IEEE CEC 2027
Edinburgh, Scotland
July 25-28, 2027
2027 IEEE CONGRESS ON EVOLUTIONARY COMPUTATION



CALL FOR PAPERS

IMPORTANT DATES

29 November 2026 *(extended date)*
Special Session & Workshop Proposals Deadline

15 December 2026
Competition & Tutorial Proposals Deadline

28 February 2027
Full Paper Submission Deadline
(No extension will be given)

15 March 2027
Short Paper Submission Deadline
(No extension will be given.)

7 April 2027
Paper Acceptance Notification

1 May 2027
Final Paper Submission & Early Registration Deadline

GENERAL CHAIRS

Amir Hussain
King Fahd University of Petroleum and Minerals, Dhahran, KSA

Xin Yao
Lingnan University, Hong Kong, China

PROGRAM CHAIRS

Ke Li
University of Exeter, UK

Bing Xue
Victoria University of Wellington, New Zealand

TECHNICAL CHAIRS

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University of New South Wales, Australia

Ying Bi
Zhengzhou University, China

Nelishia Pillay
University of Pretoria, South Africa

Kai Qin
Swinburne University of Technology, Australia

WORKSHOP & TUTORIAL CHAIRS

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University of Exeter, UK

Yanan Sun
Sichuan University, China

SPECIAL SESSIONS CHAIRS

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Victoria University of Wellington, New Zealand

Kalyanmoy Deb
University of Alabama, USA

Mohammad Tanveer
IIT Indore, India

COMPETITION CHAIR

Handing Wang
Xidian University, China

The IEEE Congress on Evolutionary Computation (IEEE CEC) is a world-class event in the field of Evolutionary Computation. One of the flagship conferences of the IEEE Computational Intelligence Society (IEEE CIS) and held annually since 1994, it provides a forum to bring together researchers and practitioners from all over the world to present and discuss their research findings on Evolutionary Computation. We invite original, previously unpublished contributions from researchers, practitioners and educators across the full breadth of evolutionary computation, from theoretical foundations to real-world applications.

IEEE CEC 2027 will be held in Edinburgh, Scotland, a vibrant capital renowned for its world-leading universities and research community and, in late July, for the festivals that fill the city each summer. We warmly invite the community to join us for an outstanding scientific programme in an inspiring setting.

ALGORITHMS

- Ant colony optimization and swarm intelligence
- Artificial immune systems
- Coevolutionary systems
- Coevolution
- Cultural algorithms
- Differential evolution
- Estimation of distribution algorithms
- Evolutionary computation theory
- Evolutionary developmental systems
- Evolutionary programming
- Evolution strategies
- Genetic algorithms
- Genetic programming
- Heuristics
- Interactive evolutionary computation
- Learning classifier systems
- Memetic algorithms
- Multi-meme and hybrid algorithms
- Molecular and quantum computing
- Multi-objective evolutionary algorithms
- Parallel and distributed algorithms
- Particle swarm optimization
- Representation and operators
- Self-adaptation in evolutionary computation

MACHINE LEARNING

- Automated design of heuristics
- Evolutionary fuzzy systems
- Evolutionary neural architecture search
- Evolutionary reinforcement learning
- Fairness-aware optimization
- Federated and secure optimization
- Large language models for optimization
- Metaheuristics and hyper-heuristics
- Multi-objective machine learning
- Neural optimization
- Surrogate-assisted optimization
- Algorithm portfolios

OPTIMIZATION

- Combinatorial Optimization
- Constraint handling
- Dynamic optimization
- Large-scale optimization
- Multi-modal optimization
- Multi-objective optimization
- Numerical optimization
- Optimization in the presence of uncertainty
- Robust optimization

THEORIES

- Causality and evolvability
- Convergence
- Fitness landscape analysis
- Robustness and neutrality
- Runtime analysis
- Scalability and complexity analysis

RELATED TOPICS

- Art and music
- Artificial life and adaptive behavior
- Autonomous mental and behavior development
- Biometrics
- Bioinformatics and computational biology
- Classification
- Clustering
- Data mining
- Defense and cybersecurity
- Drug design
- Embodied robotics
- Engineering design
- Evolutionary games and multi-agent systems
- Evolvable hardware
- Evolutionary software engineering
- Evolutionary robotics
- Finance and economics
- Intelligent systems applications
- Real-world applications
- AI ethics and governance

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