Fall 2014 Seminar Series
Presented by the CS Division

HUMAN-CENTERED COMPUTER GRAPHICS

THURSDAY NOVEMBER 6, 2014

4:00 PM – HEC 450

Given the current profusion of devices for viewing media, video content created at one aspect ratio is often viewed on displays with different aspect ratios. Many previous solutions address this problem by retargeting or resizing the video, but a more general solution would re-edit the video for the new display.

Because it is very challenging to find regions of importance in narrative-driven visual content such as film, computational saliency often misfires. I will discuss perceptually-based algorithms that leverage viewer gaze data for re-editing video via the three primary editing operations: pan, cut, and zoom.

We let viewers implicitly reveal what is important in a video by tracking their gaze as they watch the video. Our method optimizes the path of a cropping window based on the collected eyetracking data, finds places to cut, and computes the size of the cropping window to create the effect of zoom. I will present results on a variety of video clips, and discuss two perceptual experiments to evaluate our results.

EAKTA JAIN
University of Florida

Eakta Jain is an Assistant Professor (CISE) at the University of Florida. She received her PhD and MS degrees in Robotics from Carnegie Mellon University, and her B.Tech. degree in Electrical Engineering from IIT Kanpur. She has industrial research experience at Texas Instruments, the Walt Disney Animation Studios, and at Disney Research Pittsburgh. Eakta's research interests are in building human-centered computer graphics algorithms to create and manipulate artistic content such as traditional hand animation, comic art, and films. Her work has been presented at venues such as ACM SIGGRAPH, and has won multiple awards.

Hosted by: Dr. Sumanta Pattanaik

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