Reading Lists for Autonomous Synthetic Actors

Guy Hoffman

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Main Area: Coordinated Behavior for Robotic Actors

The main topic of this exam covers recent and foundational research informing the coordinated activity of robotic actors and humans. Since this is a novel area, the readings draw from a variety of related research subtopics: collaborative dialog systems address the study of believable embodied agents engaging in task-related dialog with humans, artificial theater looks at past efforts to build virtual actors and robotic performers for entertainment purposes; co-planning is the recent rethinking of the AI field of ‘planning’ arising from the challenge of planning in teams. These, in addition to a survey of recent HRI projects, are the content of my main exam area.

Reading List

Dialog Systems


**Believable Agents**


**Synthetic Actors**


Co-planning


Collaborative Control


A Survey of Human-Robot Interaction


Technical Area: Automated Gesture Parsing

Description
For an agent to perform in close sync and fluid timing with a human, it is not enough to analyze the verbal channel of communication. The automation of action-reading and the parsing of intentions from these actions, a proficiency humans have from infancy, is the technical focus of this proposal.

Reading List
Human Use of Nonverbal Communication


How People Learn to Parse Intentional Action


**Techniques for Automated Gesture Parsing**


Contextual Area: Dramatic Dialog and Improvisation

Description
The contextual area looks at improvised dialog, not as a computational framework, but based on time-earned insights from the study of dramatic dialog and improvisation. This literature can hopefully both frame my research in robotic actors, and offer an alternative viewpoint on the challenge of human-robot dialog.

Reading List
Books - Acting Technique


Journal Articles - Robots and Puppets in Theater


