Séminaire Stacy Marsella

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Télécom-ParisTech, 46 rue Barrault, Paris

Amphi Emeraude

Psychology as engineering science: Building Mr. Right

Abstract: The 21st century has seen the rapid development of virtual humans, human facsimiles that can interact with people using the same verbal and nonverbal behavior that people use. Virtual humans have been applied to a wide range of education, training, health and entertainment applications. The design of virtual humans relies on a wide range of psychological theories as well as empirical data gathered from human subject experiments.

Conversely, virtual humans are now widely used in a range of psychological research. In social psychology, for example, they have been used as precisely controlled confederates in experiments. Additionally, the computational models that comprise virtual humans can serve as a methodological tool in the formation, detailed specification and simulation of psychological theories. Finally, integration of perceptual, cognitive, emotional, (non)verbal capacities within a virtual human bring to the foreground a concern for the mental ecology of these capacities, a concern that is less emphasized in research that takes a more faculty oriented decomposition of mental processes.

In this talk, I will crack open virtual human technology to highlight some of the research and data that underlies their creation. I will then proceed to discuss recent efforts that tie together a virtual human's cognitive/emotional processes, their own expressive behavior as well as their modeling and understanding of others' behavior.

Short bio: Stacy Marsella is a Professor at Northeastern University in Computer Science and Psychology departments. Professor Marsella's multidisciplinary research is grounded in the computational modeling of human cognition, emotion and social behavior as well as the evaluation of those models. Beyond its relevance to

understanding human behavior, the work has seen numerous applications, including health interventions, social skills training and planning operations. His more applied work includes frameworks for large-scale social simulations of towns and a range of techniques and tools for creating virtual humans, facsimiles of people that can engage people in face-to-face interactions.