

ASPRS Annual 2007
TABLE OF CONTENTS

ON THE ACCURACY OF PUSHBROOM AERIAL DIGITAL CAMERA

Qassim A. Abdullah

**INVESTIGATION OF GEOMETRIC ACCURACY AND FEATURE
COMPILATION OF HIGH RESOLUTION SATELLITE IMAGERY**

Orhan Altan and Veysel Okan Atak

**URBAN SPRAWL METRICS: AN ANALYSIS OF GLOBAL URBAN
EXPANSION USING GIS**

Shlomo Angel, Jason Parent, and Daniel Civco

**COMPARATIVE ANALYSIS OF ALTERNATIVE METHODOLOGIES FOR
TRUE ORTHO-PHOTO GENERATION FROM HIGH RESOLUTION
SATELLITE IMAGERY**

K.I. Bang, A. Habib, S. W. Shin, and K. O. Kim

**MONITORING IRRIGATION AREAS USING ASTER/TERRA IMAGES:
DIYARBAKIR**

Hüseyin Bayraktar and Büilent Bayram

**MODELLING MEDITERRANEAN FOREST PRODUCTIVITY USING
ENVISAT MERIS DATA SET**

Suha Berberoglu and Cenk Dönmez

FLORIDA 2004 CROPLAND DATA LAYER

Claire Boryan

**A MONTE CARLO SIMULATION OF THE IMPACT OF SAMPLE SIZE AND
PERCENTILE METHOD IMPLEMENTATION ON IMAGERY GEOLOCATION
ACCURACY ASSESSMENTS**

Paul C. Bresnahan and Todd A. Jamison

**OBJECT-ORIENTED ANALYSIS OF SEA ICE FRAGMENTATION USING SAR
IMAGERY TO DETERMINE PACIFIC WALRUS HABITAT**

Charles Brigham, Ilan Kolkowitz, Megan Dolson, Jacqueline Rudy, Amber Brooks, Cindy Schmidt, and J. W. Skiles

**USING A GEOGRAPHIC INFORMATION SYSTEM TO ANALYZE PUBLIC
LIBRARY PERFORMANCE MEASURES**

Michael R. Brundin

**USING NAUTICAL CHARTS TO VISUALIZE 19TH CENTURY CHANNEL
CHANGE ON THE ST. MARYS RIVER, SAULT STE. MARIE, CANADA AND
U.S.A.**

Louise Pl Buck and Philip J. Stooke

**DIGITAL SURFACE MODELS IN BUILD UP AREAS BASED ON VERY HIGH
RESOLUTION SPACE IMAGES**

Gurcan Buyuksalih, Karsten Jacobsen, and Gurcan Buyuksalih

MULTIPLE DEM MEASURED ACCURACY

Jeff Carpenter and Jim Hogarty

**AN AUTOMATED DELINEATION TOOL FOR ASSISTED INTERPRETATION
OF DIGITAL IMAGERY**

Guillermo Castilla and Geoffrey G. Hay

**QUANTITATIVE ASSESSMENT OF THE ACCURACY OF SPATIAL
ESTIMATION OF IMPERVIOUS COVER**

Anna Chabaeva, James Hurd, and Daniel Civco

**SATELLITE MONITORING OF HYDROLOGIC TRANSFORMATIONS IN
SOUTHERN EGYPT**

Jonathan Chipman

**GROUND-BASED AERIAL PHOTOGRAPHY TO SUPPORT TRAFFIC FLOW
EXTRACTION**

Nora Csanyi, Charles K. Toth, and Pitu Mirchandani

**AERIAL THERMOGRAPHY SURVEYS TO DETECT GROUNDWATER
DISCHARGE IN THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT,
NORTHEAST FLORIDA**

