous Driving <i>Jimin Ryu, Subi Kim, Jieun Kang and Yong Ik Yoon</i>

	#165 Unearthing Silent Data: Back to Basics in Process Design <i>Jae Sook Cheong and Junseong Bang</i>
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19:15	Banquet (Crowne Plaza)

Wednesday, 23 July 2025	
08:00-09:00	Breakfast (Radisson Blu)
09:00-10:00	Keynote 3: Peter Pietzuch Megalith 2 & 3
10:00-10:30	Coffee break
10:30-12:00	Technical Morning Sessions 1
10:30-12:00	DS4AI/ML 4: Collaborative and Efficient Deep Learning Megalith 2 Session Chair: Chul-Ho Lee, Texas State University #533 Distributed DNN-based Video Analytics with Adaptive Multi-Device Collaboration <i>Zhihao Xu, Maozhe Zhao, Qinya Li, Shengzhong Liu, Fan Wu and Guihai Chen</i> #636 Rehearsal-free Federated Domain-incremental Learning <i>Rui Sun, Haoran Duan, Jiahua Dong, Varun Ojha, Tejal Shah and Rajiv Ranjan</i> #683 Enhancing In-network Aggregation with Adaptive Gradient Quantization for Multi-tenant Learning <i>Huifeng Xing, Yinfan Hu, Hao Wang, Yang Chen, Zixuan Chen, Sen Liu and Yang Xu</i> #700 Efficient Joint Communication and Computation Placement for Large-scale SNN Simulation on Supercomputers <i>Yubing Bao, Zhihui Lu, Xin Du, Qiang Duan, Jirui Yang, Jin Zhao, Geyong Min, Yang Chen, Shijing Hu and Xin Wang</i>
10:30-12:00	S&P3: Secure and Privacy-Preserving in Federated Learning Megalith 3 Session Chair: Ilir Murturi, TU Wien #502 A Lightweight Secure Aggregation Protocol for Federated Learning Applications <i>Elena van Kempen, Qifei Li, Giorgia Azzurra Marson and Claudio Soriente</i> #558 IB-SC: Simplify Key Management to Enable Quick Start for Short-session Path Validation <i>Keji Miao, Xinghai Wei, Dongqi Han, Jie Yuan, Zhen Qin, Qun Li, Haiguang Wang and Tieyan Li</i> #606 FLdetox: Detoxify Persistent Backdoors in Federated Learning <i>Wenjuan Tang, Chenkai Liu, Yutong Jiang, Jianan Zhao and Peng Sun</i> #637 PP-FCL: Privacy-Preserving Federated Continual Learning via Generative Replay and Incremental Representation Enhancement <i>Zaobo He, Yunkun Wang, Zhipeng Cai and Yingshu Li</i>
10:30-12:00	Alg1: Consensus and Coordination in Distributed Systems Finniaston Session Chair: Aleksey Charapko, University of New Hampshire

	#376 Shared memory consensus on a ring: Epigenetic Consensus <i>Petra Berenbrink, Funda Ergun, Anna Geisler and Yannic Maus</i> #508 Skip Hash: A Fast Ordered Map Via Software Transactional Memory <i>Matthew Rodriguez, Vitaly Aksenov and Michael Spear</i> #559 Efficient Deterministic Distributed Computing in Ad-Hoc Wireless Networks <i>Tomasz Jurdzinski and Dariusz Kowalski</i> #572 TOB-SVD: Total-Order Broadcast with Single-Vote Decisions in the Sleepy Model <i>Francesco D'Amato, Roberto Saltini, Thanh-Hai Tran and Luca Zanolini</i>
10:30-12:00	Industry 4 Room 4 Session Chair: Jordi Mateo-Fornes, University of Lleida Industry Keynote 2: Raúl Gracia #176 Monte Carlo Tree Search for Safe Decision Making at Unsignalized Intersections <i>Zhihao Lin, Jianglin Lan, Christos Anagnostopoulos, Zhen Tian and David Flynn</i> #180 Bringing Serverless Functions Closer To Citizen Science Mobile Applications <i>Aleksander Slominski, Pedro Garcia Lopez and Daniel Alejandro Coll Tejeda</i> #68 GUIDE: GNN-based Unified Incident Detection for Microservices Application Deployments <i>Anurag Dutt, Doseok Jang, Joao Nadkarni, Kai Su and Anshul Gandhi</i>

