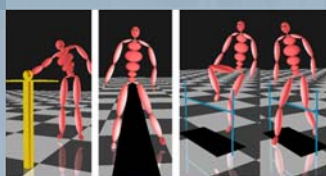


IMI PhD INTERDISCIPLINARY SEMINARS

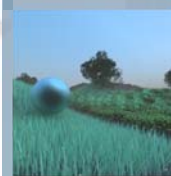
DATE: 15 January 2013, Tuesday
TIME: 11:00 am - 12:35pm
VENUE: IMI Seminar Room, Research Techno Plaza, XFrontiers, Level 03-01
 50 Nanyang Drive, Singapore 637553
 *Lunch will be served



Dr LIU Gengdai
 Research Fellow
 Institute for Media Innovation
 Singapore

STYLISTIC HUMAN MOTION GENERATION AND EDITING

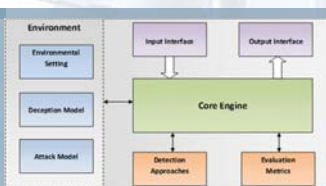
The basic idea is to model and extract motion style from motion capture data, and then to edit motion style based on the motion style model. An intuitive method is modeling the difference between motion clips and applying it to other motions to generate new stylistic human. In this method, the motion style is defined as difference between two motion clips in a low-dimensional subspace, called independent feature subspace. However, this method cannot produce motions which satisfy geometric constraints. Therefore we apply space-time optimization on motion style subspace and multi-linear subspace to edit motion style which encodes both spatial and temporal features.



Dong Lu
 PhD Student
 SCE-EEE-IMI

EXPLOITING UNCERTAINTY MASKING IN ADAPTIVE RENDERING

Adaptive rendering for image rendering aims to reduce the number of samples needed for pixel generation by concentrating samples on problematic pixels. However, existing adaptive rendering schemes still distribute too many samples to image regions with complex irregular structures. To solve this problem, we suggest exploiting uncertainty masking in adaptive rendering. By combining an uncertainty masking model with adaptive rendering, sample numbers can be further decreased on complex image regions without introducing visible noise to the rendered image. The proposed scheme with uncertainty masking considerations demonstrates that both sample numbers and overall cost decrease significantly.



Athirai ARAVAZHI
IRRISSAPPANE
 PhD Student
 SCE-IMI

TOWARDS A COMPREHENSIVE TESTBED TO EVALUATE THE ROBUSTNESS OF REPUTATION SYSTEMS AGAINST UNFAIR RATING ATTACKS

Evaluation of the effectiveness and robustness of reputation systems is important for the trust research community. We propose a novel comprehensive testbed by simulating three types of environments (simulated environments, real environments with simulated unfair rating attacks, and real environments with detected unfair ratings). The testbed incorporates sophisticated deception models and unfair rating attack models, and introduces several performance metrics to fully test and compare the effectiveness and robustness of different reputation systems. We also provide two case studies to demonstrate the usage of partial features of our proposed testbed.



GU Yuanlong William
 PhD Student
 MAE-IMI

ENHANCE PRESENCE IN TELEPRESENCE ROBOT WITH NONVERBAL COMMUNICATION

What is "telepresence"? Minsky described telepresence as a technology which immerses the user into a remote space. However a component is missing from this description, the projection of user's presence. The projection of user's presence governs the interactant's behavior and involvement towards a telepresence robot, as the interactant can either treat platform as a social agent or a mere object.

This presentation introduces dimension of presence, and how it can be embed to telepresence robot to enhance user's presence through the study of social presence. Furthermore, there is a description of the relationship of social presence to nonverbal communication.