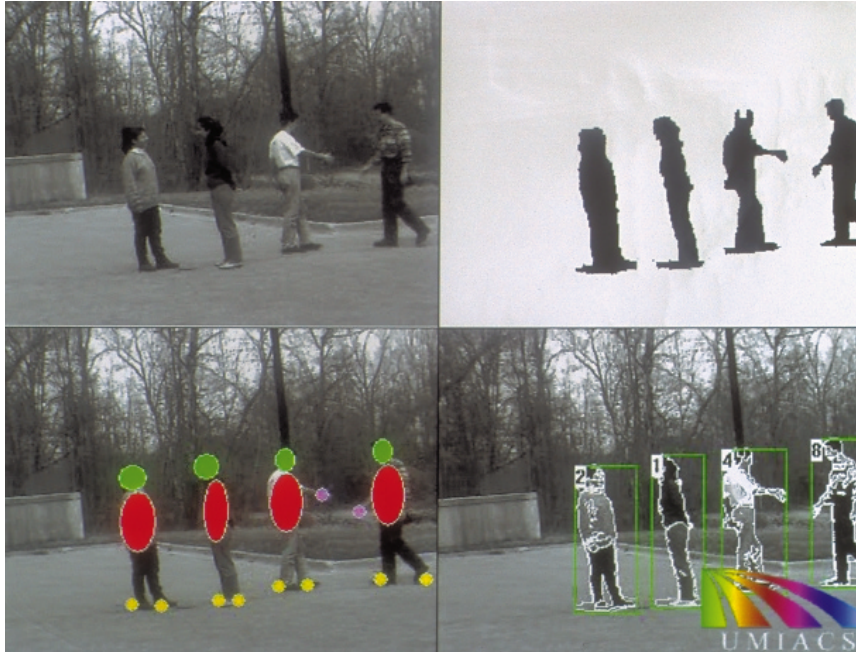


Shall We Dance?

ATR Media Integration &
Communication Research Lab and
University of Maryland

Real-time 3D computer vision gives users control over both the movement and facial expression of a virtual puppet and the music to which the puppet "dances." Multiple cameras observe a person, and human silhouette analysis achieves real-time 3D estimation of human postures. Facial expressions are estimated from images acquired by a viewing-direction controllable camera, so that the face can be tracked. From the facial images, deformations of each facial component are estimated. The estimated body postures and facial expressions are reproduced in the puppet model by deforming the model according to the estimated data. All the estimation and rendering processes run in real time on PC-based systems. Attendees can see themselves dancing in a virtual scene as virtual puppets.



Kazuyuki Ebihara

ATR Media Integration & Communication
Research Lab
2-2 Hikaridai Seika-cho Soraku-gun
Kyoto 631 Japan
ebihara@mic.atr.co.jp

Collaborators

Kazuyuki Ebihara

Jun Kurumisawa
Tatsumi Sakaguchi
Jun Ohya

ATR Media Integration & Communication
Research Lab

Larry S. Davis

Thanarat Horprasert
R. Ismail Haritaoglu
University of Maryland

