

Program - ICVS '06

Thursday, 1/5

System architectures - 10:50 am

Integration and Coordination in a Cognitive Vision System

Sebastian Wrede, Marc Hanheide, Sven Wachsmuth, Gerhard Sagerer

Building Modular Vision Systems with a Graphical Plugin Environment

Frank Loemker, Sebastian Wrede, Marc Hanheide, Jannik Fritsch

A Systems View of Scale Space

Ross S. Eaton, Jonah C. McBride, Greydon Foil, Mark R. Stevens

Parallel Pipeline Volume Intersection for Real-Time 3D Shape Reconstruction on a PC Cluster

Xiaojun Wu, Osamu Takizawa, Takashi Matsuyama

Learning Physical Activitis in Immersive Virtual Environments

Sang-Hack Jung, Ruzena Bajcsy

Vision-based User Interfaces - 2:00 pm

Parametric Hand Tracking for Recognition of Virtual Drawings

Afshin Sepehri, Yaser Yacoob, Larry S. Davis

Lexical Gesture Interface

Zhenyao Mo, Ulrich Neumann

Hand-Gesture Based Text Input for Wearable Computers

Yang Liu, Xiabi Liu, Yunde Jia

User-Centric Design of a Vision System for Interactive Applications

Stanislaw Borkowski, Julien Letessier, François Bérard, James L. Crowley

Poster Session A - 3:20 pm

Exploiting Rolling Shutter Distortions for Simultaneous Object Pose and Velocity Computation Using a Single View

Omar Aie-Aider, Nicolas Andreff, Jean-Marc Lavest, Philippe Martinet

Tracking Shopping Carts using Mobile Cameras Viewing Ceiling-Mounted Retro-Reflective Bar Codes

Thomas G. Zimmerman

Road Observation and Information Providing System for Supporting Mobility of Pedestrian

Hironobu Fujihyoshi, Takeshi Komura, Ikuko Eguchi Yairi, Kentaro Kayama

Fast and Accurate Iris Recognition Method Using Inner-Relation Random Texture Analysis

Ali Ajdari Rad, Navid Qaragozlou, Maryam Zaheri

Multi-camera Video Resolution Enhancement by Fusion of Spatial Disparity and Temporal Motion fields

Daniel Hazen, Rohit Puri, Kannan Ramchandran

Feedback Control for Improvement of Image Processing: an application to character recognition on metallic surfaces

Danijela Ristic, Sai Krishna Vuppala, Axel Gräser

A Learning Approach for Adaptive Image Segmentation

Vincent Martin, Nicolas Maillot, Monique Thonnat

A Real-Time System for Human Detection, Tracking and Verification from a Moving Camera

Mohamed Hussein, Wael Abd-Almageed, Yang Ran, Larry Davis

Lights and Camera: Intelligently Controlled Multi-channel Pose Estimation System

Olena Borzenko, Wei Xu, Mark Obsniuk, Arjun Chopra, Piotr Jasiobedzki, Michael Jenkin, Yves Lespérance

An Efficient and Robust Real-Time Contour Tracking System

Giorgio Panin, Alexander Ladikos, Alois Knoll

Multiple Active Camera Assignment for High Fidelity 3D Video

Sofiane Yous, Norimichi Ukita, Masatsugu Kidode

Calibration & Registration - 4:30 pm

Automatic robust image registration system: initialization, estimation, and decision

Gehua Yang, Charles V. Stewart, Michal Sofka, Chia-ling Tsai

Efficient Vision-Based Calibration for Visual Surveillance Systems with Multiple PTZ Cameras

I-Hsien Chen, Sheng-Jyh Wang

Automatic Aerial Image Registration Without Correspondence

Yingen Xiong, Francis Quek

Friday, 1/6

Grab Bag - 9:00 am

A Real-Time Large Disparity Range Stereo-System using FPGAs
BCM&GCM-Based Dense Stereo By Belief Propagation

