Technical Commission I of ISPRS addresses the larger as possible scope of aspects of geo-image acquisition systems.

This comprises all classical sub-systems of imaging systems: platforms, imaging sensors (passive & active), geometric and radiometric calibration, direct georeferencing acquisition, elaboration of photogrammetric and radiometric models, and on-board and on-ground image pre-processing.

It also englobes new trends in sensing i.e. networks of systems (not necessary all imaging systems) and intelligent systems communicating quickly and taking autonomous decisions to be capable of managing disaster crises for example (volcanoes, tsunamies, ...).

Commission I has historically addressed in the past satellite imagery and more recently has enlarged its scope to digital aerial imagery and Commission I is currently extending its activities (in Cooperation with Commission V) to again higher scale and very flexible acquisition devices such as Terrestrial Mobile Mapping Systems and autonomous vehicle navigation comprising UAVs.

Terms of Reference of Commission 1

- Design and realization of digital aerial and spaceborne missions for Earth observation
- Design, construction, characterization, and installation of imaging and non-imaging sensors (including Optical, IR, SAR, IFSAR, LIDAR, etc.)
- Standardization of definitions and measurements of sensor parameters
- Integration of imaging and non-imaging sensors with other relevant systems
- Geometric and radiometric properties, quality standards, and factors affecting data quality
- Test, calibration and evaluation of sensors (including laboratory, in-flight, inter-calibration and test fields)
- Integrated platform guidance, navigation, positioning and orientation
- Data reception and pre-processing
- On-board preprocessing of data and autonomous systems
- Systems and media for recording sensor data, auxiliary data (time, position, attitude, etc.) and film scanners
- Image and non-image data transfer standards
Welcome remarks

Welcome note by the President of ISPRS

It is my great pleasure to welcome you to the Symposium of ISPRS Commission I. Commission I is important in ISPRS as a cross cutting commission dealing with data acquisition.

I thank SFPT and Alain Baudoin, the Working Group chairs and all the other people who have helped put this symposium together for their hard work and for planning a meeting which I am sure will be successful.

ISPRS is known to most people in the community for the high quality of its workshops and conferences. But we also work with international bodies to promote photogrammetry and remote sensing and this Symposium give an opportunity to do this. I am particularly pleased that the plenary session on the first day includes speakers from The Group on Earth Observation (GEO), EuroSDR and ION, who represent key organisations with whom ISPRS collaborates.

ISPRS is in a position to feed your work into the framework of GEO and to ensure that Earth observation makes a difference to the lives of millions of people throughout the world. Make your work matter and make sure that people know that it matters.

Ian DOWMAN
## Scientific Committee

**Presidents**

Alain Baudoin, President of ISPRS Technical Commission I  
Nicolas Paparoditis, Secretary general of ISPRS Technical Commission I

**Members: Officers of ISPRSTC I Working Groups**

**I/1: Standards, calibration and validation**

- **Chair:** Roland Gachet, France  
- **Co-Chair:** Veljko Jovanovic, USA  
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**I/2: SAR and LIDAR Systems**

- **Chair:** Charles Toth, USA  
- **Co-Chair:** Bryan Mercer, Canada  
- **Secretary:** Boris Jutzi, Germany

**I/3: Multi-Platform Sensing and Sensor Networks**

- **Chair:** Vincent Tao, Canada  
- **Co-Chair:** Ismael Colomina, Spain  
- **Co-Chair:** Raad Saleh, USA  
- **Secretary:** Tom Kralidis, Canada

**I/4: Airborne Digital Photogrammetric Sensors Systems**

- **Chair:** Jon Mills, UK  
- **Co-Chair:** Jean-Philippe Souchon, France  
- **Co-Chair:** Michael Cramer, Germany  
- **Secretary:** David Barber, UK

**I/5: Geometric Modelling of optical spaceborne sensors and DEM generation**

- **Chair:** Karsten Jacobsen, Germany  
- **Co-Chair:** Peter Reinartz, Germany  
- **Co-Chair:** Daniela Poli, Switzerland  
- **Secretary:** Gürcen Büyüksalih, Turkey

