

Congress Timetable – Emploi du Temps du Congrès – Zeitplan des Kongresses

SUNDAY
DIMANCHE
SONNTAG

2

AUGUST
AOÛT
AUGUST

Hall C-39

TU-1 09:00 - 20:00

ISPRS-COMMISSION V & IEEE-PAMI WORKSHOP
"CALIBRATION AND ORIENTATION OF
CAMERAS IN COMPUTER VISION"

Chair: PROF. A. GRUEN & PROF. T. S. HUANG

Minimum Solutions for Orientation

B. Wrobel (GERMANY)

Uniqueness, Number of Solutions and Degeneracy in
Determining Camera Orientations

T. S. Huang (USA), R. Y. Tsai

Robust Orientation Procedures With Minimum and
Redundant Information

W. Förstner (GERMANY)

Least-Squares Camera Calibration Including Lens
Distortion and Automatic Editing of Calibration Points

D. Gennery (USA)

Camera Component Calibration Techniques—Theory,
Systems, Results

C. Fraser (USA)

Camera Calibration for High-Precision Machine
Vision

S. Shafer (USA)

System Calibration Through Self-Calibration

A. Gruen (SWITZERLAND)

Automatic Calibration of a Stereo Rig

O.D. Faugeras (FRANCE)

MONDAY
LUNDI
MONTAG

3

AUGUST
AOÛT
AUGUST

DAR Constitution Hall (SI)

PL-1 09:30 - 12:00

*INTERNATIONAL SOCIETY FOR
PHOTOGRAMMETRY AND REMOTE SENSING*

XVII ISPRS CONGRESS OPENING CEREMONY

Chair: LAWRENCE W. FRITZ (USA)

Opening by Congress Director

Lawrence W. Fritz

Address by USA Vice President

The Honorable Dan Quayle

Opening Address by NASA Administrator

Daniel S. Goldin

Welcome by ASPRS President

Dr. Stanley A. Morain

Welcome by ISPRS President

Dr. Kennert Torlegard

Greetings from IUSM President

Dr. D. R. Fraser Taylor

ISPRS Honorary Membership Election

Dr. Shunji Murai

The Otto von Gruber Award

Dr. Ivan S. Katzarsky

The Brock Gold Medal Award

Dr. Gottfried Konecny

Keynote Address -

"Photogrammetry and Remote Sensing
in Today's Society"

Dr. Roy Gibson

Hall C-38, 39, 40 (SI)

PL-2 13:30 - 15:30

COMMISSION II - MANUFACTURERS' FORUM
"INTRODUCTION TO NEW TECHNOLOGIES AND
SERVICES"

Chair: DR. KLAUS SZANGOLIES (GERMANY)

"Intergraph—Mapping the Future"—Intergraph Corp.
TBD

"The Goals of Carl Zeiss in Photogrammetry"—Carl
Zeiss, Inc.

Dierk Hobbie (GERMANY)

"The New Leica Product Line"—Leica Heerbrugg AG

Bruce Wald (SWITZERLAND), A. Chapuis

"Photography and the Environment—Current and
Future Issues"—Eastman Kodak Company

Robert Cappel (USA), Dave Woods

"Aerial Perfection"—Agfa-Gevaert N.V.

Frans Peeters (BELGIUM)

"New Technology Advancement at Ashtech"—Ashtech

Jonathan Ladd (USA)

"New Technology from Sokkia Corporation"—Sokkia

Steve Mayfield (USA)

Rooms 30-31

SS-01 13:30 - 15:00

*PRESENTATIONS BY RECIPIENTS OF THE 1992 ISPRS
BEST PAPERS AWARDS*

"BEST PAPERS FROM YOUNG AUTHORS"

Chairs: K. TORLEGÅRD (SWEDEN) & A. GRUEN
(SWITZERLAND)

Line Photogrammetry with Multiple Images

Zielinski Holger (SWEDEN)

An Analysis of the Precision of a DEM Obtained from SPOT Data

Auke de Haan (ITALY)

Laser Fluorescent Diagnostics of Dissolved Organic Matter in Natural Water

Elena M. Filippova (RUSSIA)

Object Based Reclassification of High Resolution Digital Imagery for Urban Land-Use Monitoring

Stuart L. Barr (UNITED KINGDOM)

Object Reconstruction Using 2-D Projective Transformations

Ilkka A. I. Niini (FINLAND)

A Microcomputer-Based Electron Microscope Digital Image 3D Processing System

Sun Lixin (CHINA)

In-Process Measurement of Bending Angles Based on the Principle of Light Sectioning

Werner Heckel (GERMANY)

Generation of Object Representations of 3D Objects in CAD/CAM by Digital Photogrammetry

Rongxing Li (USA)

Hall C-38, 39, 40

PL-3 15:30 - 17:30

COMMISSION II

INTRODUCTION TO NEW TECHNOLOGIES AND SERVICES - MANUFACTURERS' FORUM

Chair: DR. JOHN TRINDER (AUSTRALIA)

International Imaging Systems, Inc.

TBD (USA)

EOSAT

Brenda Burroughs (USA)

"Revolutionary Image/Mapping Software Tools"—PCI Remote Sensing Corp.

Ed Jurkevics (USA)

"Terramodel"—Plus III Software, Inc.

Derrick Darby (USA)

"Image Processing in the 1990's"—Earth Resource Mapping

Stuart Nixon (USA)

"Remote Sensing Electron Beam Image Recorder"—Image Graphics, Inc.

John P. Whitley (USA)

"Introduction to the A P Y System Version 4e"—A P Y Photogrammetric Systems GmbH

Henk Yzerman (SWITZERLAND)

"Recent Advances in Imaging Spectrometry"—Analytical Spectral Devices, Inc.

Alexander F. H. Goetz (USA)

"Imaging the Earth with Satellite Radar"—Radarsat International

Wendy S. Branson (CANADA)

"NAV 5000 Pro Sub-Meter GPS"—Magellan Systems

Mark Eustis (USA)

"GADS (Geographic Analysis and Display System) for Windows and X-Windows" — Ph.D. Associates Inc.

Julie Poore (CANADA)

"Scanatron—ECM Contact Printers"—Precision Photo Laboratories, Inc.

Matt Davis (USA)

Rooms 30-31

SS-02 15:30 - 17:00

JOINT BOARD OF REMOTE SENSING ACTIVITIES (JOBRESA)

REMOTE SENSING AT THE CROSSROADS

Chair: DR. ROBERTO DA CUNHA (BRAZIL)

Remote Sensing at the Crossroads

Gérard Brachet (FRANCE)

NASA Remote Sensing Data Policy

Lisa Robock Shaffer (USA)

An International Remote Sensing System: A Possibility

Adigun A. Abiodun (UNITED NATIONS)

Remote Sensing at the Crossroads

Z. D. Kalensky (UNITED NATIONS)

Remote Sensing in Latin America

Roberto da Cunha (BRAZIL)

**TUESDAY
MARDI
DEINSTAG**

4

**AUGUST
AOÛT
AUGUST**

Hall C-38

TS-01 08:30 - 10:00

COMMISSIONS III, IV, VII

WORKING GROUPS III/3, IV/2, VII/2

THEMATIC INFORMATION EXTRACTION FROM DIGITAL IMAGES

Chair: DR. TONI SCHENK (USA)

Thematic Information Extraction and Data Fusion, Knowledge Engineering Approach to Ingegral Use of Data from Diverse Sources (IP)

Nanno J. Mulder (NETHERLANDS)

GEOCLASS, A New Approach to the Thematic Classification of Multispectral Imagery

Roberto Steffensen (CANADA)

Fully Automated, High-Resolution Classification of Remotely Sensed Digital Multispectral Recordings

Bernd-Siegfried Schulz (GERMANY)

Semantic Models for Top-Down Image Data Identification

Dieter Fritsch (GERMANY)

Hall C-39

TS-02 08:30 - 10:00

COMMISSIONS IV, VII

WORKING GROUPS IV/1, VII/2

MAP PRODUCTION USING DIGITAL PROCEDURES

Chair: MINORU AKIYAMA (JAPAN)

Experience in Digital Photogrammetric Mapping

Jee-Cheng Wu (CHINA-TAIPEI)

Current Status of Digital Cartographic Data Preparation in Japan

Minoru Akiyama (JAPAN)

The Digital Mapping Process of the Basic Map of Finland 1:10,000/1:20,000

Jukka Artimo (FINLAND)

New Photogrammetric Data Acquisition - Data Base for Digital Mapping and GIS

Ammatzia Peled (ISRAEL), R. Adler,

J. Forrai

Hall C-40 (SI)

TS-03 08:30 - 10:00

COMMISSION V

WORKING GROUP V/1

METRIC MACHINE VISION SYSTEMS

Chair: DR. SABRY F. EL-HAKIM (CANADA)

Digital Close-Range Photogrammetric Systems, New Developments and Perspectives (IP)

Henrik Haggrén (FINLAND)

High-Speed Solid State Camera Systems for Digital Photogrammetry

Hans-Gerd Maas (SWITZERLAND)

Close-Range Videometry - Design and Calibration of a Mono-Camera System for Dynamic Purposes

Ivar Maalen-Johansen (NORWAY)

A Digital Photogrammetric System for

Three-Dimensional Deformation Measurement

Weiyang Zhou (USA), R. Brock, J. Thorpe,

P. Hopkins

Hall C-38

TS-04 10:30 - 12:00

COMMISSION I

WORKING GROUP I/1

STANDARDS AND SPECIFICATIONS IN AERIAL AND SPACE PHOTOGRAPHY

Chair: DR. HARTMUT ZIEMANN (SWEDEN)

Thoughts on Standard-Related Activities in ISPRS Commission I(IP)

Hartmut Ziemann (SWEDEN)

Evaluation of Aerial Photographs Taken by Forward Motion Compensation Cameras

Sergei S. Nekhin (RUSSIA), V. G. Afremov, V.

B. Ilin, I. Yu. Afanasiev, N. M. Babashkin

Sensitometric Aspects in Aerial Photography - A Study

Guntur S. Kumar (INDIA)

Test-Field and Self-Calibration of Fiducial Marks

Kennert Torlegård (SWEDEN)

Hall C-39

TS-05 10:30 - 12:00

COMMISSION II

WORKING GROUP II/5

INTEGRATED PHOTOGRAMMETRIC SYSTEMS

Chair: DR. ATEF ELASSAL (USA)

Integrated Photogrammetric Systems: Status and Outlook (IP)

Branko Makarovic (NETHERLANDS)

Integration of the Kern DSR-11 Analytical Plotter into a GIS

Wolfgang Faig (CANADA), J. Olaleye

The Concept of a Photogrammetric Workstation Outlined by the Example of the LEICA SD2000

Luis Cogan (SWITZERLAND), L. Hinsken

Popularization of Photogrammetry

Otto Kölbl (SWITZERLAND)

Introducing New Technology—A Manager's Prospective

Lewis A. Lapine (USA)

Hall C-40 (SI)

TS-06 10:30 - 12:00

COMMISSION VII

WORKING GROUP VII/4

APPLICATIONS OF GIS/IMAGE ANALYSIS IN NON-RENEWABLE RESOURCES

Chair: DR. TSEHAIE WOLDAI (NETHERLANDS)

Tectonic and Geologic Evolution of the NE Sudan-Eritrea Region as Analysed from Remotely Sensed Imagery(IP)

S. M. Berhe (UNITED KINGDOM),

S. A. Drury

Soil Erosion Assessment and Simulation by Means of SGEOS and Ancillary Digital Data

Carsten Jurgens (GERMANY)

Monitoring Environmental Pollution in a Coal Mining

H. van der Meer Mohr (NETHERLANDS),

T. Woldai, P. van Dijk

Landsat and SPOT Investigations in Sinai Peninsula, Egypt

Adel F. Abdel-Kader (EGYPT), M. A. Essawy,

S. E. Smith

Lithologic and Quaternary Mapping in Glaciated Vegetated Areas Using SAR and TM Images

Vernon Singhroy (CANADA), C. Bowie,

P. J. Barnett, F. M. Kenny

Exhibition Hall

ES-1 12:00 - 13:30

COMMISSION II

EXHIBITOR'S SHOWCASE - SESSION I

Chair: DR. KLAUS SZANGOLIES (Germany)

Le Stèreo Restituteur Numérique TRASTER T10

Claudy Cruette (FRANCE)

Integrations of Structured Query Language with Geographic Information System Processing:

GeoServer™

Matthew Heric (USA), Kevin D. Potter

**Photogrammetric Data Acquisition with P-Series
Planicom for CAD, AM/FM and GIS/LIS Systems**

Johannes Saile (GERMANY)

**GPS—Photogrammetric—CG Plane Table Mapping
and CAD Globe**

Hiroyuki Hasegawa (JAPAN), M. Sadasue,

J. A. Rogers, A. L. Johnson, J. F. Yates

**Orthomap: A Softcopy System for Orthoimages
Production and Monocompilation**

E. Muciaccia (ITALY)

Hall C-38

TS-07 13:30 - 15:00

COMMISSION V

WORKING GROUP V/2

**CALIBRATION AND EVALUATION OF
CLOSE-RANGE SENSORS—SESSION I**

Chair: DR. JOHN G. FRYER (AUSTRALIA)

**Advances in Characterisation and Calibration of
Digital Imaging Systems (IP)**

Horst A. Beyer (SWITZERLAND)

**Photogrammetric Calibration and Point Determination
Using a Digital CCD Camera**

Christian Heipke (GERMANY), M. Stephani, G.
Strunz, R. Lenz

**Film Deformation in Non-Metric Cameras Under
Weak Geometric Conditions—an Uncorrected
Disaster?**

Stuart Robson (UNITED KINGDOM)

**High Precision Calibration of a Close Range
Photogrammetry Systems**

Ingolf Hådem (NORWAY), K. Åmdal

Hall C-39

TS-21 13:30 - 15:00

COMMISSION VI

WORKING GROUPS VI/1, VI/2, VI/3, VI/4, VI/7

**HISTORY, TERMINOLOGY, ECONOMICS AND
STANDARDS OF PHOTOGRAMMETRY AND
REMOTE SENSING**

Chair: DR. JOHN BADEKAS (GREECE)

**Report of WG VI/1 Activity (1988-92)—Report of the
Editorial Board for Volume III the History of
Photogrammetry**

Zbigniew Sitek (POLAND)

**From Photogrammetry to Iconic Informatics - on the
Historical Development of Photogrammetry and
Remote Sensing (IP)**

Li Deren (CHINA)

**History of Photogrammetry—Analytical Methods and
Instruments**

Sanjib K. Ghosh (USA)

**ISPRS Multilingual Dictionary—General Status and
Progress of German Language Group**

G. Lindig (GERMANY), H.-P. Böhr,

J. Sievers

**Was Heisst Hier Fernerkundung? - Translation of
Technical-Scientific Concepts**

Anita Schwender (GERMANY), H.-P. Böhr

PC Assisted Translation of Photogrammetric Papers

Karlheinz Güthner (GERMANY), J. Peipe

**Strategic Challenges for National Mapping Agencies in
Developing Countries**

Jon Kure (NETHERLANDS), F. A. F. Amer

Hall C-40 (SI)

TS-09 13:30 - 15:00

COMMISSION VII

WORKING GROUP VII/1

SPECTRAL SIGNATURES

Chair: DR. GERARD GUYOT (FRANCE)

Intercomparison of Multisensor Satellite Images (IP)

Gérard Guyot (FRANCE), Xing-Fa Gu

**Estimating Foliar Chemical Concentrations with the
Airborne Visible/Infrared Imaging Spectrometer**

Paul J. Curran (UNITED KINGDOM)

**Soil Optical Properties and Environmental
Applications of Remote Sensing**

Richard Escadafal (FRANCE), A. R. Huete

**Analyse et Correction des Effets de la FTM sur les
Images de SPOT-HRV**

Xing-Fa Gu (FRANCE)

**A Conceptual Framework for Estimating Crop
Growth Using Optical Remote Sensing Data**

Jan G. P. W. Clevers (NETHERLANDS),

B. A. M. Bouman, C. Büker,

H. J. C. van Leeuwen

Hall C-40 (SI)

SS-03 15:30 - 17:00

COMMISSION V

**DIMENSIONAL INSPECTION AND QUALITY
CONTROL IN THE MANUFACTURING
INDUSTRY: REQUIREMENTS, TECHNIQUES,
PERSPECTIVES**

Chair: DRS. A. GRUEN (SWITZERLAND) & C.
FRASER (USA)

Close-Range Photogrammetry in Shipbuilding

Michael Gunn (USA)

Industrial Photogrammetry in Aircraft Manufacturing

Ray Ryan (USA)

Academia

Henrik Haggrén (FINLAND)

System Manufacturer

Thomas Luhmann (SWITZERLAND)

Services, Systems

Clive Fraser (USA)

Services

Anne Legac (FRANCE)

Users

M. Gunn, R. Ryan, (USA)

Rooms 10-15 & 30

PS-1 15:30 - 17:00

COMMISSIONS I, III, IV, VI, VII

ORAL PRESENTATIONS USING POSTERS - SESSION I

COMMISSION I

Navigation and Positioning for Remote Sensing Flights

Albrecht Grimm (GERMANY)

Integration of GPS and Photogrammetry Reduces Flying Strips in Highway Mapping

Harneck S. Bains (USA)

Optimal Digitization Steps for Usual Film Material

Hermann Diehl (GERMANY)

A Real Time 3 Axis Compensation Platform and GPS-Based Navigation System for High Resolution Airborne Spectrometers

Michaela C. Mueksch (GERMANY)

The Airborne Data Acquisition and Registration (ADAR) System 5000: A CCD-Based System for High Resolution Multispectral Remote Sensing

Cody A. Benkelman (USA), R. H. Behrendt

Automated Water Finders for Radar Imagery

Pi-Fuay Chen (USA), T. C. Tran

The Improvement of Photogrammetry Accuracy with DGPS

Hong-Yong Shih (CHINA-TAIPEI),

R.-G. Chang

A Flexible Digital Wide-Angle Optoelectronic Stereo Scanner

Dieter Oertel (GERMANY), R. Reulke,

R. Sandau, T. Terzibaschian, M. Scheele

COMMISSION III

Evaluating Landslide Susceptibility in Nebraska with a GIS

Luoheng Han (USA), D. A. Eversoll,

D. C. Rundquist

Differential Photogrammetry

Kurt Kubik (AUSTRALIA), K. Jones

On the Usefulness of Median Based Zero Crossing Edge Detector for Remotely Sensed Data in the Presence of Noise

Kiron K. Rao (INDIA), R. Krishnan

Reconstruction of Seafloor Surface Models by Shape From Shading

Rongxing Li (USA)

Thematic Map Compilation Using Nonparametric Classification Methods

Vladimir Cervenka (CZECHOSLOVAKIA)

Numerical Solution of a Block Adjustment by Stable QR Factorization

Fabio Crosilla (ITALY), I. Iob

Spatial Distribution of Control Points

Ricardo Vergara (BRAZIL), A. C. Frery,

J. C. L. d'Alge

Feature Based Image Orientation and Object Reconstruction

Günter Strunz (GERMANY)

Automatic Analysis of Highway Features from Digital Stereo-Images

Guangping He (USA), K. Novak

Program Supply for Composing of the Structural-Analytical Maps of Natural-Territorial Complexes on the Base of US Computers & IBM PC

Nabiyev A. Alibek (AZERBAIJAN)

Object Space Based Correlation with Additional Information

Frank Boochs (GERMANY)

Optimisation of GIS/RS Software Using Quadtree Data Structures

Ben G. H. Gorte (NETHERLANDS)

Fast Bitplane Matcher for DEM Generation from SPOT Stereo Data

Nanno J. Mulder (NETHERLANDS),

H. R. Kostwinder

Automatic Categorization of Clusters in Unsupervised Classification

Sunpyo Hong (JAPAN), K. Fukue,

H. Shimoda, T. Sakata

Aerial Image Matching Based on Zero-Crossings

Jia Zong (USA), J.-C. Li, T. Schenk

Implementation of Object Oriented GIS Using Formal Data Structure with Planar Topology—Some Considerations

Hongguang Yang (GERMANY),

W. Reinhardt

State and Time Topologies for Geographic Information

Hazem Raafat (CANADA), Zhongsen Yang, D.

Gauthier

COMMISSION IV

Analytic Stereomapping Using SPOT Imagery

Yubiao Zhong (CHINA)

GIS for a Small City Using GPS and Photogrammetry

K. Jeyapalan (USA), M. Byrne

Photogrammetric Contribution to the Romanian Cadastre Development

Nicolae Zegheiu (ROMANIA)

Stereoscopic Accuracy of SPOT Imageries

Maarouf A. M. Diefallah (QATAR)

Study on the Computer Dynamic Simulation of the Yellow River Delta Environmental Evolution

Chen Feng (CHINA), Tang Xinqiao

A Chinese Digital Mapping System with Photogrammetric Method

Jen-hsing Hsieh (CHINA-TAIPEI),

T.-C. Chen, M.-C. Wu

Tolerances in Digital Mapping

Constantin Nitu (ROMANIA), C. D. Nitu

Agricultural Land Cover and Forest Classification of Landsat Data in the Province of Bolu

A. Nejat Evsahibioglu (TURKEY), M. Tankut
Updating Maps of Soils Through Landsat Images
Gilberto

J. Garcia (BRAZIL), M. V. F^o, P. S. Anderson
Application of Digital Cameras and GPS for Aerial
Photogrammetric Mapping

Kurt Novak (USA)

**Automated River Line and Catchment Area Extraction
from DEM Data**

Wolfgang Rieger (AUSTRIA)

Redresseur d'Images Numériques

Michel Boulianne (CANADA), J.-P. Agnard, M.
Côté

**GIS as Data Source to Water Quality Model: The
Possible Effects of Recoding Strategies**

Ruslan Rainis (MALAYSIA)

**Remote Sensing/GIS-Techniques to Identify Potential
Areas for Runoff Irrigation in Semi-Arid Areas**

Thomas Voegtle (GERMANY), W. Tauer

**Study of Geographical Information System to Renew
the Landslide Distribution**

Takayuki Inomata (JAPAN), M. Setojima

**GIS for Digital Terrain Site Modeling : An
Application for Ladakh Area, India**

Saroj K. Pal (INDIA)

**From Satellite Image to a Map - a New Guide Map for
Finnish Rural Areas**

Kari Tuukkanen (FINLAND)

**Automized Updating of Road Databases from Scanned
Aerial Photographs**

M. E. de Gunst (NETHERLANDS),

M. J. P. M. Lemmens

**Mapping from Multisensor Stereo Images with
Analytical Plotter**

Remy J. Ackermann (NETHERLANDS),

G. R. Venkatesh

Seam Smoothing of Digital Color Mosaics

Hao-Hsiung Huang (CHINA-TAIPEI)

**Satellite Image Maps—Experiences, Problems and
Chances**

Joerg Albertz (GERMANY), H. Lehmann,

F. Scholten, R. Tauch

**Methodologies to Extract Contour Lines from Digital
Terrain Models Using a Microcomputer**

Carlos A. Felgueiras (BRAZIL)

**Effectiveness of the Transparent Visualization Method
to Represent Multiple Z Values in the DTM**

Takashi Morita (JAPAN)

**Aerial and Space Images and the Touristic Danube
Delta Map**

Albota M. Gabriel (ROMANIA)

A GIS for Dubai Municipality

Mohammed Al Zaffin (UNITED ARAB

EMIRATES), Rajam Padmanabhan

**The KUDAMS Project in War and Peace—An Urban
GIS for Kuwait**

Mansour Al Nassar (KUWAIT),

Khalid Al Rashed, Rajam Padmanabhan

COMMISSION VI

**Technical Issues in Designing a Satellite Imagery Atlas
of Latin America**

Emilio Chuvieco (SPAIN), J. Sancho

**Impact of Photogrammetric Surveying and Mapping
on Developing Countries' Economic Performances**

John O. Anwana (NIGERIA)

**Improved Remote Sensing & GIS Reliability
Diagrams, Image Genealogy Diagrams, and Thematic
Map Legends to Enhance Communication**

John R. Jensen (USA), Sunil Narumalani

**Remote Sensing and GIS Education at the University
of the Aegean**

John N. Hatzopoulos (GREECE)

**Brazilian Remote Sensing Community: Historical,
Geographical and Economical Aspects**

Tania M. Sausen (BRAZIL)

**GIS Tools for Development: Strategies for
Implementation**

Roman Pryjomko (USA), P. Rabley

Geocomputing Education: The Hong Kong Experience

Chiu-ming Luk (HONG KONG)

**Adequate Decentral Management for Environmental
Monitoring of Very Large Areas**

Hans-Peter Böhr (GERMANY)

The Grass Global CD-ROM Database and Software

Scott Madry (USA)

**Cartography and Remote Sensing and the African
Environment—Nigeria Case Example**

Julius A. Ogunlami (NIGERIA)

The Future of Mapping Organizations in the GIS Era

Mohsen M. Hassan (EGYPT)

COMMISSION VII

**Landsat TM Image Analysis for the Thrust System of
Henanshan Mountains, the Northwest of China**

Tan Yongjie (CHINA), G. Haiyan

**Integration of Primary Data Acquisition and
Interpretation of Remote Sensing Data in**

Town-Planning and City-District-Renewal

Peter Gerlach (GERMANY)

Forest in Thermal Image

Mahmoud Zobeiry (IRAN)

**Application of Remote Sensing and Geo-Expert System
for Soil Evaluation in Soil Erosion Hazard Mapping**

Pham T. Luong (VIETNAM), T. D. Cuong

**The Production Estimation by Remote Sensing and the
Productivity Spatial Patterns of Grassland in Xilingol
League of Inner Mongolia**

Li Bo (CHINA), Shi Pei-Jun, Li Zhong-hou

**Remote Sensing in Archaeology. A New Approach to
the Knowledge of the Interaction Human/Territory**

Paolo Baggio (ITALY), G. B. Sigalotti,

C. Zamboni, G. Gullini

**Land Degradation Assessment in the Afram Plains of
Ghana—A Case Study**

Charles Asare (GHANA)

Textural Analysis for Remotely Sensed Imagery

Sun Xinghe (CHINA), Qin Ping

Study on Au Biogeochemical Effects using Remote Sensing Technique in Western Guangdong and Hainan Province, China

Xu Ruisong (CHINA), Lu Huiping,
Ye Suqun, Ma Yueliang

Site Selection for Priority Attention Using GIS

Javier S. Bejarano (COSTA RICA)

Soil Conservation Monitoring Information System Based on Remotely Sensed Data

Li Rui (CHINA), Zhao Yongan

Land Resource Information System of Wuwei County

Feng Xuezi (CHINA), Sun Wenxin, Zeng
Qunzhu, Liang Fengxian Zhu Jiahui, Meng Hu,
Li Shuo, Lu Anxin

Comparison of SPOT and Landsat TM Spectral Variances to the Study of Tropical Forest

Arnaldo Carneiro-Filho (BRAZIL)

Prospection Electromagnétique Inductive et Télédétection par Hyper-fréquences Appliquées à l'Identif. de Structures Hydrogéologiques

Leone Frédéric (FRANCE)

Town Network Analysis Using Orbital RS Data

Maria de L. N. de Oliveira Kurkdjian
(BRAZIL), J. G. Blanco

A Comparison of Conventional Classification Methods & New Indicator Kriging Based Method Using High-Spectral Resolution Images (AVIRIS)

Freek D. van der Meer (NETHERLANDS)

Remote Sensing of Waves in the MIZ: Evidence of Langmuir Circulations

Konstantin I. Voliak (RUSSIA)

Post-Classification of Misclassified Pixels by Evidential Reasoning: A GIS Approach for Improving Classification Accuracy of RS Data

Yeqiao Wang (USA), D. L. Civco

Monitoring of Recent Glacier Variations in the Southern Patagonia Icefield, Utilizing RS Data

Masamu Aniya (JAPAN), R. Naruse,
M. Shizukuishi, P. Skvarca G. Casassa

Spectral Remote Sensing of Anomalous Mineralogy-Induced by Hydro-carbon Migration and Uranium Mineralization, San Rafael Swell, Utah

Hayati Koyuncu (TURKEY)

A Comparative Evaluation of Ratio Transformed and Enhanced Thematic Mapper Images in Landcover Classification of Sahel Region of Africa

Joel I. Igbokwe (GERMANY)

The Application of Remote Sensing to the Environmental Change Detection—A Case Study

Sally Tang (CHINA-TAIPEI), L.-S. Liang

Apport du Couplage Haute Résolution Temporelle - Haute Résolution Spatiale pour le Suivi des Cultures sur les Régions Agricoles Temp.

