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# Frontiers in Artificial Intelligence and Autonomous Systems

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The International Journal of *Artificial Intelligence and Autonomous Systems (AIAS)* is a new platform for rigorous and rapid publication of the latest research findings and industrial applications in the contemporary fields of AI and autonomous systems. AIAS welcomes research articles on the theoretical, computational, cognitive, and empirical aspects of AI, autonomous systems, and their implementations.

Congratulations on the publication of the inaugural issue of AIAS! On behalf of the Editorial Board, the Co-Editors-in-Chief would like to express a warm welcome to authors, readers, editors, and editorial staff.

It is recognized that the general form of *Artificial Intelligence* (AI) is embodied by *Autonomous AI* (AAI) [1–3] underpinned by contemporary *intelligence science* [4–12], and *Intelligent Mathematics* (IM) [13–22]. AAI generates collective intelligence by cognitive knowledge acquisition from low-level data-driven learning machines trained in certain domains. AAI explores how general AI and autonomous systems may learn for thinking and reasoning beyond data regression by mimicking the brain from reflexive, imperative, adaptive, autonomous, and cognitive intelligence according to the Hierarchical Intelligence Model of the Brain (HIM) [1,2]. It involves and emphasizes building theoretical views at complex systems by engaging fundamentals, practices, and algorithms of Granular Computing [23–26]. The future generation of advanced AAI systems will enable the implementation of brain-inspired cognitive computers based on outcomes of the data-driven AI front-end supported by cognitive knowledge learning and IM theories. AAI will not only extend human knowledge [27–29], but also augment human intelligence [4,5,22,30–33] in an unprecedented pace and scope.

AIAS aims at publishing advanced research and studies on technical innovations in AAI including: a) The theoretical foundations of AI and AS underpinned by intelligence science and intelligent mathematics; b) AAI beyond traditional data-aggregated technologies; and c) Brain-inspired systems that reveal the mechanism of natural intelligence which AI can't do.

The Editors-in-Chief of AIAS include world's pioneers in AAI and cognitive systems. Their visions and insights would lead to the next generation of AAI equivalent to the brain towards a symbiotic society of human and machine intelligence.

The scope of AIAS covers, but are not limited to, the following fields and theme topics:

- Theoretical foundations of AI
- Theoretical foundations of AS
- Autonomous AI (AAI)
- Brain-inspired systems
- Cognitive robots
- Autonomous medical devices and systems
- Autonomous vehicles
- Autonomous human-machine systems
- Autonomous function and behavior generation
- Interactive intelligent systems
- Autonomous decision making
- Autonomous machine learning theory
- Computer vision
- Autonomous robotics and control
- Language and semantic processing
- Data science
- AI control theory and optimization
- Networked and distributed systems
- Ai-based computer security
- High-performance computing driven by AI

The submission site of AIAS is at https://elspublishing.com/journals/artificial-intelligence-and-autonomous-systems/. Interested authors are welcome to submit original work, the latest breakthroughs, and studies on innovative technologies in the transdisciplinary fields covered by AIAS. Rapid peer reviews and Gold Open Access (http://creativecommons.org/licenses/by/4.0/) will be offered to authors for rapid publications with worldwide reach-out by free open access.

We look forward to productive interactions with authors and readers towards the development of the emerging and truly fascinating field of AAI on the platform of AIAS.

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