Special Session Special Session Information for Website

1. Title

Computational Cognitive Dynamics in Human–Robot/AI/Agent Interaction: Subjectivity, Context, and Bounded Rationality

2. Organizers and Contacts

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3. Short Description of Aims and Scopes

Human-robot/AI/agent interaction is increasingly characterized by rich, adaptive, long-horizon exchanges. While outcome measures such as trust, acceptance, and satisfaction remain important, they often do not explain how an interaction unfolded—how coordination emerged, where misunderstandings accumulated, or why subjective experiences changed over time. This special session focuses on **computational cognitive dynamics**: the hidden, time-evolving processes through which beliefs, goals, affect, and common ground are jointly constructed and repaired under constraints in observability, attention, computation, communication bandwidth, and control.

We seek contributions that connect empirical phenomena to principled computational and cognitive accounts of interaction, including mechanisms shaping subjectivity, context sensitivity, and bounded rationality. Relevant work spans empirical/behavioral research, user and field studies, design frameworks, system implementations, evaluation methodologies, and computational modeling/theory (e.g., Bayesian Theory of Mind, information theory, active inference, pragmatics, interactive POMDPs). Submissions that illuminate interaction dynamics over time and yield implications for theory-grounded models, metrics, and robot/AI interaction policies are especially encouraged. The session aims to foster constructive discussion across HRI communities and to bridge empirical findings with computational perspectives that inform both scientific understanding and interactive system design.