Alberte Fischer (FRANCE)

Monitoring the Tropical Forests from Space

Mára R. L. F. da Silva (BRAZIL)

Development of a New Methodology for Land

Use-Land Cover Mapping from Remotely Sensed Data

Francesca Somma (ITALY)

Étude Partéledétection des Mangroves de la Baie de Paranaguá (Bresil)

Thierry Naizot (FRANCE), H. Khodja

Application of Orbital Remote Sensing Techniques in Studying the Water Quality in Lagoa da Conceição, Santa Catarina Island, Brazil

Rosana M. Rodrigues (BRAZIL),

M. R. Martins

Digital Analysis of MS Wet and Dry Season Images for Topo-Sequence Characterization of Inland Valleys

E. Amamoo-Otchere (NIGERIA), L. Cuihe

Remote Sensing for Resource Management of Wildlife Sanctuaries in Sri Lanka

Andra H. Dhanapala (SRI LANKA)

WEDNESDAY
MERCREDI
MITTWOCH

5

AUGUST
AOÛT
AUGUST

Hall C-38

TS-10 08:30 - 10:00

COMMISSION VII

WORKING GROUP VII/3

RENEWABLE RESOURCE INVENTORY AND MONITORING WITH REMOTE SENSING/GIS—SESSION I

Chair: GABOR REMETÉY-FÜLLÖP (HUNGARY)

Dynamic Geoecology: Aerospace Monitoring, Mapping, and Forecasting (IP)

Boris V. Vinogradov (RUSSIA)

Feature Extraction from Landsat TM Pixels - An Example from Shrub Dominated Rangelands

Paul T. Tueller (USA), A. C. Yuan,
C. C. Geddes

Landsat Imagery and GIS Application in Studying Consequences of Deforestation on the Environment: Case Study Vale do Paraiba do Sul

Tania M. Sausen (BRAZIL), E. E. Wangui

The Land Cover of Great Britain from Multi-Temporal Landsat Data: Uses in Environmental Management

Robin M. Fuller (UNITED KINGDOM),

A. R. Jones, G. B. Groom

Background Effects on Reflectance and Derivatives in an Open Canopy Forest Using Airborne Imaging Spectrometer Data

Yoshio Awaya (JAPAN), J. Miller,
J. Freemantle

Hall C-39
 TS-11 08:30 - 10:00
COMMISSION I
WORKING GROUP I/2
SENSORS AND PLATFORMS FOR REMOTE DATA ACQUISITION—SESSION I
 Chair: DR. DECIO C. CEBALLOS (BRAZIL)
Ways of Radiometrical Calibration of Sensors in the Solar-Reflective Range Using On-Board Solar Diffusers & Ground Sites as References (IP)
 Philip N. Slater (USA)
The Camera Experiments HRSC and WAOSS on the Mars 94 Mission
 Jörg Albertz (GERMANY), H. Ebner, C. Heipke, G. Neukum F. Scholten
Development and Application of an Airborne Multispectral Digital Frame Camera Sensor
 Douglas J. King (CANADA)
Interior Orientation of SPOT Imagery
 Torbjörn Westin (Sweden)
A Rigorous Calibration Method for Digital Cameras
 Ying Chen (USA), A. F. Schenk

Hall C-40 (SI)
 TS-12 08:30 - 10:00
COMMISSION II
WORKING GROUP II/1
ADVANCES IN DEVELOPMENT OF ANALYTICAL STEREOPLOTTERS
 Chair: MORRIS L. MCKENZIE (USA)
Advances in the Development of Analytical Stereoplotters. Working Group II/1 Report for 1988 - 1992 (IP)
 Morris L. McKenzie (USA)
Real Time Processing of MOMS-02 Linear Array Imagery for Analytical Stereo Restitution
 Ludwig Hoch (GERMANY), E. Dorrer
A New Method of Calibration for Analytical Photogrammetric Workstations
 Wilfried Müller (SWITZERLAND), A. Chapuis
A CCD Eyepiece for Analytical Instruments
 Michael H. Elfick (AUSTRALIA)

Rooms 20-22
 UN-1 08:30 - 12:00
IPSRs AND UNITED NATIONS, SCIENCE, TECHNOLOGY, ENERGY, ENVIRONMENT AND NATURAL RESOURCES DIVISION
UN INTERREGIONAL SEMINAR FOR DEVELOPING COUNTRIES—SESSION I
TECHNOLOGY TRANSFER TO DEVELOPING COUNTRIES
 Chair: PROF. JACOB RAIS (INDONESIA)
 Muhammad Nasim Shah (PAKISTAN)
 Mohamed Mosaad Ali Ibrahim (EGYPT)



Hall C-38
 TS-13 10:30 - 12:00
COMMISSIONS III & V
COMPUTER VISION AND COMPUTER GRAPHICS
 Chair: DR. BERNHARD P. WROBEL (GERMANY)
Three Dimensional Vision and Mobile Robots (IP)
 Olivier D. Faugeras (FRANCE)
Model-Based 3D Scene Analysis from Stereoscopic Image Sequences
 Reinhard Koch (GERMANY)
Photogrammetry and Computer Graphics for Visual Impact Analysis in Architecture
 Peter Durisch (SWITZERLAND)
An Information Theoretic Image Visualization System
 John S. Powers (USA)

Hall C-39
 TS-14 10:30 - 12:00
COMMISSION IV
WORKING GROUP IV/3
PROGRESS IN MAP REVISION PROCESSES
 Chair: PAUL R. T. NEWBY (UNITED KINGDOM)
Bulgarian Experience in Devising Automated Technology for Large-Scale Mapping
 Ivan Katzarsky (BULGARIA), S. Postadjian
A Study on the Automatic Revision of the European Community's CORINE Land Cover Database Using Satellite Data
 Graeme Wilkinson (ITALY), S. Folving, K. Fullerton, J. Mégier
Semi-Automatic Revision of Topographic Maps from Satellite Imagery
 Rune Solberg (NORWAY), J. Tallhaug
Evaluation of SPOT Data for Topographic Map Revision at the National Land Survey of Sweden
 Bo Malmström (SWEDEN), A. G. Engberg
Accuracy of Superimposition
 A. Van Voorden (NETHERLANDS), M. Van Persie

Hall C-40 (SI)
 TS-15 10:30 - 12:00
COMMISSION V
WORKING GROUP V/4
INDUSTRIAL MEASUREMENT APPLICATIONS
 Chair: DR. HEINZ RUETHER (SOUTH AFRICA)
Automated Dimensional Inspection with Real-Time Photogrammetry
 Horst A. Beyer (SWITZERLAND)
Three-Dimensional Measurements by Hybrid Methods (Photogrammetry and Theodolites)
 Anne Legac (FRANCE)
Photogrammetric Methods for the Inflight Verification of Attitude Sensor Accuracy
 Andrew R. Marshall (AUSTRALIA)
Photogrammetric On-Line Quality Control in a Furniture Factory
 K. Güther (GERMANY), J. Peipe, V. Uffenkamp

Exhibition Hall

ES-2 12:00 - 13:30

EXHIBITORS' SHOWCASE - SESSION II

Chair: DR. KARSTEN JACOBSEN (Germany)

Experiences with Photogrammetric Industrial As-Built Documentation

Dave E. Knopp (USA)

Single Camera System for Close Range Industrial Photogrammetry

Knut Åmdal (NORWAY)

Digitization and Rectification of Transparencies with the Analytical Plotter P3

Claudia Fuchs (GERMANY), S. Ruwiedel

A Low Cost Scanner for Small Format Transparent Material

Gerrit C. Huurneman (NETHERLANDS)

Hall C-40 (SI)

SS-04 13:30 - 15:00

INTERCOMMISSION WORKING GROUP I/IV

INTERNATIONAL COOPERATION FOR REMOTE SENSING SATELLITES

Chair: DR. GOTTFRIED KONECNY (GERMANY)

Rooms 10-15 & 30

PS-2 13:30 - 15:00

COMMISSIONS II, III, V, VI, VII

ORAL PRESENTATIONS USING POSTERS — SESSION II

COMMISSION II

Long-Term Monitoring of the Dynamics of Landslides by Aerial Photogrammetry

Ivan Katzarsky (BULGARIA), S. Postadjian

Processing of Images, Generated by Video Sensors of Different Types for Combined Presentation on Operator's TV Screen

Vladimir N. Grigoryev (RUSSIA),

K. V. Obrosof, N. N. Pasechny,

V. A. Stephanov

An Interactive Image Analysis System

Stuart C. Sides (USA), J. A. Anderson,

P. S. Chavez, Jr.

Object Space Reconstruction for ERS-1 Stereo SAR and for Perspective Images

Volker Sasse (GERMANY)

Operational Geocoding of ERS-1 SAR Imagery

Detlev Kosmann (GERMANY), A. Roth,

G. Schreier

Object Oriented Feature Extraction from Aero-Imagery

Lin Zongjian (CHINA), Lu Jian, Tao Chuang

Phase and Geometric Fidelity of Range-Doppler Processing Algorithm

C. Y. Chang (USA), M. Y. Jin, J. C. Curlander

Analysis of Mono-Parametric, Multi-Temporal SAR Image Data for Land-Use Classification

Stefan Tex (GERMANY), M. Sties

Opportunities and Limitations on Internationalization of Remote Sensing

Adigun A. Abiodun (UNITED NATIONS)

The Role of the Committee on Earth Observations Satellites (CEOS) in Mission to Planet Earth

S. G. Tilford (USA)

An Operational Information System

John S. MacDonald (CANADA)

The Role of the Committee on Earth Observations Satellites (CEOS) in the Coordination of International Remote Sensing Activities

Russell Koffler (USA)

Global Mapping Products for the EOS Programme

Jan-Peter Muller (UNITED KINGDOM)

An International Opportunity for an Orbital Imaging System

Donald L. Light (USA)

New Satellite Data with High Ground Resolution from the Space Complex MIR and Other Platforms

V. Liebig (GERMANY), O. N. Lebedev, M. Schröder

Multiresolution Processing for Fractal Analysis of Airborne Remotely Sensed Data

S. Jaggi (USA), D. Quattrochi, N. Lam

Agricultural Fields Pollution Studies by Means of Remote Sensing in Optical & Microwave Spectrum Bands—Instruments, Physical Approach

V. Lyalko (RUSSIA), A. Shutko

Optimum Nonlinear Measurement Computer System (MCS) in Remote Sensing of Atmosphere

P. V. Golubtsov (RUSSIA), S. A. Filatova,

Y. P. Pyt'ev

Cluster Analysis of Landsat TM Data

Masatoshi Mori (JAPAN), K. Gotoh

Mapping on the Analytical Stereoplotter Using SAR Images

Zhu Cai-Ying (CHINA), Cai Wang-Sen

SAR-Optical Image Fusion with Landsat, Seasat, Almaz and ERS-1 Satellite Data

David G. Tilley (USA)

Design Aspects of Open Portable Image Processing Software - the DIDiX Approach

Joachim Wiesel (GERMANY), S. Tex,

W. Weisbrich, K. Segl P. Muessig, H. Jacobs

The Image Processing System for JERS-1 OPS

Seiichi Kawase (JAPAN), M. Fukuda,

T. Tanaka, S. Watanabe M. Shimada,

H. Wakabayashi, H. Okamoto

Joint Methods Provided in Remote Sensing for Investigating the Land

Vladimir E. Nekos (UKRAINE)

COMMISSION III

Study on River Channel Changing Information System of the Middle Changjiang River—A Case Study of the Lower Jingjiang River

Bingxian Chen (CHINA), Manchun Li

ANSER-Artificial Neural Network Expert System for Satellite-Derived Estimation of Rainfall

Ming Zhang (USA), R. A. Scofield

Suchbasierte Verfahren zur automatischen Raster-Vektor und Vektor-Raster Transformation der Grauwertbilder

Yonglong Xu (GERMANY)

Ein Wissenbasiertes System für die Automatische Bildanalyse

Hartmut Füger (GERMANY), K. Jurkiewicz, K. Lütjen, U. Stilla

Mathematical-Cartographical Modelling of the Vertical Structure of Mountainous Landscape on the Computer

Nabiyev A. Alibek (AZERBAIJAN)

SPOT Geometric Correction Model - Quality Assurance of Geo-Referencing

Theodore Bouloucos (NETHERLANDS), P. K. Ganguly, K. Tempfli

The Multilevel Structuring Approach for the Densification of the Topographic Database Contents

Mustafa Radwan (NETHERLANDS), D. Sukamayadi, A. Maklouf

Production, Inversion and Learning of Spatial Structure: A General Paradigm to Generic Model-Based Image Understanding

He-Ping Pan (GERMANY)

A Geometrical Fuzzy Partitions Approach to Fuzzy Query and Fuzzy Database Retrieval

E. Gerard Mtalo (CANADA), E. Derenyi

Analytical Tools and Procedures for Geoinformation Processing

J. A. Rod Blais (CANADA)

Expertensystem zur Orientierung komplexer Bildverbände

Christian Föhring (GERMANY)

Spatial Reasoning About Terrain Applied to the Amazon Region

Joao Argemiro (USA), M. J. Egenhofer, A. U. Frank

Expert System for Investigation of Photographic Image Quality

Miklos G. Gerencsér (HUNGARY)

Edge Based Region Growing Mathias

J.P.M. Lemmens (NETHERLANDS), R. J. Wicherson

Image Segmentation from Texture Measurement

Dong-Cheon Lee (USA), T. Schenk

Parallel Simulation of a Connectionist Stereo Algorithm on a Shared-Memory Multiprocessor

Zhang Yongsheng (CHINA)

Bundle Adjustment in No Need of Approximations of Parameters

Susumu Hattori (JAPAN), Akiyoshi Seki

Méthodes Numériques de Reconnaissance de Paysages

F. Borne (FRANCE)

COMMISSION V

Refit of Phototheodolite 19/1318 and Its Application to Close Range Photogrammetry

Wang Li (CHINA), Fan Qiulin, Liao Hongbin

Estimation of Heights of Robbers Using Photographic and Video Security Imagery

J. H. Chandler (UNITED KINGDOM), D. M. Stirling

One Protogram Raster-Photogrammetry for Industrial Purposes. Development of a Computer Method

E. Baj (ITALY), E. Biscaretti, M. Rampolli

Image Segmentation Based on Parameter Estimation

Younian Wang (GERMANY)

Single CCD Camera Based Three Dimensional Measurement System for Moving Objects

Lu Jian (CHINA), Lin Zongjian,

Pan Dongchao

Digital Orthophoto System for Architecture

Representation

Rainer Pallaske (GERMANY), W. Marten, L. Mauelshagen

On the Problem of Determining Rotational Accelerations in Rapid Human Motions

Peter F. Niederer (SWITZERLAND)

A Phototriangulation Method for an Underwater Restitution

C. Ioannidis (GREECE), C. Potsiou, V. Kyriakopoulou, J. Badekas

A System for the Normal Case of Close Range Photography with a Terrestrial Camera

Oguz Müftüoğlu (TURKEY), C. Örmeci

Very Large Scale Photogrammetric Plotting in Restoration, Epigraphy and Archeology

Raffaella Bologna (ITALY)

Use of Close Range Photogrammetry and Acoustic Systems in Structural and Engineering Geology

G. Rafat (GERMANY), H. M. Rödenauer

Mapping from Non-Metric, Small-Frame Photographs Using Multi-Model Photogrammetry

Keld S. Dueholm (DENMARK)

COMMISSION VI

A Brief Account of the General Organization of Remote Sensing and Its Activities

Marwan Koudmani (SYRIA)

Five-Lingual Dictionary on Photogrammetry and Remote Sensing—Polish Edition

Zbigniew Sitek (POLAND)

Education and Training of Photogrammetry and Remote Sensing in China

Li Deren (CHINA), Lin Zongjian

Projects Analysis for Cartography and Remote Sensing

Paulo C. Gurgel de Albuquerque (BRAZIL)

An Analysis of Skilled Training in Remote Sensing in Developing Countries: Experience of National Water Res. Inst. Kaduna, Nigeria

Nkem U. Ononiwu (NIGERIA)

Space Mapping Commercialisation: An Analysis of the Management of Remote Sensing in Australia

Andrew Finegan (AUSTRALIA), G. Ellis

- A Data Base for Forest Rehabilitation in Sudan**
Allan Falconer (USA), H. G. Lund
- Automating Map Specifications for a Bilingual Work Force: An Egyptian/American Case Study**
Safinas A. Soliman (EGYPT), J. C. Fass
- Adp-Education as a Part of the GIS-Curriculum**
Kirsi-Kanerva Artimo (FINLAND)
- Strategy for Developing National Management and Planning GIS**
Fouad Amer (NETHERLANDS)
- Utilization of Multimedia Technology in GIS Education**
Xin Zhuang (USA), B. A. Engel, D. D. Jones
- COMMISSION VII*
- Modeling Geo-Biosphere Structure and Function**
Jiang Li (USA)
- New Laser Fluorescent Method for Remote Control of Oil Pollutions in Water**
Oleg M. Glushko (RUSSIA)
- Detecting Soil Moisture Under Canopy by Means of NOAA AVHRR**
Jilong Li (CHINA)
- Analysis of Tectonic in Northern Xinjiang, China as Interpreted from Color Infrared Aerial Photo and Satellite Images**
Zhang Wenhua (CHINA)
- Sediment-Yield Model for Large Watershed by Using the AVHRR-NOAA Satellite Data**
Osama M. Moussa (EGYPT)
- GIS Supported Analysis on City Gathering in China**
Ren Fuhu (JAPAN)
- Spectral Data Model for Estimating Rock Properties**
O. Prakash Dubey (INDIA)
- Remote Sensing Interpretation of Eastern Mecsek Mountains (SW Hungary) Focusing on Tectonic Elements**
Mohamed Tolba (HUNGARY)
- Application of Landsat Data and GIS to Geological Studies, NE Iowa**
Xingzhi Chen (USA)
- Assessment of Urban Heat Island Temperature Bias Through Analysis of Multi-Satellite Data**
Kevin P. Gallo (USA), A. L. McNab,
D. Tarpley, J. F. Brown, T. R. Karl
- Obtaining and Processing Multitemporal Video Images for Gully Erosion Evaluation**
Jose L. Palacio-Prieto (MEXICO),
J. Lopez-Blanco
- Analytical Results of the Computer-Process Calculating the Snowpack with Remote-Sensed Information in Xinjiang**
Wang Shijie (CHINA), Ge Zheng,
Guan Hangqi
- Potential of High Resolving Sensor Data (GER) for Geologic Applications—Data Processing & Evaluation**
Roland Geerken (GERMANY), M. Beyth,
K. Segl
- Remote Sensing of Agricultural Areas with Low-Cost Systems**
Andreas Schmidt (GERMANY)
- Canal Alignment—An Approach Based on Remote Sensing Techniques (A Case Study)**
Gurmeet S. Saini (INDIA), R. S. Sidhu
- High Resolution Digital Imagery Applied to Vegetation Studies**
Cody A. Benkelman (USA), W. Cohen,
D. Stow, A. Hope
- Effect of Water Ponding Paddy Fields on the Local Thermal Environment**
Kunihiko Yoshino (JAPAN)
- Atmospheric Correction Model for Ground Surface Temperature Using a Single IR Channel Data of Satellite**
Takashi Machimura (JAPAN)
- Predicted Water Property Distributions Using Aircraft Multispectral Data, Regression Techniques, and Generated Optical Coefficients**
Elijah W. Ramsey III (USA)
- Detection of Environmental Changes Caused by a Hydroelectric Station Construction on the Danube River Using Landsat Data**
George Büttner (HUNGARY)
- Simulation of the Leaf Area Index Value in a General Model of Forest Ecosystem Process for Regional Applications**
Marcelo de Avila Chaves (BRAZIL),
J. V. Soares, Y. Shimabukuro
- Segmentation of High Resolution Satellite Imagery Using Texture and Spectral Information**
Chi-Farn Chen (CHINA-TAIPEI)
- Multisensor Approach to Geomorphological Investigation of Sand Desert Areas**
Adam Linsenbarth (POLAND)
- Assessment of Grassland Production Using Information from Satellite Remote Sensing**
Katarzyna Dabrowska-Zielinska (POLAND), A.
Ciolkosz, M. Gruszczynska ST. Lewinski
- Detecting Changes in Conifer Forest Canopy Reflectance Caused by Wildfire**
Lawrence Fox III (USA), E. H. Biery,
J. D. Stuart
- Identification of the Environment Units for Land Use Planning—Parana—Brazil**
Francisco L. Lange Jr. (BRAZIL), C. Dias Jr.,
G. Maximiano
- Model Study of Basin Soil Loss (BSL) of Loess Plateau in China**
Wang Zhi-hua (CHINA)
- Dynamic Monitoring of Earth Surface Environment**
Mendbayaryn Badarch (MONGOLIA),
R. Oyun, M. Enkhbayar
- Quantative Soil Erosion Mapping and Classification in China Using GIS & Remote Sensing Techniques From the Xichang Area in SW China**
Yu Jiang (UNITED KINGDOM),
Cheng Cang Shi, R. B. Tucker

Hall C-38
 TS-16 15:30 - 17:00
**COMMISSIONS II & III INTERCOMMISSION
 WORKING GROUP II/III**
**DESIGN AND ALGORITHMIC ASPECTS OF
 DIGITAL SYSTEMS**
 Chair: DR. HEINRICH EBNER (GERMANY)
**Design and Algorithmic Aspects of Digital
 Photogrammetric Systems. Intercommission Working
 Group II/III Report to Commissions II & III (IP)**
 Heinrich Ebner (GERMANY), I. Dowman,
 C. Heipke
**Design Alternatives for Digital Photogrammetric
 Systems (IP)**
 Franz Leberl (USA)
**Quality of Photogrammetric Products from Digitized
 Frame Photography**
 Edward M. Mikhail (USA)
Digital Photogrammetry—Options and Opportunities
 John E. Farrow (UNITED KINGDOM),
 K. J. Murray
**A Digital Photogrammetric Workstation for the
 Evaluation of Space Data**
 Eckhard Siebe (GERMANY), B. Pollak,
 J. Schiewe

Hall C-39
 TS-17 15:30 - 17:00
COMMISSION V
WORKING GROUP V/5
**ARCHITECTURAL AND ARCHEOLOGICAL
 PHOTOGRAMMETRY**
 Chair: ROSS W. DALLAS (UNITED KINGDOM) Low
**Cost Surveying Systems in Architectural
 Photogrammetry (IP)**
 Manfred Fellbaum (Germany)

**The Tomb of Christ, Jerusalem; Analytical
 Photogrammetry and 3D Computer Modelling for
 Archaeology and Restoration**
 M. A. R. Cooper (UNITED KINGDOM),
 S. Robson, R. M. Littleworth
**St. Marcus' Basilica in Venice. An Application of
 Image Projection on a Dome**
 Raffaella Brumana (ITALY), G. Galeazzo
**Multispectral Analysis of Digital Image Data in
 Architectural Photogrammetry**
 Robert Godding (GERMANY), G. Sacher,
 G. Siedler
Recording Traditional Ships
 T. Kokkas (GREECE), A. Georgopoulos,
 J. Badekas, K. Damianidis

Hall C-40 (SI)
 TS-18 15:30 - 17:00
COMMISSION VI
WORKING GROUPS VI/2, VI/7
**EDUCATION AND TRAINING IN
 PHOTOGRAMMETRY AND REMOTE SENSING**
 Chair: DR. GREGORY P. ELLIS (AUSTRALIA)
**Training and Educational Aspects on Remote Sensing
 Image Geometry (IP)**
 Gottfried Konecny (GERMANY), W. Schuhr
**Changes in Swedish Higher Education in
 Photogrammetry and Remote Sensing (IP)**
 Kennert Torlegård (SWEDEN)
Air Survey Photography: Educational Innovation
 Keith B. Atkinson (UNITED KINGDOM),
 R. W. Graham, R. Hepton
**The Challenge of Providing Photogrammetric
 Education for the 21st Century**
 Kevin Jones (AUSTRALIA), C. Bellman,
 G. Ellis
**Teaching Remote Sensing Project Design &
 Management at the Undergraduate Level**
 R. Douglas Ramsey (USA)

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Hall C-38
 TS-19 08:30 - 10:00
COMMISSION V
WORKING GROUP V/4
**PHOTOGRAMMETRY AND CAD/CAM: THE
 INDUSTRIAL CONNECTION**
 Chair: DR. CLIVE S. FRASER (USA)
**CAD Modelling of Radioactive Plant: The Role of
 Digital Photogrammetry in Hazardous Nuclear
 Environments (IP)**
 David Paul Chapman (UNITED KINGDOM), A.
 T. Deacon, R. Kotowski, A. Hamid