**I/6: Small Satellites**

- **Chair:** Ugur Murat Leloglu, Turkey  
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I/7: Intelligent Earth Sensing

Chair: Guoqing Zhou, USA  
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IC WG I/V: Autonomous Vehicle Navigation

Chair: Ron Li, USA  
Co-Chair: Jurgen Everaerts, Belgium  
Secretary: Kaichang Di, USA

IC WG V/I: Integrated Systems for Mobile Mapping

Chair: Naser El-Sheimy, Canada  
Co-Chair: Mohamed Mustapha, Canada  
Secretary: Jan Skaloud, Switzerland

Organising Committee

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<td>• Marie-José Lefevre-Fonollosa - SFPT</td>
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<td>• Dominique Fourny-Delloye - CNES</td>
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<td>• Pascale Ultre Guerard - CNES</td>
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<td>• Dorothée Arnould - Colloquium</td>
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<td>• Inez Burger - Colloquium</td>
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Tuesday 4 May

11:00 - 12:30

Plenary sessions

PL-1 THE ROLE OF EUROSDR IN THE EMERGING WORLD OF INTEGRATED SPATIAL INFORMATION
Murray K.* (Southampton, UK)

PL-2 THE INSTITUTE OF NAVIGATION: ADVANCING MODERN NAVIGATION TECHNOLOGIES
Grejner-Brzezinska D.* (Columbus, USA)

PL-3 THE GEOSS CHALLENGE: WHAT ROLE FOR THE SCIENTIFIC COMMUNITY?
Achache J.* (Geneva, Switzerland)

T1 - Airborne Photogrammetric Sensors (Radiometry) - WG I/4

Chair: Michael Cramer (Germany)
Co-Chair: David Barber (UK)

T01-01 AIRBORNE DIGITAL IMAGERS: AN OVERVIEW & ANALYSIS
Petrie G.*, Walker AS (Glasgow, UK)

T01-02 RADIOMETRIC TESTING AND CALIBRATION OF DMC
Markelin L.*, Honkavaara E, Peltoniemi J, Ahokas E (Masala, Finland)

T01-03 IMAGE RESTORATION FOR RESOLUTION IMPROVEMENT OF DIGITAL AERIAL IMAGES
Becker S.*, Haala N, Honkavaara E, Markelin L, Reulke R (Stuttgart, Masala, Berlin, Germany, Finland)

T01-04 “ATMOSPHERIC” CORRECTION OF DIGITAL COLOUR IMAGES BASED ON LUMINANCE RATIO CONSIDERATION
Ziemann H.*, Grohmann D (Dessau, Germany)

16:00 - 17:30

T2 - Modelling of spaceborne sensors - WG I/5

Chair: Karsten Jacobsen (Germany)
Co-Chair: Daniela Poli (Switzerland)

T02-05 IN-FLIGHT CALIBRATION OF SPOT-5 HRS AND FORMOSAT-2
Toutin T.*, Blondel E, Rother K, Mietke S (Ottawa, Chelsea, Dresden, Canada, Germany)
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<td>T02-06</td>
<td>PROS AND CONS OF THE ORIENTATION OF VERY HIGH RESOLUTION OPTICAL</td>
<td>Jacobsen K.* (Hannover, Germany)</td>
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<td>SPACE IMAGES</td>
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<td>T02-07</td>
<td>ANALYSIS OF DIFFERENT ORIENTATION APPROACHES FOR SPACEBORNE</td>
<td>Giannone F, Crespi M.*, Poli D (Rome, Zurich,</td>
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<td>PUSHBROOM SENSORS. APPLICATIONS WITH QUICKBIRD</td>
<td>Italy, Switzerland)</td>
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<td>T02-08</td>
<td>ANALYSIS OF ARTEFACTS IN SUB-PIXEL REMOTE SENSING IMAGE REGISTRATION</td>
<td>Inglada J, Muron V.*, Pichard D, Feuvrier T</td>
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<td>(Toulouse, France)</td>
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<td>T02-09</td>
<td>THE PLEIADES-HR MOSAIC SYSTEM PRODUCT</td>
<td>De Lussy F.*, Gigird P, Airault S (Toulouse,</td>
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<td>Saint Mande, France)</td>
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**Wednesday 5 May**