12:00-13:15	Lunch
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13:15-14:45	Technical Afternoon Sessions 1
13:15-14:45	DS4AI/ML 5: Inference and Resource Management Megalith 2 Session Chair: JinYi Yoon, Virginia Tech #737 Wainscot: Tailoring Model Parallelism to Fit Device Memory Limits <i>Xiaojuan Ma, Shashwat Jaiswal, Chirag Shetty, Chen-Wei Chou, Kevin Zhang and Indranil Gupta</i> #893 Inferring Communities of Interest in Collaborative Learning-based Recommender Systems <i>Yacine Belal, Mohamed Maouche, Sonia Ben Mokhtar and Anthony Simonet-Boulogne</i> #855 Ripple: Scalable Incremental GNN Inferencing on Large Streaming Graphs <i>Pranjal Naman and Yogesh Simmhan</i> #928 MCaM: Efficient LLM Inference with Multi-tier KV Cache Management <i>Kexin Chu, Zixu Shen, Sheng-Ru Cheng, Dawei Xiang, Ziqin Liu and Wei Zhang</i>
13:15-14:45	E&D 1: Smart Infrastructure and Resource Management Megalith 3 Session Chair: Chenwei Xie, Snowflake #254 The Cloud, Like Building and Running Go Binaries <i>Diana Arroyo, Paul Castro, Cora Coleman, Thuan Doan, Nick Mitchell, Sara Kokkila-Schumacher, Ed Seabolt, Alek Slominski, Ansu Varghese and Lionel Villard</i>

	#263 Smart Blue Light Pole-based Real-Time Crowd Counting for Smart Campuses <i>Yitao Chen, Kaiqi Zhao, Krishna Gundu, Zohair Zaidi and Ming Zhao</i> #424 Space Booking: Enabling Performance-Critical Applications in Broadband Satellite Networks <i>Xiaojian Wang, Ruozhou Yu, Dejun Yang, Guoliang Xue, Qiushi Wei, Huayue Gu and Zhouyu Li</i> #473 Elastic Scheduling for Mix-Flow in Time-Sensitive Networking <i>Jiawei Huang, Yifeng Liu, Yiting Wang, Shengwen Zhou, Hui Li, Zhaoyi Li, Yijun Li, Qile Wang, Jishu Tian, Kengchang Chen and Jiacheng Xie</i>
13:15-14:45	Mobile 1: Intelligent and Secure Mobile Computing Finnieston Session Chair: Chen Qian, University of California, Santa Cruz #28 Weighted Monitoring Interval Minimization for Disaster Surveillance with a UAV <i>Wenzheng Xu, Yunrui Cao, Dandan Huang, Weifa Liang, Jianwei Zhang, Tang Liu, Jian Peng, Xiaohua Jia and Zichuan Xu</i> #199 DiVE: Differential Video Encoding for Online Edge-assisted Video Analytics on Mobile Agents <i>Jiangang Shen, Hongzi Zhu, Liang Zhang, Yunzhe Li, Shan Chang and Minyi Guo</i> #322 Partitioned Collaborative Inference for On-Device Models via Evolutionary Reinforcement Learning <i>Lin Tan, Pengzhan Zhou, Songtao Guo, Jun Zhao, Zhufang Kuang, Dewen Qiao and Lu Yang</i> #286 QuHE: Optimizing Utility-Cost in Quantum Key Distribution and Homomorphic Encryption Enabled Secure Edge Computing Networks <i>Liangxin Qian, Yang Li and Jun Zhao</i>
13:15-14:45	Industry 5 Room 4 Session Chair: George Floros, University of Thessaly #172 Artificial Intelligence and Radar-Enhanced Audio-Visual Speech Recognition for the Next Generation of Communication Technologies <i>Nour Ghadban, Hira Hammed, Elem Miranda, Qammer H. Abbasi, Muhammad Ali Imran, Jonathan Cooper and Julien Le Kerne</i> #66 Distributed Log-driven Anomaly Detection System based on Evolving Decision Making <i>Zhuoran Tan, Qiyuan Wang, Christos Anagnostopoulos, Shameem P. Parambath, Jeremy Singer and Sam Temple</i> #174 Efficient and Safe Planner for Automated Driving on Ramps Considering Unsatisfication <i>Qinghao Li, Zhen Tian, Xiaodan Wang, Jinming Yang and Zhihao Lin</i> #175 Adaptive Field Effect Planner for Safe Interactive Autonomous Driving on Curved Roads <i>Qinghao Li, Zhen Tian, Xiaodan Wang, Jinming Yang and Zhihao Lin</i> #746 Correctness proof for a Ring-Learning-with-Errors Multi-Authority Ciphertext-Policy Attribute-Based Encryption Scheme <i>Jack Loughridge, Charuka Herath, Yogachandran Rahulamathavan, Chaminda Hewage, Imtiaz Khan, Lewis Kemp, Simon Bourne and Ali Shahaab</i>