**Three-Dimensional Mapping and As-Built Computer
 Modelling by Analytical Photogrammetry**
 R. M. Littleworth (UNITED KINGDOM),
 D. M. Stirling, J. H. Chandler
**On Line Dimensional Measurements of Glass-Made
 Components by Means of an IR Computer Vision
 System**
 Francesco Angrilli (ITALY), G. Bianchini,
 G. Fanti, M. Mozzi
**Photogrammetric Survey of a Large Offshore Platform
 During a Dynamic Phase**
 Moreno Rampollis (ITALY)

Hall C-39

TS-20 08:30 - 10:00

COMMISSIONS II, VII

WORKING GROUPS II/2, VII/2

SYSTEMS FOR INTEGRATION OF GIS AND REMOTE SENSING

Chair: DR. MANFRED EHLERS (GERMANY)
Systems for the Integration of Remote Sensing and GIS (IP)

Jeffrey L. Star (USA), J. E. Estes

Geographic Information Systems and Remote Sensing Future Computing Environment—An Update (IP)

Nickolas L. Faust (USA)

Requirements of a Stereo Workstation for GIS Environment

Tapani T. Sarjakoski (FINLAND), J. Lammi
A Digital Stereophotogrammetric System in a GIS Environment

Gerhard Koenig (GERMANY), J. Storl,
F. Wewel

Hall C-40 (SI)

TS-08 08:30 - 10:00

COMMISSION III

WORKING GROUP III/1

GEOGRAPHIC INFORMATION THEORY

Chair: DR. MARTIEN MOLENAAR (NETHERLANDS)
Geo-Information Theory: Why and What(IP)

Martien Molenaar (NETHERLANDS),
R. Groot

Spatial Data Modelling: The Module-R Formalism and CASE Technology(IP)

Y. Benard (CANADA)

An Object-Oriented Modelling Framework for Geographic Information

M. Isdale (CANADA), Y. C. Lee

Responsibility, Uncertainty & Fitness-for-Use: Implications for Geo-Information Theory

Allan J. Brimicombe (HONG KONG)

A Unified Data Structure to Represent Vector and Raster Data in GIS

Li Deren (CHINA), Gong Jianya

Object-Oriented Data Models in GIS

Gong Jianya (CHINA), Li Deren

Room 31

IS-1 08:30 - 12:00

ISPRS AND UNITED NATIONS, OUTER SPACE AFFAIRS DIVISION UN/ISPRS INTERNATIONAL SPACE YEAR WORKSHOP - SESSION I

"DATA FORMATS, BASIC PROCESSING AND IMAGE ENHANCEMENT TECHNIQUES"

Chair: DR. DAVID G. GOODENOUGH (CANADA)
United Nations Opening Statement

Ade A. Abiodun (UNITED NATIONS)

Remote Sensing Data Analysis Methods

K. Rassmussen (DENMARK)



Image Correction/Enhancement Techniques With Emphasis on: Basic Geometric and Radiometric Processing; Radiometric Calibration and Mu

Jo Wu (CHINA-TAIPEI)

Levels of Image Processing with Emphasis on: Edge and Feature Extraction; Linear Feature Extraction; General Segmentation; Image M

John Trinder (AUSTRALIA)

Image Analysis Software

L. W. B. Hayes (UNITED KINGDOM)

Hall C-38

TS-22 10:30 - 12:00

INTERCOMMISSION WORKING GROUP VIII/I

TROPICAL FOREST AND LAND USE MONITORING

Chair: DR. L. SAYN-WITTGENSTEIN (CANADA)
FAO Remote Sensing Activities in Environmental Monitoring and Forest Cover Assessment in Developing Countries (IP)

Z. D. Kalensky (UNITED NATIONS)

"A Good, A Better or the Best Remote Sensing Application System" for Tropical Rain Forest Survey in the Amazon Region

G. Sicco Smit (NETHERLANDS)

Deforestation Estimates in AVHRR/NOAA and TM/Landsat Images for a Region in Central Brazil

Silvana Amaral (BRAZIL)

The Role of NOAA-AVHRR in Vegetation Monitoring of Amazonia

Sherry C. Chen (BRAZIL),

Y. E. Shimabukuro

Canada's Tropical Forestry Initiative in Latin America—An Airborne SAR Program

Frederick Campbell (CANADA), F. J. Ahern,
R. K. Raney

Hall C-39

TS-23 10:30 - 12:00

COMMISSION III

PROGRESS IN PHOTOGRAMMETRIC DATA ANALYSIS: NEW THEORIES AND ALGORITHMS

Chair: DR. DEREN LI (CHINA)

Photogrammetric Restitution Based on Linear Features (IP)

Kurt Kubik (AUSTRALIA)

Operational Rules and Accuracy Models for GPS Aerotriangulation (IP)

Fritz Ackermann (GERMANY)

Notes on the Direct Projective Transformation of General Stereo Pairs into the Rigorous Normal Case by Image Correlation

Gerhard Brandstätter (AUSTRIA)

Investigations into the Recovery of MOMS-02 Three-Line Camera Orientation by Means of Knowledge-Based Image Processing

Egon Dorrer (GERMANY)

Hall C-40 (SI)

TS-24 10:30 - 12:00

COMMISSION IV

WORKING GROUP IV/7

GLOBAL LAND COVER MAPPING AND GLOBAL DEM

Chair: DR. RYUTARO TATEISHI (JAPAN)

Radiometric Correction of NOAA GVI Data for Global Land Cover Monitoring

Koji Kajiwara (JAPAN), R. Tateishi

A Global Inventory of Digital Topographic Data

M. Wolf (UNITED KINGDOM)

An Ideal Map Projection for Global GIS Output

Piotr Laskowski (USA)

Accuracy of SPOT Triangulation with Very Few or No Ground Control Points

Isabelle Veillet (FRANCE)

Exhibition Hall

ES-3 12:00 - 13:30

EXHIBITORS' SHOWCASE - SESSION III

Chair: Dr. Horst Beyer (Switzerland)

A New MS-DOS Based Integrated Software Package for Triangulation and Data Collection for Close Range Applications

Luis Cogan (SWITZERLAND), L. Hinsken, R. Kotowski

Development of a 4 x 5" Réseau Camera for High Precision Industrial Photogrammetry

Jürgen Peipe (GERMANY), G. Suilmann, W. Wester-Ebbinghaus

Calibration and Accuracy Assessment of a Multi-Sensor Online- Photogrammetric System

Robert Godding (SWITZERLAND), T. Luhmann

Application for Close-Range Photogrammetry Using a Camera System Attached on Transit and Stereo Image System (TOPCON PS-1000/PI-1000)

Masatoshi Ishii (JAPAN), H. Otani

MIROS - A New Software for Rollei RS1 Digital Monocomparator

Martin Knobloch (GERMANY), T. Rosenthal

Hall C-38

TS-25 13:30 - 15:00

COMMISSION V—ASSOCIATE GROUP

ROBOT VISION AND NAVIGATION

Chair: DR. REIMAR LENZ (GERMANY)

Intelligent Navigation for Autonomous Robots Using Dynamic Vision (IP)

Christian Hock (GERMANY), E. D. Dickmanns

On-Line Triangulation for Autonomous Vehicle Navigation

Kenneth Edmundson (USA), K. Novak

Sequential Estimation in Robot Vision

Armin Gruen (SWITZERLAND), Th. Kersten

Fusion of Visual Data Through Dynamic

Stereo-Motion Cooperation

Nassir Navab (FRANCE), Zhengyou Zhang

Hall C-39

TS-26 13:30 - 15:00

COMMISSIONS II, IV

WORKING GROUPS II/3, IV/4

ACCURACY AND QUALITY STANDARDS OF PHOTOGRAMMETRIC DATA

Chair: JON KURE (NETHERLANDS)

Final Report of W.G. IV/4: Standards for Photogrammetric Procedures(IP)

Jon Kure (NETHERLANDS), M. M. Radwan

Automatic Feature Extraction for Map Revision

Hiroshi Murakami (JAPAN), R. A. Welch

An OEEPE Test on Orthophoto and Stereo-Orthophoto Accuracy

Guy Ducher (FRANCE), Ian Dowman

Updating Cartographic Data Bases - Merging Old and New Data

Ole Jacobi (DENMARK)

The Visualisation of GIS Generated Information Quality

Corne P. J. M. van Elzakker

(NETHERLANDS), B. Ramlal, J. Drummond

Hall C-40 (SI)

TS-27 13:30 - 15:00

COMMISSION VII

WORKING GROUP VII/5

OCEAN AND COASTAL ZONE MONITORING WITH REMOTE SENSING

Chair: DR. KLAUS A. ULBRICHT (GERMANY)

Environmental Assessment of Hurghada Coastal Zone, Red Sea by Thematic Mapper Data(IP)

Adel F. Abdel-Kader (EGYPT), A. S. Ayoub

Water Quality Modeling of Nearshore Waters Using Integrated Remotely Sensed Data and in Situ Measurements

Sima Bagheri (USA)

Laser Remote Sensing of Phytoplankton Photosynthetic Activity In-Situ

Alexander M. Chekalyuk (RUSSIA), M. Yu Gorbunov

Bottom Types and Water Depth Extraction from TM Imagery on Shallow Coastal Waters

Alexandre P. Cabral (BRAZIL), M. L. Vianna

NOAA Satellite Used to Determine Areas of Probable Fishing for the Swordfish

M. Angela Barbieri (CHILE), E. Yanez, A. Gonzalez, M. Farias

Room 31

IS-2 13:30 - 16.45

ISPRS AND UNITED NATIONS, OUTER SPACE AFFAIRS DIVISION UN/ISPRS INTERNATIONAL SPACE YEAR WORKSHOP—SESSION II

"COMPUTER ASSISTED DATA INTERPRETATION AND DIGITAL MAPPING"

Chair: DR. BRUCE FORSTER (AUSTRALIA)

Image Analysis at CCRS

D. G. Goodenough (CANADA)



**Data Analysis and Classification with Emphasis on:
Multispectral Classification Techniques; Spatial
Frequency Analysis**

Girard Guyot (FRANCE)

Multivariate Analysis Techniques

Nanno J. Mulder (NETHERLANDS)

Digitizing Images; Automated Stereoscopic Analysis

Tapani T. Sarjakoski (FINLAND)

Hall C-40

SS-05 15:30 - 17:00

INTERCOMMISSION WORKING GROUP VIII/

**EARLY WARNING SYSTEMS AND MONITORING
NATURAL DISASTER**

Chair: DR. L. SAYN-WITTEGENSTEIN (CANADA)

**Application of Remote Sensing and GIS for Renewable
Resources Damaged by Typhoon 'Gay' : Chumphon
Province**

Manu Omakupt (THAILAND)

**Detection of Sub-Surface Coal Fires Using Landsat
Thematic Mapper Data**

Arthur P. Cracknell (UNITED KINGDOM), S.

B. Mansor

**Generation of Land Disaster Risk Map from
LANDSAT TM and DTM Data**

Masataka Takagi (JAPAN), S. Murai,

T. Akiyama

**Assessment of AVHRR Data for Deforestation
Estimation in the Amazon Basin**

Getulio T. Batista (BRAZIL), C. J. Tucker

**Ecological and Economical Evaluation of Condition of
Environment**

Tibor Dobos (HUNGARY)

**Mapping of Desert Locust Habitats Using Remote
Sensing Techniques**

Udo Dreiser (GERMANY)

Rooms 10-15 & 30

PS-3 15:30 - 17:00

COMMISSIONS I, III, IV, V, VII

ORAL PRESENTATIONS USING POSTERS - SESSION III

COMMISSION I

**WAOSS-Eine Intelligente Weitwinkel-Stereokamera
für die Missionen Mars 94/96**

Rainer Sandau (GERMANY), H. Jahn,

D. Oertel

**Three Years' Experience with the CASI Imaging
Spectrometer**

Michaela C. Mueksch (GERMANY)

**Experiences from the Use of Computer Aided Aerial
Photography with GPS at the National Land Survey of
Sweden**

Jonas Andreasson (SWEDEN)

Microlight Aircraft for Large-Scale Aerial Surveying

V. G. Afremov (RUSSIA), S. S. Nekhin,

V. A. Mirkin, A. G. Vanin

**Far-Field Fluorescence Lidar for Vegetation
Monitoring**

K.-P. Günther (GERMANY), H.-G. Dahn,

W. Lödeker, M. Schroeder

Holographic Recognizer With Disk Memory Unit

V. A. Stefanov (RUSSIA),

Leonid M. Tsiboulkin, Y. L. Tsourikov

COMMISSION III

Mathematical Analysis About Q_{vv} P Matrix

Wang Renxiang (CHINA)

**A Study on the Representation and Interpretation of
Remotely Sensed Imagery**

Li Deren (CHINA), Guan Zequn

Simulation de Couverts Vegetaux Realistes en 3-D

Frédéric Blaise (FRANCE)

**Methods and Results of Combined Adjustment
Utilizing Kinematic GPS Positioning and
Photogrammetric Data**

Keren Li (GERMANY),

Jochen Stueckmann-Petring

**A Conception for Object-Oriented Description of
Knowledge and Data in Scene Analysis and Object
Recognition**

Yonglong Xu (GERMANY)

Multiple Image Matching

Peggy Agouris (USA), T. Schenk

**On the Interpolation Problem of Automated Surface
Reconstruction Raid**

A. Al-Tahir (USA), T. Schenk

**Auto/Semiautomatic GIS Database Creation Using
Remotely Sensed Satellite Imagery**

Wenjin Zhou (CANADA)

**Towards Automatic DTM Verification Exploiting
Stereo Orthophotos**

Michael Hahn (GERMANY)

**Comparison of Different Mathematical Principles for
Solving Optimization Problems in Computer Vision**

Berthold Plietker (GERMANY), M. Hahn

**Patterns of Aerial Triangulation by Independent
Models**

Raouf S. Rostom (KENYA)

Hough Transform in Digital Photogrammetry

Christos Adamos (CANADA), W. Faig

**Reconstructing Small Surface Patches from Multiple
Images**

Toni Schenk (USA), C. K. Toth

Use of Features Derived from Proportions of Classes in a Pixel for the Multispectral Classification of Remote Sensing Images

Ana P. D. Aguiar (BRAZIL),
N. D. A. Mascarenhas, Y. E. Shimabukuro

COMMISSION IV

Orientation Tests of Yzerman APY Instrument

Mustafa Turker (UNITED KINGDOM),
D. A. Tait

A Model for the Orientation of Alongtrack Satellite Stereopairs

Francelina A. Neto (UNITED KINGDOM)

Monitoring Near and Off Shore Sediment Formations by Satellite

Charles C. Watson, Jr. (USA)

Geological Mapping in Arid Regions of Africa Using Satellite Data—Integration of Visual and Digital Techniques

Franz K. List (GERMANY), W. Koch,
M. H. Salahourian

Intelligent vs. Regular Sampling: Implications for the Use of Expert Systems in Environmental Monitoring

Joseph R. Seppi (USA)

Border Mapping Using Satellite Imagery: The Nigerian Experience

S. O. Ihemadu (NIGERIA)

Automatic Data Acquisition from Topographic Maps Using a Knowledge Based Image Analysis System

Norbert Ebi (GERMANY), B. Lauterbach, Ph.
Besslich

Computer-Assisted Generalization—An Important Software Tool in GIS

Bernd M. Powitz (GERMANY)

Topographic Mapping Method Using SPOT Imagery

Minoru Akiyama (JAPAN)

Computer Assisted Production of Planimetric Data: An Industrial Approach

Philippe Nonin (FRANCE)

Photogrammetric Applications for GIS/LIS, Unstructured Data Capture and Topology Builder

B. Studemann (SWITZERLAND),
A. Chapuis, P. Sonnenfeld

Rectification of Aircraft Thematic Mapper Imagery

Martin J. Smith (UNITED KINGDOM),
V. Veronese, P. M. Mather

Small to Large-Scale Mapping Using Multi-Resolution Image Data

Johannes Raggam (AUSTRIA), A. Almer,
M. F. Buchroithner

Image Rectification in a GIS Environment

Tian-Yuan Shih (CANADA), D. Fraser,
E. Derenyi

An Accuracy Study of a DEM Generated from SPOT

Jude X. Huang (USA), A. Zusmanis,
Z.-G. Xia

Digital Elevation Models for Identification of Potential Wetlands

Petter Pilesjö (SWEDEN), D. B. Michelson, K.
Hall-Könyves

Analysis of Regional Geologic Hazards (Landslide) Using GIS Technology

Youn-Jong Kim (SOUTH KOREA), Won-Young
Kim, Il-Hyon Yu, Young-Kyu Yang, Dong-jo
Seo

Application of Photogrammetric Methods to the Creation of State Cadastre of Real Properties and GIS in the Czech Republic

M. Roule (CZECHOSLOVAKIA), L. Skládál

Altimetric Restitution of Spot Digital Stereopair Antonio

J. F. M. e Silva (BRAZIL), R. E. G. Braga,
L. A. V. Dias

Accuracy and Quality Control of Photogrammetric Digital Map Production in Istanbul

H. Erdogan Örüklü (TURKEY), A. Alkis,
Ü. Gümüşay, T. Akcalt

A Comparison of the Effectiveness of Four Data Capture Production Lines

S. P. Goel (NETHERLANDS),
A. M. Tuladhar, J. Drummond

A Knowledge-Based System Approach to Thematic Mapping

Zhang Wenxing (CHINA), Su Bo, Li Hua,
Zhang Xiaochun

DIGIRAST: The Powerful Entry Level Interactive Semi-Automatic Digitizer

R. Casini (ITALY), M. Nardini, M. Scarton

COMMISSION V

CCD or not CCD

Derry R. Gordon (NEW ZEALAND)

Digital Data Acquisition Techniques for Creating Archaeological Data-Bases

Kurt Novak (USA), S. Seshadri

The Photogrammetric Survey of an Inaccessible Object

Andreas Georgopoulos (GREECE),
A. Spiliotakara

Complexity Analysis for the Establishment of Image Correspondences of Dense Spatial Target Fields

Hans-Gerd Maas (SWITZERLAND)

Further Investigation on the Camera Calibration for a Stereo-Camera Project

T. Y. Shih (CANADA), X. Liu, W. Faig

Determination of the Clearance Chart with Close-Range Photogrammetry

Akos Detrekóí (HUNGARY), K. Fekete,
A. Knyih

Determination of Landing Parameters of High Performance Aircraft Using a Photogrammetric Approach

Gary Robertson (CANADA)

Removal of Random Noise from Conventional Digital X-Ray Images

Khalil I. Jassamm (USA)

A Comparison Between Two Comparable Analytical Methods of Data Reduction from Non-Metric Photography

Adel A. E. Mahmoud (EGYPT)

- 3D Reconstruction and Simulation CLUNY III**
Manfred Koob (GERMANY)
- Surface Reconstruction and Change Detection for Agricultural Purposes by Close Range Photogrammetry**
Katharina Helming (GERMANY),
Wolfgang Jeschke, J. Stori
- SNAP: A System for Non-metric Architectural Photogrammetry**
Petros Patias (GREECE), D. Rossikopoulos
- Combination Close-Range Photogrammetry and Digital Processing in Archeology**
Francisco J. B. Mendonáa (BRAZIL)
- Architectonic Photogrammetry: A New Mentality for New Technologies**
Grimaldi Pietro (ITALY)
- COMMISSION VII*
- Monitoring Environmental Impacts of Land and Water Development in Sri Lanka with Aerial Survey RS**
Chakrin D. Gangodawila (SRI LANKA)
- Supervised Classification to Land Cover Mapping in Semi-Arid Environment of NE Brazil Using Landsat TM and SPOT Data**
Klaus A. Ulbricht (BRAZIL), H. S. Teotia,
D. L. Civco
- SPOT Survey of Agricultural Land Uses in the Brazilian Amazon**
James B. Campbell (USA), J. O. Browder
- An Algorithm for Estimation of Upper & Lower Bounds of Emissivity & Temperature of a Target Using Thermal MS Airborne Remote Sensed Data**
S. Jaggi (USA), D. Quattrochi, R. Baskin
- Remote Sensing Applications in Mapping the Banded Hematite Quartzite Formation in Central India**
Bhopesht Sakalley (INDIA), D. K. Soni,
T. Habib
- Global Change Monitoring Based on the Eco-Climate Map**
Yoshiaki Honda (JAPAN), S. Murai
- Soil Erosion Susceptibility Evaluation Based on GIS Technology**
Sérgio D. A. F. Pinto (BRAZIL),
M. Valerio-Filho, P. L. Donzeli
- Structural Characterization of Satellite Data Using Geostatistical Methods in Order to Evaluate Renewable Natural Resources**
Michel F. Massart (BELGIUM), E. Wolff
- Growing Environment of Tropical Seasonal Forest**
Haruo Sawada (JAPAN), G. Takao,
C. Thongchai
- A Digital Composite of DMSP Nighttime Image and NOAA/AVHRR Data with Its Geographical Consideration**
Yasunori Nakayama (JAPAN), S. Tanaka,
Y. Suga
- New Technique in Oceanographic Feature Labeling of Infrared Images**
Sankar Krishnamurthy (USA), S. S. Iyengar, R. Holyer, M. Lybanon
- Radiometric and Spatial Fidelity of Resampled Imagery**
Raad A. Saleh (USA), E. E. Derenyi
- Analysis and Correction Technique of Topographic Effect in Digital Remote Sensing Image**
Liangcai Chu (CHINA), Yingcheng Li
- The Evolution of the Coastal Vegetation Ecosystem of the Abrolhos Archipelago-Brazil**
Bernard Gastelois (BRAZIL), R. M. Hadad
- GIS and Mathematical Models for Regionalization of Land Use Planning in China**
Liu Chuang (CHINA), Zhou Qian,
Wang Cheng, Lin Wenqi
- Landsat TM Data for Municipal Environmental Planning? Studies of Vegetation Indices in Urban Area**
Matthias Achen (GERMANY)
- Estimation of Snow Water Equivalent in Kurobe Basin by Using Remotely-Sensed Data**
Norihsa Kamibayashi (JAPAN), A. Kondoh
- Regression de la Forêt Equatoriale par les Feux de Brousse Indigenes**
Luiz E. Mantovani (BRAZIL), E. Fritzsons,
C. D. de M. Scaramuzza
- The Use of Landsat Spectral Data to Classify Grassland Like Vegetation on Quartzitic Substrat ("Campos Rupestres")**
Marisa D.B. Pereira (BRAZIL), T. E. Ruiz
- Cloud Free Mosaic Images**
Tsukasa Hosomura (THAILAND),
P. K. M. M. Pallewatta
- Integrating Topographic, Spectral and Structural Data for Vegetation Mapping in Country Parks of Hong Kong**
Tung Fung (HONG KONG), C.-Y. Jim
- Characteristics in Landsat TM Images of Structures Associated with Shear Belts in the Minas Gerais State, Brazil**
Juércio T. de Mattos (BRAZIL), T. Ohara
- Spectral Indicators of Vegetation Vigour of Beans (Phaseolus Vulgaris L.)**
Antonio R. Formaggio (BRAZIL),
J. C. N. Epiphanyo
- Regional Land Use Planning Based on RS Data**
Maria L.N.O. Kurkdjian (BRAZIL),
M. Valerio-Filho, P. Veneziani, C. E. Anjos,
M. N. Pereira, TG Florenzano, T.M. Sausen, T. Ohara
- Coastal Water Chlorophyll Estimation Using Landsat TM**
Maycira P. de F. Costa (BRAZIL)
- Recurrence Periods of Flooding Associated to TM Data within the Pantanal, Brazil**
Joao S. V. da Silva (BRAZIL), H. J. H. Kux
- Potential Area Localization for Groundwater Exploration and Recharge in Paraiba do Sul Valley Using Landsat TM—Sao Paulo State, Brazil**
Célio E. dos Anjos (BRAZIL), P. Veneziani
- Contextual Classification Using Ancillary Data—GIS**
Alexandre G. de Castro (BRAZIL)

Indians of the South of Brazil—Environment Diagnosis of the Indian Reserves of the Paraná State—Brazil

Francisco L. Lange Jr. (BRAZIL), S. Sohn, C. Dias Jr.