08:30 - 10:00

**T3 - Developments in Airborne LIDAR Systems - WG I/2**

Chair: Bryan Mercer (Canada)
Co-Chair: Boris Jutzi (Germany)

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<td>T03-10</td>
<td>VALIDATION OF DTMS BENEATH FOREST CANOPY DERIVED FROM P-BAND</td>
<td>Mercer B.*, Maduck J, Kahr E (Calgary, Canada)</td>
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<td>T03-11</td>
<td>CALIBRATION OF THE OPTECH ALTM 3100 LASER SCANNER INTENSITY DATA</td>
<td>Ahokas E.*, Kaasalainen S, Hyyppä J, Suomalainen J</td>
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<td>USING BRIGHTNESS TARGETS</td>
<td>(Kirkkonummi, Finland)</td>
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<td>T03-13</td>
<td>CAPABILITY OF LASER SCANNING SYSTEMS CAPTURING THE WAVEFORM</td>
<td>Jutzi B.*, Stilla U (Ettlingen, Muenchen, Germany)</td>
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<td>T03-14</td>
<td>A REVIEW OF THE ASPRS GUIDELINES FOR THE REPORTING OF HORIZONTAL</td>
<td>Rodarmel C, Theiss H.*, Johanesen T, Samberg A</td>
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<td>AND VERTICAL ACCURACY IN LIDAR DATA</td>
<td>(Chantilly, VA, Reston, VA, Bethesda, MD, USA)</td>
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08:30 - 10:00

T4 - Small Satellites - WG I/6

Chair: Arthur Cracknell (UK)
Co-Chair: Mazlan Hashim (Malaysia)

T04-15 INTERNATIONAL STUDY ON COST-EFFECTIVE EARTH OBSERVATION MISSIONS - OUTCOMES AND VISIONS
Sandau R.* (Berlin, Germany)

T04-16 THAILAND EARTH OBSERVATION SYSTEM: MISSION AND PRODUCTS
Kaewmanee M.*, Choomnoommanee T, Fraisse R (Bangkok, Toulouse, Thailand, France)

T04-17 A NEW ERA OF HIGHLY MINIATURIZED SPACE TECHNOLOGIES, ALLOWING TO DEVELOP HIGH PERFORMING, LIGHT AND AFFORDABLE EARTH OBSERVATION MISSIONS
Savaria E.* (Cannes-La-Bocca, France)

T04-18 ON-ORBIT MODULATION TRANSFER FUNCTION ESTIMATION FOR BILSAT IMAGERS
Leloglu UM.*, Tunali E (Ankara, Turkey)

10:30 - 12:00

T5 - Airborne Photogrammetric Sensors (Geometry) - WG I/4

Chair: Jon Mills (UK)
Co-Chair: Jean-Philippe Souchon (France)

T05-19 THEORETICAL AND EMPIRICAL EVALUATION OF GEOMETRIC PERFORMANCE OF MULTI-HEAD LARGE FORMAT PHOTOGRAMMETRIC SENSORS
Honkavaara E.*, Jaakkola J, Nurminen K, Ahokas E, Markelin L (Masala, Finland)

T05-20 A SIMULATION STUDY FOR THE GEOMETRIC ACCURACY TESTING OF AIRBORNE LINEAR ARRAY CCD CAMERAS
Kocaman S.*, Gruen A (Zurich, Switzerland)

T05-21 CALIBRATION AND VALIDATION OF DIGITAL AIRBORNE CAMERAS
Cramer M.* (Stuttgart, Germany)

T05-22 TESTS AND PERFORMANCE EVALUATION OF DMC IMAGES AND NEW METHODS FOR THEIR PROCESSING
Zhang L, Kocaman S, Kornus W, Baltsavias E.* (Zurich, Barcelona, Switzerland, Spain)