Jeffrey B. Davis

**ONTOLOGY-SUPPORTED AUTOMATIC SERVICE CHAINING FOR
GEOSPATIAL KNOWLEDGE DISCOVERY**

Liping Di, Peng Yue, Wenli Yang, Genong Yu, Peisheng Zhao, and Yaxing Wei

SEGMENT BASED IMAGE ANALYSIS AND IMAGE FUSION

Manfred Ehlers

**THE GROUND CONTROL ROOM AS AN ENABLING TECHNOLOGY IN THE
UNMANNED AERIAL SYSTEM**

Gary Gear and Thomas Mace

**GEOSTATISTICAL MODELLING FOR ASSESSMENT OF DEVELOPMENT
AT MICRO LEVEL**

R.D. Gupta

**MEDIUM-FORMAT DIGITAL CAMERAS: A STUDY INTO THE
CALIBRATION, STABILITY ANALYSIS, AND ACHIEVABLE ACCURACY**

A. Habib, Anna Jarvis, Paul Quackenbush, and Gregory Stensaas

**INTEGRATION OF PHOTOGRAMMETRIC AND LIDAR DATA IN A MULTI-
PRIMITIVE TRIANGULATION PROCEDURE**

A. Habib, K.I. Bang, M. Aldelgawy, S. W. Shin, and K. O. Kim

**ALTERNATIVE METHODOLOGIES FOR THE QUALITY CONTROL OF
LIDAR SYSTEMS**

A. Habib, Mohammad M. Al-Durgham, and Paul Quackenbush

**DETECTING THE TOPOGRAPHIC CHANGES OF SPATIAL FEATURES
FROM SATELLITE IMAGES WITH THE EDGE FLOW TECHNIQUES**

Yishuo Huang and Jin-Guei Cheng

**THE EUROSDR PROJECT "AUTOMATED CHECKING AND IMPROVING OF
DIGITAL TERRAIN MODELS"**

Joachim Höhle

**FOREST INVENTORY, CATASTROPHIC EVENTS AND HISTORIC
GEOSPATIAL ASSESSMENTS IN THE SOUTH**

Dennis M. Jacobs

ORIENTATION OF HIGH RESOLUTION OPTICAL SPACE IMAGES

Karsten Jacobsen

GEOMETRY OF DIGITAL FRAME CAMERAS

Karsten Jacobsen

**EFFECTS OF URBANIZATION ON THE SPATIAL DISTRIBUTION AND SIZE
OF WETLANDS IN NEW HAMPSHIRE**

Katie Jacques, Russell G. Congalton, and Kimberly Babbitt

**CLASSIFIER SHOOTOUT: A QUANTITATIVE ASSESSMENT OF THREE
POPULAR IMAGE CLASSIFICATION METHODOLOGIES**

David M. Johnson

**MAPPING SUBMERGED MACROPHYTES: USING MULTI-RANGE
SPECTRAL FEATURE FITTING TO MAP SUBMERGED EELGRASS IN A
TURBID ESTUARY**

Chaeli Judd and Steven Steinberg

**A STUDY ON SENSOR MODELING AND TRIANGULATION FOR AN
AIRBORNE THREE LINE SCANNER**

Won Jo Jung and James S. Bethel

**AERIAL AND SATELLITE IMAGE SEGMENTATION BASED ON SHAPE-
CONSTRAINED GEODESIC ACTIVE CONTOURS**

Konstantinos Karantzas, Haris Papasaika, and Nikos Paragios

**DIGITAL SURFACE MODEL OF TREE CANOPY STRUCTURE FROM LIDAR
DATA THROUGH IMPLICIT SURFACE RECONSTRUCTION**

Akira Kato, Gerald F. Schreuder, Donna Calhoun, Peter Schiess, and Werner Stuetzle