Hierarchization of Landscape in the Island of Santa Catarina, Southern Brazil, by Using Landsat-5 TM and Multispectral SPOT Images

Rosana M. Rodrigues (BRAZIL), V. J. P. Luz, M. R. Martins Ricardo W. ad-V. Veado

Grassland Type and Over Grazed Area Estimation Using Remote Sensing and Ground Data in Mongolia

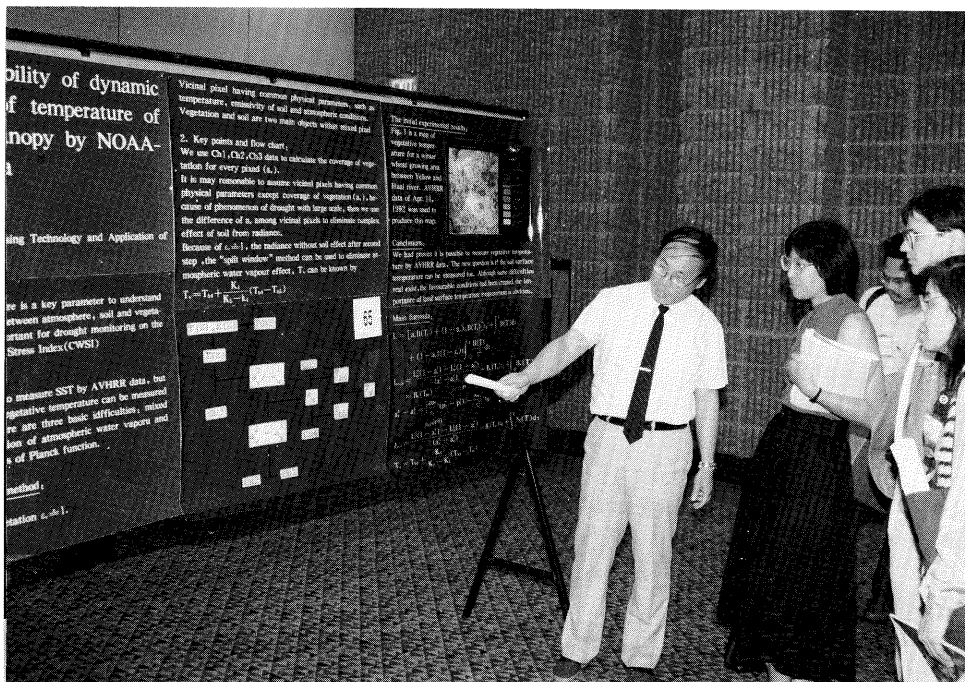
Mendbayaryn Badarch (MONGOLIA), G. Tsolmon, U. Bayarjargal

Aerial Photography, Photogrammetry and Microwave Remote Sensing Instruments in the Verification Activities of the Open Skies Treaty

P. Winkler (HUNGARY), M. Krasznai, S. Mihály, A. Banner

Itamaracè Island Land Use Monitoring With Landsat-TM Multidate Scenes

Héber R. Compasso (BRAZIL), C. G. Compasso



Oral Presentations Using Posters

FRIDAY
VENDREDI
FREITAG

7

AUGUST
AOÛT
AUGUST

Hall C-38

TS-28 08:30 - 10:00

COMMISSION VII

WORKING GROUP VII/7

**APPLICATIONS OF EXPERT SYSTEMS AND
ARTIFICIAL INTELLIGENCE IN
ENVIRONMENTAL MANAGEMENT**

Chair: DR. DAVID G. GOODENOUGH (CANADA)

Experiments with Statistical Classifiers

Manfred Sties (GERMANY), K. Segl

**GERES: A Prototype Expert System for the
Geometric Rectification of Remotely-Sensed Images**

M. I. Heard (UNITED KINGDOM),

P. M. Mather, C. A. Higgins

**A Methodology to Design an Expert System for
Remote Sensing Technology Management**

Andrew Finegan (AUSTRALIA)

**A Comparative Study on the Methods for Estimation
of Mixing Ratio Within a Pixel**

Yasunori Terayama (JAPAN), Y. Ueda,

K. Arai, M. Matsumoto

Hall C-39

TS-29 08:30 - 10:00

COMMISSIONS II, III, V

WORKING GROUPS II/5, V/3, IC II/III

**ALGORITHMS AND SOFTWARE CONCEPTS FOR
DIGITAL PHOTOGRAMMETRIC
WORKSTATIONS**

Chair: DR. HEINRICH EBNER (GERMANY)

**Algorithms and Software Concepts for Digital
Photogrammetric Work Stations (IP)**

Toni Schenk (USA)

**Considerations on Image Matching - An Engineering
Perspective**

Branko Makarovic (NETHERLANDS)

**Parallel Processing—The Example of Automatic
Relative Orientation**

Beate Müller (GERMANY), M. Hahn

**A Knowledge Based Approach to Reconstruct
Buildings in Digital Aerial Imagery**

Eberhard Gülch (SWEDEN)

Digital Production System

Lee R. Warren (USA)

Hall C-40(I)

TS-30 08:30 - 10:00

COMMISSION VI WORKING GROUP VI/6

ON-LINE LITERATURE RETRIEVAL

—IN MEMORIAM JÜRGEN HOTHMER—

Chair: DR. J. H. TEN HAKEN (NETHERLANDS) **The
European Remote Sensing and Photogrammetry
(ERSAP) Database (IP)**

Irene Mader (ITALY), C.-H. Lata arche

**PC Based Information Retrieval System for Remote
Sensing Literature and Data**

Vasudha Satalkar (INDIA), R. Nagarajan,

L. S. Joshi, K. Rao

**The Federal Geographic Data Committee: Developing
a National Geographic Information Resource**

Gene Thorley (USA)

**Data Bases in the Field of Aerospace and Related
Fields**

J. H. ten Haken (NETHERLANDS)

ISPRS Journal—Review and Preview

David A. Tait (UNITED KINGDOM)



Room 31

IS-3 08:30 - 11.45

*ISPRS AND UNITED NATIONS, OUTER SPACE
AFFAIRS DIVISION UN/ISPRS INTERNATIONAL
SPACE YEAR WORKSHOP—SESSION III*

**"INTEGRATION OF REMOTE SENSING DATA
AND GIS"**

Chair: ALASTAIR MACDONALD (UNITED
KINGDOM)

**Updating of Vector Coded GIS Using Remotely Sensed
Data**

Dieter Fritsch (GERMANY)

Remote Sensing and GIS: Possibilities and Limitations

Emmanuel P. Baltasvias (SWITZERLAND)

**Integrated Image and Digital Processing as Applied to
Photogrammetry**

S. Takeuchi (JAPAN)

Hybrid Data Bases for GIS and Remote Sensing

D. S. Alves (BRAZIL)

Hall C-38

TS-31 10:30 - 12:00

COMMISSION I

**FUTURE REMOTE SENSING MISSIONS AND
EARLY RESULTS OF NEW SYSTEMS**

Chair: DR. PLACIDINO M. FAGUNDES (BRAZIL)

The Brazilian Space Program (IP)

Carlos E. Santana (BRAZIL),

Paulo R. M. Serra

ERS-1 Europe's First Remote Sensing Satellite

Alfred Setzer (GERMANY)

**Technology Trends in Spaceborne Remote Sensing
Instruments**

Bill P. Clark (USA)

The MEOSS Mission

F. Lanzl (GERMANY)

**The Development of Short Wavelength Infrared
(SWIR) Subsystem for ASTER**

M. Kudoh (JAPAN), Y. Nemoto,

M. Fukushima, M. Isoda, T. Higuchi,

T. Takenouchi, Hidekazu Michioka,

Hiroshi Akao

Hall C-39
TS-32 10:30 - 12:00
COMMISSIONS V, II, III
WORKING GROUPS V/3, III/2, IC II/III
IMAGE ANALYSIS AND SYNTHESIS IN ON-LINE APPLICATIONS
Chair: DR. DIETER FRITSCH (GERMANY)
Aspect Graphs: State-of-the-Art and Applications in Digital Photogrammetry (IP)
David W. Eggert (USA), K. Bowyer, C. Dyer
Verification of Graphical Primitives in Gradient Direction Images
Ulf Hönisch (GERMANY)
Recognition of Partially Occluded Moving Objects
Michael Schmid (GERMANY)
Computer Visualizations of Traffic Accidents Using Photogrammetry
T. K. Koo (SINGAPORE)

Hall C-40 (SI)
TS-33 10:30 - 12:00
COMMISSIONS IV, III & VII
WORKING GROUPS IV/5, III/?, VII/?
APPLICATIONS OF GEOGRAPHIC INFORMATION SYSTEMS
Chair: DR. ROY A. WELCH (USA)
Computer Assisted Information Extraction from Satellite Images for Updating National Land Use Information Data Base in Japan
Kohei Cho (JAPAN), M. Yoshimura,
S. Takeuchi, K. Kamada, S. Murai, C. Otsuka
Spatial Modeling and Monitoring of Biodiversity Using Biophysical Land Units (BLU)
Crista S. Carroll (USA), S. A. Morain,
D. Hinrichsen
Utilization of GIS for Road Management
Hidemi Kashima (JAPAN), K. Hirata
A Study of Facility Management System in the Computer Aided Design Using 3 Dimensional Data Base
Uesugi Kohei (JAPAN), I. Osamu, Y. Myint
Progress in GIS Change Detection Ability
Gottfried Konecny (GERMANY), W. Schuhr

Exhibition Hall
ES-4 12:00 - 13:30
EXHIBITORS' SHOWCASE - SESSION IV
Chair: DR. H. S. MEHTA (INDIA)
Display System Advances for Raster/Vector Integration
Kenneth Maughan (CANADA), T. Taylor
Yo: An Innovative Tool for Remote Sensing Science
Jeremy C. Wilson (CANADA)
Film Recorders for the Receipt, Processing and Archiving Remote Sensing Data
John P. Whitley (USA), P. F. Grosso,
P. Morgan
Recent Advances in Electron Beam Image Recording for Remote Sensing Data Processing and Analysis
Patrick F. Grosso (USA), J. P. Whitley,
J. E. Turek

Hall C-38
TS-34 13:30 - 15:00
COMMISSION IV
WORKING GROUP IV/7
GENERALIZATION AND VISUALIZATION OF DIGITAL ELEVATION MODELS
Chair: DR. LUIZ A. V. DIAS (BRAZIL)
A Digital Image Processing Approach to Creating DTM's From Digitized Contours (IP)
Morakot Pilouk (NETHERLANDS),
K. Tempfli
Use of "Local" Shape-from-Shading to Enhance an Existing Digital Elevation Model
Pat S. Chavez, Jr. (USA)
Principles for a New Edition of the Digital Elevation Modelling System SCOP
Laszlo Molnar (AUSTRIA)
DEM Determination from SPOT
C. Angleraud (AUSTRALIA), K. Becek,
J. C. Trinder
Improving Digital Elevation Models Through Better Sampling Methods
Walker Gomes (BRAZIL)
Generation of High Fidelity Digital Terrain Models from Contours
G. Aumann (GERMANY), H. Ebner

Hall C-39
TS-35 13:30 - 15:00
COMMISSIONS III, V
WORKING GROUPS III/2, V/3
OBJECT RECONSTRUCTION AND LOCATION BY IMAGE ANALYSIS
Chair: DR. WOLFGANG FÖRSTNER (GERMANY)
Object Reconstruction and Location by Image Analysis (IP)
U.P. Horn Al-Lab, (USA)
Integration of Digital Image Matching and Multi Image Shape from Shading
Christian Heipke (GERMANY)
Relational Matching for Stereopsis
Ofer Zilberstein (ISRAEL)
Robust 3D Object Representation by Linear Features
Anja M. I. Wilkin (FINLAND)
Automated 3D-Spatial Measurement of Short Gravity-Capillary Waves
Alexander P. Gracian (UNITED KINGDOM),
P. G. Challenor, J.-P. Muller, M. A. Srokosz

Hall C-40 (SI)
TS-36 13:30 - 15:00
COMMISSION VII
WORKING GROUP VII/7
KNOWLEDGE BASED TECHNIQUES FOR DATA FUSION
Chair: DR. DAVID G. GOODENOUGH (CANADA) An
Expert System Interface for the GRASS Geographic Information System (IP)
Katarina Johnsson (CANADA),
D. G. Goodenough, C. Kushigbor

**Information Fusion of Multispectral Imagery for
Cartographic Feature Extraction**

Stephen J. Ford (USA), David M. McKeown

**Multistage Pattern Recognition for Digital Landscape
Modelling**

Alfred Mehlbreuer (NETHERLANDS), I.
Molina

**Backpercolation Training of Neural Networks for
Agricultural Land Use Classification with Landsat TM
Data**

Anton K. Kaifel (GERMANY), F. Löher
**Classification of Spatial Data Using a Hybrid Neural
Network-Expert System**

Andrew K. Skidmore (AUSTRALIA)



Room 31

IS-413:30 - 17:00

*ISPRS AND UNITED NATIONS, OUTER SPACE
AFFAIRS DIVISION UN/ISPRS INTERNATIONAL*

SPACE YEAR WORKSHOP—SESSION IV

"DISCUSSION AND CONCLUSIONS"

Chair: MISS CHARLOTTE E. O'BRIEN (WORLD
BANK)

Rooms 10-15 & 30

PS-415:30 - 17:00

COMMISSIONS I, II, III, IV, VII

ORAL PRESENTATIONS USING POSTERS - SESSION IV

COMMISSION I

**The Differential Brightness Measurement and the
Exposure System of Aerial Photography**

Yang Ke (CHINA)

**Optimum Forward Looking Angle for Stereoscopic
View Taking into Account Steep of the Terrain Based
on Auto-Regressive Model**

Kohei Arai (JAPAN), M. Ozawa, Y. Terayama

Appropriate Pixel Size for Orthophotography

Hans-Peter Bähr (GERMANY)

Subjective vs. Objective Image Quality

Anders E. Boberg (SWEDEN)

Spatial Resolution of a Digital CCD-Camera

Manfred Schroeder (GERMANY)

**Video Imaging for Controlling Differential GPS
Measurements**

Juha I. Jaakkola (FINLAND)

GPS & Aerotriangulation Francisco

H. S. Magro (BRAZIL), J. B. de Andrade

COMMISSION II

**Remote Pavement Weather Sensing and Applications
for the Transportation Industry**

Joe R. Kelley (USA)

**Range Images Segmentation Based on the Remote
Sensing Data**

V. I. Saliga (RUSSIA), N. N. Pasechny,

O. V. Mikheev, V. M. Lisitsin

A New Approach to Photogrammetric Plotting

Humberto Rosas (COLOMBIA)

Digital Photogrammetry at the Survey Department

Chung S. Han (NETHERLANDS)

Hall C-40

SS-0615:30 - 17:00

COMMISSION V

**PHOTOGRAMMETRY RECORDS THE WORLD'S
HERITAGE**

Chair: R. DALLAS (United Kingdom) & DR. J.
BADEKAS (GREECE)

**Recording: Unrealized Potential for Heritage
Conservation**

Herb Stovel (CANADA)

Defining the Future of Architectural Photogrammetry

Peter Waldhäusl (AUSTRIA)

**Some Cases of Architectural Photogrammetry Done in
Central and South America**

Antonio Cheli (ARGENTINA)

World Heritage Sites—Photogrammetric Records

R. W. A. Dallas (UNITED KINGDOM),

M. Carbonnell

**Infrared Image Enhancement with Nonlinear
Spatio-Temporal Filtering**

Wilhelm Meier (GERMANY), H. vom Stein

**Noise and Object Elimination from Automatic
Correlation Data Using a Spline Function**

Irineu da Silva (BRAZIL)

A System to Process Digital Sonar Images

Jeffery A. Anderson (USA), S. C. Sides,

P. S. Chavez, Jr.

The Performance of DIPS qImage Processing System

Othman Alhusain (HUNGARY)

Stereoscopic Measurements of Binary Images

Ali Azizi (IRAN)

**Development of a PC-Based Digital Photogrammetric
System**

Nobuhiko Mori (JAPAN), S. Masuda,

S. Murai

**Improvement of Digital Image Resolution by
Oversampling**

Håkan B. Wiman (SWEDEN)

**Three-Dimensional Mapping from Softcopy Images on
Personal Workstations**

Roy Welch (USA)

**VISAO: A Based PC Software in Object Oriented
Language for Image Processing**

José I. Miranda (BRAZIL)

Evaluation of Geometric Quality of Scanned Images

James Bethel (USA)

**Direct Method of Petroleum Prospecting by Satellite
Scanner Images Processing**

Oleg I. Karasev (RUSSIA)

COMMISSION III

Knowledge-Based Recognition of 3-D Objects in Fuzzy Environment

V. S. Bansal (INDIA)

Design of Geographical Inference Engine

Zhou Zhangfa (CHINA)

Principles of Geographical Expert System

Ma Ainai (CHINA), Zhou Zhangfa

Scale Reduction and Maximum Information Loss of Different Image Information Categories

Ulrich Wieczorek (GERMANY)

Topological Spatial Relations and Operators

Zhexue Huang (SWEDEN)

Towards the Perceptual World: A Modeling Framework for Transforming Physical Environmental Digital Data into Perceptual Digital Data

Liu Binyi (CHINA)

Surface Reconstruction from Data of Digital Line Cameras by Means of Object Based Image Matching

Hermann Diehl (GERMANY), C. Heipke

Matching Images of Different Geometric Scale

Franz Schneider (GERMANY), M. Hahn

Edge Detection for Digital Photogrammetry

Joshua S. Greenfeld (USA)

Graph-Based Matching of Stereo Image Features

Olaf Hellwich (CANADA), W. Faig

Derivation and Comparative Analysis of Some Vector Space Formulation for Image Space to Model Space Transformation on a Microcomputer

James Olaleye (CANADA), W. Faig

Spatial Reasoning About Flow Directins: Towards an Ontology for River Networks

Joao A. de C. Paiva (USA), M. J. Egenhofer,
A. U. Frank

Estimation of Classifier's Performance with Error Counting

Jan Heikkilä (FINLAND)

Optimized Algorithm for Three Dimensional Object Reconstruction

Maria L. Reis (BRAZIL)

Application of Image Pyramid for Surface Reconstruction with FAST Vision (= Facets Stereo Vision)

Boris Kaiser (GERMANY), M. Schmolla,
B. P. Wrobel

Space Triangulation Using Affine Transformation

Atsushi Okamoto (JAPAN)

Automated Extraction of Airport Runway Patterns from Radar Imagery

Richard A. Hevenor (USA), P.-F. Chen

A GIS Uncertainty Subsystem

Bheshem Ramlal (NETHERLANDS),
J. Drummond

Knowledge Network and Inference Model on Intelligent Interpretation of TM Image

Qiming Qin (CHINA)

Application des Processus Stochastiques aux Traitements Numeriques des Images:

Estimation-Analyse des Residus

Abdelhamid Khodja (FRANCE)

COMMISSION IV

The Panoramic Projection of the Globe from Satellites

Wagih N. Hanna (EGYPT)

GPS Control for Digital Mapping

Joseph Forrai (ISRAEL)

Low Cost Feature Extraction from Aerial Photographs for Data Base Revision

Theodore Bouloucos (NETHERLANDS),
R. Kunarak, K. Tempfli

How to Interpolate a Surface with Break Lines?

Zi-Tan Chen (USA)

Satellite Image Data and Their Potential for the Commercial Use of Updating and Creating of Large Scale Topographic Maps

Christian G. Hoffmann (AUSTRIA)

SPOT Data for Urban Land-Cover Mapping and Road Map Revision

Bengt Paulsson (KENYA)

The Use of Linear Features as Reference Datum in Digital Map Revision

Jussi Heikkinen (FINLAND), Anita Laiho

Management of Illegal Slope Land Uses in Taipei City

Jenug-Hsiung Wu (CHINA-TAIPEI),
Chen G. Der, Mu-Lin Wu

Metric Information Extraction from SPOT Images and the Role of Polynomial Mapping Functions

Emmanuel P. Baltsavias (SWITZERLAND), D. Stallmann

Feature Extraction Comparison of Image Analysis Systems and Geographic Information Systems

J. Gairns (CANADA), T. Taylor

Contribution to the DTM's Study (DTM on Drainage Studies)

Evangelos Patmios (GREECE)

Software for Cartographic Raster-to-Vector Conversion

Laurence R. Moore (USA)

The Significance of SPOT Imagery to GIS Applications: A Comparison of Databases, their Accuracies and Uses

Thomas W. Lenzen (USA)

Integration of GIS and Methods for Digital Image Map Production

Martin R. Kaehler (GERMANY),
Ruediger Tauch

The Terrain Roughness Determination Using Spectral Analysis

Ion Ionescu (ROMANIA)

Digital Elevation Model for Photogrammetric Measurements of Soil Erosion

Julian C. Barbalata (CANADA), R. Lebel

Geographic Information System for Landslide Prediction

Norihisa Kamibayashi (JAPAN), A. Kondoh

Development of the GPS Site Patrol System

Tomonori Takada (JAPAN), T. Sada,
H. Sakurai

- Hydrodynamic Modelling by Utilizing GIS in Paranagua Bay, Parana, Brazil**
Mauro R. Martins (BRAZIL),
Mariane A. D. Santo, J. T. de Matos,
F. P. Brandini
- The "Flowing" Accumulation Method and Its Application for Earth Surface Analysis**
Yaroslav V. Golda (UKRAINE)
- Digital Mapping of Silchar Suburb, India by Using Indian Remote Sensing LISS-II Data**
J. K. Ghosh (INDIA), S. Dutta, B. K. Saha,
P. K. Chakraborty
- Aerophotogrammetrical Monitoring of Surging Glaciers**
Yu. F. Knizhnikov (RUSSIA), G. B. Osipova,
D. G. Tsvetkov
- The Database Technology Challenge for GIS**
Donn C. Walklet (USA)
- Nautical Charting Applications of Photogrammetry and Remote Sensing**
Andrew R. Kilbride (UNITED KINGDOM)
- COMMISSION VII*
- Natural Resources Classification and Mapping in Large Area Using Image Analysis of Landsat Thematic Mapper TM Data M**
Ghiassi Khalhogle (IRAN), A. Majd
- An Assessment of Merged SPOT Panchromatic and Multispectral Imagery for Detection of Disturbed Hill Forest Sites in Peninsular Malaysia**
Kamaruzaman Jusoff (UNITED KINGDOM)
- Blue Grama (*Boutelouga gracilis*) Rangeland Biomass Assessment at the Peak of the Rains in North-Central Mexico Using NOAA-AVHRR-LAC**
R. Rene Garcia-Daguer (UNITED KINGDOM)
- Laser Remote Sensing of Phytoplankton and Organic Matter in the Sea Water**
A. M. Chekalyuk (RUSSIA), A. A. Demidov,
V. V. Fadeev, M. Yu. Gorbunov
- Rule-Based Land Use Classification from SPOT Multispectral Data**
Katarina Johnsson (CANADA)
- Hypertemporal Display and Analysis of NOAA AVHRR Data**
Christopher Elvidge (USA), W. Jansen
- Estimating APAR by Means of Vegetation Indices: A Sensitivity Analysis**
Jan G. P. W. Clevers (NETHERLANDS),
W. Verhoef, H. J. C. van Leeuwen
- Groundwater Prospection Criteria Based on Remote Sensing Data Applied to Crystalline Rocks in the State of Sao Paulo, Brazil**
P. Veneziani (BRAZIL), Marco A. R. Roci
- Pollution Monitoring of Elbe River by Aerial Thermography**
Miloslav Krížek (CZECHOSLOVAKIA)
- Data Volume Reduction of Airborne Thematic Mapper Data Set for Crop Area Estimations**
Flavio Deppe (UNITED KINGDOM)
- Essai d'Estimation de Cultures Annuelles à Partir d'une Nomenclature établie sur une Image Satellitaire**
Sylvain N'Kanza (FRANCE)
- Apport du Canal Thermique (T.M.) pour l'Étude de l'Occupation du Sol**
Pierre Bildgen (FRANCE), S. Servain
- Integrated Remote Sensing Study of the Lighto-Tectonic Setup of the Delhi Supergroup in Jaipur and Sikar District, N.E.-Rajasthan-India**
A. K. Sinha (INDIA), S. K. Das
- Statistical Analysis for Remote Sensing Spectrum Data of Targets**
Shi Ji Yuan (CHINA), Cheng Shu Ying
- Social-Economic Impact of Forest Degradation of the Mangueirinha Indian Reserve—South of Brazil**
Francisco L. Lange Jr. (BRAZIL),
G. Maximiano, C. Dias Jr.
- Urban and Rural Land Use Change Mapping with a Spectral and Textural Method**
Pieter F. Erasmus (SOUTH AFRICA)
- The Use of Remote Sensing in a Neotectonic Study in the Amazon Basin**
Elena Franzinelli (BRAZIL), E. Latrubesse
- Monitoring Locust Breeding Grounds Using Satellite Remote Sensing in the Indian Desert**
J. R. Sharma (INDIA), K. Radhakrishnan
- Sao Paulo State Natural Vegetation Monitoring**
M. Covre (BRAZIL), K. de Faria,
E. C. C. Fidalgo, Claudette M. Hahn,
D. R. Matheus
- Interpretation of RS Information Related to Uranium Mineralization in Quaternary Covering Area**
Huang Xianfang (CHINA), Luo Fusheng,
Tian Hua, Lin Shuanxing, Zhang Haifeng
- Use Remote Sensing Data to Inventory Ecologic Environment in Hulun Lake**
Liu Huimin (CHINA), Ding Kexu
- NOAA/AVHRR Data and Vegetation Zonality of the Loess Plateau**
Zhou Yingchun (CHINA), Wang Naibin
- Water Surface Fluctuation, Landuse and Landform Mapping in North Part of Iran by Using Landsat Data**
Ahmad Mohammadpour (IRAN)
- A New Approach in Search of Mineralisation Based on Analysis of Lineaments in Parts of North-Western Himalaya Using Landsat Imagery**
J. K. Attre (INDIA), M. Tiwari
- Remote Sensing in Water Cadastre Updating Albota**
M. Gabriel (ROMANIA)
- Coastal Zone Resource Analysis Surrounding the Tanimbar Island, Indonesia Using the Digitally Processed LANDSAT TM Imagery**
Indroyono Soesilo (INDONESIA)

SATURDAY
SAMEDI
SAMSTAG

8

AUGUST
AOÛT
AUGUST

Hall C-40

IU-ED1 08:30 - 10:00



*INTERNATIONAL UNION FOR SURVEYS AND
MAPPING (IUSM)*

WORKING GROUP ON EDUCATION

**"STATUS AND TRENDS IN SURVEYING AND
MAPPING EDUCATION" SESSION I—SUMMARY
OF STUDIES AND SYMPOSIA**

Chair: DR. RICHARD HOISL (GERMANY)

**Trends of Education in Photogrammetry and Remote
Sensing: The Rhodes Symposium Experience**

A. Georgopoulos (GREECE), J. Badekas

Toward World Surveying and Mapping Education

Edward J. Krakiwsky (CANADA),

I. I. Mueller

**"Symposium on University Education for Surveyors"
Held in Madrid in 1988**

Pedro J. Cavero (SPAIN)

**The Canadian Geomatics Human Resources Planning
Study**

David F. Woolnough (CANADA),

J. D. McLaughlin, E. A. Kennedy

**The Philosophy and Methodology of Analysing the
Education and Practice of Surveyors in Europe**

Arthur I. Allan (UNITED KINGDOM)

Education and Training in Cartography 1987-1992

Ferjan J. Ormeling (NETHERLANDS)

Room 31

SS-11 08:30 - 10:00



*INTERNATIONAL UNION OF FORESTRY RESEARCH
ORGANIZATIONS*

ISPRS/IUFRO - SESSION I

AUTOMATION OF AERIAL PHOTO

INTERPRETATION IN RESOURCE INVENTORIES

Chair: DR. ROGER HOFFER (USA)

Digital Stereophotos for Forestry Applications

Phillip F. Kern (USA)

**New ZEISS Interpretation Instruments for
Photo-Interpretation**

Klaus Franke (GERMANY), Rolf-Peter Mark

**Analysis of Possibility of Color Distinction on the
Colour Tests Taken by Multispectral Camera Using
ERDAS System**

Romauld Kaczynski (POLAND)

Hall C-39

TU-2 09:00 - 17:30

COMMISSION V

**TUTORIAL—"FUNDAMENTALS OF REAL-TIME
PHOTOGRAMMETRY"**

Lecturers:

Dr. E. Baltasias

Dipl.—Ing. H. Beyer

ETH Institute of Geodesy and Photogrammetry
(Switzerland)

