

2026 Fourth International Conference on Distributed Computing and High Performance Computing (DCHPC 2026)

**Tehran, Islamic Republic of Iran
10-11 May 2026**

IEEE Catalog Number:
ISBN:

CFP26BT8-POD
979-8-3315-6315-8



Copyright © 2026, IEEE

All Rights Reserved

Copyright and Reprint Permissions:

Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

*** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.

IEEE Catalog Number:	CFP26BT8-POD
ISBN (Print-On-Demand):	979-8-3315-6315-8
ISBN (Online):	979-8-3315-6314-1

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA

Phone:	(845) 758-0400
Fax:	(845) 758-2633
E-mail:	curran@proceedings.com
Web:	www.proceedings.com

TABLE OF CONTENTS

HITL-GAN-RF: A Human-in-the-Loop Data Pipeline for Adaptive Financial Fraud Detection	1
<i>Payam Zohari, Dorsa Macky Aleagha, Sina Akhavi, Mohammadhadi Alayeian</i>	
Adaptive Resource Allocation in Distributed Systems Using Reinforcement Learning and Graph Neural Networks	10
<i>Alireza Rahimipour Anaraki, Parvaneh Asghari</i>	
DPoH: Proactive Mitigation of Stragglers in Hadoop	18
<i>Mohammad Hossein Aghanabi, Ali Kamandi, S. Mahmoud Taheri</i>	
Vision Transformer with Gated Cross-Attention Fusion for Accurate Brain Tumor Classification	25
<i>Fatemeh Naserizadeh, Tahereh Majidi, Arash Khosravi</i>	
Systematic Fraction Guided Learning for Neural Partial Differential Equation Solvers	33
<i>Mahboubeh Molavi-Arabshahi, Khalid Sumiea Munshid</i>	
An Integrated Parallel Computing and Metabolic Biomarker Framework for Enhanced Prediction of Type 2 Diabetes and Insulin Resistance	41
<i>Mina Gholami, Mohammad Mahdi Gorzin, Radin Ashrafi, Benyamin Safipourian, Soroush Bayat Negar Rezaei, Amirparsa Rahmani</i>	
Evaluating the Impact of Active Wire Fence Placement on Remote Power Side-Channel Attacks in Multi-Tenant FPGAs	50
<i>Sina Ojaghi, Ali Ghorbani Bargani, Sana Babayan Vanestan, Mona Hashemi, Siamak Mohammadi Ahmad Khonsari</i>	
Mapping Forest Fire Risks Using Deep Learning: A Case Study in An Giang Province, Vietnam	58
<i>Muhammad Suliman, Ramon Antonio Rodrigues Zalipynis</i>	
Hierarchical Uncertainty-Driven Adaptive Ensemble for Cost-Sensitive Stream Fraud Detection	72
<i>Fatemeh Moradi, Mehran Tarif, Mohammadhossein Homaei, Oscar Mogollon-Gutierrez, Andres Caro</i>	
Towards Trustworthy Digital Twins: Verifiable Simulation via Recursive Zero-Knowledge Proofs	78
<i>Mohammadhossein Homaei, Fatemeh Moradi, Mehran Tarif, Ruben Molano, Pablo García Rodríguez Mar Avila</i>	
Zero-Knowledge Access Control for Digital Twin Operations: A Privacy-Preserving Framework	84
<i>Mohammadhossein Homaei, Fatemeh Moradi, Mehran Tarif, Agustin Di Bartolo, Mar Avila</i>	
Optimization Methods for Neuro-Fuzzy Systems: A Comprehensive Review of Financial Applications	90
<i>Xuefang Li, Asefeh Asemi</i>	
Stochastic Twin Regression Machine for k-class Classification	105
<i>Tara Mohammadi</i>	
Wearable IoT-Driven Activity and Calorie Insights Using Gradient Boosting on Real-World Sensor Streams	117
<i>Rana Alotaiby, Sayyed Khawar Abbas</i>	
A Knowledge-Driven Networking Framework for Detecting LoFT Attacks Using LSTM-Based Time Series Analysis	125
<i>Kourosh Daniel Seifi, Parvaneh Asghari, Hamid Haj Seyyed Javadi, MohammadHadi Alaeiyan</i>	

GraFuz-MST: A Graph-Theoretic Framework for Scalable and Interpretable Fuzzy Rule Learning in Big Data	131
<i>Mohammad Nematpour, Farnaz Mahan</i>	
Challenges in Building and Visualizing Isolines on Tile-Based Data Quickly and Accurately	142
<i>Uzochukwu Felix Onyekwelu, Ramon Antonio Rodrigues Zalipynis</i>	
Class-Aware Feature Selection with Core and Auxiliary Subsets for Multi-Class Intrusion Detection	160
<i>Mohammad Hossein Aminian, Arash Khosravi, Ahmad Azarnik</i>	
Heuristic Optimization in Green Datacenter for Balancing and Migration	165
<i>Haifa Saleh Mahdi, Furkan Rabee</i>	
TensExaMig: A Topology- and Interaction-Aware Framework for Scalable Process Migration in Distributed Exascale Computing Systems	176
<i>Fatemeh Hamdollahzadeh, Ehsan Mousavi Khaneghah, Mario Francesco Pavone</i>	
<i>Abdel Rahman Alzoubaidi, Weam Farhan Oliwi, Ha Huy Cuong Nguyen, Mehdi Hajirajabi, Reza Safari</i>	
<i>Zahra Fathali, Abolghasem Khamseh, Fateme Zahmatkesh</i>	
EnsembleShield-DM: Interpretable, Shift-Robust Ensemble Learning for Type 2 Diabetes Prediction Across Multi-Regional Cohorts	181
<i>Aylar Seyedi, Mohammadreza Pournameti, Mahdieh Mosavi</i>	
Quantum Gantt Charts for Spatial Data Engineering: Visualizing Hyperslab Bottlenecks, Pipeline Multiplication, and Quantum Candidate Stages	198
<i>Haque Munshi Mahidul</i>	
FedAdaptQ: Adaptive Communication-Efficient Federated Learning for IoT and Edge Devices	211
<i>Atefeh Hemmati, Shirin Abbasi, Amir Masoud Rahmani</i>	
SMR-GWO: A Hybrid Metaheuristic for High-Accuracy Lightweight Intrusion Detection in IoT Networks	217
<i>Mohammad Yasin Safaie, Arash Khosravi, Ahmad Azarnik</i>	