T05-23 THE HRSC-AX MT. ETNA PROJECT: HIGH-RESOLUTION ORTHOIMAGES AND 1 M DEM AT REGIONAL SCALE
Gwinner K.*, Coltelli M, Flohrer J, Matz Kd, Marsella M, Roatsch T, Scholten F, Trauthan F (Berlin, Sezione Di Catania, Rome, Germany, Italy)
10:30 - 12:00

**T6 - Multi-Platform and Intelligent Sensing, Sensor Networks - WGs I/3, I/7**

Chair: Vincent Tao (Canada)
Co-Chair: Guoqing Zhou (USA)

**T06-24**
ON THE USE OF SAR AND OPTICAL IMAGES COMBINATION
Petit D.*, Oller G, Inglada J (Toulouse, France)

**T06-25**
SPATIAL SENSOR WEB REFERENCE MODEL – A MODEL OF ARCHITECTURE FOR SPATIAL SENSOR WEB INTERCONNECTION
Liang SL.*, Tao V (Ontario, Canada)

**T06-26**
ADVANCE OF EARTH OBSERVING SATELLITE SYSTEM: FROM GEOSS TO FIEOSS
Zhou G.* (Norfolk, USA)

**T06-27**
TAILORING SPACE SOLUTIONS FOR OPERATIONAL EARTH OBSERVATION USAGE
Maliet E.*, Cantié R (Toulouse, France)

12:00 - 13:15

**Poster Session 1 - WGs I/3, I/5, I/7**

**PS1-01**
USE OF MULTI-PLATFORM-SENSING FOR CHARACTERISATION OF LAND USE IN RIVER CORRIDORS

**PS1-02**
Haddouche I.*, Mederbal K, Saidi S (Tlemcen, Mascara, Montpellier, Algeria, France)

**PS1-03**
AUTOMATED SENSOR BLOCK ADJUSTMENT AND LOCAL ORBIT/FLIGHTPATH POSITIONNING BENEFITS, AND PERSPECTIVES FOR MAPPING APPLICATIONS
Le Guellec A.* (Deuil La Barre, France)

**PS1-04**
A NEW PROCEDURE TO COMPARE NDVI IMAGES DERIVED FROM MODIS AND LANDSAT 7 ETM+ DATA
Boccardo P, Borgogno Mondino E.*, Perez F, Claps P (Torino, Italy)

**PS1-05**
AN OPEN STANDARD-BASED SENSOR WEB APPROACH FOR ONLINE 3D EXTRACTION: USING SENSOR OBSERVATION SERVICE, SENSORML AND RATIONAL FUNCTION MODEL
Liang SHL.*, Wang R, Tao V (Toronto, Canada)
PS1-06 3D PHYSICAL VS EMPIRICAL MODELS FOR STEREO-PROCESSING HR IMAGES: EXAMPLES WITH IKONOS AND QUICKBIRD
Toutin T.*, Schauer P (Ottawa, Dresden, Canada, Germany)

PS1-07 GEOMETRIC ACCURACY OF IKONOS GEO PANCHROMATIC ORTHOIMAGE PRODUCTS
Aguilar MA.*, Aguilar FJ, Carvajal F, Agüera F (Almeria, Spain)

PS1-08 GENERATION OF DEM FROM NON-METRIC CAMERA IMAGES OVER MOUNTAINOUS AREAS
Abdullah K.*, Muhammad D, Sarip A (Johor, Malaysia)

PS1-09 AN INTEGRATED MODEL TO ESTIMATE THE ACCURACY OF DIGITAL ORTHOIMAGES FROM HIGH RESOLUTION SATELLITE IMAGERY
Aguilar FJ.*, Aguilar Ma, Agüera F, Carvajal F (Almeria, Spain)

PS1-10 GEOMETRIC MODELLING AND ORTHORECTIFICATION OF SPOT5 SUPER MODE IMAGES
Boukerch I.*, Bounour H (Oran Arzew, Algeria)

PS1-11 AN IMPROVED MODEL FOR ALONG TRACK STEREO SENSORS USING RIGOROUS ORBIT MECHANICS AND NAVIGATION DATA
Michalis P.*, Dowman I (London, UK)

