Special Issue

Embodied Intelligence: Continuous Learning Algorithms and Applications

Message from the Guest Editor

This Special Issue investigates the use of continuous learning algorithms as the foundation for advancing embodied intelligence in AI and robotics. Key areas within which continuous learning is applied include the following:

- Deep Learning Architectures: Novel neural models designed specifically for the lifelong acquisition and retention of knowledge in embodied agents.
- Robotic Adaptation: Reinforcement and evolutionary learning methods enabling robots to continuously refine their skills (e.g., manipulation, navigation) through interaction and experience.
- Vision and Language Integration: Continuous learning approaches to enable agents to improve their multimodal understanding (e.g., scene comprehension, instruction following) in real time.
- AI Frameworks: Theoretical and algorithmic advances (e.g., generative replay, regularization, Bayesian methods) tackling core continual learning challenges like stability and plasticity.

This Special Issue seeks contributions on algorithms, architectures, and applications where continuous learning enables embodied systems to grow, adapt, and operate effectively in complex, evolving real-world settings.

Guest Editor

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Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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