14:45-15:15	Coffee break
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15:15-16:45	Technical Afternoon Sessions 2
15:15-16:45	AI/ML 3: Efficient and Secure Federated Learning Megalith 2 Session Chair: Jayaram Radhakrishnan, IBM Research #603 Federated Learning with Workload Reduction through Partial Training of Client Models and Entropy-Based Data Selection <i>Hongrui Shi, Valentin Radu and Po Yang</i> #709 FedSU: Communication-efficient Federated Learning with Speculative Updating <i>Wei Yu, Chen Chen, Qinbin Li, Jieru Zhao, Shixuan Sun, Bo Li and Minyi Guo</i> #825 A Client-level Assessment of Collaborative Backdoor Poisoning in Non-IID Federated Learning <i>Phung Lai, Guanxiong Liu, Nhathai Phan, Issa Khalil, Abdallah Khreishah and Xintao Wu</i>
15:15-16:45	E&D 2: Advanced Management and Distributed Execution Megalith 3 Session Chair: Probir Roy, University of Michigan Dearborn #545 Hetero\$^2\$Pipe: Pipelining Multi-DNN Inference on Heterogeneous Mobile Processors under Co-Execution Slowdown <i>Yuhao Shen, Zichen Wang, Tianyi Wang, Chaojie Gu, Zhenyu Wen, Yuanchao Shu and Cong Wang</i> #654 Arsc: Automated Reconciliation for State Correctness of Cluster Management <i>Hongjing Yu, Chaoqun Li, Tao Han and Pengfei Hu</i> #803 Remote Gate Scheduling in Distributed Quantum Computing <i>Xu Xu, Yu Liu, Yingling Mao and Yuanyuan Yang</i> #411 CloudQC: A Network-aware Framework for Multi-tenant Distributed Quantum Computing <i>Ruilin Zhou, Yuhang Gan, Yi Liu and Chen Qian</i>
15:15-16:45	Alg 2: Efficient and Resilient Distributed Coordination Finnieston Session Chair: Tomasz Jurdzinski, University of Wroclaw #594 Fast Self-Stabilizing Ranking <i>Petra Berenbrink, Robert Elsässer, Thorsten Götte, Lukas Hintze and Dominik Kaaser</i> #735 On the Complexity of Deterministic Distributed Wireless Link Scheduling <i>Dariusz Kowalski and Miguel A. Mosteiro</i> #778 Failure-Aware Tasking for Teams of Drones <i>Jonathan Diller, Qi Han, Robert Byers, Yee Shen Teoh, John G. Rogers III and Neil Dantam</i> #902 Distributed Non-Duplicate Sampling with Application on Network-wide Flow Cardinality Estimation <i>Aayush Karki, Zibo Liu, Shigang Chen and Haibo Wang</i>

15:15-16:45	Industry 6 Room 4 Session Chair: Kostas Kolomvatsos, University of Thessaly #67 Performance of Confidential Computing GPUs <i>Antonio Martínez Ibarra, Julian James Stephen, Aurora González Vidal, Antonio Fernando Skarmeta Gómez and Kallapalayam Radhakrishnan Jayaram</i> #182 Optimized Data Transfer Strategies for Forward Command Centres in Distributed Wildfire Management <i>Mustafa Al-Bado, Thuy Truong, Michal Sworzeniowski, Deirbhile Healy, Panagiotis Oikonomou and Konstantinos Kolomvatsos</i> #184 Scheduling Inference Workloads in the Computing Continuum with Reinforcement Learning <i>Gabriele Castellano, Juan-Jose Nieto, Antonino Angi, Francisco Alvarez Terribas, Jordi Luque, Ferran Diego, Alessio Sacco, Flavio Esposito and Fulvio Riso</i> #200 Reconfiguration of Applications in Cloud-Edge Multi-clusters <i>Marta Patiño-Martinez, Ainhua Azqueta-Alzuaz and Aitor Agirre</i>
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16:45-17:15	Closing
19:00	Civic Reception (Glasgow City Chambers)