PS1-12 ANALYSIS OF DTM PRODUCTION FROM SPOT-5 HRS-STEREO DATA AND THE INFLUENCE OF ATMOSPHERIC EFFECTS
Tsakiri-Strati M.*, Pateraki M, Georgoula O (Thessaloniki, Greece)

PS1-13 IN-DEPTH INVESTIGATIONS OF PARAMETERS INFLUENCING ACCURACY OF ORTHOIMAGES FROM HIGH RESOLUTION SATELLITES
Eisenbeiss H.*, Zhang L, Baltsavias E (Zurich, Switzerland)

PS1-14 ACCURACY COMPARISON TESTS ON ORTHO-RECTIFIED HIGH RESOLUTION SATELLITE IMAGES
Ioannidis C.*, Katsigiannis A (Athens, Greece)

PS1-15 FIRST ASSESSMENTS OF PLEIADES SYSTEM POTENTIAL FOR IGN-FRANCE IMAGE ACQUISITION REQUIREMENTS
Cantou JPC.*, Buissart HB (Ramonville, Creil, France)

PS1-16 ACCURACY ANALYSIS ON LARGE BLOCKS OF HIGH RESOLUTION IMAGES
Passini R.*, Jacobsen K (Mt Laurel, Hannover, USA, Germany)

14:15 - 15:30

Poster Session 2 - WGs I/1, I/2, I/6

PS2-17 ACTIVITIES OF CALIBRATION AND VALIDATION FOR THE KOMPSAT-2 MSC DATA
Lee DH.*, Seo DC, Song JH, Park SY, Lim HS (Daejeon, Republic of Korea)
PS2-18 GEOMETRIC CALIBRATION OF PLEIADES LOCATION MODEL
Greslou D.*, De Lussy F (Toulouse, France)

PS2-19 ON-ORBIT MODULATION TRANSFER FUNCTION ESTIMATION USING GROUND TARGETS
Benbouzid A.*, Rachedi A, Laidi K (Oran, Algeria)

PS2-20 RADIOMETRIC NORMALIZATION OF A TIME SERIES OF SPOT 4 AND SPOT 5 IMAGES (BD ISLE-REUNION) FOR APPLICATION IN AGRICULTURE.
Houlès V.*, El Hajj M, Bégued A (Montpellier, France)

PS2-21 CALIBRATIONS OF FORMOSAT-2 SATELLITE
Chang LH.*, Cheng HH, Liu SJ, Wu SC (Hsinchu, Taiwan)

PS2-22 JASON-1 AND TOPEX/POSEIDON ALTIMETER CALIBRATION CAMPAIGNS IN THE WESTERN MEDITERRANEAN
Martinez-Benjamin JJ.*, Martinez-Garcia M, Martin Davila J, Garate J, Talaya J, Ortiz MA, Baron A, Bonnefond P (Barcelona, San Fernando, Grasse, Spain, France)

PS2-24 ASSESSMENT AND COMPARISON OF REGISTRATION ALGORITHMS BETWEEN AERIAL IMAGES AND LASER POINT CLOUDS
Pothou A.*, Karamitsos S, Georgopoulos A, Kotsis I (Athens, Greece)

PS2-25 MATCHING TOPOGRAPHIC SURFACES BY RETRIEVING AND MODELING 3D DISCREPANCIES. APPLICATION TO LIDAR DATA AND PHOTOGRAMMETRIC SURFACES.
Bretar F.* (Saint Mandé, France)

PS2-27 EVALUATION OF THE POTENTIAL OF SAR ERS AND ASAR ENVISAT SENSORS IN MULTI-INCIDENCE AND MULTI-POLARISATION MODES FOR LANDSCAPE STUDY IN FRENCH GUYANA: EXAMPLES OF KOOUROU AND SAINT LAURENT DU MARONI
Kouame JL.*, Frison PL, Mascret A, Rudant JP (Champs-Sur-Marne, France)

PS2-28 PERFORMANCE ANALYSIS OF ALTM3100EA SYSTEM: INSTRUMENT SPECIFICATIONS AND ACCURACY OF LIDAR DATA
Usyshkin V.*, Smith B (Toronto, Canada)