Dr. D. Fritsch

Dr. R. Lenz

Technical University Munich (Germany)

Hall C-40

IU-ED2 10:30 - 12:00



*IUSM - WORKING GROUP ON EDUCATION
SESSION II - POSITION PAPERS AND PANEL
DISCUSSION*

**"STATUS AND TRENDS IN SURVEYING AND
MAPPING EDUCATION"**

Chair: DR. EDWARD KRAKIWSKY (CANADA)

**The Role of Geodesy in Surveying and Mapping
Education**

Richard B. Langley (CANADA), E. J.
Krakiwsky

**Education of Surveyors as a Response to the
Challenges of the Society (FIG Position Paper)**

Richard Hoisl (GERMANY), S. Härmälä

Surveyors Education at a Turning Point

John Badekas (GREECE), G. Konecny

**ICA/CET Position Paper on Cartographic Education
& Training**

Richard E. Dahlberg (USA)

Room 31

SS-12 10:30 - 12:00



IUFRO/ISPRS - SESSION II

SUMMARY OF WORLD FOREST WATCH

Chairs: DR. ROBERTO DA CUNHA (BRAZIL) AND
DR. JEAN PAUL MALINGREAU (ITALY)

Satellite Monitoring of Tropical Forest - A

Commentary on Current Status and Institutional Roles

C. Justice

**How to Watch the Forests. IUFRO Guides For World
Forest Monitoring**

H. Gyde Lund (USA)

**Vegetation Mapping of Indo-China Peninsula Using
MOS-1 and NOAA Data**

S. Murai (JAPAN)

**Integrating Airborne and Space Borne Digital Data
into a Geographic Information System for Forest
Monitoring**

F. Hegyi (CANADA)

**PRODES: The Brazilian Deforestation Mapping
Project**

Diogines Alves (BRAZIL)

Room 31

SS-13 13:30 - 15:00

IUFRO/ISPRS - SESSION III

**"REMOTE SENSING APPLICATIONS IN
RESOURCE INVENTORIES"**

Chair: DR. DAVID GOODENOUGH (CANADA)
**Replacing Aerial Photo Interpretation in Resource
Inventories with Integrated Airborne Digital Data and
Geographic Information Systems**

Frank Hegyi (CANADA), Paul Pilon,
Penny Walker

**Applying Orbital Remote Sensing - The Use of
Landsat TM to Assess, Inform and Monitor the
Atlantic Forest Domain—Brazil**

Eduardo S. Brondizio (USA),
D. S. Hamburger, P. C. Gurgel P. R. Martini,
C. F. Lino-Fundacao



**Integration of Vegetation Information Derived from
Landsat TM Data into a National Forest GIS**

David L. Evans (USA), L. Schoelerman,
T. Melvin

**Airborne Linear Array Imagers for Forestry
Applications**

Donald G. Leckie (CANADA)

Hall C-38

UN-2 13:30 - 17:00

*ISPRS AND UNITED NATIONS, SCIENCE,
TECHNOLOGY, ENERGY, ENVIRONMENT AND
NATURAL RESOURCES DIVISION*

**UN INTERREGIONAL SEMINAR FOR
DEVELOPING COUNTRIES—SESSION II
EDUCATIONAL ASPECTS, REQUIREMENTS AND
NEEDS IN DEVELOPING COUNTRIES**

Chair: MR. ATO ASFAW FANTA (KENYA)

Jan Konieczny (POLAND)

Fraser Taylor (CANADA)



Rooms 10-15 & 30

PS-5 13:30 - 15:00

COMMISSIONS I, II, III, IV, V, VII

ORAL PRESENTATIONS USING POSTERS—SESSION V

COMMISSION I

**Resolution Increase of CCD-Based Imager by a
Foccon Element Application**

Igor M. Efimenko (BYELORUSSIA),
K. G. Predko

**Microcomputer Aided Design System for Aerial
Remote Sensing Flight Path**

Chen Ruie (CHINA), Yang Li, Wang Ruichen

**Limits of KDGPS-Supported Aerial Triangulation for
High Precision Point Determination**

Christian Schwiertz (GERMANY), E. Dorrer

**The Trial of Alternative Methods in Large Scale, Low
Altitude Aerial Photography for Field Monitoring in
Forestry**

Lodovico Gherardi (ITALY), I. Manicioppi,
L. Paganucci

Calibration Plan of the Polder Instrument

Jean-Michel Martinuzzi (FRANCE), M. Leroy,
T. Bret-Dibat, P-Y. Deschamps, M. Herman, X.
Briottet, L. Wald

**Mathematical Aspects of an Optimum Calibration in
Remote Aerosol Lidar Sensing**

Svetlana A. Filatova (RUSSIA),
P. V. Golubtsov, A. G. Ermolayev,
O. V. Mikheev

**GPS-Controlled Photogrammetry for Large Scale
Mapping**

Clement Lee (USA), S. Curry, D. Merchant,
T. Schenk

**Hochauflösende Photographie mit der Contax RTS
III—Messkammer mit Filmansaugung**

Franz-Josef Heimes (GERMANY),
H. M. Hülsebusch, D. Ludwig, O.-M. Balve

**Requirements for Earth Observation in Tropical and
Subtropical Zones from Low Inclination Orbit**

Werner Kirchof (GERMANY), D. Beran,
M. Gaida, M. Schroeder I. Thomas,
P. Wendling

COMMISSION II

**Fast and Accurate Geometric Correction of NOAA
AVHRR Imagery**

Toshiaki Hashimoto (JAPAN), S. Murai

**Design and Research on the Fast Statistical and
Analytical System for Earthquake Disaster**

Yang Delin (CHINA), Wang Menghe

**Upgrade Kit for KERN DSR's Based on the Concept
of the Leica Photogrammetric Workstation**

Alain Chapuis (SWITZERLAND)

Robust Estimation by Using Linear Sequential Algebra

B. Bucciarelli (ITALY), G. Forlani, L. Mussio

**Detection of Fiducials and Points for Automatic Image
Orientation**

Yan Lue (USA)

**IMAGEM: A MOTIF Based Image Processing
Package**

José I. Miranda (BRAZIL), S. Rodrigues, Jr., J.
Camargo-Neto

**Design and Implementation of an Object-Oriented
Photogrammetric Toolkit**

Chris McGlone (USA)

**PC-Based Integrated Digital Pugging and
Measurements for Block Adjustments**

Jean-Paul Agnard (CANADA), C. Nolette,
P.-A. Gagnon

Orientation Theory for Satellite CCD Line-Scanner Imageries of Mountainous Terrains

Atsushi Okamoto (JAPAN), S.-I. Akamatu,
H. Hasegawa

State of the Art Digital Photogrammetric Systems: An Overview

Raad A. Saleh (USA)

Image Binarization by Back Propagation Algorithm

Tao Chen (JAPAN), M. Takagi

COMMISSION III

Iterative Algorithm for Multidimensional Image Analysis

Vjatcheslav M. Lisitsyn (RUSSIA),
N. N. Pasechny, V. A. Stephanov,
K. V. Obrosof

Intelligent Environment for Interpretation Tasks of Remotely Sensed Images

José D. Simoes da Silva (BRAZIL),
C. A. de Oliveira, J. M. de Carvalho

Recalage Image SPOT/Carte Routiere

Michel Roux (FRANCE), J. Lopez-Krahe,
H. Maître

Detection of Lines and Circles in Maps and Engineering Drawings

Demetre P. Argialas (GREECE),
S. Krishnamurthy

On Matching Image Patches Under Various Geometrical Constraints

Charles K. Toth (USA), T. Schenk

Resampling Digital Imagery to Epipolar Geometry

Woosug Cho (USA), M. Madani, T. Schenk

Regression Analysis: A Method for Extracting Information from Satellite Images

Michael Wüthrich (SWITZERLAND)

A Knowledge-Based System for Linear Object Extraction

Xiaofeng Li (CHINA), Xiangqian Zhang

COMMISSION IV

Contours Generated by a Digital Terrain Model with Topological Triangle Network Format

William W.-K. Chang (USA)

Information Optical Detection in Topographical Maps Digital Actualisation Process

Niculae Raducanu (ROMANIA), D. Raducanu

Primary Data Analysis and Preparation for DTM Generation

G. Aumann (GERMANY), A. Pfannenstein, R. Würländer, K. Eder

Contour Lines Evaluated from Data Base Analysis

Osama M. Moussa (EGYPT), E. H. Soliman,
M. S. El-Ghazaly

Effect of Planimetric Correction with a Few GCP's on Terrain Height Estimation with Stereo Pair

Kohei Arai (JAPAN), S. Mukai, Y. Terayama

On the Use of Control Features for Rectification of Satellite Images

Gabriel E. Ajayi (GERMANY)

The International TADAT Remote Sensing Programme in High Mountain Cartography. Initial Results

Robert Kostka (AUSTRIA), F. Buchroithner, M. Gruber

Accuracy Improvement of Three Dimensional Positioning Using SPOT Imagery

Yeu Bock-Mo (SOUTH KOREA),
S. Duk-Jae, L. Hyun-Jik

Integrating Geographic Information Systems to Support Multi-Disciplinary Analyses: Toward a Complete Spatial Information System

William J. Szymanski (USA), A. V. Douglas,
D. R. Morris-Jones

Automatische Fehlerentdeckung bei der Flächenbildung und deren Anwendungsmöglichkeiten in Geo-informationssystemen

S. Zhang (GERMANY)

Raster Based 1/25,000 Topographic Map Revision

Masanori Koide (JAPAN), I. Kamiya,
T. Yoshinari, B. Urabe Y. Fukushima,
H. Maruyama

Génération de Cartes Planimétriques Automatisées dans la Région Brésilienne de l'Amazonia avec Images du Senseur Landsat TM

Luis A. de Andrade (BRAZIL), O. A. Abib, M. Zanick

Texture Trajectories from SPOT Data: A "Space Compass" for Tectonic Analysis

Claude Lecorre (FRANCE), Y. Quéité

Input Procedures for TM-Landsat Photographic Products into a GIS Environment

Jélio C. L. d'Alge (BRAZIL), D. S. Alves
Development of "Japan Vegetation Data Base"
Atsushi Tsunekawa (JAPAN)

Expose sur le Role, la Capacite d'Intervention et Perspectives d'Avenir du Cadastre National au Regard de la Legislation AgroFonciere

E. Mabilia Taty (CONGO)

Some Problems in Large Scale Mapping

Ma Li Rong (BOTSWANA)

An Alternative Technique for Updating Digital Map Data within a Pilot Project in Egypt

Osman A. A. Akif (EGYPT), M. M. Nassar,
M. El Kady, K. M. Hassen

Photogrammetry in Land Morphology Monitoring Ion Nelu Leu (ROMANIA)

Automatic Compilation of Contour Lines by Local DTM Method

Bokuro Urabe (JAPAN)

COMMISSION V

Photogrammetric Support of Monument Protection in Archaeology

W. Schuhr (GERMANY), M. Wiggengagen, E. Kanngieser, W. Schlüter

On the Determination of Camera Parameters

Younian Wang (GERMANY)

Self-Calibration of a Stereo Rig

Q. -T. Luong (FRANCE), O. D. Faugeras

On the Integrated Calibration of a Digital Stereo-Vision System

Guangping He (USA), K. Novak,
Wenhao Feng

Use of Parallel Projected Scanning Electron Micrographs in Central Projection Plotters : Limitations and Solutions

Mohamed S. Elghazali (EGYPT)

Analogue and Digital Methods in Architectural Photogrammetry

B. Astori (ITALY), G. Bezoari, F. Guzzetti

The Optimum Phototheodolite Positions that Maximize the Accuracy of the Object Points

Adel A. E. Mahmoud (EGYPT)

Real Time Tracking with a Dual Fan Shaped Laser Beam

Voon W. Foo (UNITED KINGDOM),

B. J. Gorham

Crack Measuring System Based on Hierarchical Image Processing Technique

Takeshi Doihara (JAPAN), K. Hirono,

K. Oda, T. Kimura, Y. Kasai

The Use of the Stereo-Photogrammetry Method in Geotechnical Engineering Work

Abdelmalek Bouazza (ALGERIA)

Architectural Recording with CCD Camera

Azmi Hassan (MALAYSIA)

Helicopter-Supported Photogrammetric Survey of Castle Ramsberg

Günter Eckstein (GERMANY), J. Peipe

COMMISSION VII

Mapping-Monitoring Coastal Zone Using Satellite Remote Sensing—Some Examples

LRA Narayan (INDIA)

Estimating Surface Albedo in Alpine Tundra Using the Landsat Thematic Mapper and Digital Terrain Data

Douglas G. Goodin (USA), D. C. Rundquist

Characteristics of Desert Aerosol Retrieved From Passive Optical Remote Sensing

Yoram J. Kaufman (ISRAEL), A. A. Gitelson,

E. Ganor, A. Karnieli T. Nakajima

Landsat TM Images for Pedological Survey under Brazilian Northeast Semi-Arid Conditions

Sonia B. Perdigao de Oliveira (BRAZIL),

A. R. Formaggio

Correction of Field Irradiance Measurements

Xing-Fa Gu (FRANCE), G. Guyot

An Algorithm for the Estimation of Water Temperatures from Thermal Multispectral Airborne Remotely Sensed Data

S. Jaggi (USA), D. Quattrochi, R. Baskin

Situation of the Mineral Activities in the Paraiba Valley (Sao Paulo State, Brazil) Showed on the TM-Landsat

Tomoyuki Ohara (BRAZIL), J. T. de Mattos

Extraction of Snow Covered Information of NOAA-AVHRR Pixel Inside Data with Aid of LANDSAT MSS Knowledge Base

Atsushi Rikimaru (JAPAN), S. Inada,

T. Miyoshi, T. Oshima

Research of the Nature Resources from Cuba Through Remote Sensing Methods

Lucas F. Reyes, et al (CUBA)

Fourier Analysis of Multitemporal Vegetation Index Data

Yunqing Li (JAPAN), K. Ohnuma, Y. Yasuda

Geographical Information System for Simulating the Adverse Impact of the Sea Level Rise on Tianjing Coastal Plain

Liu Chuang (CHINA)

A Synthetic Method for Information Extraction of Salinity of Soil

Wanglu Peng (CHINA), Changzuo Wang,

Tiangjie Li

Application of Remote Sensing for Appraisal of Geo-Environmental & Natural Resource Potential for Developmental Planning in Rajasthan Madan

L. Jhanwar (INDIA), S. Kumar

Analytical Approximation of Atmospheric Correction in Rugged Terrain

Harriet H. Kagiwada (JAPAN), S. Ueno,

Y. Kawata

A Fast Contextual Classifier for Information Extraction from Remotely Sensed Imagery

Peng Gong (CANADA)

Land Slide Analysis Using Photogrammetry in Korea

Injoon Kang (SOUTH KOREA)

The Influence of Different Sample Sizes on Land Use Classification Accuracy

Jansle V. Rocha (UNITED KINGDOM)

Multistage Data Evaluation for Geomorphological Mapping in Part of Doon Valley (UP)—India

Rajiv Chopra (INDIA)

Monitoring of Tropical Forest Fire by Satellite Remote Sensing

Shoji Takeuchi (JAPAN), C. L. Seng, K. Joko

On the Extraction of Elevation Information of Antarctic Ice-Covered Surface Using Landsat TM Band 6 Data

Sun Jiabin (CHINA), Shu Ning, Chen Shicong

Geologic and Geomorphic Application of Remote Sensing for Land-Use Identification in Northern Sinai, Egypt

M. A. El Ghawaby (EGYPT), M. Y. Zein

El-Din, H. A. Kerim

Utilization of Vector Radiothermal Fields for Solving Remote Sensing and Image Interpretation Problems

Yu K. Shestopalov (RUSSIA), V. I. Troitsky,

U. Eckhardt

La Surveillance des Modifications Morphologiques Spécifiques pour le Delta du Danube par Télédétection Aéro-Satellitaire

Nicolaie Oprescu (ROMANIA), F. Zavoianu

Experimental Approach for Urban Structure Identification Using Remotely Sensed Imagery

Mitsunori Yoshimura (JAPAN), T. Oshima, J. Oshima

Integration of Satellite and Revenue Data for Agricultural Land Reclamation Programs

Amrendra N. Singh (INDIA)

Remote Sensing Methods in Airborne Geophysics in Hungary

Beáta Csathó (HUNGARY), G. Balog, M. Bodrogi, A. Gulyás

Monitoring Water Quality in a Small Mexican Coastal Lagoon with "Simultaneous" Landsat Imagery:

Multi-Temporal Approach

Pilar Ruiz-Azuara (MEXICO)

Room 31

SS-14 15:30 - 17:00

IUFRO/ISPRS - SESSION IV

"SPECIAL REMOTE SENSING APPLICATIONS IN FORESTRY"

Chair: FRANK HEGYI (CANADA)



SUNDAY
SIMANCHE
SONNTAG

9

AUGUST
AOÛT
AUGUST

Room 30

IU-AC1 08:30 - 10:00

INTERNATIONAL UNION FOR SURVEYS AND MAPPING (IUSM) INFORMAL WORKING GROUP ON AUTOMATED CONTROL SYSTEMS

"AUTOMATED CONTROL MEASUREMENTS"

SESSION I—STATE OF THE ART REVIEWS BY

IAG, ISPRS, FIG, ICA

Chair: DR. KLAUS LINKWITZ (GERMANY)

Hybrid Measurement Robots in Engineering Surveys

Heribert Kahmen (AUSTRIA)

Digital Close-Range Photogrammetry in Industrial Measurement

Horst A. Beyer (SWITZERLAND)

Interdisciplinary Approach to Deformation Monitoring and Analysis

Adam Chrzanowski (CANADA)

Stability Control of Photogrammetric Stations

Henrik Haggrén (FINLAND), P. Pekkinen

Room 31

TU-3 08:30 - 17:30

INTERCOMMISSION WORKING GROUP III/VI MATHEMATICAL ASPECTS OF DATA ANALYSIS

TUTORIAL—"MODERN TREND IN PHOTOGRAMMETRY" GIOVANNA TOGLIATTI MEMORIAL TUTORIAL

Chair: DR. LUIGI MUSSIO (ITALY)

Opening

Luigi Mussio (ITALY)



Developing Spatial Reclassification Techniques for Improved Land-Use Monitoring Using High Spatial Resolution Images

Michael J. Barnsley (UNITED KINGDOM), S. L. Barr

Influence of Forest Stand Parameters on Vegetation Indices Used for Coniferous Forest Damage Assessment

Jonas Ardö (SWEDEN)

Effect of Polarization on Radar Backscatter in Relation to Slash Pine Stand Biomass Using Aircraft and SIR-B Data

Yousif A. Hussin (NETHERLANDS), R. M. Reich, R. M. Hoffer

Aerial Space Information Processing in the Integrated Geoinformational System of Forest Monitoring

Mark D. Breido (RUSSIA)

Space Photogrammetry

Gottfried Konecny (GERMANY)

Applications of SAR Interferometry to Digital Terrain Modelling

F. Rocca (ITALY)

Teaching Photogrammetry in Developing Countries

Valery Moskalenko (UNITED NATIONS)

Mathematical Aspects of Digital Photogrammetry

Luigi Mussio (ITALY), A. de Haan

Digital Photogrammetric Work-Stations

H. Ebner (GERMANY), C. Heipke

Digital Close-Range Photogrammetry

Armin Gruen (SWITZERLAND)

Room 30

IU-AC2 10:30 - 12:00

IUSM - INFORMAL WORKING GROUP ON AUTOMATED CONTROL MEASUREMENTS

"AUTOMATED CONTROL MEASUREMENTS"

SESSION II—EXAMPLES OF INDUSTRIAL USAGE

Chair: MR. HENRIK HAGGRÉN (FINLAND)

Machine Vision and Close-Range Photogrammetry

Toni Schenk (USA)

Evaluation of Three-Dimensional Geometric Features of Industrial Objects

Werner Bösemann (GERMANY)

Application of Photogrammetry in Industry

Peter C. Gustafson (USA), G. J. Johanning



Rooms 32-33

BM-RSA 10:30 - 12:00

*JOINT BOARD OF REMOTE SENSING ACTIVITIES
(JOBRESA) & NATIONAL AERONAUTICS AND SPACE
ADMINISTRATION (NASA)*

**SPECIAL PANEL DISCUSSION "EFFECT OF THE
IMPACTS OF CHANGES IN LANDSAT-7 DATA
POLICY UPON THE RS COMMUNITIES"**

Chairs: DR. GOTTFRIED KONECNY (GERMANY)
and KASS GREEN (USA)

Panel Members:

L. Shaffer (NASA)

P. Didishein (US House of Representatives, SSC)

K. Green (Pacific Meridian)

C. Nelson (SPOT Image)

E. Bachus (Conservation International)

A. Silvestrini (EOSAT)

MONDAY
LUNDI
MONTAG

10

AUGUST
AOÛT
AUGUST

Hall C-38

TS-45 08:30 - 10:00

COMMISSION VII

WORKING GROUP VII/2

**APPLICATIONS OF INTEGRATED GIS/IMAGE
ANALYSIS SYSTEMS**

Chair: DR. PAMELA I. SALLAWAY (CANADA)

**The Integration of Remotely Sensed Imagery and
Public Land Survey Data With a Biogeoclimatic Tree
Growth Process Model Into a GIS (IP)**

K. Milner (USA), S. W. Running,

H. R. Zuuring

**Integrated Image Processing/GIS Techniques for
Monitoring Aquatic Resources**

Marguerite Remillard (USA), R. Welch

**Remote Sensing and GIS Contribution for an
Environmental Planning Proposal**

Fabrizio Jemma (ITALY)

**Ecological Inventory and Classification Using
Integrated Remote Sensing/GIS Analysis**

Douglas M. Muchoney (USA),

D. H. Grossman

**Construction of a Statistical Area Sampling Frame
Using Remote Sensing and GIS: The Statistics Canada
Experience**

Richard Dobbins (CANADA), K. Korporal,

G. Filoso

Hall C-39

TS-38 08:30 - 10:00

COMMISSION III

WORKING GROUP III/2

IMAGE UNDERSTANDING IN

PHOTOGRAMMETRY AND REMOTE SENSING

Chair: DR. WOLFGANG FÖRSTNER (GERMANY)

**Using Perceptual Grouping to Detect Objects in Aerial
Images (IP)**

Keith Price (USA), A. Huertas

3D Urban Area Surface Analysis

Zheng Wang (USA), T. Schenk

Automatic Model Acquisition by Learning

Monika Sester (GERMANY)

Parsing Segmented Digital Images

John Stokes (SWEDEN)

**Feature Extraction: A Neural Network Oriented
Approach Microproperties in a Digital Image**

Yong-Jian Zheng (GERMANY)

**The Trilogy of Feature Extraction, II: A Neural
Network Oriented Approach to Feature Grouping**

Yong-Jian Zheng (GERMANY)

**The Trilogy of Feature Extraction, III: Model Driven
Object Description**

Yong-Jian Zheng (GERMANY)

Hall C-40 (SI)

TS-39 08:30 - 10:00

COMMISSIONS IV, III, VII

WORKING GROUPS IV/5, III/1, VII/2

VISUALIZATION OF GIS OUTPUT

Chair: DR. ROY A. WELCH (USA)

**Integration of GIS and 3-D Image Processing on
Personal Computers (IP)**

Roy Welch (USA)

**Design and Implementation of GIS Based Digital
Image Processing System**

M. Halim (CANADA), E. Derenyi, R. Pollock,

T. Y. Shih, C. K. Xian

Photogrammetry & GIS for Coastal Defence

Chung S. Han (NETHERLANDS),

H. J. W. van der Vegt

**Application of Geographic Information System (GIS)
and Remote Sensing to Land Assessment in the
Philippines**

Julius P. Maling (PHILIPPINES)

**On the Use of the Object Oriented Paradigm for
Multisensor Geocoding**

Hans W. Wehn (CANADA), B. Robertson

Room 30

BM-I 08:30 - 10:00

ISPRS COMMISSION I—BUSINESS MEETING

Chair: MARCIO BARBOSA (BRAZIL)

Room 31

BM-V 08:30 - 10:00

ISPRS COMMISSION V—BUSINESS MEETING

Chair: DR. ARMIN GRUEN (SWITZERLAND)

Hall C-38
TS-42 10:30 - 12:00
COMMISSION V
WORKING GROUPS V/3, V/5
IMAGE ANALYSIS AND IMAGE SYNTHESIS IN ARCHITECTURAL PHOTOGRAMMETRY
Chair: DR. LANDOLF MAUELSHAGEN (GERMANY)
Digital Orthophoto Using Multi Image Matching
Detlev Woytowicz (GERMANY)
Spatial Reconstruction and Modeling of the Sundagger Site in Chaco Canyon
Kurt Novak (USA), K. L. Edmundson,
P. Johnson
Photogrammetric Structured Data Acquisition and Compression Aimed to Static Calculation by Finite Elements Methods
Maurizio Barbarella (ITALY), R. Carlucci,
M. Fiani, S. Paradisi
Object Modelling and Visualization in Architecture
Manfred Stephani (GERMANY), L. Tang
Digital Photogrammetric Techniques for Architectural Design
André Streilein (SWITZERLAND), H. Beyer,
T. Kersten

Hall C-39
TS-41 10:30 - 12:00
COMMISSIONS III, VII
WORKING GROUPS III/4, VII/7
KNOWLEDGE BASED SYSTEMS
Chair: DR. NANNO J. MULDER (NETHERLANDS)
SEIDAM, System of Experts for Intelligent Data Management (IP)
David G. Goodenough (CANADA)
Multiple Representations and Knowledge-Based Generalization of Topographical Data
L. Tiina T. Kilpeläinen (FINLAND)
On the Acquisition, Representation and Application of Knowledge in Geo-Information Systems
Ralf Bill (GERMANY)
Representing Uncertain Knowledge with Bayesian Belief Networks
Jan Heikkilä (FINLAND)

Hall C-40 (SI)
TS-40 10:30 - 12:00
INTERCOMMISSION WORKING GROUP VI/III AND COMMISSION II/VI NEWSLETTER
COMPUTERIZED TEACHING
Chair: DR. ANDREAS GEORGOPOULOS (GREECE)
Rechnergestützte Ausbildung und Übung in Photogrammetrie und Landinformationssystemen (IP)
Joachim K. Höhle (DENMARK)
The Potential of Hypermedia to Photointerpretation Education and Training
Demetre P. Argialas (GREECE),
O. W. Mintzer