**FOREST SPECIES CLASSIFICATION AND TREE CROWN DELINEATION
USING QUICKBIRD IMAGERY**

Yinghai Ke and Lindi J. Quackenbush

**NEW APPROACH FOR PLANAR PATCH SEGMENTATION USING
AIRBORNE LASER DATA**

Changjae Kim, A. Habib, and Paul Mrstik

**UNMANNED AERIAL VEHICLES FOR RANGELAND MAPPING AND
MONITORING: A COMPARISON OF TWO SYSTEMS**

Andrea S. Laliberte, Albert Rango, and Jeff Herrick

**NEW CONCEPT OF PROFILE BASED PAVEMENT MEASUREMENT
SYSTEM**

T. Lovas, I. Kertesz, I. Fi., and A. Barsi

**COMMUNITY-BASED DISASTER RESPONSE DESIGN USING AN OPEN
SOURCE GIS**

Jennifer Lumbert, Guy-Alain Amoussou, and Steven Steinberg

GIS MODELING OF RIPARIAN ZONES UTILIZING DIGITAL ELEVATION MODELS AND FLOOD HEIGHT DATA: AN INTELLIGENT APPROACH

Lacey Mason and Ann L. Maclean

COMPARISON OF METHODOLOGIES TO DERIVE A NORMALIZED DIFFERENCE THERMAL INDEX (NDTI) FROM ATLAS IMAGERY

Michael McInerney and Robert Lozar

INTEGRATION OF LOGISTIC REGRESSION AND GENETIC PROGRAMMING TO MODEL COASTAL LOUISIANA LAND LOSS USING REMOTE SENSING

H.G. Momm, J. S. Kuszmaul, and Greg Easson

SUPER-DENSE DIGITAL TERRAIN ELEVATION RECONSTRUCTION THROUGH METHOD OF EPIPOLAR CHARACTERISTICS

Pascal Monasse, Lenny Rudin, and Frédéric Cao

PARTIAL UNMIXING OF HYPERSPECTRAL IMAGERY: THEORY AND METHODS

Jacob T. Mundt, David R. Streutker, and Nancy F. Glenn

USING LIDAR-DERIVED FUEL MAPS WITH FARSITE FOR FIRE BEHAVIOIR MODELING

Muge Mutlu and Sorin Popescu

DISCRETE WAVELET TRANSFORM EFFECT ON HYPERSPECTRAL IMAGE CLASSIFICATION PERFORMANCE USING LOSSLESS COMPRESSION ALGORITHMS WITH COLOR & QUALITY SCALABILITY UNDER JPEG2000

David Negrete, Vikram Jayaram, and Bryan Usevitch

A NOISE-REMOVAL APPROACH FOR LIDAR INTENSITY IMAGES USING ANISOTROPIC DIFFUSION FILTERING TO PRESERVE OBJECT SHAPE CHARACTERISTICS

