

International Symposium on The CREST Digital Archiving Project

Technical Session Program

Tuesday, March 8, 2005

Session 1: Modeling Cultural Heritage Objects Overview

- 10:00 - 10:40 Overview of the CREST Digital Archiving Project
Digital Archiving of Cultural Heritage Objects Using Observation and Computer Vision Techniques
Katsushi Ikeuchi, the University of Tokyo, Japan
- 10:40 - 11:20 **Invited Talk** Beyond Digital Archiving: A Virtual Portal to the World's Heritage
Alonzo Addison, UNESCO World Heritage Centre and University of California, Berkeley
- 11:20 - 11:40 Collaboration of geometry and photometry for virtual exhibitions of tangible and intangible cultural heritages
Takeshi Shakunaga, Okayama University, Japan

Session 2: Geometric Sensors and Techniques

- 12:40 - 13:20 **Invited Talk** Automating the 3D Modeling Pipeline
Peter Allen, Columbia University, USA
- 13:20 - 13:40 Flying Laser Range Sensor: -A Novel Aerial System for Sensing Large Cultural Heritage Objects-
Kazuhide Hasegawa, the University of Tokyo, Japan
- 13:40 - 14:00 Polarization-based Shape Estimation of Transparent Objects for Digitizing Cultural Assets
Daisuke Miyazaki, the University of Tokyo, Japan
- 14:00 - 14:20 Fast Simultaneous Alignment of Multiple Range Images
Takeshi Oishi, the University of Tokyo, Japan
- 14:20 - 14:40 Recovery of Distorted Shapes Obtained from the Flying Laser Range Sensor for Large-Scale Cultural Heritages
Atsuhiko Banno, the University of Tokyo, Japan
- 14:40 - 15:00 **BREAK**
- 15:00 - 15:40 **Invited Talk** Enhancing processing and visualization efficiency of 3D Scanned Meshes
Roberto Scopigno, ISTI-CNR, ITALY
- 15:40 - 16:00 Sunlight Illumination Simulation of Fugoppe Cave based on 3D measurement.
Nobuaki Kuchitsu, National Research Institute for Cultural Properties, Tokyo, Japan
- 16:00 - 16:20 Distortion Correction of Range Data Obtained from Floating Laser Range Sensor using Parameterized Deformation Registration
Tomohito Masuda, the University of Tokyo, Japan
- 16:20 - 16:40 Shading and Shadowing of Architecture in Augmented Reality
Tetsuya Kakuta, the University of Tokyo, Japan
- 16:40 - 18:30 **LABORATORY TOUR**

Wednesday, March 9, 2005

Session 3: Photometric and Environmental Techniques

- 10:00 - 10:40
Invited Talk Refractive and Specular 3D Shape by Light-Path Triangulation
Kiriakos N. Kutulakos, University of Toronto, Canada
- 10:40 - 11:00 Color Alignment for Texturing 3D Geometric Model
Hiroki Unten, the University of Tokyo, Japan
- 11:00 - 11:20 Estimating Consistent Surface Color of Large Outdoor Cultural Heritage Objects
Rei Kawakami, the University of Tokyo, Japan
- 11:20 - 11:40 Spectral Scene Separating: Illumination distribution and Surface Spectral reflectance
Akifumi Ikari, the University of Tokyo, Japan

Session 4: Motion Acquisition and Analysis

- 13:00 - 13:40
Invited Talk Computer Graphics Research at KAIST
Sung Yong Shin, KAIST, Korea
- 13:40 - 14:00 Multimodal Dance Training System based on Motion Analysis
Yoshinori Kuno, Saitama University, Japan
- 14:00 - 14:20 Dance Motion Analysis and Synthesis using Motion Capture Data
Atsushi Nakazawa, Osaka University, Japan
- 14:20 - 14:40 Structure Detection of Dance Sequence using Motion Capture and Musical Information
Takaaki Shiratori, the University of Tokyo, Japan
- 14:40 - 15:00 Balance Maintenance Model for Human-like Characters with Whole Body Motion
Shunsuke Kudoh, the University of Tokyo, Japan
- 15:00 - 15:20 Imitative Dance Performance by a Biped Humanoid Robot Synchronized with the Original Human Dance
Shinichiro Nakaoka, the University of Tokyo, Japan

Session 5: Motion Editing and Presentation

- 15:50 - 16:10 Simultaneous Object Tracking and Recognition by Nearest Neighbor Traversing Graph
Toshikazu Wada, Wakayama University, Japan
- 16:10 - 16:30 Learning Everyday Manipulation Tasks from Observation
Koichi Ogawara, the University of Tokyo, Japan
- 16:30 - 16:50 Imitation of Assembly Tasks for Realizing Dexterous Manipulation
Jun Takamatsu, the University of Tokyo, Japan