



Joint ISPRS and DAGM Workshop

Object Extraction for 3D City Models, Road Databases and Traffic Monitoring - Concepts, Algorithms, and Evaluation

CMRT05

Vienna, Austria

29-30 August 2005

Final Program

Monday 8:00	Registration	
Monday 9:30-9:50	Opening session	
Monday 9:50-11:05	<u>Session 1</u>	Airborne Laserscanning
<i>Lunch break: Mensa or surrounding restaurants</i>		
Monday 13:00-14:15	<u>Session 2</u>	Road Extraction
<i>Coffee break</i>		
Monday 14:45-16:45	<u>Poster Session</u>	
<i>Monday 19:00</i>	<i>Conference Dinner</i>	
Tuesday 9:00-10:15	<u>Session 3</u>	Building Extraction I
<i>Coffee break</i>		
Tuesday 10:45-12:00	<u>Session 4</u>	Vehicles and Traffic I
<i>Lunch break: Mensa or surrounding restaurants</i>		
Tuesday 13:30-14:45	<u>Session 5</u>	Vehicles and Traffic II
<i>Coffee break</i>		
Tuesday 15:15-16:30	<u>Session 6</u>	Building Extraction II
Tuesday 16:30-17:00	Closing session	

Technical Program

Session 1: Airborne Laserscanning

Chairman: N. Haala

University of Stuttgart, Germany

A Full GIS-Based Workflow for Tree Identification and Tree Crown Delineation using Laser Scanning

D. Tiede, G. Hochleitner, T. Blaschke,

University of Salzburg, Austria

Evaluation of a Method for Fusing LIDAR Data and Multispectral Images for Building Detection

F. Rottensteiner, G. Summer, J. Trinder, S. Clode, K. Kubik,

Vienna University of Technology, Austria;

University of New South Wales, Australia;

University of Queensland, Australia

3D-Modeling of Urban Structures

H. Gross, U. Thoennesen, W. v. Hansen,

FGAN-FOM, Germany

Session 2: Road Detection

Chairman: P. Gamba

University of Pavia, Italy

Scale-Dependent Adaptation of Object Models for Road Extraction

J. Heller, K. Pakzad,

University of Hannover, Germany

Automatic Road Extraction from Multispectral High Resolution Satellite Images

U. Bacher, H. Mayer,

Bundeswehr University Munich, Germany

Robust and Efficient Road Tracking in Aerial Images

J. Zhou, W. F. Bischof, T. Caelli,

University of Alberta, Canada;

Canberra Laboratory, Australia

Session 3: Building Extraction I

Chairman: F. Rottensteiner

Vienna University of Technology, Austria

Extraction of 3D Spatial Polygons Based on the Overlapping Criterion for Roof Extraction from Aerial Images

Y. Avrahami, Y. Raizman, Y. Doytscher,

Technion – Israel Institute of Technology, Israel

Constraints for Modelling Complex Objects

C. Brenner,
University of Hannover, Germany

Building Façade Interpretation from Image Sequences

H. Mayer, S. Reznik,
Bundeswehr University of Munich, Germany

Session 4: Vehicles and Traffic I

Chairman: H. Mayer
Bundeswehr University Munich, Germany

Motion Detection by Classification of Local Structures in Airborne Thermal Videos

M. Kirchhof, E. Michaelsen, K. Jäger,
FGAN-FOM, Germany

New Approaches for Real Time Traffic Data Acquisition with Airborne Systems

I. Ernst, M. Hetscher, K. Thiessenhusen, M. Ruhé, A. Börner, S. Zuev,
German Aerospace Center (DLR) Berlin, Germany

Automatic Vehicle Detection in Space Images Supported by Digital Map Data

J. Leitloff, S. Hinz, U. Stilla,
Technische Universität München, Germany

Session 5: Vehicles and Traffic II

Chairman: S. Hinz
Technical University Munich, Germany

Vehicles Detection from Very High Resolution Satellite Imagery

A. Gerhardinger, D. Ehrlich, M. Pesaresi,
IPSC, Italy

A-Priori Information Driven Detection of Moving Objects for Traffic Monitoring by Spaceborne SAR

F. Meyer, S. Hinz, A. Laika, R. Bamler,
German Aerospace Center (DLR) Oberpfaffenhofen, Germany
Technische Universität München, Germany

Two-Channel SAR Ground Moving Target Indication for Traffic Monitoring in Urban Terrain

I. Sikaneta, C. H. Gierull,
Defence R&D Canada, Canada

Session 6: Building Extraction II

Chairman: C. Brenner

University of Hannover, Germany

Interpretation of High Resolution SAR Data using Existing GIS Data in Urban Areas

T. Balz, N. Haala,

University of Stuttgart, Germany

Automatic Building Reconstruction from Cadastral Maps and Aerial Images

F. Taillandier,

Institut Géographique National, France

Voxel-Based Quality Evaluation of Photogrammetric Building Acquisitions

J. Meidow, H.-F. Schuster,

FGAN-FOM, Germany;

University of Bonn, Germany

Poster Session:

Data Fusion for Classification and Object Extraction

B.C. Gruber-Geymayer, A. Klaus, K. Karner,

VRVis, Austria

Semi-Automatic Building Extraction utilizing Quickbird Imagery

S. D. Mayunga, Y. Zhang, D.J. Coleman,

University of New Brunswick, Canada

Robust Building Detection in Aerial Images

S. Müller, D. W. Zaum,

University of Hannover, Germany

Potential of Building Extraction from Multi-Aspect High-Resolution Amplitude SAR Data

E. Michaelsen, U. Soergel, U. Thoennesen,

FGAN-FOM, Germany

Stereophotogrammetric Measuring in Risk Areas with the aid of Remotely Controlled Equipment

E. Gavlovský, E. Sojka, R. Kapica, D. Böhmová,

VŠB-Technical University of Ostrava, Czech Republic

Improving City Model Determination by using Road Detection from LIDAR Data

S. P. Clode, F. Rottensteiner, P. Kootsookos,

University of Queensland, Australia;

University of New South Wales, Australia;

United Technologies Research Center, USA

Performance Evaluation of ATOMI System for Road Database Updating from Aerial Film, ADS40, Ikonos and Quickbird Orthoimagery

C. Zhang, E. Baltsavias, L. O'Sullivan,
University of Melbourne, Australia;
ETH Zürich, Switzerland;
Swiss Federal Office of Topography, Switzerland

Automatic Quality Assessment of GIS Road Data using Aerial Imagery - A Comparison between Bayesian and Evidential Reasoning

M. Gerke,
University of Hannover, Germany

Outline Extraction of a Motorway from Helicopter Image Sequence

B. G. H. Gorte, F. Karimi Nejadasl, S. P. Hoogendoorn,
Delft University of Technology, Netherlands

A Fusion Strategy for Extracted Road Networks from Multi-Aspect SAR Images

K. Hedman, B. Wessel, U. Stilla,
Technische Universität Muenchen, Germany

On Tracking-Driven Road Map Extraction from GMTI Radar Data

W. Koch, M. Ulmke,
FGAN-FKIE, Germany