Call for Chapters

Artificial Intelligence and Quantum Dynamics for Memristor-System Computing

Edited volume (World Scientific Publishing Company), planned publication 2026

About the Book

This edited volume explores the fusion of emerging AI paradigms, quantum-inspired models, and memristor-system-based computing architectures. We invite contributions that present rigorous theory, algorithms, hardware/architecture co-design, and real-world applications across this rapidly evolving field.

Topics of Interest (including, but are not limited to):

- Memristor-based architectures for neuromorphic and quantum-inspired computing
- Quantum dynamics models for AI and hybrid systems
- AI algorithms tailored for memristive hardware (training, inference, optimization)
- Memristor-enabled quantum-inspired neural networks
- Hybrid AI–quantum–memristor computing models
- Machine learning with memristor crossbars and resistive RAM
- Energy efficiency, scalability, and fault tolerance in memristor-based AI systems
- Simulation frameworks for quantum–memristor dynamics
- Applications in signal processing, robotics, IoT, cryptography, and optimization
- Theoretical insights: nonlinear dynamics, chaos, and complex networks & systems in memristor–AI computing

Important Dates

- **Proposal submission (2–3 pages):** 31 December 2025
- **Notification of acceptance:** 31 January 2026
- **Full chapter submission:** 31 May 2026
- **Peer-review feedback:** 31 July 2026
- **Final manuscript due:** 30 August 2026
- **Publication:** October 2026

Submission Guidelines

- Submit a 2–3 page proposal (PDF) outlining scope, objectives, and relevance; include a brief abstract.
- Final chapters: 8,000–12,000 words, formatted according to the World Scientific author guidelines.
- All submissions undergo double-blind peer review.
- Submission portal / contact: see below.

Editors

- **Prof. Ivan Zelinka**, VSB–Technical University of Ostrava, Czech Republic <ivan.zelinka@vsb.cz>
- **Prof. Felix Yang Lou**, Hiroshima University, Japan <ylou@hiroshima-u.ac.jp>
- **Prof. Guanrong (Ron) Chen**, City University of Hong Kong, China <eegchen@cityu.edu.hk>

Publisher

World Scientific Publishing Company (WSPC)

Contact

For proposals and inquiries, please contact any of the editors.

Why Contribute?

- One of the first comprehensive works bridging AI, quantum dynamics, and memristor computing.
- High visibility through the international distribution of the WSPC.
- Network with top researchers in AI hardware, neuromorphic computing, and quantum-inspired systems.