Use of PC-ERDAS in Satellite Mapping/GIS Education
Oystein B. Dick (NORWAY)
Education Based on Computer Operation for Remote Sensing and GIS Beginners' Training
Mitsunori Yoshimura (JAPAN), T. Oshima
Training Concept for Software-Oriented Products
Reiner Schwebel (GERMANY)

Room 30
BM-VII 10:30 - 12:00
ISPRS COMMISSION VII - BUSINESS MEETING
Chair: FRANK HEGYI (CANADA)

Room 31
BM-II 10:30 - 12:00
ISPRS COMMISSION II - BUSINESS MEETING
Chair: DR. KLAUS SZANGOLIES (GERMANY)
Systems for Data Processing and Analysis.
Commission II Report for 1988 - 1992
Klaus Szangolies (GERMANY)

Exhibition Hall
ES-5 12:00 - 13:30
EXHIBITORS' SHOWCASE - SESSION V
Chair: DR. ROOP C. MALHOTRA (USA)
Entry Level Digital Photogrammetry: Latest Developments of the DVP
Jaap Klaver (SWITZERLAND), A. S. Walker
Aerial Photography Systems from Carl Zeiss
N. Diete (GERMANY), W. Lorch
Aviphot B & W Films Sensitization and MTF
Wilfried Bahn Müller (GERMANY)
Wild RC Aerial Camera System, New Powerful Interface Module for Data Acquisition and GPS-Supported Flight Navigation (GIM)
Arthur Rohrbach (SWITZERLAND),
J. Meisterl

Hall C-38
TS-43 13:30 - 15:00
INTERCOMMISSION
WORKING GROUP III/I
ADVANCES IN SPACE PHOTOGRAPHY AND ITS USE
Chair: DR. KARLHEINZ MAREK (GERMANY)
Weltraumphotographie—stand und Entwicklungstendenzen (IP)
K.-H. Marek (GERMANY), V. V. Kiselev
Advantages and Disadvantages of Different Space Images for Mapping
Karsten Jacobsen (GERMANY)
Aerospace Experiment "Caribe-88" Cuba
Francisco A. Rivero Reyes, et al (CUBA)
Remote Sensing from Space—Acquisition and Use of Space Photographic Data, Case Study: Syrian Volcanic Phenomena
Moutaz M. Dalati (SYRIA)

**Erfahrungen zur Standardisierung Photographischer
Weltraumaufnahmen für die Informationsgewinnung
über Waldökosysteme**

Eberhart Pelz (GERMANY), K. Fritsche,
D. Hertel

Hall C-39

TS-44 13:30 - 15:00

COMMISSION V

WORKING GROUP V/1

**MACHINE VISION SYSTEMS FOR INDUSTRIAL
PHOTOGRAMMETRY**

Chair: DR. KAM WONG (USA)

A Video-Based Industrial Measurement System

Peter C. Gustafson (USA), H. B. Handley

**A Real Time Photogrammetry System for Underwater
and Industrial Applications**

John Turner (UNITED KINGDOM), D. Yule, J.
Zanre

**A Knowledge-Based Edge/Object Measurement
Technique**

Sabry F. El-Hakim (CANADA), D. Westmore

**4D-Laser Scanning Followed by Internal Computer
Model Generation**

Ph. Hartl (GERMANY), M. Ioannides,
G. Pritschow, A. Wehr

**Precise Tool Measurement Using Digital
Photogrammetry**

Brigitte Husen (GERMANY), U. Benter

Hall C-40 (SI)

TS-37 13:30 - 15:00

COMMISSION VII

WORKING GROUP VII/1

**APPLICATIONS FROM ACTIVE AND PASSIVE
MICROWAVE SENSING**

Chair: DR. GERARD GUYOT (FRANCE)

**Generation of Spatial Variability Index (SVI) Images:
SLAR Examples(IP)**

Pat S. Chavez, Jr. (USA)

**Geometric Optics Modelling of the Polarized
Back-Scattering from a Vegetation Layer with Rough
Ground Surface Boundary**

Sune R. J. Axelsson (SWEDEN)

**An Approach to Mapping Soil Moisture with
Multifrequency Polarimetric SAR Data**

K. S. Rao (USA), N. Chauhan, W. L. Teng,
J. R. Wang, E. T. Engman

Room 31

BM-VI 13:30 - 15:00

ISPRS COMMISSION VI—BUSINESS MEETING

Chair: DR. JOHN BADEKAS (GREECE)

Hall C-38

BM-III 15:30 - 17:00

ISPRS COMMISSION III—BUSINESS MEETING

Chair: DR. LI DEREN (CHINA)

Hall C-40

SS-07 15:30 - 17:00

COMMISSION VII

**THE INTERNATIONAL GEOSPHERE/BIOSPHERE
PROGRAM**

Chair: DR. I. S. RASOOL (FRANCE)

**Remote Sensing for the Modeling of the Land
Biosphere**

Piers J. Sellers (USA)

IGBP—The Scientific Issues

S. Ishtiaque Rasool (FRANCE)

Space Observations for Studying Ocean Biosphere

James A. Yoder (USA)

Rooms 10-15

PS-6 15:30 - 17:00

COMMISSIONS III, IV, V, VI

ORAL PRESENTATIONS USING POSTERS — SESSION VI

COMMISSION III

**Development of a Language for Expert Cartographic
Systems**

J. Raul Ramirez (USA)

**Suboptimal Procedure for Shifting Image Detection in
Complex Scenes**

Nicolay A. Rosental (RUSSIA),
V. M. Lisitsyn, K. V. Obrosof,
V. A. Stephanov

**Road Extraction in Urban and Suburban Area Using a
Contextual Method**

Tian Lianghu (CHINA)

**A Geocoded Database for Land Classification of
ERS-1 Data**

Karlheinz Knipp (GERMANY), K. Knipp

**Lattices and the Extraction and Organization of
Remotely Sensed Image Information**

Guan Zequn (CHINA)

RG-DW Image Matching Scheme and Its Application

Yan Lue (USA), K. Novak

A 3-D Model Extraction System

R. L. Russell (USA), R. A. McClain, B. Patrick
Landell

**Maximum Likelihood Estimation of Category
Proportions Among Mixels**

Masao Matsumoto (JAPAN), Yasunori
Terayama, Kohei Arai

**Handling Integrity Constraints of Complex Objects in
Spatial Databases**

Hanna H. Kemppainen (FINLAND)

Consideration of the Uncertainty in Uncertain

Knowledge for Knowledge Based Image Classification

S. Huang (CANADA), C. Duguay, A. Zhang

**Two Dimensional Coding of Structure Information in
GIS for Mineral Resource Prediction**

Feng Ji-lu (CHINA), Zhou Qin

- Free Network Theory for Affine Imageries**
Atsushi Okamoto (JAPAN)
- A Least-Squares Approach to Matching Lines with Fourier Descriptors**
Yi-Hsing Tseng (USA), T. Schenk
- Automatic DEM Data Generation and Change Detection by Region Matching**
King-Chang Lo (NETHERLANDS),
N. J. Mulder
- Geographical Database—Structures**
Oswaldo A. Abib (BRAZIL)
- COMMISSION IV*
- LIS/GIS for the Danube Delta**
Nicolae Zegheiu (ROMANIA), M. G. Albota
- Analyse des Rythmes Bioclimatiques des Brousses et des Forêts Sèches du Nordeste Brésilien par NOAA-AVHRR**
Valéry Gond (FRANCE)
- A Photomap of China with NOAA AVHRR Data**
Huang Qian (CHINA), Huang Rentao,
Zhang Xinchang, Lai Rongqing, Zhu Huiming
- The Object-Oriented Height Model and Its Applications**
Joachim K. Höhle (DENMARK)
- Semi-Automatic Derivation of Digital Elevation Models from Stereoscopic 3-Line Scanner Data**
Manfred Lehner (GERMANY), R. S. Gill
- On the Extraction Elevation Information from SPOT Imagery**
Shu Ning (CHINA), Lin Zongjian,
Tao Chuang
- Bundle Adjustment with Model Coordinates**
Karsten Jacobsen (GERMANY)
- Optimum Sampling for Digital Terrain Modelling**
Massoud Charif (NETHERLANDS)
- Intersection and Combination of Digital Elevation Models—Methods and Applications**
Manfred Sigle (GERMANY), O. Hellwich,
A. Köstli
- The Automatic Selection System of Transmission Line Routes Based on DTM**
Mamoru Takahashi (JAPAN), T. Yokokawa
- Different SPOT DEM Applications for Studies in SAR Interferometry**
Frédéric Perlant (FRANCE), D. Massonnet
- Extraction Automatique de MNT à Différentes résolutions**
Laurent Renouard (FRANCE)
- The DTM Generation from Topographic Map**
Sukit Viseshsin (THAILAND)
- A Personalized Geographic Information System**
Ta neu Liao (CHINA-TAIPEI), Mu-Lin Wu
- Soil and Water Conservation Engineering Using a 3-D GIS**
Mu-Lin Wu (CHINA-TAIPEI), J. E. Kuo,
Mu S. Liu, Der-Ren Song
- Digital Map Revision in a Hybrid Geographic Information System**
Eugene Derenyi (CANADA), C. H. Teng
- Landsat TM Data for Documentation and Simulation of Landscape Change in Sweden**
K. Hall Könyves (SWEDEN), A-M. B. Börning
- Digital Orthophotography for Natural Resource Management**
Bryan Logan (USA), G. Tilley
- Development of Knowledge Based Interactive Terrain Analysis System for the Effective Military Operation and Troup Maneuvering**
Young-Kyu Yang (SOUTH KOREA),
Y.-K. Kim, S.-C. Suh, K.-O. Kim, H.-O. Nam,
S.-I. Cho
- Biquadratic Surface-Facets in FAST Vision**
Boris Kaiser (GERMANY)
- Extraction of Landslide Areas Using MSS Data and Thematic Map Database System**
Masaaki Shikada (JAPAN), T. Kusaka,
K. Miyakita
- Interpretation of Multi-Temporal Photography from Space**
Rolf J. Staetter (GERMANY)
- Updating Substrate Maps of Endangered Coral Reef Areas Using SPOT Imagery**
Drew Decker (USA), J. R. Jensen
- Forest Management Information System (FORMIS): An Application of GIS in the Forestry in Turkey**
Gönül Toz (TURKEY), F. Akyüz, H. Tastan
- Deformable Model for Image Segmentation**
Yaonan Zhang (NETHERLANDS)
- Prise en Compte des Différences Photométriques Entre Images Dans les Techniques de Stéréorestitution**
Jacques Petit-Frère (FRANCE)
- Geometric Correction of SPOT Image with Use of DEM**
Oswaldo C. Barbosa (BRAZIL)
- Exchange of Data**
Soren R. Alexandersen (DENMARK)
- Developments & Challenges: A Digital Spatial Database for Zambia's Urban Metropolis—Lusaka**
Raynold Moyo (ZAMBIA), P. Luhanga
- Mapping 500:000 Sq.Kms. at a scale of 1:25,000. The Spanish Challenge**
Rafael Andújar Tomás (SPAIN),
J. M. García-Courel, J. R. Sánchez
- COMMISSION V*
- Photogrammetric Measurements of Deformations**
Stoyantsho Miloshev (BULGARIA)
- Digital Mapping Study for Buddah Statues**
Taisaku Itoh (JAPAN)
- Analytical Photogrammetric Survey of the Leaning Tower of Pisa**
Elena Baj (ITALY), M. Rampolli,
G. Bozzolato
- A Filtering-Based Approach to Eye-in-Hand Robot Vision**
Antonio M. G. Tommaselli (BRAZIL),
C. L. Tozzi

- Research on the Detection of Cutting Tool Wear by Machine Vision**
Mei Anhua (CHINA), Wang Jinhui
- Projective Analytical Transformation into the Taking or Plotting Phase for Digital Close-Range Photogrammetry**
Renzo Carlucci (ITALY)
- A Rigorous Photogrammetric Adjustment Algorithm Based on Co-angularity Condition**
Wang Yianmin (CHINA)
- A Study on the Improvement of Accuracy of Very Close Range Photogrammetry by Using Non-Metric Camera**
Joon-Mook Kang (SOUTH KOREA), Won-Jin Oh, Seung-Hee Han
- An Automated 3D Motion Analysis System for Digitized High Speed Film**
Peter Axelsson (SWEDEN)
- Digitising Table Calibration Using Close Range Photogrammetry**
Kevin Jones (AUSTRALIA), Basil Pathé
- Digital Close-Range Photogrammetry Using Artificial Targets**
Frank A. van den Heuvel (NETHERLANDS), R. S. Le Poole, R. J.G.A. Kroon
- Metrology Norway System—Optimum Accuracy Based on CCD Cameras**
Alf Pettersen (NORWAY), K. Aamdal
- An Application of Digital Orthoimage System to the Colosseo**
Maurizio Barbarella (ITALY), M. Fiani
- Use of Close Range Photogrammetry and Acoustic Systems in Structural and Engineering Geology**
Helmut M. Rüdener (GERMANY), G. Rafat
- Non-Conventional System in Underwater Photogrammetry**
Alessandro Capra (ITALY)
- Graphical Representation of an Armenian Castle with AutoCAD**
Michael Kempa (GERMANY), M. Schlüter
- Image Processing of Conventional X-Ray Images**
Khalil I. Jassam (USA)
- La Phototriangulation Adaptée au Spécifique de la Photogrammétrie Architecturale**
Nicolaie Oprescu (ROMANIA), L. Turdeanu
- Some Recent Typical Examples in Industrial Photogrammetric Application with CAD Techniques**
Taichi Oshima (JAPAN)
- Close Range Photogrammetric Applications Using ASTRI**
Efthimios Stamboulglou (GREECE)
- Photogrammetric Determination of Geometrical Parameters of Suspended Cable Bridges**
Viktor Gregor (CZECHOSLOVAKIA), P. Bartos
- The Use of Close-Range Photogrammetry in the Analysis and Reconstruction of a Large Theatre Destroyed by Fire**
Maurizio Minchilli (ITALY)
- COMMISSION VI*
- Educational Aspects of Photogrammetry and Remote Sensing Digital Image Data Processing in Developing Countries**
Asfaw Fanta (POLAND), R. Kaczynski
- GIS/LIS Education at ITC—Its Standard and Effectiveness**
Arbind M. Tuladhar (NETHERLANDS), F. A. A. F. Amer
- A Model for the Economic Evaluation and Management of Remote Sensing Operations**
Andrew Finegan (AUSTRALIA), N. Rollings, G. Ellis
- Modernizing Egypt's Land Information System**
Mona El Kady (EGYPT), F. L. Hanigan
- A Knowledge Based Approach to the Management of Soil Erosion Information in Developing Countries**
E. Gerard Mtalo (CANADA), E. Derenyi
- An Overview of Remote Sensing and GIS Training, Education and Market Trends in Egypt**
Adel F. Abdel-Kader (EGYPT), A. S. Ayoub
- The Status and Future Role of the Regional Centre for Training in (RECTAS), Ile-Ife, Nigeria. Impact of Donor Countries and Agencies**
Julius A. Ogunlami (NIGERIA)
- Subjects of LIS/GIS into the Instruction of Photogrammetry and Remote Sensing**
Evangelos Patmios (GREECE), M. Lasaridou
- Some Prospects in Photogrammetric Education and Research**
G. H. Ligterink (NETHERLANDS)
- Technical Cooperation Remote Sensing Training Project in Ecological Characterization of Landscapes: A RECTAS Experience**
E. Amamoo-Otchere (NIGERIA), G. Beaufils, I. Cuilhe, J. P. Delsol
- New Trends in Surveying Education in Zambia**
Aleksandra Bujakiewicz (ZAMBIA)
- A Series of Atlases on Methods of Space Images Interpretation**
Yu. F. Knizhnikov (RUSSIA), V. I. Kravtsova
- Background and Training of Geographical Information Users: A Case Study**
Ute J. Dymon (USA)
- High Level Education on Image Processing, Remote Sensing and GIS: Case FC-IA/UNAM, Mexico**
Pilar Ruiz-Azuara (MEXICO)
- Curriculum Development for Developing Countries**
Olubodun O. Ayeni (NIGERIA)

TUESDAY
MARDI
DEINSTAG

11

AUGUST
AOÛT
AUGUST

Hall C-40
IU-GI1 08:30 - 10:00



*INTERNATIONAL UNION FOR SURVEYS AND
MAPPING (IUSM) WG ON LAND INFORMATION
SYSTEMS/GEOGRAPHIC INFORMATION SYSTEMS*
"GIS, REMOTE SENSING AND CARTOGRAPHIC
DATA INTEGRATION: THEORETICAL AND
PRACTICAL ISSUES"—SESSION I
Chair: DR. JEAN-CLAUDE MÜLLER
(NETHERLANDS)
**Land-Use Mapping from Landsat TM Images in GIS
Environment**

Marek Baranowski (POLAND)

Data Integration and Spatial Change

A. Coote (UNITED KINGDOM),

J. E. Farrow, P. E. Haywood, D. W. Murphy

**DIM, DLM and DKM Data Integration—The Case of
"ATKIS"**

Heinz Brüggemann (GERMANY)

Image Maps

Bertrand Galtier (FRANCE), A. Baudoin

**A Three Dimensional GIS, Used for Model Based
Image Analysis and Cartographic Visualisation**

Nanno J. Mulder (NETHERLANDS)

Hall C-40
IU-GI3 10:30 - 12:00



IUSM WG ON LIS/GIS
"GIS AND LIS IN A GLOBAL ENVIRONMENT"
SESSION III

Chair: Dr. Pamela SALLAWAY (CANADA)

Availability of Global Digital Topographic Data

Susan K. Jensen (USA)

**RS Data and Geographic Information Systems for the
Characterization of Areas of Soil Erosion**

Mario Valério-Filho (BRAZIL),

A. G. de Castro

WEDNESDAY
MERCREDI
MITTWOCH

12

AUGUST
AOÛT
AUGUST

Hall C-38
TS-48 08:30 - 10:00

*COMMISSIONS III, VII
WORKING GROUPS III/3, VII/2*
**SIMULTANEOUS INTERPRETATION OF
DIFFERENT DIGITAL RECORDINGS**

Chair: DR. BERND-SIEGFRIED SCHULZ
(GERMANY)

**Simultaneous Interpretation of Different Digital
Recordings (IP)**

Wolfgang Förstner (GERMANY),

T. Löcherbach

**Removal of Topographic Effects from Satellite Images
Without the Use of a DEM**

**Towards a North American Continental AVHRR
Dataset—An International Effort**

Marc D'Iorio (CANADA),

J. C. Eienshink, C. R. Morasse

Global Soil Data Bases for Environmental Modeling

Norman B. Bliss (USA)

**Aerial Photographs and Satellite Images as an
Archives (Information Power in Horizontal and
Vertical Sense)**

Luc Daels (BELGIUM)

Hall C-39
IU-GI2 10:30 - 12:00



*INTERNATIONAL UNION FOR SURVEYS AND
MAPPING WORKING GROUP ON LIS/GIS*
"GIS, REMOTE SENSING AND CARTOGRAPHIC
DATA INTEGRATION: THEORETICAL AND
PRACTICAL ISSUES"—SESSION II

Chair: DR. JEAN-CLAUDE MÜLLER
(NETHERLANDS)

**The Development of Multisource Databases for GIS
Analysis**

R. Eric Anderson (USA), K. E. Anderson

Map Based Data Acquisition for GIS

Dietmar Grünreich (GERMANY)

**Use of SPOT Images within IGN France, Image Maps
Derived from Geographic Data Bases**

Anne Ruas (FRANCE)

**GIS, Remote Sensing and Cartographic Data
Integration: Theoretical and Practical Issues**

Manfred Ehlers (GERMANY)

**Integrating Classified Remote Sensing Data and Map
Data in a Digital Landscape Model**

Alfred Mehlbreuer (NETHERLANDS)

Pat S. Chavez, Jr. (USA), J. A. Anderson,
S. C. Sides

**The Non-Stationary Poisson Process : A Fully
Non-Parametric Model for a New Approach of
Supervised Classification in Remote Sensing**

Jean-Paul Rasson (BELGIUM), V. Granville, F.
Orban-Ferauge

**Multitemporal Remote Sensing Data Classification
Using Neural Network**

Guido Pasquariello (ITALY), P. Blonda

**A New Method for the Integration of Landsat TM and
SPOT Panchromatic Data**

Claudio Conese (ITALY), F. Maselli,
T. de Filippis

Hall C-39

TS-47 08:30 - 10:00

COMMISSIONS IV, VII

WORKING GROUPS IV/2, VII/2

EXPERIENCE WITH DIGITAL ELEVATION MODELS

Chair: DR. LUIZ A. V. DIAS (BRAZIL)

Experience with Automatic DEM Generation (IP)

Fritz Ackermann (GERMANY), W. Schneider

A Consideration of Attitude Jitter on Digital Elevation Model (DEM) Estimation with EOS-AM1/ASTER

Kohei Arai (JAPAN), Y. Terayama,

H. Watanabe, T. Tagawa, J. Komai

Map Production and Updating Using SPOT Data and SPOT Data Derived Products

Philippe Munier (FRANCE), J.-C. Rivereau, S.

Le Blanc

Produits Cartographiques à Partir d'Images Spatiales: Quelles Perspectives pour L'Afrique?

A. Soumare (NIGERIA), L. Cuilhe

Recursive Surface Reconstruction Using SPOT Stereo Images Liang-

Chien Chen (CHINA-TAIPEI), J.-Y. Rau, L.-H.

Lee

Hall C-40 (SI)

TS-46 08:30 - 10:00

COMMISSION V

WORKING GROUP V/6

BIOLOGICAL SURFACE MEASUREMENTS

Chair: DR. THOMAS LEEMANN (SWITZERLAND)

Precise Biological Surface Measurements in Some Medical and Dental Studies

Laurence P. Adams (SOUTH AFRICA),

A. Tregidga

A Computer Vision System for Mapping Human Bodies

Kam W. Wong (USA), Ying Ke, M. Slaughter,

R. Gretebeck

An Approach to Digital Photogrammetry for Body Surface Measurement

Harvey L. Mitchell (AUSTRALIA)

Photogrammetric Measurement of the Human Back Shape and Its Relation to the Spine

Helga Gäbel (GERMANY), W.

Wester-Ebbinghaus, D. Woytowicz,

Th. Hallbauer, G. Schumpe

Stereophotogrammetry: A Possible Employment in the Dental Field

V. Achilli (SWITZERLAND), L. Baratin,

G. Bonetti, I. Marini

The Impact of GPS on Surveying and Mapping—Introduction, Summary, Review & Prospects

Günter Seeber (GERMANY), Larry Hothem

Getting GPS Down to Earth and Off the Ground

Chuck Counselman (USA)

The Impact of "the International GPS Geodynamics Service" (IGS) on the Surveying and Mapping Community

Gerhard Beutler (SWITZERLAND)

Present and Future Impacts of Satellite Survey Techniques in the FIG Community

John Oswald (USA), Cannon

The Role of GPS Technology in Cartographic Products

Bertrand Garlier (FRANCE), M. Bernard

Hall C-38

TS-49 10:30 - 12:00

COMMISSIONS II, III, V

WORKING GROUPS II/5, III/2, III/4, V/1, IC II/III

TOMORROW'S DIGITAL SYSTEMS

Chair: DR. IAN DOWMAN (UNITED KINGDOM)

Suitability of the Sharp JX-600 Desktop Scanner for the Digitization of Aerial Color Photographs

Tapani T. Sarjakoski (FINLAND)

A Line of High Performance Digital Photogrammetric Workstations - The Synergy of General Dynamics, Helava Associates, and Leica

S. B. Miller (SWITZERLAND), J. E. Thiede,

A. S. Walker

Nonlinear Array Algebra in Digital Photogrammetry

Urho A. Rauhala (USA)

The Programmable Optical 3D Measuring System POM—Applications and Performance

Raimund Loser (SWITZERLAND),

Thomas Luhmann

Hall C-39

TS-50 10:30 - 12:00

COMMISSION IV

WORKING GROUP IV/6

PLANETARY MAPPING

Chair: DR. SHERMAN S. C. WU (USA)

Extraterrestrial Mapping and the Space Exploration Initiative(IP)

Michael B. Duke (USA)

Cameras for Extraterrestrial Mapping(IP)

Frederick J. Doyle (USA), M. Davies,

M. Milan, G. Neukum

Global Topographic Mapping System of Mars(IP)

J.-Peter Muller (UNITED KINGDOM),

A. C. Cook, T. Day, J. Illiffe

Magellan SAR Processor Design and Performance

John C. Curlander (USA)

Stereo-Mapping of Planet Venus from Magellan SAR Images: A Status Report

Franz W. Leberl (USA), K. E. Maurice

Automated Digital Topographic Mapping Techniques for Mars

Timothy Day (UNITED KINGDOM),

J.-P. Muller, A. C. Cook

Room 31

IU-GP1 08:30 - 10:00

INTERNATIONAL UNION FOR SURVEYS AND MAPPING (IUSM) WORKING GROUP ON GLOBAL POSITIONING SYSTEM

"THE IMPACT OF GPS ON SURVEYING AND MAPPING" SESSION I—GENERAL ASPECTS

Chair: DR. GÜNTER SEEGER (GERMANY)



Hall C-40 (SI)

TS-51 10:30 - 12:00

COMMISSION VII

WORKING GROUP VII/3

RENEWABLE RESOURCE INVENTORY AND MONITORING WITH RS/GIS—SESSION II

Chair: DR. RANDALL THOMAS (DENMARK)

Monitoring Renewable Natural Resources—A Joint Proposal of Eastern-Central European Countries (IP)

Gabor Remetey-Fülöpp (HUNGARY),

P. Winkler

Remote Sensing for Crop Inventory of Egypt's Old Agricultural Lands

Mona El Kady (EGYPT), C. B. Mack

Remote Sensing for Forest Management—The Swedish ISY Contribution Projects

Henrik Österlund (SWEDEN), E. Rosenqvist, A. Engberg

Multi-Source National Forest Inventory of Finland

Erkki O. Tomppo (FINLAND), Matti Katila

Mapping Rural Land Use in Selected Subsistence Farming Areas of South Africa, Using Remote Sensing Products

Edward M. Makhanya (SOUTH AFRICA),

M. Townsend

Room 31

IU-GP2 10:30 - 12:00



INTERNATIONAL UNION FOR SURVEYS AND MAPPING (IUSM) WORKING GROUP ON GLOBAL POSITIONING SYSTEM

"THE IMPACT OF GPS ON SURVEYING AND MAPPING" SESSION II - PHOTOGRAMMETRY AND REMOTE SENSING

Chair: LARRY HOTHEM (USA)