Thursday, 24 July 2025	
11:30-12:30	Exclusive Distillery Whiskey Tasting Tour 2 (Optional)

Sunday, 20 July 2025 – Wednesday, 23 July 2025	Poster Papers Megalith 1 #17 Quantum Federated Aggregation using Joint Fidelity-and-Entropy Computation <i>Seok Bin Son and Soohyun Park</i> #21 Efficient Fine-tuning of Large Models under 4GB VRAM with Power-saving Strategies <i>Dong Dong, Mingshu Zhai, Hui Zeng, Chengzhang Wu and Jidong Zhai</i> #22 Fundamentals of Caching Layered Data objects <i>Agrim Bari, Gustavo de Veciana and George Kesidis</i> #23 ACC: Ensuring Eventual Consistency across Diverse Data Stores in End-Cloud Collaboration <i>Wenbo Zhao, Longhai Li, Hui Li, Mingtao Chen, Mingsong Xie, Yuheng Chang and Jiangtao Cui</i> #25 FedColab: Federated Collaborative Learning for Teacher-Student Knowledge Distillation <i>Wenhao Li, Christos Anagnostopoulos and Kevin Bryson</i>
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	#28 Adaptive Region-aware Video Encoding for Real-time Cloud-edge Collaborative Object Detection <i>Bingyun Yang, Jingyi Ning, Wenhui Zhou, Chuyu Wang, Lei Xie, Zhenjie Lin and Liming Wang</i> #29 Convergence Behaviors and Variabilities of Loss Functions in Quantum GANs and GANs <i>Md Abdur Rahman, Alfredo Cuzzocrea and Hossain Shahriar</i> #31 EMO: Edge Model Overlays to Scale Model Size in Federated Learning <i>Di Wu, Weibo He, Wanglei Feng, Zhenyu Wen, Bin Qian and Blesson Varghese</i> #32 Federated Learning for Privacy-Preserving Anomaly Detection in Electronic Health Record Access Control <i>Javier Martínez Llamas, Paolo Marcheschi, Stefano Dalmiani, Davy Preuveneers and Wouter Joosen</i> #33 A Federated Few-shot Learning Siamese Network Framework with Data Label Imbalance <i>Tahani Aladwani and Christos Anagnostopoulos</i> #35 Gradient Bandit Experts For Node Selection In Edge Computing <i>Saleh Abdullah Alfahad, Shameem A Puthiya Parambath, Christos Anagnostopoulos</i> #36 Federated Quantum Generative Adversarial Network for Intrusion Detection <i>Franco Cirillo and Christian Esposito</i> #38 Detection of stealthy attack vectors in networked Industrial Control Systems using Machine Learning <i>Lazaros Lazarou, Costas Pashiourtides and Angelos K. Marnierides</i> #41 Unified Parallel Semantic Log Parsing based on Causal Graph Construction for Attack Attribution <i>Zhuoran Tan, Christos Anagnostopoulos, Shameem P. Parambath, Ke Xiao and Jeremy Singer</i> #48 Resilient Inference for Personalized Federated Learning in Edge Computing Environments <i>Ke Xiao, Qiyuan Wang, Christos Anagnostopoulos and Kevin Bryson</i> #53 Traffic Embedding: Improving the Transferability of Deep Learning Model in Anomaly Detection <i>Yifei Zhang, Chung-Horng Lung and Zhe Zhang</i> #171 Causal VAE-DM: Trustworthy Generative Modeling for Image Modification Based on Causal Graphs <i>Zhaoan Ye, Dezong Zhao, Li Zhang, Wenjing Zhao, David Flynn and Chongfeng Wei</i> #181 EFaaS: Energy-efficient Function Orchestration in Serverless Edge Computing <i>Chen Chen, Peiyuan Guan, Luning Li, Pedro Juan Rivera Torres, Roman Kolcun and Richard Mortier</i> #183 A Fast-Converging Decentralized Approach to the Weighted Minimum Vertex Cover Problem <i>Matteo Mordacchini, Emanuele Carlini and Patrizio Dazzi</i>