Rodrigo A.A. Nobrega, Jose A. Quintanilha, and Charles G. O'Hara

EDGE DETECTION OF MANMADE OBJECTS USING WAVELETS IN HIGH RESOLUTION SATELLITE IMAGES

Varvara D. Noutsou, Demetre P. Argialas, and Pantelis N. Michalis

GEOMETRIC CALIBRATION AND ORTHORECTIFICATION OF BILSAT-1 IMAGERY

Ali Özgün Ok and Mustafa Turker

**SIMULATING FUTURE FOREST FRAGMENTATION IN A CONNECTICUT
REGION UNDERGOING SUBURBANIZATION**

Jason Parent, Daniel Civco, and James Hurd

**INVESTIGATING FULL-WAVEFORM LIDAR DATA FOR DETECTION AND
RECOGNITION OF VERTICAL OBJECTS**

Christopher E. Parrish and Frank L. Scarpace

**INFLUENCE OF VARIOUS PARAMETERS ON THE ACCURACY OF LIDAR
GENERATED PRODUCTS FOR HIGHWAY DESIGN APPLICATIONS**

Eva Paska and John A. Ray

ACCURACY ANALYSIS OF SRTM HEIGHT MODELS

Ricardo M. Passini, Karsten Jacobsen, and Ricardo M. Passini

**SPECTRAL MIXTURE ANALYSIS FOR MAPPING ABUNDANCE OF URBAN
SURFACE COMPONENTS FROM THE TERRA/ASTER DATA**

Ruiliang Pu, Peng Gong, and Ryo Michishita

IMU AND ULTRACAM D MISALIGNMENT CALIBRATION

K.S. Qtaishat, M.J. Smith, and D.W.G. Park

INVESTIGATING NEW ADVANCES IN FOREST SPECIES CLASSIFICATION

Lindi J. Quackenbush and Yinghai Ke

**FUSION OF GPS AND MACHINE VISION FOR ABSOLUTE VEHICLE
POSITIONING**

Andrew Rae and Otman Basir

**PRODUCTION SYSTEM FOR AUTONOMOUS 3-DIMENSIONAL MODELING
WITH LIDAR, IFSAR, AND PHOTOGRAMMETRIC DSM DATA**

Mark Rahmes, Josef DeVaughn Allen, J. Harlan Yates, and Patrick Kelley

**PANCHROMATIC ENHANCED SUPER-RESOLUTION OF MULTI-SPECTRAL
IMAGERY**

Ronald A. Riley

**PREDICTING FLOOD HAZARD AREAS: A SWAT AND HEC-RAS
SIMULATIONS CONDUCTED IN AGUAN RIVER BASIN OF HONDURAS,
CENTRAL AMERICA**

*Samuel Rivera, Alexander J. Hernandez, R. Douglas Ramsey, Gines Suarez, and San
Alonso Rodriguez*

**NEW DEVELOPMENTS IN TARGET DETECTION IN HYPERSPECTRAL
IMAGERY USING SPECTRAL METRICS AND SPECTRA EXTRACTION**

Stefan Robila

**ACCURACY ASSESSMENT OF BIOMASS AND FORESTED AREA
CLASSIFICATION FROM MODIS, LANDSAT-TM SATELLITE IMAGERY
AND FOREST INVENTORY PLOT DATA**

Dumitru Salajanu, Dennis M. Jacobs

**USING ASTER DATA TO DETECT CROP RESIDUE AND TO IMPROVE CROP
CLASSIFICATION**

David Schaub, Nancy French, Colin Brooks, and Richard Powell

**EVALUATING THE ACURACY OF 2005 MULTITEMPORAL TM AND AWIFS
IMAGERY FOR CROPLAND CLASSIFICATION OF NEBRASKA**

Robert Seffrin

**DOES STATE-OF-THE-ART EQUIPMENT SOLVE ALL MAPPING
PROBLEMS? A CASE STUDY OF THE LOS ANGELES REGION IMAGERY
ACQUISITION CONSORTIUM (LAR-IAC) PROJECT.**

Gerhard Sehnalek and Nick Franchino

**DEVELOPING AN APPLICATION FOR MEASURING ACCURATE FEATURE
DISTANCES AT REGIONAL AND GLOBAL SCALES**

Jeong Chang Seong and Jinmu Choi

**ANALYZING MULTI-SENSOR DATA FUSION TECHNIQUES: A MULTI-
TEMPORAL CHANGE DETECTION APPROACH**

Chintan A. Shah and Lindi J. Quackenbush

**TOWARDS THE DEVELOPMENT OF NEXT GENERATION REMOTE
SENSING TECHNOLOGY – ERDAS IMAGINE INCORPORATES A HIGHER
ORDER FEATURE EXTRACTION TECHNOQUE BASED ON ICA**

Chintan A. Shah, Ian Anderson, Zaiyong Gou, Steven Hao, and Andrew Leason

**FEATURE-BASED TRANSFORMATION MODELS FOR SATELLITE IMAGE
ORIENTATION AND TERRAIN MODELING**

Ahmed Shaker

**REMOTE SENSING EDUCATIONAL OPPORTUNITIES AVAILABLE
THROUGH WYOMINGVIEW**

Ramesh Sivanpillai and Kenneth L. Driese

**DEVELOPMENT OF A BLUNDER DETECTION APPROACH FOR
AUTOMATED POINT MATCHING DURING VECTOR TO IMAGE DATA
INTEGRATION**

Lawrence V. Stanislawski, Michael P. Finn, E. Lynn Usery, and Paul M. Robinette

**RUBBER ACREAGE CHANGE DETECTION USING LANDSAT TM:
LINKAGES TO POLICIES**

Mohd Nazip Suratman

**HYPERSPETRAL VERSUS MULTISPECTRAL SATELLITE DATA FOR
URBAN LAND COVER AND LAND USE MAPPING — BEIJING, AN
EVOLVING CITY**