GPS Application in Photogrammetry

Fritz Ackermann (GERMANY)

Aspects of GPS Use for Aircraft Positioning

Kurt Kubik (AUSTRALIA)

An Integrated GPS Flight Management System

Peter M. Connors (USA)

Recent Experiences in Combined Block Adjustment with Kinematic GPS Data

Karsten Jacobsen (GERMANY), K. Li

Reduction of Systematic Errors in GPS-Based Photogrammetry by Fast Ambiguity Resolution Techniques

Holger Schade (GERMANY)

Exhibition Hall

ES-6 12:00 - 13:30

EXHIBITORS' SHOWCASE - SESSION VI

Chair: DR. Thomas Luhmann (switzerland)

Metrology Norway System - An On-Line Industrial Photogrammetry System

Alf Pettersen (NORWAY)

The UMK 1000—A New Camera System for Analog and Digital Photogrammetry

Holger Poitz (GERMANY), R.-P. Mark,

T. Kindas

Software Development for Close-Range Applications Under Consideration of Present Standards

Günter Pomaska (GERMANY)

Optical 3-D Measurement Systems for Quality Control in Industry

Carl-Thomas Schneider (GERMANY),

K. Sinnreich

Rolleiflex 6008 Metric - A New Camera for Industrial Photogrammetry

Günter Suilmann (GERMANY)

Hall C-40 (SI)

SS-08 13:30 - 15:00

COMMISSION VI

INTERNATIONAL TECHNICAL COOPERATION: HOW TO PROMOTE REMOTE SENSING IN DEVELOPING COUNTRIES

Chair: DR. SHUNJI MURAI (JAPAN)

How to Promote Remote Sensing—The Asian Experience

Bruce C. Forster (AUSTRALIA)

Regional Activities on Remote Sensing in Asia

Shunji Murai (JAPAN)

How to Promote Remote Sensing—Indian Experience

Bulusu L. Deekshatulu (INDIA)

Activities of National Research Council of Thailand

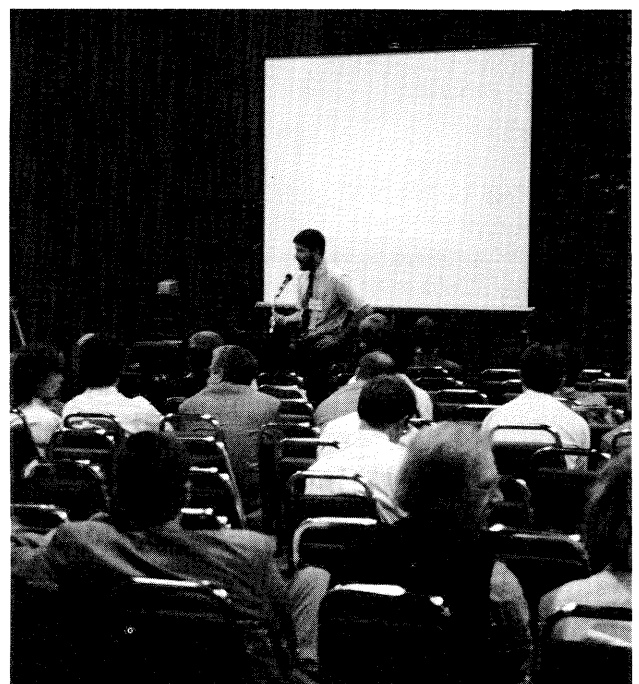
Suvit Vibulsresth (THAILAND)

Activities of ITC in Developing Countries

John van Genderen (NETHERLANDS)

Les Conditions de Succes de la Cooperation Technique et du Tranfert de Technologie

A. Fontanel (FRANCE), C. Paresi



Rooms 10-15 & 30
PS-7 13:30 - 15:00

COMMISSIONS I, II, III, IV, VII
ORAL PRESENTATIONS USING POSTERS - SESSION VII

COMMISSION I

The Study of Applying High-Precision Real Time GPS Positioning to Aerotriangulation

Ruey-Gang Chang (CHINA-TAIPEI),
H.-C. Chiang

Simulation Study for Integrating GPS-Control and Infrared Photography in Aerotriangulation for Shoreline Mapping

Roop C. Malhotra (USA)

Simulation of CCD Recording for Measured Lens Line Spread Functions

Hartmut Ziemann (SWEDEN)

GPS and Photogrammetry: An Italian Experiment

B. Astori (ITALY), L. Pinto

Relationship Between Format and Resolution of Metric Camera and Mapping Accuracy

Chang Ninghua (CHINA)

Block Adjustment Including GPS Observations of the Photo Stations

Helen Burman (SWEDEN)

Cosmos for Earth

R. A. Afanasyev (RUSSIA), A. V. Blagov,
O. N. Meyer, E. A. Pekarev

The Study of Multispectral Images from Existing Primary Color Filters

Hsing-Wei Lee (CHINA-TAIPEI),
H.-M. Chao

The Development of Advanced Visible and Near Infrared Radiometer

N. Iwasaki (JAPAN), Y. Tange, Y. Miyachi,
K. Inoue, T. Kadowaki H. Tanaka,
Hidekazu Michioka, Hiroshi Akao

Experiences and Results of the GPS Aerial Triangulation Test

Urgell I. Colomina Fosch (SPAIN),
M. Hernández-Pajares, J. Talaya, A. Térmens

Compression of Digital Color Images by the JPEG

Jussi T. Lammi (FINLAND), T. Sarjakoski

The Spatial Data Transfer Standard : Status and Plans for Implementation

Kathryn Neff (USA)

A Standard Product Exchange Format for the Defense Mapping Agency's Vector Products

David M. Danko (USA),

Roberta E. Lenczowski

Orientation Theory for Satellite CCD Line-Scanner Imageries of Hilly Terrains

Atsushi Okamoto (JAPAN), S.-I. Akamatu,

H. Hasegawa

Earth Observation Concept Involving Portable Data Receiving and Processing Equipments, WOM-8 System

Décio C. Ceballos (BRAZIL)

Stereo Radargrammetry with Digital Side-Looking Radar Images

Jo Wu (CHINA-TAIPEI), D. C. Lin,

D. K. Chen

Analytical Stereorestitution Instrument (ASTRI)

Efthimios Stambouloglou (GREECE)

GEOCOMP, A NOAA AVHRR Data Geocoding and Compositing System

Brian Robertson (CANADA), A. Erickson,
M. D'Iorio, J. Friedel B. Guindon, P. Teillet,
R. Brown, A. Sanz, T. Fisher, J. Cihlar

Digital Stereoplotting Using the PC-SVGA Monitor

József Jachimski (POLAND), J. Zielinski

From Softcopy Light Tables to Digital Photogrammetric Systems

Franz W. Leberl (USA)

A Compilers Observation Concerning the Implementation of IDPF

Ted M. Doyle (USA)

COMMISSION II

LANDSAT TM Image Refinement Using Straight Feature as Control

Maria I. C. de Freitas Viadana (BRAZIL),
J. B. Lugnani

An Architecture for Efficient Time Domain SAR Processing

Giorgio Franceschetti (ITALY), A. Mazzeo, N. Mazzocca, V. Pascazio G. Schirinzi

A Technique for Compression of Multispectral Remotely Sensed Data Using Vector Quantization

S. Jaggi (USA)

New Hardware Features of the Leica SD Line Analytical Workstations

Alain Chapuis (SWITZERLAND),
U. Almroth

COMMISSION III

Object Classifiers for Forest Classification

Gintautas Palubinskas (LITHUANIA)

Integration of DTM Data Structures into GIS Data Models

D. Fritsch (GERMANY), A. Pfannenstern

Quality Control of Combined Adjustment of Photogrammetric and GPS Data

Theodore Bouloucos (NETHERLANDS),
M. Radwan, A. A. El-Sharkawey

Precision of Image Matching

John C. Trinder (AUSTRALIA), K. Becek,
B. E. Donnelly

A Theoretical Framework for Handling Spatial Data with Positional Uncertainty in a GIS

Ryosuke Shibasaki (JAPAN)

Computer Assisted Problem Solving in Image Analysis

Fang Luo (NETHERLANDS), N. J. Mulder

Sub-Pixel Analysis of Optical Satellite Images

Werner Schneider (AUSTRIA)

Interpreting Single Images of Polyhedra

Carola Braun (GERMANY)

Man-Made Object Detection of TM Data Integrating Spatial and Spectral Information

Joji Iisaka (CANADA), W. Russell

Adaptive Regularization—A New Method for Stabilization of Surface Reconstruction from Images

Bernhard P. Wrobel (GERMANY), B. Kaiser, J. Hausladen

Segmentation of Edges in 3-D Object Space

Amnon Krupnik (USA), T. Schenk

Optimization of Training Data Required for Neuro-Classification

Xin Zhuang (USA), D. F. Lozano-Garcia, B. A. Engel, R. N. Fernández, C. J. Johannsen

Neural Network Strategies for Machine Labeling of Satellite Data

Richard K. Kiang (USA)

A New Stereo Matching Approach in Image/Object Dual Spaces

Yaonan Zhang (NETHERLANDS)

Multi-Templet-Matching for the Automation of Photogrammetric Measurements

Otto Köbl (SWITZERLAND), U. Bach, D. Gasiör, K. de Laporte

Application of Significance Tests for Land-Cover/Land-Use Change Detection

Chi-Farn Chen (CHINA-TAIPEI)

COMMISSION IV

Applications of GIS Technology in the Telecommunications Industry

Robert F. Austin (USA)

Automatic Elevation Tagging as Part of Hypsographic Data Generation From Scanning Data

J. Raul Ramirez (USA), E. Fernandez-Falcon, R. Schmidley

Cartographic Database Edgematching and Digital Mapping

Wu Hehai (CHINA)

Construction of a Global Environment Database from Satellite Remote Sensing Data—Estimation of Air Temperature on Kyushu Island

Yojiro Utsunomiya (JAPAN)

Land Use Statistics Using Automatic Scan Digitizing Method

Wen Shimin (CHINA)

The Integration of Remote Sensed Images and DTM Data

Weihsin Ho (CHINA-TAIPEI), Liang H. Lee

Linear Feature Based Matching of Stereo SPOT Satellite Images

Nigel Butler (AUSTRALIA)

An Expert System for Topographic Image Mapping

Alfred Mehlbreuer (NETHERLANDS)

Advancement in Matching of SPOT Images by Integration of Sensor Geometry and Treatment of Radiometric Differences

Emmanuel P. Baltsavias (SWITZERLAND), D. Stallmann

Orthoimage Generation in a GIS Environment

Tian-Yuan Shih (CANADA), E. Derenyi

Analytical Processing of Photogrammetric Data for Photobathymetry

I. T. Antipov (CUBA), R. A. Soler

Comparison Between Akima and Beta-Spline Interpolators for Digital Elevation Models

Luiz A. V. Dias (BRAZIL), C. E. Nery

A Study for the Most Suitable Sorting Method in Digital Terrain Model

O. Östan (TURKEY), D. Z. Seker, E. Tari

Accuracy Evaluation by GCP Acquisition Method in Bundle Adjustment for SPOT Imagery

Yeu Bock-Mo (SOUTH KOREA), K. Hyun, C. Gi-Sung, Y. Jae-Hong

3-D Visualization of Digital Geographic Data

Peter Muessig (GERMANY)

The Renewal of Spatial Data in Geographic Information System

Chen Zhaoyu (CHINA)

Spezielle Fernerkundungstechnik für Raumbezogene Forschungsprojekte

M. Gruber (AUSTRIA), R. Kostka

Pan Amazonia Deforested Zones in French Guiana Using SPOT Data and a Geographic Information System

Denis Girou (FRENCH GUIANA), J. Beauchene

Cartographie Automatique des Dunes Sahariennes D'Après les Images SPOT

Y. Callot (FRANCE), C. Mering, R. Escadafal, A. Simonin

Mapping with SPOT Satellite Imagery: The Nigerian Experience

Olusola Atilola (NIGERIA)

COMMISSION VII

Erosion Maps Using GIS

Javier S. Bejarano (COSTA RICA)

On the Feasibility of Dynamic Monitoring of Temperature of Vegetative Canopy by NOAA-AVHRR Data

Xu Xiru (CHINA), Niu Zheng

The Methodological Research on Eco-Environment Change Monitoring by Using Remote Sensing Technology

Wang Changyao (CHINA)

Application of the Image Interpretation from Airphotos Taken in the Different Periods for the Debris Flow Research

Zhang Renlin (CHINA)

- Tectonic Study Around Indore (Central India) with Emphasis on Seismology Using Visual & Digital Image Processing Techniques**
Siddharth K. Soni (INDIA)
- Studies on Stability Evaluation with Remote Sensing and Geophysical Data in Hainan Island China**
Wang Pin Qing (CHINA), Meng Fan Rang
- Large-Scale Rock-Mass Movement at Longshou Mountain, Gansu Province China**
Wang Yuming (CHINA)
- Multistage and Multisensor Approach for Woody Biomass Evaluation in Dry Tropical Region**
Defourny Pierre (THAILAND)
- Applications of Landsat TM Data for Mapping of Red Tide Distribution in Bouhai Bay**
Jilong Li (CHINA), M. Jin
- Systematic Technology for Remote Sensing and Information practising in the Methodic Research on Planning Business of Modern Urban, Rural**
Liu Bin-yi (CHINA), Li Wei-qian
- Comparison of Spatial Variability in Visible and Near-Infrared Spectral Images**
Pat S. Chavez, Jr. (USA)
- The Use of the Remote Sensing Technique in the Geographical Problems of Peru**
Mario Gonzales (PERU), S. Iglesias
- Development of an Expert System Method for Integration of Geographic Context in Automatic Image Analysis**
Graeme Wilkinson (ITALY), C. Kontoes, D. Rokos, J. Megier
- Rainfall Determination by Using the AVHRR-NOAA Satellite Cloud Coverage**
Osama M. Moussa (EGYPT)
- Use of Remotely Sensed and Terrestrial Images in Search and Classification of Agricultural Soil**
Massoud S. Wheda (LIBYA), J. A. Glidan, I. S. Elaradi
- Application of Space Remote Sensing Images for the Study of the Vicissitudes of the Disaster Environment on the Silk Road**
Liu Hongxue (CHINA)
- IRS-1A and Landsat Data in Mapping Deccan Trap Flows Around Pune, India: Implications on Hydrogeological Modelling**
Vivek S. Kale (INDIA), H. C. Kulkarni
- Characterisation of Inland Valleys of the West African Guinea Savannah with Satellite Images: Case of Tamale Zone in N. Ghana**
E. Amamoo-Otchere (NIGERIA)
- Remote Sensing of Visual Resources**
Ennio Giusti (ITALY)
- Laser Remote Sensing of Forest and Crops in Genetic-Rich Tropical Areas**
Edgardo Gerck (USA), James J. Hurtak
- Improvement of Classification Results of Multispectral Remote Sensing Data Using Additional Topographic Data**
Thomas Voegtle (GERMANY), S. Schoedl
- A Study on the Relationships Between Human Activities and Biosphere Using Satellite Data**
Shintaro Goto (JAPAN), S. Murai, Y. Honda, K. Asakura
- A Measurement Program for the Validation of Forest Canopy Models**
R. P. Gauthier (CANADA), P. M. Teillet, K. Staenz, R. Landry G. Fedosejevs, R. Fournier, C. Morasse
- Comparison of Texture Analysis Techniques in Both Frequency and Spatial Domains for Cloud Feature Extraction**
Nahid Khazenie (USA), K. Richardson
- Comparison of Analog and Digital Landsat MSS Data in a Forest Classification of Peten, Guatemala Dario Rodriguez-Bejarano (USA), C. S. Veiman, C. P. Lemmerhofer**
- Enhanced Radiometric Functions for Homogeneous Materials**
Khalil I. Jassamm (USA)
- Discrimination of Peatlands and Mineral Soil Lands Using Multisource Remote Sensing Data**
Kari Lahti (FINLAND), T. Häme
- Developing Tasseled Cap Transformation for SPOT HRV Reflectance Data**
Chang Yuan Ji (UNITED KINGDOM)
- Atmospheric Correction of Landsat TM Data Over Mountainous Terrain**
Gilbert Kattenborn (GERMANY)
- Characterization of Various Surface Types by their Forward and Back—Scatter at Visible and Infrared Wavelengths**
D. Deering (USA), J. Otterman, J. Susskind, T. Brakke, J. Irons K. Itten
- Hall C-38
TS-52 15:30 - 17:00
COMMISSION V
WORKING GROUP V/6
HUMAN MOTION AND POSTURE ANALYSIS
Chair: DR. PETER NIEDERER (SWITZERLAND)
Photogrammetry in Medical Gait Analysis (IP)
Jürg U. Baumann (SWITZERLAND), A. R. Schaer, G. Meier
- Imaging Parkinsonian Movements With Neuronal Networks**
Carlo Albani (SWITZERLAND), A. Martinoli, A. Turi, C. Scharer
- Sports Dynamics of Carl Lewis Through 100m Race Using Video Imagery**
Hirofumi Chikatsu (JAPAN), M. Turuoka, S. Murai
- A Real-Time Phtogrammetric System for Patient Positioning in Proton Therapy**
G. van der Vlugt (SOUTH AFRICA), H. Rüter
- Moving Humans Recognition Using Spatio-Temporal Models**
Winfried Kinzel (GERMANY), E. D. Dickmanns

Hall C-39

TS-53 15:30 - 17:00

COMMISSION VII

WORKING GROUP VII/6

MONITORING CHANGE IN URBAN AREAS WITH GIS/IMAGE ANALYSIS

Chair: DR. BRUCE FORSTER (AUSTRALIA)

Urban Spatial Attributes from Satellite Remote Sensing Using End Member Analysis and Variability Measures (IP)

Bruce C. Forster (AUSTRALIA), Chen Xing
A GIS Approach to Population Estimation in a Complex Urban Environment Using SPOT Multispectral Images

Chor P. Lo (USA)

Exploring the Discriminating Power of Texture in Urban Image Analysis

Christopher J. Webster (UNITED KINGDOM),
I. J. Bracken

Application of Integrated GIS/Remote Sensing in Management of Tourism Development in Egypt

Samir El-Sadek (EGYPT)

Analysis of Vegetation Indices in Urban Areas from Landsat TM and HRV-SPOT Orbital Data

Ana L. R. Carrara (CANADA), C. Foresti,
J. R. dos Santos

Hall C-40 (SI)

TS-54 15:30 - 17:00

COMMISSION I

WORKING GROUP I/4

SENSOR ORIENTATION AND NAVIGATION

Chair: DR. DENIZAR BLITZKOW (BRAZIL)

Airborne Global Positional System Control for the National Aerial Photography Program(IP)

Larry D. Hothem (USA), E. J. Cyran
Ergebnisse über drei GPS-gestützte Testflüge und Vergleiche—Testflight, Results

Keren Li (GERMANY)

Experience with GPS-Supported Aerial Triangulation

Peter Friess (GERMANY), T. Heuchel

Handling of Disturbed Kinematic GPS-Data in Block Adjustment

Karsten Jacobsen (GERMANY)

A Practical Test of a Photogrammetric Project Controlled with Airborne GPS

Karen Schuckman (USA), S. Curry, M. Zhao,
G. Salsig



THURSDAY
JEUDI
DONNERSTAG

13

AUGUST
AOÛT
AUGUST

Hall C-38
TS-55 08:30 - 10:00

COMMISSION V
WORKING GROUP V/2

**CALIBRATION AND EVALUATION OF
CLOSE-RANGE SENSORS - SESSION II**

Chair: DR. W. WESTER-EBBINGHAUS (GERMANY)
**Criteria of Selecting Opto-Electronic Components of
Systems Intended for Contactless and True to
Geometry Measurement (IP)**

Ralf Goldschmidt (GERMANY),
W. Borchardt, U. Richter

**The Accuracy of the Reseau-Scanning Camera (RSC)
in Comparison with Theodolite and Photogrammetric
Systems**

Wolfgang Riechmann (GERMANY)

**Geometric Calibration of Zoom Lenses for Computer
Vision Metrology**

Anthony G. Wiley (USA), K. W. Wong

**Recent Developments in Camera Calibration for
Close-Range Applications**

John G. Fryer (AUSTRALIA)

Hall C-39
TS-56 08:30 - 10:00

COMMISSIONS III, VII
WORKING GROUPS III/4, VII/7

**KNOWLEDGE ENGINEERING, APPLICATIONS,
AND SYSTEMS**

Chair: DR. TAPANI SARJAKOSKI (FINLAND)
**Knowledge Engineering in R.S. and Knowledge Based
Systems in GIS**

Nanno J. Mulder (NETHERLANDS),
K. Schutte

**Recognition of Road and River Patterns by Relational
Matching**

Norbert Haala (GERMANY), G. Vosselman

**A Comparison of Four Neural Network Architectures
as Applied to the Problem of Classifying Pixels in a
Landsat Image**

Timothy E. Zickus (USA)

Knowledge Based Image Classification in a GIS

Eugene Derenyi (CANADA), D. Fraser,
R. Pollock, M. Halim

**Fuzzy Classification of Satellite Imagery by Neural
Networks**

Eihan Shimizu (JAPAN)

Hall C-40 (SI)
SS-09 08:30 - 10:00

COMMISSION I

**THE ROLE OF TROPICAL FORESTS AND
OCEANS IN GLOBAL CHANGE**

Chair: MARCIO N. BARBOSA (BRAZIL)

**GCM Experiments on Deforestation (Amazon) and
Afforestation (Sahara/Sahel) and Implications to
Regional and Global Climate**

J. Shukla (USA)

**The Role of Tropical Forests on Climate with
Emphasis on the Amazonia Case**

Carlos A. Nobre (BRAZIL)

**The Role of the Oceans on Climate and Climate
Change**

Edward Sarachik (USA)

The U.S. Climate and Global Change Program

J. Michael Hall (USA)

Rooms 20-22
UN-3 08:30 - 12:00

*ISPRS AND UNITED NATIONS, SCIENCE,
TECHNOLOGY, ENERGY, ENVIRONMENT AND
NATURAL RESOURCES DIVISION*

**UN INTERREGIONAL SEMINAR FOR
DEVELOPING COUNTRIES—SESSION III
INTEGRATION AND MANAGEMENT OF
TECHNOLOGY IN DEVELOPING COUNTRIES**

Chair: DR. ENG. HUSSEIN IBRAHIM (SYRIA)

Luis Socolovsky (ARGENTINA)

Richard Ashcroft (USA)



Hall C-38
TS-58 10:30 - 12:00

COMMISSION VII

**REMOTE SENSING DATA REQUIREMENTS IN
THE 1990'S**

Chair: FRANK HEGYI (CANADA)

**Four Decades of Progress in Photographic
Interpretation Since the Founding of Commission VII
(IP)**

Robert N. Colwell (USA)

**Spatial Decision Making for Image Processing: A
Preliminary Analysis**

Thomas L. Millette (USA)

**Evidence Based Feature Extraction in Remote Sensing
Using Geographical Knowledge**

Reinhold Burger (GERMANY)

**A Hybrid Formalism for Representation and
Interpretation of Image Knowledge**

Francisco A. T. F. da Silva (BRAZIL)

**Frame Representation of Ecological Models in
Forestry Planning**

Tao Chen (JAPAN), Jian K. Wu, M. Takagi

Hall C-39
TS-59 10:30 - 12:00

COMMISSION I

WORKING GROUP I/3

**SENSORS AND PLATFORMS FOR REMOTE DATA
ACQUISITION—SESSION II**

Chair: DR. JOHN CURLANDER (USA)

Recent Developments in the Use of Synthetic Aperture Radar for Remote Sensing (IP)

John Curlander (USA)

X-SAR, A Spaceborne Synthetic Aperture Radar Instrument

E. Velten (GERMANY), P. Ammendola,
M. Canevari, M. Wahl

Optoelectronic Imaging Spectrometers: German Concepts for Remote Sensing

Eberhard Bach (GERMANY),
H. van der Piepen, A. Schmitz-Pfeiffer,
G. Zimmermann

Radiometric Calibration of SAR Image Data

Anthony Freeman (USA)

Calibration Results for the Field Portable Thermal Infrared Spectrometer (THIRSPEC)

Benoit Rivard (CANADA), P. Thomas,
D. Pollex, A. Hollinger J. Miller, R. Dick

Hall C-40 (SI)

TS-60 10:30 - 12:00

COMMISSION II

WORKING GROUP II/2

SYSTEMS FOR IMAGE INTERPRETATION, ANALYSIS AND DISPLAY OF RS DATA

Chair: DR. MANFRED EHLERS (GERMANY)

A New Evolving Paradigm in the Systems Aspects for Processing of Remotely Sensed Data (IP)

Manfred Ehlers (GERMANY), D. R. Steiner

Benchmarking Image processing Systems

Joachim Wiesel (GERMANY)

Triangulation of SPOT Data: Results from the OEEPE Test

Ian J. Dowman (UNITED KINGDOM)

An Automated System for Sub-Pixel Correction and Geocoding of Multi-Spectral and Multi-Look Aerial Imagery

David Allison (UNITED KINGDOM),
J.-P. Muller

The Evolution of Operational Satellite Image Geocoding in Canada

B. Guindon (CANADA), T. A. Fisher,
F. E. Guertin

Image Processing in a Network Environment

R. Müller (GERMANY), P. Reinartz,
G. Kritikos, M. Schroeder

Exhibition Hall

ES-7 12:00 - 13:30

EXHIBITORS' SHOWCASE - SESSION VII

Chair: DR. KARL-HEINZ MAREK (GERMANY)

Carl Zeiss' Digital System for Orthophoto and DTM Generation

Werner Mayr (GERMANY)

Computer-Assisted Cartographic Generalization and Its Practical Application with PHOCUS

Philipp Willkomm (GERMANY)

The Camera Lenses for HS2323 Aerial Camera of JOIF

Li Can Cheng (CHINA)

Application of FAST Vision for Digital Terrain Model Generation

B. Kaiser (GERMANY), J. Hausladen,

B. P. Wrobel, J. R. Tsay

Hall C-38

TS-63 13:30 - 15:00

COMMISSION V

WORKING GROUP V/3

ALGORITHMIC ASPECTS IN CLOSE-RANGE IMAGE ANALYSIS

Chair: DR. DIETER FRITSCH (GERMANY)

Real-Time Photogrammetric Systems—Who Are the Developers? (IP)

Peter Axelsson (SWEDEN)

