IEEE TELEPRESENCE 2024
Pasadena, California,
November 16-17, 2024

CALL FOR SHORT PAPERS, LATE-BREAKING RESEARCH & INDUSTRY ABSTRACTS, AND ANNOUNCEMENT OF THE TELEPRESENCE COMPETITION

The First IEEE Conference on Telepresence (TELEPRESENCE 2024) will be held November 16-17, 2024, **in hybrid format**, with the in-person component located at Caltech, in Pasadena, California. The conference will provide a stimulating forum for researchers, educators, and practitioners to learn, share knowledge, report the most recent innovations and developments, and exchange ideas and advances in all aspects of telepresence systems and applications, telerobotics, human-machine interfaces, learning from humans, and autonomy. A Telepresence Competition will also take place on November 15, 2024, **with cash prizes**.

At this moment, we are calling for submissions of **short papers** (up to 4 pages) and **technical abstracts** (up to 2 pages) for late-breaking research or industrial research outcomes and/or demonstrations, as well as announcing the Telepresence Competition. Accepted short papers will appear on IEEE Xplore, while research/industry abstracts will appear in the conference proceedings, **but not** on IEEE Xplore. Paper/abstract submissions to theory and practice, including but not limited to, the following technical areas, are invited:

Technological Infrastructure and Systems

Remote Collaboration
Virtual Reality (VR) Integration
Augmented Reality (AR) Applications
Haptic Feedback Technology
3D Tele-immersion
Cross-Platform Compatibility
Teleoperation Systems
Real-Time Communication
Low Latency Networking
Spatial Audio Technology
Wireless Control Systems
Sensor Fusion for Robotics
Robotic Actuation Techniques
Internet of Things (IoT) Integration
Cloud Computing for Telepresence
5G and Advanced Networking
Cybersecurity in Telepresence
Edge Computing in Telepresence
Digital Twins and Simulation
Biometric Authentication
Wearable Technology
Machine Vision and Perception
Advanced Image and Video Processing
Environmental Sensing Technologies
Virtual Meeting Spaces
Quantum Computing Applications
Collaborative Virtual Environments
Scalability Solutions for Telepresence Systems
Sustainable Design in Telepresence Technology

Multi-Perception Integration of Data Sources

Approaches combining more than one perception source

Human-Computer Interaction and User Experience

Gesture Recognition
Brain-Computer Interfaces (BCI)
Voice User Interfaces (VUI)
Multi-Modal Interaction
Ergonomic Design
Assistive Technologies
Augmented Reality Interfaces
Virtual Environments Interaction
User Experience (UX) in HCI
User Interface (UI) Design
Behavioral Modeling
Ethnographic Data Analysis
Cognitive Modeling
Psychology of Human-Computer Interaction
Social Presence in Virtual Environments
Data Privacy and Ethics
Accessibility in Telepresence
Adaptive User Interfaces
AI-driven Personalization
Human-Centered Machine Learning
Interactive Machine Learning

Integrative Approaches

Autonomy and intelligent systems approaches in Human-Computer Interaction and User Experience

Interactive and responsive elements to Autonomy and Intelligent Systems

Autonomy and Intelligent Systems

Autonomous Navigation
Human-in-the-Loop Control
Telepresence Robots
Long-Distance Robotic Control
Autonomous Decision Making
Self-Learning Systems
Robotics and Automation
AI Ethics in Autonomy
Intelligent Control Systems
Swarm Intelligence
Autonomous Agents and Multi-Agent Systems
Self-Regulating Systems
Predictive Analytics for Autonomy
Empirical Studies in Human Learning
Natural Language Processing (NLP) for Human Learning
Human Feedback in AI
Human-in-the-Loop Learning
Haptic Interfaces for Telerobotics

Timeline

Submission Deadline: July 26, 2024
Decision Announcement: August 26, 2024
Camera-Ready Submission: September 9, 2024
Early-Bird Registration: September 9, 2024
Late Registration: November 13, 2024

Organizing Committee

General Chair: Paolo Fiorini
Co-Chairs: Adrian Stoica, Ferat Sahin
Local Chair: Joel Burdick
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Publications Chair: Kyungtae (KT) Han
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Telepresence Competition

Chair: Robert Mueller, NASA

Initial Technical Co-Sponsors: IEEE Initiative on Telepresence, IEEE RAS TC on Telerobotics, IEEE SMC TC on Robotics and Intelligent Sensing and TC on Brain-Machine Systems

https://ieee-telepresence.org