Qiyun Tan and Jinfei Wang

**LIDAR MAPPING SUPPORTING EARTHQUAKE RESEARCH OF THE SAN
ANDREAS FAULT**

Charles K. Toth, Dorota Brzezinska, Nora Csanyi, Eva Paska, and Naci Yastikli

**EXPERIENCE WITH HIGH ACCURACY COUNTY DTM MAPPING USING
SURVEYING, PHOTOGRAMMETRIC, AND LIDAR TECHNOLOGIES -
GOVERNMENT AND CONTRACTOR PERSPECTIVES**

Barbora Ubar, Tim Brown, and John Antalovich Jr.

**UTILIZING MODIS LAI TO IDENTIFY VEGETATIVE ANOMALIES IN
YOSEMITE NATIONAL PARK**

Matthew Voss, Allison Husby, Sachi Lake, Kristen Lavelle, Siddhartha Oza, Allison Suarez, Forrest Melton, Cindy Schmidt, and J. W. Skiles

**PHENOLOGICAL CHANGE DETECTION IN FLAT AND TERRACE PADDY
USING ASTER SATELLITE IMAGES IN TAKAYAMA RIVER BASIN AREA.**

Din Ara Wahid and Tsuyoshi Akiyama

THE CHICXULUB METEOR IMPACT AND ANCIENT LOCATIONAL DECISIONS ON THE YUCATÁN PENINSULA, MEXICO: THE APPLICATION OF REMOTE SENSING, GIS, AND GPS IN SETTLEMENT PATTERN STUDIES

Terance L. Winemiller

SPATIAL-SPECTRAL CROSS-CORRELATION FOR CHANGE DETECTION -- A CASE STUDY FOR CITRUS COVERAGE CHANGE DETECTION

Zhengwei Yang and Rick Mueller

URBAN EXPANSION AND ITS ENVIRONMENTAL IMPACT ANALYSIS USING HIGH RESOLUTION REMOTE SENSING DATA: A CASE STUDY IN THE GREATER MANKATO AREA

Fei Yuan

ANALYSIS OF THE RELATIONSHIP BETWEEN NDVI AND CLIMATE VARIABLES IN MINNESOTA USING GEOGRAPHICALLY WEIGHTED REGRESSION AND SPATIAL INTERPOLATION

Fei Yuan and Shouraseni Sen Roy

AUTOMATIC ROAD EXTRACTION BY INTEGRATED ANALYSIS OF IMAGES AND GIS DATA

Chunsun Zhang and Emmanuel Baltsavias

TERRAIN DEFORMATION MODELING BY PHOTOGRAMMETRIC EXPLOITATION OF HIGH-RESOLUTION SATELLITE IMAGERY

Chunsun Zhang, Michael P. Crane, and Clive Fraser

NEXT GENERATION AUTOMATIC TERRAIN EXTRACTION USING MICROSOFT ULTRACAM IMAGERY

Bingcai Zhang, Scott Miller, Stewart Walker, and Kurt Devenecia

AN EFFICIENT 3D GIS DATA EXTRACTION METHOD WITH DIGITAL PHOTOGRAMMETRY TECHNOLOGY IN ARID AREA

Yongping Zhao, Amani AlOthman, and Mostafa Kawiani

A MANOVA-BASED AND OBJECT-ORIENTED STATISTICAL METHOD FOR EXTRACTION OF IMPERVIOUS SURFACE AREA

Yuyu Zhou and Y.Q. Wang