Divyang Masrani, W. James MacLean
Hongsheng Zhang, Shahriar Negahdaripour

A Simple, Effective System for Automated Capture of High Dynamic Range Images

Sean M. O'Malley

System for Computer-Aided Multiresolution Microscopic Pathology Diagnostics

Grigory Begelman, Michael Pechuk, Ehud Rivlin, Edmond Sabo

Faces - 10:50 am

Face detection for automatic exposure control in handheld camera

Ming Yang, James Crenshaw, Bruce Augustine, Russell Mareachen, Ying Wu

Automatic Face Modeling and Synthesis Based on Image Pairs

Peng Dai, Guangyou Xu

Robotics - 2:00 pm

GeoBot: A High Level Visual Perception Architecture for Autonomous Robots

Pedro E. López-de-Teruel, Alberto Ruiz, Lorenzo F. Maimó

Evaluation of Visual Attention Models for Robots

M. Zaheer Aziz, Baerbel Mertsching, M. Salah E.-N. Shafik, Ralf Stemmer

Stereo-Based Ego-Motion Estimation Using Pixel Tracking and Iterative Closest Point

Annalisa Milella, Roland Siegwart

3D Vision-Guided Bore Inspection System

Georg Biegelbauer, Markus Vincze

Poster Session B - 3:20 pm

A Flexible Technique for Accurate Omnidirectional Camera Calibration and Structure from Motion

Davide Scaramuzza, Agostino Martinelli, Roland Siegwart

The Grlmage Platform: A Mixed Reality Environment for Interactions

Jérémie Allard, Jean-Sébastien Franco, Clément Ménier, Edmond Boyer, Bruno Raffin

Detecting Anomalous Motion Trajectories in the Coefficient Space

Shehzad Khalid, Andrew Naftel

Face Tracking by Maximizing Classification Score of Face Detector Based on Rectangle Features

Akinori Hidaka, Kenji Nishida, Takio Kurita

A Desktop 3D Scanner Exploiting Rotation and Visual Rectification of Laser Profiles

Carlo Colombo, Dario Comanducci, Alberto Del Bimbo

Strategies for Object Manipulation using Foveal and Peripheral Vision

Danica Kragic, Marten Bjorkman

Multi-point Stereo Camera System for Controlling Safety at Railroad Crossings

Ikushi Yoda

Digital Imaging with Extreme Zoom: System Design and Image Restoration Results on Range Image Segmentation for Service Robots

Yi Yao, Bisma Abidi, Mongi Abidi
Stefan Gachter, Viet Nguyen, Roland Siegwart

Multi-Modal Human Verification Using Face and Speech

Changhan Park, Taewoong Choi, Youngouk Kim, Soonhyob Kim, Jaechan Namkung, Joonki Paik

Real-Time Median Filtering for Embedded Smart Cameras

Yong Zhao, Gabriel Taubin

Automatic robust image registration system: initialization, estimation, and decision

Gehua Yang, Charles V. Stewart, Michal Sofka, and Chia-ling Tsai

Activity detection & Interpretation - 4:30 pm

An Apriori-based Method for Frequent Composite Event Discovery in Videos

Alexander Toshev, Francois Bremond, Monique Thonnat

Activity Awareness: From Predefined Events to New Pattern Discovery

Yunqian Ma, Ben Miller, Pradeep Buddharaju, Mike Bazakos

Contextual Coordination in a Cognitive Vision System for Symbolic Activity Interpretation

M. Vincze, W. Ponweiser, M. Zillich

Saturday, 1/7

Monitoring & Surveillance - 9:00 am

A Real-Time Scene Understanding System for Airport Apron Monitoring
Evaluation and Knowledge Representation Formalisms to Improve Video
Understanding

Integrated Motion Detection and Tracking for Visual Surveillance

Moving Objects Verification from Airborne Video

David Thirde, Mark Borg, James Ferryman
Benoît Georis, Magali Mazière, François
Brémond, Monique Thonnat

Mohamed F. Abdelkader, Rama Chellappa,
Qinfen Zheng, Alex L. Chan

Zhanfeng Yue, David Guarino, Rama
Chellappa

Object recognition and Tracking - 10:50 am

Urban Object Detection from Mobile Imagery with Geo-Contextual Attention
and Informative Descriptors

Large Motion Object Tracking using Active Contour Combined Active
Appearance Model

A Vision System for Interactive Object Learning

Multi-class object recognition using boosted linear discriminant analysis
combined with masking covariance matrix method

Hand Pose Estimation From Voxel Data using a Kinematically Constrained
Gaussian Mixture Model

Gerald Fritz, Christin Seifert, Lucas Paletta

Jaewon Sung

Gabriele Peters

Masashi Tanigawa, Takio Kurita

Shinko Y. Cheng, Mohan M. Trivedi