The Automatic Recognition, Location and Labelling of Targets in Digital Photogrammetric Engineering Measurement

J. Chen (UNITED KINGDOM), T. A. Clarke

High Accuracy Dimensional Measurement Using Non-Targeted Object Features

Armin Gruen (SWITZERLAND),
D. Stallmann

Stereoscopic Vision using Line Scan Sensors

Simon X. Godber (UNITED KINGDOM),
M. Robison, P. Evans

Hall C-39

TS-62 13:30 - 15:00

COMMISSION VII

WORKING GROUP VII/5

ATMOSPHERIC REMOTE SENSING

Chair: DR. KLAUS A. ULBRICHT (GERMANY)

Multisensor and Multitemporal Satellite Data for Runoff Forecast in High Alpine Environment (IP)

A. N. Swamy (ITALY), P. A. Brivio, E. Zilioli

Cloud Classification on the Basis of NOAA-APT Data Using a Fuzzy Logic Approach

Uta Heinzmann (SWITZERLAND)

Estimating Evapotranspiration Within the Colorado Alpine Tundra with Landsat Thematic Mapper

Claude R. Duguay (CANADA)

Atmospheric Correction of Angular Measurements

Above an Inhomogeneous and Non-Labertian Surface

Andrey A. Ioltukhovski (RUSSIA)

Aerial Rainfall Measurement

Willy S. Goma (ZAMBIA)

Hall C-40 (SI)

TS-61 13:30 - 15:00

COMMISSION IV

WORKING GROUP IV/2

MAPPING FROM SPACE

Chair: ALAIN BAUDOIN (FRANCE)

Mapping Potential of Remote Sensing Sensors (IP)

Gottfried Konecny (GERMANY), W. Schuhr

A Simulation Study on Point Determination for the MOMS-02/D2 Space Project Using an Extended Functional Model

H. Ebner (GERMANY), W. Kornus,
T. Ohlhof

Automatic Photogrammetric Processing of Spot Imagery for Point Determination, DTM Generation and Orthoprojection

Christian Heipke (GERMANY), W. Kornus, G.
Strunz, R. Thiemann I Colomina

Les Améliorations du Système SPOT A l'horizon de l'an 2000

Alain Baudoin (FRANCE)

Topographic Mapping with SPOT in Polar Regions

Frank Pattyn (BELGIUM)

Hall C-40

TS-57 15:30 - 17:00

COMMISSION II

WORKING GROUP III/4

SYSTEMS AND INSTRUMENTATION FOR MICROWAVE DATA PROCESSING

Chair: DR. HORST WEICHELT (GERMANY)

Progress and Problems in Microwave Radiometric Remote Sensing of Soil Moisture (Instruments and Application) (IP)

H. Weichelt (GERMANY), A. Shutko,
E. Reutov, T. Jackson T. Schmutge, C. Swift,
P. Pampaloni, S. Paloscia, G. Ijash K. Rao,
K. Schmidt

DLR's Operational and Planned SAR Processing Systems (IP)

Wolfgang Noack (GERMANY)

SIR-C Ground Data System and Processing Algorithm Design

C. Y. Chang (USA), J. C. Curlander

The SAR Processing System of NASDA EOC

H. Wakabayashi (JAPAN), M. Shimada,
T. Kikuchi, H. Aiba, H. Nohmi

A Processor-Based SAR Image Geocoding System

Einar-Arne Herland (FINLAND),
Seppo Väätäinen

Multisensor Mapping Using SAR in Conjunction with Optical Data

Johannes Raggam (AUSTRIA), D. Strobl,
A. Almer

Rooms 10-15 & 30

PS-8 15:30 - 17:00

COMMISSIONS II, III, V, VI, VII

ORAL PRESENTATIONS USING POSTERS - SESSION VIII

COMMISSION II

The Use of the Wild B8-S Analog Plotter as a Source for DTM Data

Ismat M. Elhassan (SAUDI ARABIA)

Evaluation of the Use of SPOT Imagery in "Open Sky" Mapping

Nkem U. Ononiwu (NIGERIA)

Integration of R.S. & Geophysical Data: An Approach for Geological Studies in the Tropical Rainforest of the Eastern Amazonia

Silvia B. A. Rolim (BRAZIL)

Real-Time Mapping Technology

Kurt Novak (USA)

The Moment-Preserving Pyramid for Progressive Image Transmission

Jeng-Jong Pan (USA), Sheng-Tun Li

ATTIRE (Analytical Tools for Thermal InfraRed Engineering)—A Thermal Sensor Simulation Package

S. Jaggi (USA)

On Calibration of SC SAR Images

Paolo Corona (ITALY), G. Franceschetti,
M. Migliaccio, V. Pascazio

Development of a PC-Based Modular Photogrammetric System

Bernd Pollak (GERMANY), B. Husen,
C. Lüken

Software for Data Acquisition for Leica

Photogrammetric Workstations

Ulf Almroth (SWITZERLAND), A. Chapuis

Digital Photogrammetry for Renewable Resource Measurements: Single Photo Analyses

Paul V. Bolstad (USA)

Development of Supercomputer Image Processing Software with X-Window User-Interface for the Processing of the Remotely Sensed Data

Young-Kyu Yang (SOUTH KOREA),
H.-O. Nam, K.-O Kim, S.-I. Cho

A GIS Workstation Based Analytical Plotter

Charles K. Toth (USA), T. Schenk

Advanced Digital Imaging Electron Beam Recorder for Primary Data Acquisition

John E. Turek (USA), J. P. Whitley,
P. F. Grosso

Electron Beam Recording of Remote Sensor Imagery in Brazil

Patrick F. Grosso (USA), A. A. Tarnowski,
J. E. Turek

A Multi-Resolution Approach to Parallel Stereo Matching of Airborne Imagery

Mohamed J. Zemerly (UNITED KINGDOM),
M. Holden, J.-P. Muller

Methods for the Visualisation of Environmental Remote Sensing Data

Philip Eales (UNITED KINGDOM), T. Day,
J.-P. Muller, D. Rees, S. Richards

Photogrammetric Scanning with a Square Array CCD Camera

Franz W. Leberl (USA), M. Best, D. Meyer

Image Processing in Photogrammetry: The Digital Rectifier Approach

Petros Patias (GREECE)

Importance of Modern Mathematical Methods for the Digital Photogrammetry

Erhard Pross (GERMANY)

Galileo Siscam Approach to Digital Photogrammetry

F. Flamigni (ITALY), A. Viti

COMMISSION III

Spatial Relation Extraction from Remotely Sensed Image on Quadtree Representation

Li Deren (CHINA), Guan Zequn

The Geo-Coded Model Based on Geographical Knowledge Formalization

Ma Ainai (CHINA)

Raster Algorithms for Surface Modelling

Liang Tang (GERMANY)

Robust Procedures for GIS Data Homogenization

Dieter Fritsch (GERMANY), F. Crosilla

Knowledge-Based Interpretation of Scanned Large-Scale Maps Using Multi-Level Modelling

Helmut Mayer (GERMANY), C. Heipke, G. Maderlechner

On the Application of Scale Space Techniques in Digital Photogrammetry

Anthony Stefanidis (USA), T. Schenk

Feature Matching for Outer Orientation of Single Images Using 3-D Wireframe Controlpoints

Wolfgang Schickler (GERMANY)

Object Surface Reconstruction by Digital Image Matching

Einari Kilpela (FINLAND), J. Pirhonen, K. Inkila

Reliable Surface Reconstruction Using Triple Epipolar Geometry and Feature Matching

Liang-Chien Chen (CHINA-TAIPEI), K.-T. Chang

Utilizing High-Level Knowledge in Middle-Level Image Analysis

Yaonan Zhang (NETHERLANDS)

The Phase Information Content of Complex Multifrequency Multipolarization SAR Images

Luciano V. Dutra (BRAZIL), S. Quegan

Photogrammetric Feature Intersection

Riadh Munjy (USA), K. Schuckman

Boundary and Category Errors in Spatial Data

Geoffrey Edwards (CANADA), K. E. Lowell, C. M. Gold

Matching Techniques for Deriving Topographical Information from Multispectral Imagery

Raad A. Saleh (USA), F. L. Scarpace

Discrete Mathematical Techniques in the Analysis and Adjustment of Hybrid Networks

I. Colomina (SPAIN)

Rectification of Thermal Airborne Imagery by Delauney Triangulation for Integration with a Large Scale Catchment Model

Paul G. Hutton (AUSTRALIA), D. L. B. Jupp

Comparison of Precision and Reliability of Point Coordinates Using DLT and Bundle Approach

Lars-Åke Edgardh (SWEDEN)

COMMISSION V

Analytical Calibration of Close-Range Cameras

Lilia Koleva (BULGARIA)

Applications of White-Light Optical Density Encoding Technique in Medicine

Hu Ruiming (CHINA), Yang Suqin

The Differential Formulas for Analytical Processing of Panoramic Stereo Photos taken by Fish-Eye Lens

Li Weiqian (CHINA), Li GUANGWEN

Surface Determination with an Accuracy of Few Microns

Karsten Jacobsen (GERMANY)

On the Study of a Non-Destructive Checkup System by X-Ray for the Inside Structure of a Bridge Floor Board

Mitsuyoshi Kureya (JAPAN)

A Special Information System for the Documentation of Castles

C. Potsiou (GREECE), C. Ioannidis, J. Badekas

Monitoring the Weathering of Stones: Setup and First Results

Michael Kempa (GERMANY)

The Semimetric 6x6 Reseau Camera for the Close Range Projects of High Accuracy

Jozef Jachimski (POLAND), A. Boron

A Contribution to the Photogrammetric Determination of the Critical Crack Tip Opening Displacement

Michael Gruber (AUSTRIA), O. Kolednik

Coastal Monitoring by Terrestrial Photogrammetry - Case Studies Along Kerala Coast, India

Narendra K. Agarwal (INDIA)

Remote Sensing Monitoring of Open-Cast Mine

Stanislaw C. Mularz (POLAND)

Ultra-Precise Measurement Using Affine Transformation

Atsushi Okamoto (JAPAN)

Developing Orthographic Views from Fisheye Photographs

Graham T. Richardson (USA)

Optimization Problems of Photogrammetric Method of Hyperbolic Cooling Tower Measurements

Jozef Wozniak (POLAND)

COMMISSION VI

Applications of Remote Sensing in Developing Countries by the Food and Agriculture Organization (FAO) of the United Nations

Z. D. Kalensky (UNITED NATIONS)

Photogrammetric Training in Survey of India—A Report

Guntur S. Kumar (INDIA)

Technology Transfer and Remote Sensing: Models for Success and Models for Failure

Bill Bruce (CANADA), B. Ryerson

Standardized Methods-Comparable Results: The EEC-Manual on Aerial Forest-Condition Inventories
Claus-Peter Gross (GERMANY)

Education in Remote Sensing and Photogrammetry in Hungary

Akos Detreköi (HUNGARY)

Uncovering America Artemis

M. F. S. Moroni (BRAZIL), J. A. Mannis,
S. Rodrigues, Jr. P. G. Cohn

Le Problème de la Formation et du Recyclage du Personnel dans la Période de Transition en Photogrammétrie et Télédétection

Nicolaie Oprescu (ROMANIA), L. Turdeanu, I. Noaje

The United States Geological Survey Side-Looking Airborne Radar Data Base

Allan N. Kover (USA),
J. W. Schoonmaker, Jr., C. H. Cramer,
B. F. Molnia

Intégration de la Télédétection dans l'Aménagement Rural au Burkina Faso

Günter Roos (SWITZERLAND), H. Dao

The Open Geographic Information Market—A Norwegian Example

Olaf M. Ostensen (NORWAY)

The Amazonia Information System

Diogenes S. Alves (BRAZIL),
Luiz Gylvan M. Filho, J. S. de Medeiros,
J. C. L. d'Alge, E. K. Mello, J. C. Moreira

Data Modelling and Development of a Spatial Database for the Brazilian Amazonia

Gilberto Camara (BRAZIL), M. Casanova,
U. Freitas, R. C.M. Souza A. S. Hemerly

The "Regio-Klima-Projekt" (REKLIP)—Tasks and Results of the Central GEO-Information System

Gerhard Schweinfurth (GERMANY)

The Satellite Image Chart of the Parana State—Brazil

Celso G. Dias Jr. (BRAZIL),
F. L. P. Lange Jr., G. Lessa

COMMISSION VII

Application of Remote Sensing in Studies of Water Quality in the Amazon Region: A General View

Anastacio A. Juras (BRAZIL)

Detection of Land Use/Land Cover Changes Using Remote Sensing and GIS in Vietnam

Pham T. Luong (VIETNAM), N. T. Choat,
T. D. Cuong

The Integration of Remote Sensing and GIS Technologies for Land Development and Irrigation Potential in the State of Ceara, Brazil

Harendra S. Teotia (BRAZIL), K. A. Ulbricht,
D. L. Civco

Remote Assessment of Inland and Coastal Waters Quality from Irradiance Reflectance: An Improved Interpretation

Anatoly A. Gitelson (ISRAEL)

Multi-Temporal Analysis of Sediment Transport in the Southeastern Mediterranean Using CZCS Data

Arnon Karnieli (ISRAEL), M. Mayo,
A. Gitelson, Z. Ben-Avraham

Prospective Advantages of a Use of Laser Remote Sensing for Calibration of a Satellite Detected Chlorophyll Distribution in a Sea-Water

Andrey A. Demidov (RUSSIA),
A. M. Chekalyuk

Classification Barycentrique Avec Masque En Utilisant Le Logiciel Didactim Pour La Caracterisation Des Types De Couvertures

Emmanuel Amamoo-Otchere (NIGERIA)

Using GIS to Estimate Agricultural Evapotranspiration in Idaho

Anthony Morse (USA)

Landslide Monitoring for Presumption of Underground Slide Surface

Norikazu Yoshizawa (JAPAN)

Desertification in Rajgarh District of M.P. India—(An Integrated Approach Based on Remote Sensing Technique)

Dilip K. Soni (INDIA), B. Sakalley

Analysis of the Relationship Between Global Vegetation Index and Climate Factors

Xuemei Bai (JAPAN)

Monitoring and Analysis of Urban Trends of Greater Cairo Using Multitemporal Satellite-Imagery

Marion Czeranka (GERMANY)

Monitoring and Predicting Strong Earthquakes Using NOAA Data

Guangsi Huang (CHINA), L. Zhaofu

Vegetation Conservation Using A 3-D GIS at Yangmingshan National Park

Ching-Nan Liu (CHINA-TAIPEI),

Pai-Sheng Hwang, Jue-Wu Harn, Mu-Lin Wu

Use of Remote Sensing and Auxiliary Data to Monitor Flood and Assess Floodplain Damages in Hwai He River, China

Xianxiang Yin (CHINA), Weining Yi,
Yehwai Lu, Qingsan Xu

Land Use Evaluation: Case Study in Brazil

Madalena N. Pereira (BRAZIL),
M. Valério-Filho, S. D.A.F. Pinto

Data Integration to Evaluate the Potential Soil Erosion and Land Capability

Pedro L. Donzeli (BRAZIL), S. D.A.P. Pinto,
M. Valério-Filho

Spectral Analysis Applications in Digital Image Processing

J. A. Rod Blais (CANADA), W. Zhou

Using Remote Sensing to Evaluate Spatial Dependence in a Wheat Breeding Trial

Shane T. Ball (USA), B. E. Frazier,
C. F. Konzak

Definition of Potential Areas for Uranium/Thorium Prospecting in the Poços de Caldas Alkaline Complex, Brazil: A RS/GIS Approach

Raimundo Almeida-Filho (BRAZIL)

Integrated Remote Sensing Study of Arid Wetland—A Case Study of Sambhar Lake, Rajasthan, India

A. K. Sinha (INDIA)

Real Time Monitoring of Turbid Water by Using Video Camera, Personal Computer and Image Processing

Nobuyuki Mizutani (JAPAN), K. Saito,
O. Nakamura, S. Kurosaki Y. Numata,
S. Sakama

Geological Mapping of an Inaccessible Himalayan Terrain Using Stereo SPOT Imagery

G. S. Srivastava (INDIA), R. S. Mishra

Geoprocessing Technologies Applied to Geologic Mapping and Mineral Prospecting in Northeastern Brazil

Sebastiao M. P. da Silva (BRAZIL)

Change Detection Study in Semi-Arid Regions Using Large Scale Satellite Data, Varamin Plain Test Site

Ali Izadpanah (IRAN)

New Methods Provided in Remote Sensing for Investigating the Earth

Vladimir E. Nekos (UKRAINE)

Technologies for Geological and Environment Protection Projects Using Remote Sensing Data and Field Spectrometric Measurements

Alexei V. Pertsov (RUSSIA), S. G. Slutskaya

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FREITAG

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AUGUST

Hall C-38

TS-64 08:30 - 10:00

COMMISSION V

EXPERTS AND EXPERT SYSTEMS

Chair: DR. EMMANUEL P. BALTSAVIAS
(SWITZERLAND)

Expert Witness Testimony Based on Photogrammetric Evidence

Mark R. Shortis (AUSTRALIA),
C. L. Ogleby, F. J. Leahy

On the Representation of Close-Range Network Design Knowledge

Scott O. Mason (SWITZERLAND),
V. Kepuska

Designing and Planning Close-Range Photogrammetric Networks: Is an Expert System Approach Feasible?

Adeyinka A. Bammeke (UNITED KINGDOM),
R. A. Baldwin

A Knowledge Based System for Close Range Digital Photogrammetry

J. Jansa (AUSTRALIA), J. C. Trinder

Halls C-39, 40 (SI)

TS-65 08:30 - 10:00

INTERCOMMISSION

WORKING GROUP VIII/I

ENVIRONMENTAL MONITORING APPLICATIONS

Chair: FRANK HEGYI (CANADA)

Satellite Data for Large Area Monitoring of Environmental Phenomena (IP)

J. Cihlar (CANADA), R. Brown, A. Erickson,
T. Fisher, J. Prinz

Remote Sensing of Environmental Effects of the Gulf War

Farouk El-Baz (USA)

Collection and Interpretation of Color Infrared and Thermal Infrared Imagery of Landfill Covers

Christopher Stohr (USA), R. S. Lunetta,
T. D. Frank

Principles for Model Independent Design of Environment Monitoring Systems

Peter Orbay (HUNGARY)

Soil Salinity Mapping in the Nile Delta, Egypt Using Remote Sensing Techniques

M. A. Abdel-Hamid (NETHERLANDS),
Dhruba P. Shrestha

Room 31

TS-66 08:30 - 10:00

COMMISSION II

WORKING GROUP II/3

RECEIPT, PREPROCESSING AND ARCHIVING OF LARGE VOLUMES OF DATA IN REMOTE SENSING

Chair: DR. FRED C. BILLINGSLEY (USA)

Principal Components Analysis as a Tool for Merging TM/Landsat-5 and Gamma-Ray Data Applied to Geologic Mapping in NE Brazil

Sebastiao M. P. da Silva (BRAZIL)

Land Science Data Management for the Earth Observing System an Architecture for Archive Management

Ralph J. Thompson (USA)

A Survey of Digital and Optical Small Media for Storage of Landsat Data

Bill P. Clark (USA)

A Feasibility Study for Lossless Data Compression of Remotely Sensed Images Using Difference-Mapped Shift-Extended Huffman Coding

S. Jaggi (USA)

Automatic Mosaicing of Satellite Images Using Global Re-Navigation

Athula Mandanayake (UNITED KINGDOM), K. Tildsley, A. Newton J.-P. Muller

Hall C-38

TS-67 10:30 - 12:00

COMMISSION V

WORKING GROUP V/3

SURFACE MONITORING

Chair: DR. J.-P. MULLER (UNITED KINGDOM)

Monitoring One of Europe's Largest Retaining Walls Using Oblique Aerial Photography

Donald M. Stirling (UNITED KINGDOM),

J. H. Chandler, J. S. Clark

Optimizing the Photogrammetric Network to Record Mozart's Pianoforte

Rüdiger Kotowski (GERMANY), J. Peipe

Robust Automatic Surface Reconstruction with Structured Light

Hans-Gerd Maas (SWITZERLAND)

Automatic Generation of Facial DEMs

Faustin A. S. Banda (UNITED KINGDOM),

J.-P. Muller, S. N. Bhatia M. Bukhary

Hall C-39, 40 (SI)

SS-10 10:30 - 12:00

COMMISSION I

SPACE IMAGING ACTIVITIES CONDUCTED BY ASTRONAUTS

Chair: Dr. Michael Hall (USA)

Astronauts from five countries have been invited to present their experiences using imaging sensors in space.

Room 31

TS-68 10:30 - 12:00

COMMISSIONS IV, III

WORKING GROUPS IV/1, III/1, IV/5

DIGITAL MAPPING AND GEOGRAPHIC INFORMATION SYSTEMS

Chair: DR. RYOSUKE SHIBASAKI (JAPAN)

A Digital Urban Space Model—A Three Dimensional Modelling Technique of Urban Space in a GIS Environment (IP)

Ryosuke Shibasaki (JAPAN), H. Shaobo

Integration of Scanning and GPS Data by DTM Means

J. Raul Ramirez (USA), E. Fernandez-Falcon,
R. Schmidley

Automatic Contour Labeling for Scanned Topographic Maps

Chao-hsiung Wu (USA), W. Mackaness

Analysis of Geographical Data and Visualization of Their Quality

Karl Kraus (AUSTRIA)

Cartographic Amalgamation of Area Objects

Lars Schyllberg (SWEDEN)

Rooms 10-15 & 30

PS-913:30 - 15:00

COMMISSIONS II, III, IV, V, VII

ORAL PRESENTATIONS USING POSTERS—SESSION IX

COMMISSION II

Testing Geometric Accuracy of SPOT Imageries

Maarouf A. M. Diefallah (QATAR)

Topographic Correction of the Remote Sensing Data

Beata Hejmanowska (GERMANY)

Compression of Satellite Images for Remote Sensing Applications

Paulo R. R. L. Nunes (BRAZIL), A. Alcaim,

M. R.L. Fragooso da Silva

SPRING: Object-Oriented Geoprocessing

R. C. M. de Souza (BRAZIL),

Gilberto Camara-Neto

Knowledge-Based Interpretation of SAR Imagery

Axel Popella (GERMANY), G. Eiben,

W. Geile, S. Meltzer

Development of a Multimedia Spatial Information System

Qiming Zhou (AUSTRALIA), A. H. Evans

Low Cost Digital Change Detection—in a

Photogrammetric Map Revision Model

Jesper Damgaard-Iversen (DENMARK)

Advanced Development in ARIES-III Image Analysis

Softwares and Its Application in Remote Sensing

Geology

Ji Shi Dong (CHINA), B. Cheng

COMMISSION III

Experimental Results of Adaptively Regularized FAST Vision Using Synthetic Images

Boris Kaiser (GERMANY), J. Hausladen,

B. P. Wrobel

A Hierarchical Understanding System of Linear Feature on Aerial Image

Cao Hai-Sheng (CHINA)

A New Approach for Unsupervised Image Classification

Antonio J. F. M. e Silva (BRAZIL),

J. M. P. Fortes

Refining Edges Detected by LoG for Dominant Point Selection on Digital Curves

Liang-Chien Chen (CHINA-TAIPEI),

Chi-Chuang Chen

Designing an Optimal and Scientific GIS Project

Bishwa Acharya (USA), W. C. Bell

Image Segmentation Based on Hough Transformation

Zhang Zhuxun (CHINA), Min Yiren, Zhang

Jianqing

OEEPE-Test on Feature Based Segmentation

Mathias J.P.M. Lemmens (NETHERLANDS)

A Method for Constructing Polyhedral

Approximations of a Scene Objects from Range Maps

Antonio A.F. Oliveira (BRAZIL), M. Nardone

Digital Analysis of Error Ellipsoids in Analytical Photogrammetric Stereotriangulation

Iulian C. Barbalata (CANADA)

Geometric and Radiometric Models in Processing SPOT Imagery for Object-Space Surfaces

Jo Wu (CHINA-TAIPEI), M. J. Hsyu,
C. H. Liu, D. C. Lin

An Induction-Based Model for Classification of Landsat Data

Richard J. Roiger (USA), L. D. Cornell

GeoTex: A General Point Determination System

I. Colomina (SPAIN), J. A. Navarro,
A. Termens

A Rule-Based Expert System for High-Quality Image Enhancement

Xiangqian Zhang (CHINA), Xiaofeng Li, Xuchu Yu

COMMISSION IV

Les Besoins D'Établissement d'un Cadastre National au Congo

E. Mabiala Taty (CONGO)

Creating an Information System to Integrate Remote Sensing Data with GIS Data for Railway Design

Wei Xie (CHINA)

Three Dimensional Data from SAR Images

Ian J. Dowman (UNITED KINGDOM),
C. Clark, M. Denos

Studies in Urban Green Ecology and establishment of Information System

Zhou Jianhua (CHINA)

Evaluation of Land Resources Using Geographic Information System

Tian Lianghu (CHINA), Zhao Yuanhong, Sheng Yongwei, Lu Jiancheng, Chen Nanfeng

Image Processing Procedures for Generating Two Degree Quadrangle Digital Mosaics from Gloria Sonar Data

Jo-Ann Howell (USA), L. Bellisime,
J. Ruhlman, J. A. Anderson S. C. Sides,
P. S. Chavez, Jr.

GIS as a Multipurpose Platform

Arbind M. Tuladhar (NETHERLANDS)

The Indonesian Standards for the Exchange of Digital Data Between Various GIS Systems

M. Mostafa Radwan (NETHERLANDS),
P. Suharto

A Thematic Map Reading System

Di Kaichang (CHINA), Li Zongjian, Lu Jian

Topographic Mapping Using Satellite Images: How Feasible in Developing Countries?

Gabriel E. Ajayi (GERMANY)

Evaluation of the Beta-Spline Interpolator for Digital Elevation Models with Different Beta Parameters on Each Patch

Carlos E. Nery (BRAZIL), L. A. V. Dias

Experiences on the Photogrammetric Digital Mapping for Istanbul Land Information System

Ayhan Alkis (TURKEY), H. E. Örüklü,
G. Batuk, B. Bayram

Impact of Digital Terrain Elevation Data (DTED) Resolution on Terrain Visualization: Simulation vs. Reality

Louis A. Fatale (USA), J. R. Ackeret

A Prolog-Based Mars Information System

Anthony C. Cook (UNITED KINGDOM),
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J. Maupin, P. Pals, P. Poeler, S. S. C. Wu

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Chair: DR. GOTTFRIED KOŃECNY (GERMANY)

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