PS2-29 LIDAR FOR CITY MODELS – EXPERIMENT OF LAS VEGAS STRIP
Wu Sc.* (Las Vegas, USA)

PS2-31 AGRICULTURAL SOIL MONITORING USING GROUND-BASED RADAR SENSOR: THE GESPAS IN-FIELD EXPERIMENT

PS2-32 APPLICATION OF REMOTE SENSING WITH ALSAT-1 DATA IN SURVEY OF FOREST FIRES AND IT S IMPACT IN FOREST ECOSYSTEM IN THE NORTH OF ALGERIA
Zegrar Z.A.* (Arzew, Algeria)

PS2-33 DEEP PROCESSING AND APPLICATION FOR DMC+4 SMALL SATELLITE
Yang X.*, Wang C, Lan R (Beijing, Zhengzhou, China)
16:00 - 17:30

T7 - DEM Generation - WG I/5

Chair: Peter Reinartz (Germany)
Co-Chair: Gûrcan Buyuksalih (Turkey)

T07-28 COMPARISON OF DSM GENERATION METHODS OF URBAN AREAS FROM IKONOS IMAGES
Krauss T.*, Lehner M, Reinartz P (Wessling, Germany)

T07-29 COMPARISON OF DEM GENERATION AND COMBINATION METHODS USING HIGH RESOLUTION OPTICAL STEREO IMAGERY AND INTERFEROMETRIC SAR DATA
Hoja D.*, Reinartz P, Schroeder M (Weßling, Germany)

T07-30 GENERATION AND VALIDATION OF DIGITAL ELEVATION MODELS BASED ON SATELLITE IMAGES
Buyuksalih G.*, Jacobsen K (Zonguldak, Hannover, Turkey, Germany)

T07-31 EVALUATION OF THE POTENTIAL OF PLEAIDES SYSTEM FOR 3D CITY MODELS PRODUCTION: BUILDING, VEGETATION AND DTM EXTRACTION
Flamanc D.*, Durupt M (Saint-Mandé, France)

T07-32 AUTOMATIC BUILDING 3D-RECONSTRUCTION FROM PLEIADES SIMULATIONS
Lafarge F.*, Descombes X, Zerubia J, Pierrot-Deseilligny M (Sophia Antipolis, Saint Mandé, France)

16:00 - 17:30

T8 - Advancement in Navigation and Mobile Mapping - ICWG I-V

Chair: Ron Li (USA)
Co-Chair: Jurgen Everaerts (Belgium)

T08-33 AUTOMATION OF GROUND IMAGE BASED MARS ROVER LOCALIZATION
Li R.*, Di K, Agarwal S, Wang J, Matthies L, Howard A (Columbus, Oh, Pasadena, Ca, USA)

T08-34 AUTONOMOUS IMAGE BASED LOCALISATION FOR A MARTIAN AEROBOT

T08-35 APPLICATIONS OF PHOTOGRAMMETRIC PROCESSING USING AN AUTONOMOUS MODEL HELICOPTER
Eisenbeiss H.* (Zurich, Switzerland)
T08-36  MOBILE MAPPING AND AUTONOMOUS VEHICLE NAVIGATION
Toth C.*, Paska E (Columbus, USA)

T08-37  PROJECT FOR AN AUTONOMOUS MODEL HELICOPTER NAVIGATION SYSTEM
Guarnieri A, Pirotti F, Pontin M, Vettore A.* (Padova, Italy)

Thursday 6 May

08:30 - 10:00

T9 - New Spaceborne and Airborne SAR Techniques - WG I/2

Chair: Charles Toth (USA)
Co-Chair: Frederic Bretar (France)

T09-38  EXTREME PRECISION LIDAR MAPPING
Toth C.*, Grejner-Brzezinska D, Bevis M (Columbus, USA)

T09-39  INTEREST OF FULLY POLARIMETRIC SAR DATA FOR CLASSIFICATION AND LAND USE CARTOGRAPHY
Lardeux C.*, Frison Pl, Rudant Jp, Souyris Jc, Tison C, Stoll B (Champ Sur Marne, Toulouse, France)

