24th Workshop of the
AUSTRIAN ASSOCIATION FOR PATTERN RECOGNITION (AAPR)

"Applications of 3D-Imaging and Graph-based Modeling"

Villach, Carinthia, Austria
May 25 - 26, 2000

Co-Chairmen

Christian Menard
Verbundplan GmbH
Consulting Engineers
Klagenfurt

Robert Sablatnig
Institute of Computer Aided Automation
Pattern Recognition and Image Processing Group
Vienna University of Technology

Program Committee

H. Bischof (TU Vienna)
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G. Paar (Joanneum Res. Graz)
A. Pinz (TU Graz)

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Local Organization

Raimund Seywald (Chair)
CTR Carinthian Tech Research
Villach

Carmen Oberortner (CTR Villach)
Karin Hraby (TU Vienna)
Michael Dangl (TU Vienna)
Program

Thursday, 25 May 2000

09:00 – 09:30  Welcome Reception and Opening: Helmut Manzenreiter, Major of Villach

09:30 – 10:45  Guest Speaker: Pierre Boulanger
Creation of Live Virtual Reality Model of Real Environments from Sensor Fusion

10:45 – 11:00  Coffee Break

Session 1: 3D Acquisition and Calibration (Chair: G. Paar)

11:00 – 11:20  Martin Kampel and Srdan Tosovic
Turntable Calibration for Automatic 3D-Reconstruction

11:20 – 11:40  Christian Eitzinger
Calibration of Optical Measurement Systems Using Invariants

11:40 – 12:00  Janne Haverinen and Juha Röning
A 3D Scanner Capturing Range and Color: Design and Calibration

12:00 – 12:20  Giovanna Sansoni, Matteo Carocci, and Roberto Rodella
Phase Coded Profilometry Based on Frequency Mixing

12:20 – 12:40  Danijel Skočaj and Aleš Leonardis
Obtaining High Dynamic Scale Radiance Maps by Varying Illumination Intensity

12:40 – 14:30  Lunch

Session 2: 3D Modelling and Posters (Chair: W. Burger)

14:30 – 14:50  Josef Scharinger
Watermark Generation for 3D Imaging

14:50 – 15:10  Axel Pinz, Jochen Martin, and Thomas Auer
Automatic 3D Extraction of Visual Landmarks in a Room

15:10 – 15:30  Vít Zýkla and Radim Sára
Polynocular Image Set Consistency for Local Model Verification
Postersession:

15:30 – 15:50  Short Talks:
    Heinz Mayer and Peter Werth
    An Automatic Positioning System for BRDF Measurements of Rough Surfaces

    Peter Werth and Stefan Scherer
    Direct Subpixel Stereo Matching by Deconvolution of Image Translations

    Martin Lindermaier, Wilfried Kubinger, and Markus Vincze
    On Performance Evaluation of Image Comparison Algorithms for Video Surveillance Applications

    Georg Fischer and Ernst Schuster
    3D-Visualization of Spatial Distributions of EEG-Signals by "Axon"

15:50 – 16:10  Presentation

16:10 – 16:30  Coffee Break

Session 3: Robust Vision (Chair: A. Leonardis)

16:30 – 16:50  Horst Bischof and Aleš Leonardis
    Recovery of Eigenimages from Responses of Local Filter Banks

16:50 – 17:10  Thomas Melzer and Michael Reiter
    Parametric Stereo Eigenspaces

17:10 – 17:30  Simon Kurinčič and Aleš Leonardis
    Robust Approach to Calibration-Free Augmented Reality

17:30 – 19:00  Plenary Session ÖAGM

20:00  Conference Dinner
    Gasthof BACHER
    Vassacher Straße 58
    9500 Villach
    TelNr.: 04242 – 26893
    See also map below.
Friday, 26 May 2000

Session 4: Machine Vision (Chair: A. Pinz)

09:00 – 09:20  Markus Brandner, Axel Pinz, and Wolfgang Pölzleitner
               A Concept for Real-time, Robust Pattern Matching

09:20 – 09:40  Arno Zaworka, Stefan Scherer
               Machine Vision Driven Real-time Black Jack Analysis

09:40 – 10:00  Michael Nestler, Harald Ganster, Axel Pinz, and Georg Brasseur
               Defect Detection for Real-time Quality Grading of Apples

10:00 – 10:20  Christian Wolf, Jean-Michel Jolion, and Horst Bischof
               Histograms for Texture based Image Retrieval

10:20 – 10:40  M. Zillich, M. Vincze, M. Ayromlou, D. Legenstein
               A Framework for Model-based Vision for Robotics (V4R)

10:40 – 11:00  Coffee Break

Session 5: Graph-based Modelling and Airborn Vision (Chair: W. Kropatsch)

11:00 – 11:20  Mark Burge
               Efficient Feature Computation for Run Graphs

11:20 – 11:40  R. Glantz and W.G. Kropatsch
               Parallel Relinking of Graph Pyramids

11:40 – 12:00  Regine Bolter and Franz Leberl
               Shape-from-Shadow Building Reconstruction from Multiple View SAR Images

12:00 – 12:20  Jürgen Scheiber
               Automatic Identification of Position, Motion, and Development of Thundercloud Cells and Weather Fronts

12:20 – 12:40  Closing

15:00 (optional) Guided tour through CTR, please register at registration desk
Conference Dinner

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