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	#185 GeNet: A Multimodal LLM-Based Co-Pilot for Network Topology and Configuration <i>Beni Ifland, Elad Duani, Rubin Krief, Miro Ohana, Aviram Zilberman, Andres Murillo, Ofir Manor, Ortal Lavi, Kenji Hikichi, Asaf Shabtai, Yuval Elovici and Rami Puzis</i> #186 Efficient Cloud-Edge Fault Diagnosis in High-Speed Trains leveraging Dynamic Neural Inference <i>Yunpu Wu, Paul Allen, Gareth Tucker, Lai Wei and Lei Xia</i> #187 HybridServe: Efficient Serving of Large AI Models with Confidence-Based Cascade Routing <i>Leyang Xue, Yao Fu, Luo Mai and Mahesh Marina</i> #188 TUBO: A Tailored ML Framework for Reliable Network Traffic Forecasting <i>Zhihang Yuan, Leyang Xue, Waleed Ahsan and Mahesh K. Marina</i> #190 LogWF: Anomaly Detection for Distributed Systems Based on Log Workflow Mining <i>Teng Li, Shengkai Zhang, Yebo Feng, Jiahua Xu, Yaxuan Xie, Wei Qiao and Jianfeng Ma</i> #191 Adaptive Multiple Workflow Scheduling in Cloud with Execution Uncertainty <i>Panagiotis Oikonomou, Nikos Tziritas, Mustafa Al-Bado, Thanasis Loukopoulos, Georgios Theodoropoulos and Kostas Kolomvatsos</i> #193 A Modularized and Greedy Strategy-Based Framework for Enhanced DV-Hop Model <i>Zhou Zhou, Han Shen and Mohammad Shojafar</i> #194 P4mCast: Accelerating and Scaling Fault-Tolerant Atomic Multicast in Multi-Cloud Environment <i>Bochra Boughzala, Boris Koldehofe and Alexander Lazovik</i> #195 Time-Varying Functional Connectivity for Scalable Observability in Microservice Architectures <i>Giles Winchester, George Parisi and Luc Berthouze</i> #196 Web of Things Framework for Remote Health Monitoring of Older Adults <i>Banani Anuraj, Kirill Dorofeev, Jean-Marie Aerts and Jean-Paul Calbimonte</i> #198 Towards Efficient Straggler Management in Distributed Deep Learning Training <i>Suraiya Tairin, Haiying Shen and Anand Iyer</i> #199 Analysis and Tuning of Knowledge Distillation for Efficient Collaborative Learning <i>Norah Alballa, Ahmed M. Abdelmoniem and Marco Canini</i> #339* Mahi-Mahi: Low-Latency Asynchronous BFT DAG-Based Consensus <i>Philipp Jovanovic, Lefteris Kokoris-Kogias, Bryan Kumara, Alberto Sonnino, Pasindu Tennage and Igor Zablotchi</i>
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Demonstration Papers**#45 Tokenator: A Blockchain-based Platform for Monetizing Wearable Device Data***Polina Bobrova, Artem Karapetian, Pavel Glebov, Viktor, Frolov-Bukanov, Yury Yanovich***#47 FIONA: Detecting Syntactical Outliers in Attributes with Categorical Values***Thanos Tsiamis and Abdulhakim A. Qahtan***#50 SAGkit: A Python SAG Toolkit for Response Time Analysis of Hybrid-Triggered Jobs***Ruide Cao, Zhuyun Qi, Qinyang He, Chenxi Ling, Yi Wang, Guoming Tang***#58 Integrating CvarTel with Hyperledger Fabric for Enhanced Biometric Authentication***Grigory Ivanov, Yash Madhwal, Renat Gubaev, Nikita Loshkarev, Yury Yanovich and Alexander Belenov***#59 Demo: WaterLLMarks: In-data User Tracing for Distributed LLaaS Environments***Léo Lavaur and Jérôme François***#61 Demo: Decentralized Product Lifecycle Management Using Blockchain and Digital Twins***Ranjit Kannappan, Julien Hatin, Emmanuel Bertin and Noel Crespi*