The 5th International Conference on Social Sciences and Intelligence Management (SSIM 2025)

October 16-17, 2025, Chaoyang University of Technology, Taichung, Taiwan

Special Session on <u>Applications of Evolutionary Computation</u> in Social Sciences

Call for Papers

Organizers: Prof. Fei Wang, Dr. Yi Jiang

Brief introduction of the special session (in paragraphs)

The integration of evolutionary computation (EC) with social sciences has emerged as a transformative approach to address complex, dynamic, and adaptive challenges inherent in societal systems. EC algorithms, inspired by biological evolution and natural selection, provide robust tools for modeling social phenomena, optimizing decision-making in policy design, and simulating human behavior dynamics. These methods excel in handling non-linear relationships, uncertainty, and large-scale datasets—features that are often critical yet challenging in social science research.

This special session aims to bridge the gap between computational intelligence and social science disciplines, fostering interdisciplinary dialogue and innovation. As societal challenges grow in complexity—from urbanization and pandemic response to economic inequality and climate change—traditional analytical frameworks often fall short. Evolutionary computation offers novel pathways for adaptive problem-solving, enabling researchers to explore emergent behaviors, optimize interventions, and predict system-level outcomes in dynamic environments. By showcasing cutting-edge applications, the session will highlight how EC techniques such as genetic algorithms, genetic programming, swarm intelligence, and multi-objective optimization can advance theoretical insights and practical solutions in sociology, economics, political science, and beyond. We invite researchers to contribute methodologies, case studies, and critical reflections that demonstrate the synergy between computational innovation and social science inquiry.

Topics of interest include but are not limited to the following:

- 1. Evolutionary algorithms for social network analysis
- 2. EC-based policy optimization
- 3. EC for simulating cooperation and competition in social systems
- 4. Human behavior prediction and simulation via EC-driven algorithms.
- 5. Evolutionary game theory in economic systems, political decision-making, or conflict resolution.
- 6. Multi-objective evolutionary approaches for balancing equity, efficiency, and sustainability in social policies.
- 7. Swarm intelligence in collective decision-making
- 8. Hybrid EC-machine learning frameworks
- 9. EC in Chinese culture studies

Submissions:

Papers should follow the template announced on the SSIM 2025 conference website (https://ssim2025.github.io), and be submitted via the **Microsoft CMT** system and then select

SUBJECT AREAS: <u>SS-06</u>: <u>Applications of Evolutionary Computation in Social Sciences</u> for submission.

Conference Proceeding Information:

Papers that are presented orally at the conference and meet the publication requirements of SSIM 2025 conference proceedings will be published in Springer's book series titled "Smart Innovation, Systems and Technology". Normally, this series will be indexed by Scopus and El Compendex.

Important Dates: (If SSIM extends the dates, follow those dates announced on the website)

- Abstract Submission Deadline: July 15, 2025
- Notification of Abstract Acceptance: July 25, 2025
- Full Paper Submission Deadline: August 5, 2025
- Notification of Full Paper Acceptance: August 20, 2025
- Camera-Ready Paper Deadline: August 31, 2025

For more information:

Please visit the SSIM 2025 official website https://ssim2025.github.io or contact the organizers of this special session as follows:

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