T09-40  A THREE DIMENSIONAL DOMINANT SCATTERER MAP EXTENDS THE DEM INFORMATION IN URBAN AREAS
Adam N.*, Eineder M (Oberpfaffenhofen, Germany)

T09-41  FIRST DATA ACQUISITION AND PROCESSING CONCEPTS FOR THE TANDEM-X MISSION
Eineder M.*, Krieger G, Roth A (Oberpfaffenhofen, Germany)

10:30 - 12:00

T10 - Integrated Systems for Mobile Mapping - ICWG V-I

Chair: Naser El-Sheimy (Canada)
Co-Chair: Joe Hutton (Canada)

T10-42  OPEN-SOURCE SOFTWARE-OPERATED CMOS CAMERA FOR REAL-TIME MAPPING
Gontran H.*, Skaloud J, Janvier N (Lausanne, Le Mans, Switzerland, France)

T10-43  AN INTEGRATED ON-BOARD LASER RANGE SENSING SYSTEM FOR ON-THE-WAY CITY AND ROAD MODELLING

T10-44  BRIDGING LAND-BASED MOBILE MAPPING USING PHOTOGRAMMETRIC ADJUSTMENTS
Hassan T.*, Ellum C, El-Sheimy N (Alberta, Canada)
T10-45  HIGH QUALITY GEOREFERENCING OF GROUND-BASED MOBILE MAPPING SYSTEMS IN URBAN AREAS: USING 3D AERIAL-EXTRACTED ROADMARKS AS GROUND CONTROL OBJECTS
Paparoditis N.*, Tournaire O, Soheilian B (Saint-Mandé, France)

T10-46  THE DSS 322 AIRBORNE MAPPING SYSTEM: A VERSATILE FUSION OF DIGITAL PHOTOGRAMMETRIC SENSING WITH DIRECT GEOREFERENCING
Mostafa M.*, Ip A, Hutton J (Richmond Hill, Ontario, Canada)

12:00 - 13:15

Poster Session 3 - WG I/4, ICWGs I-V, V-I

PS3-34  GEOMETRIC VALIDATION OF IMAGERY AND PRODUCTS FROM A HIGH PERFORMANCE AIRBORNE DIGITAL SENSOR

PS3-35  INVESTIGATION OF DIGITAL COLOUR IMAGES
Ziemann H, Grohmann D.* (Dessau, Germany)

PS3-36  EVALUATION OF DIGITAL PHOTOGRAMMETRY IN AN OPERATIONAL MAPPING ENVIRONMENT

PS3-37  A COMPARATIVE STUDY OF THREE METHODS FOR IDENTIFYING INDIVIDUAL TREE CROWNS IN AERIAL IMAGES COVERING DIFFERENT TYPES OF FORESTS.
Eriksson M.*, Perrin G, Descombes X, Zerubia J (Sophia Antipolis, France)

PS3-38  SEAMLESS AUTOMATIC MOSAICKING TAKING INTO ACCOUNT INFRASTRUCTURES AND BUILDINGS
Xandri R.*, Pérez F, Palà V, Arbiol R (Barcelona, Spain)

PS3-39  IN-FLIGHT TESTING OF RESOLVING POWER AND MTF OF DMC
Honkavaara E, Jaakkola J.*, Markelin L, Becker S (Masala, Stuttgart, Finland, Germany)

PS3-40  THE POTENTIALITIES OF AIRBORNE DIGITAL SENSOR ADS40 FOR THE DOCUMENTATION AND REPRESENTATION OF ARCHAEOLOGICAL SITES
D'amelio S, Emmolo D.*, Orlando P (Palermo, Italy)

PS3-41  ON THE EMPIRICAL PERFORMANCE OF THE DMC
Alamus R.*, Kornus W, Talaya J (Barcelona, Spain)

PS3-42  CALIBRATION AND FIELD EXPERIENCE WITH THE DIGITAL LARGE FORMAT AERIAL CAMERA ULTRACAMD
Gruber M.*, Ladstadtter R (Graz, Austria)

