

International Workshop on Trustworthiness and Reliability in Neurosymbolic AI

ABOUT

Neurosymbolic AI is a new growing trend that has been able to merge the recent advances in AI through deep learning with logic and rule-based methods. The application of neurosymbolic AI seems to be spreading across many contexts, from image classification to Visual Question Answering. It has an expressive and semantic power that is not usually provided by classical deep learning. In addition, it has great potential in explainability, due to the logic-based methodologies that are a strong component of this context. These capabilities are only a starting point in XAI, they need to be explored in detail to facilitate the interpretability of whole models, in any part of them and not only in terms of the natural relationships that can be discovered. This workshop will focus on two main aspects:

1. Gives the possibility to extend the exploration of the explainability in multiple contexts, developing and adapting techniques that can be useful to relate classical deep learning approaches to their symbolic extensions.
2. Opens to the possibility to extend the understanding of neurosymbolic models to deep aspects of AI.

These two concepts lead to the trustworthiness and reliability of the new trend of Neurosymbolic AI, increasing the confidence of end-users in choosing and believing in these methodologies for computer-aided applications.

IMPORTANT DATES

Paper Submission Deadline – **March 20, 2025**

Paper Acceptance Notification – **April 15, 2025**

PAPER SUBMISSION

<https://cmt3.research.microsoft.com/IJCNN2025/Track/3/Submission/Create>

WEBSITE

<https://sites.google.com/view/trns-ai>

CALL FOR PAPER

On the behalf of Organizing Committee, it is our great pleasure to invite you to the 1st International Workshop on Trustworthiness and Reliability in Neurosymbolic AI that will be held in the The International Joint Conference on Neural Networks 2025 in Rome, Italy hosted in Pontificia Università Gregoriana on July 5th, from 2 PM to 5 PM.

Authors, according to IJCNN25 paper template are invited to submit:

- Full papers, up to 8 pages
- Short papers, up to 4 pages

Short papers may also be presented in the **poster session**. Full and short papers will be published in the **conference proceedings**.

Topics of interest include, but are not limited to:

- Soft Computing methodologies
- Symbolic and Neurosymbolic AI
- Logic and Rule-based methods
- AI methods for explainability, interpretability and reliability
- Resilient AI models
- From wide to task-specific methodologies
- Machine Learning and Deep Learning based AI methodologies
- Data-driven decision-making
- Multimodal Learning strategies
- Scalability and optimization of intelligent systems
- Generative AI and applications

PLUS! A challenge has been organized for all passionate students and researchers! The topic is *Explainable AI for Educational Question-Answering*. JOIN THE CHALLENGE!

ORGANIZING COMMITTEE

GENERAL CHAIRS

Prof. Angelo Ciaramella - University of Naples Parthenope, Italy
Prof. Le Hoang Son - Vietnam National University, Hanoi, Vietnam
Prof. Emanuel Di Nardo - University of Naples Parthenope, Italy

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