

13th ICIEV 2026 <https://cennser.org/iciev>

Special Session: Fuzzy Game Studies and Mini 4WD AI

The **ICIEV 2026 Special Session on “Fuzzy Game Studies and Mini 4WD AI”** invites researchers, academics, engineers, and practitioners to explore the broad relationships among **play, games, sports, artificial intelligence, human behavior, engineering, and society**.

Organizer:

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The session will be held as part of **ICIEV 2026**, taking place on **21–24 December 2026 in Kitakyushu, Japan**.

Scope and Objectives

Play is a fundamental aspect of human culture and society. Beyond conventional games and sports, play encompasses **competitions, hobbies, entertainment, creative activities, engineering activities, and community-based activities**. These activities are closely connected with communication, education, technology, products and services, media, business, and social communities.

This Special Session aims to examine play from a broad interdisciplinary perspective. It particularly welcomes research addressing the boundaries between **games, sports, hobbies, competitions, human activities, and technological systems**, as well as research exploring why people perceive experiences as fun, engaging, challenging, or meaningful.

The rapid development of **Artificial Intelligence, machine learning, and generative AI** is creating new relationships between humans and play. AI can participate in games and competitions, support human players, generate game content, analyze player behavior, and provide experimental environments for evaluating intelligent technologies.

The session therefore welcomes research from three complementary perspectives:

1. **Studying play** as a human, social, technological, or cultural phenomenon;
2. **Conducting research through play**, games, competitions, and related activities as experimental environments; and

3. Developing technologies that create, support, or enhance play.

What Do We Mean by “Fuzzy Game Studies”?

The term “**fuzzy**” reflects the ambiguity and uncertainty inherent in both play and its surrounding research.

Human perceptions such as **fun, enjoyment, difficulty, comfort, skill, engagement, and immersion** cannot always be represented through precise numerical measures. Such perceptions may vary between individuals and may change according to context, experience, and environment.

Similarly, human behavior and decision-making in games and competitions are influenced by **experience, intuition, emotion, risk perception, interaction, strategy, and environmental conditions**. Players do not necessarily follow theoretically optimal strategies.

The term “fuzzy” also highlights the **boundaries between academic disciplines**. Research related to games and play extends beyond computer science into psychology, cognitive science, education, human factors, economics, business, design, media studies, cultural studies, and engineering.

This Special Session particularly welcomes research that lies **between or across traditional academic boundaries**.

If you have ever wondered, “*Is this really game research?*”, your work may be particularly appropriate for this session.

Mini 4WD AI as a Research Platform

A distinctive component of this Special Session is **Mini 4WD AI**, which provides a practical platform connecting **play, artificial intelligence, engineering, experimentation, and competition**.

Although Mini 4WD is widely recognized as a hobby and competitive activity, it provides opportunities for research in areas such as:

- Mechanical design and engineering
- Aerodynamics and vehicle dynamics
- Sensors and measurement
- Signal processing
- Control engineering

- Computer vision
- Machine learning and artificial intelligence
- Simulation and optimization
- Data analytics
- Performance evaluation
- Competition strategy

Real-world Mini 4WD competitions involve uncertainty arising from **track conditions, environmental factors, machine characteristics, tuning decisions, competition rules, and human judgment**. These characteristics make Mini 4WD AI an accessible real-world platform for investigating intelligent systems under conditions that cannot always be fully captured by theoretical models or simulations.

We therefore welcome research involving **Mini 4WD AI competition machines**, including their design, development, sensing, control, simulation, optimization, AI integration, performance evaluation, and competition strategies.

We particularly encourage participants to consider research questions such as:

- Why was a particular design or strategy selected?
- How can machine performance be measured and evaluated?
- How can AI improve design, control, or competition performance?
- How do real-world conditions differ from simulation or theoretical assumptions?
- How can competition activities serve as experimental environments for AI and engineering research?

Topics of Interest

The Special Session welcomes original research, exploratory studies, case studies, prototypes, and interdisciplinary research covering, but not limited to:

- Game studies and digital games
- Sports, competitions, and e-sports
- Mini 4WD and Mini 4WD AI
- AI for games, sports, competitions, and play
- Game AI and intelligent agents
- Machine learning and reinforcement learning
- Generative AI for games, entertainment, and creative activities
- Fuzzy systems, ambiguity, and uncertainty
- Human decision-making, behavior, skills, and affect
- Human–AI and Human–Machine Interaction
- Enjoyment, fun, engagement, immersion, and user experience
- Experimental methods using games and sports

- Game-based education, learning, and training
 - Communities and social activities surrounding play
 - Economic activities, industries, businesses, and services related to play
 - Engineering design and competition machines
 - Simulation, digital twins, and data analytics
 - Design, fabrication, control, sensing, and evaluation of Mini 4WD AI systems
 - Interdisciplinary research connecting play, AI, engineering, and society
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Towards a Broader Research Community

The objective of this Special Session is not to establish another narrowly defined academic category. Rather, it seeks to create a **cross-disciplinary platform** connecting researchers and practitioners working in games, sports, hobbies, artificial intelligence, human factors, engineering, education, economics, and society.

The session encourages **innovative, exploratory, interdisciplinary, and challenging research** that crosses conventional academic boundaries.

By bringing together diverse perspectives, the session aims to explore how **play can serve not only as an object of research, but also as a platform for experimentation, engineering, innovation, and artificial intelligence.**

We warmly invite researchers and practitioners to share their ideas, prototypes, research findings, and new perspectives at **ICIEV 2026 in Kitakyushu, Japan.**

For submission guidelines and conference information, please visit the **ICIEV 2026** website.