CALL FOR PAPERS - SPECIAL SESSION

"Computational Intelligence for Sustainable and Resilient Financial Systems"

for CODIT 2026

July 13-16, 2026 ▪ Bari, Italy

Session Co-Chairs:

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Session description:

This special session deals with the problem of designing and deploying computational intelligence methods for modern financial systems operating under high uncertainty, rapid structural changes, and increasing sustainability and regulatory requirements; it focuses on data-driven models for asset pricing, trading, portfolio construction, risk management and credit assessment that explicitly account for market complexity, model risk and the growing importance of environmental, social and governance (ESG) factors. The goal is to gather theoretical contributions, algorithmic innovations and empirical studies that (i) enhance the robustness, interpretability and adaptability of financial models under non-stationary conditions, (ii) integrate ESG and sustainability-related information into forecasting, optimization and risk evaluation processes in a rigorous and measurable way, and (iii) demonstrate scalable and reproducible solutions validated on realistic financial and ESG datasets, thereby supporting responsible investment strategies, regulatory compliance and long-term financial stability.

The topics of interest include, but are not limited to:

• Interpretable machine learning and ensemble methods for asset valuation, credit scoring and default risk prediction.

• Supervised learning approaches for price forecasting, volatility estimation and financial rating or ranking.

• Reinforcement learning and adaptive control for algorithmic trading, hedging and dynamic portfolio allocation.

• Heuristics and metaheuristics for large-scale portfolio optimization, including transaction costs and sustainability constraints.

• Integration of ESG indicators and sustainability metrics into asset pricing, portfolio construction and risk management models.

• Natural language processing and representation learning for extracting ESG signals from reports, news and disclosures.

• Fuzzy and hybrid neuro-fuzzy systems for modelling imprecision, incomplete information and qualitative ESG assessments.

• Deep learning and graph-based models for market microstructure, interconnected financial networks and systemic risk analysis.

• Uncertainty quantification, model-risk management, explainability and regulatory compliance in financial decision systems.

• Causal inference, scenario analysis and stress-testing frameworks incorporating climate and sustainability-related risks.

• High-frequency financial data analysis and execution strategies under operational and regulatory constraints.

• Reproducible benchmarks, open datasets and empirical case studies demonstrating practical deployment in sustainable finance contexts.

SUBMISSION

Papers must be submitted electronically for peer review through PaperCept by **February 07, 2026:** **http://controls.papercept.net/conferences/scripts/start.pl**. In PaperCept, click on the **CoDIT 2026 link "Submit a Contribution to CoDIT 2026" and follow the steps.**

IMPORTANT: All papers must be written in English and should describe original work. The length of the paper is limited to a maximum of 6 pages (in the standard IEEE conference double column format).

DEADLINES

February 07, 2026: deadline for paper submission

April 30, 2026: notification of acceptance/reject

May 20, 2026: deadline for final paper and registration