PS3-44  BUNDLE BLOCK ADJUSTMENT WITH ULTRACAMD IMAGES
Buyuksalih G.*, Jacobsen K (Zonguldak, Hannover, Turkey, Germany)
PS3-45  IS THERE AN IDEAL DIGITAL AERIAL CAMERA?  
Souchon JP.* (Saint Mande, France)

PS3-46  A NEW RADAR SENSOR FOR MOBILE ROBOT LOCALIZATION AND MAPPING IN EXTENSIVE OUTDOOR ENVIRONMENT. FIRST RESULTS  
Rouveure R.*, Faure P, Monod Mo (Aubièvre, France)

PS3-50  APPLICATION OF MOBILE GIS AND SDI FOR EMERGENCY MANAGEMENT  
Mobaraki A.*, Mansourian A, Malek M, Mohammadi H (Tehran, Melbourne, Iran, Australia)

PS3-51  THE POTENTIAL OF LOW-END IMUS FOR MOBILE MAPPING SYSTEMS  
Barsi BA.*, Lovas LT (Budapest, Hungary)

PS3-52  AUTOMATING ROAD FEATURE EXTRACTION PROCEDURE  
Xin Y.* (Richmond Hill, Canada)

14:30 - 16:00

T11 - Standards, Calibration and Validation - WG I/1

Chair: Roland Gachet (France)  
Co-Chair: Veljko Jovanovic (USA)

T11-47  REQUIREMENTS FOR AN ORIENTATION AND CALIBRATION STANDARD FOR DIGITAL AERIAL CAMERAS AND RELATED SENSORS  
Kresse W.* (Neubrandenburg, Germany)

T11-48  PERMANENT VALIDATION OF THE GEOMETRIC CALIBRATION AS COMPLEMENT TO MISR DATA PRODUCTION SYSTEM  
Jovanovic V.*, Mathews J, Nelson D (Pasadena, USA)

T11-49  ABSOLUTE SPECTRORADIOMETRIC CALIBRATION OF THE ADS40 SENSOR  
Beisl U..* (Heerbrugg, Switzerland)

T11-50  THE GEOMETRIC SUPERSITE OF SALON DE PROVENCE  
Delvit JM.*, Fave P, Gachet R (Toulouse, France)
The symposium: "From Sensors to Imagery" has been organised by the Technical Commission I of the International Society for Photogrammetry and Remote Sensing (ISPRS) and the Societe Fran9aise de Photogrammetrie et de Teledetection (French Society for Photogrammetry and Remote Sensing - SFPT) from July 4 to July 6, 2006 at Marne-la-Vallee, near Paris, France, in the premises of the Ecole Nationale des Sciences Geographiques (the French National School of Geographical Sciences - ENSG).

More than 200 participants from 30 countries have presented their works, discussed new ideas and exchanged experiences on Image Data Acquisition, Sensors and Platforms during the eleven oral sessions and the three poster sessions organized by the seven Working Groups of the Commission and its two Inter commission Working Groups shared with Technical Commission V.

Beyond the scientific and technical results the necessity of mastering data acquisition, acquired from space, from aircraft or from ground has been confirmed and emphasized. This challenge is still - and maybe more and more present - to obtain the images of our planet enabling a better knowledge, management and protection of its resources and environment.

The Proceedings of the Symposium have been electronically published and distributed to all participants. This version is a printed copy of the CR ROM split in two parts. Part A contains all full papers accepted by the Scientific Committee after a peer review. Part B contains all other full papers, whose authors have not asked to be peer reviewed or not accepted to be put in Part A after the peer review.

We would like to thank the members of the Organising Committee, from SFPT, CNES and IGN for having set up the conditions to promote the exchanges between the symposium participants not only from a professional point of view but also from a social and human one. Thanks should also be delivered to the members of the Scientific Committee for the review of the abstracts and full papers, and for the work done in their Working Groups until the last Istanbul Congress in July 2004. This work should continue until the next Beijing Congress in July 2008 where new results of Commission I activities will be presented and published in the ISPRS Archives.

Alain Baudoin

Nicolas Paparoditis