SASAR VHF SAR Interferometry: Early Results ................................................. 411
A.J. Wilkinson, Jasper M. Horrell, Michael R. Inggs, Dept. Electrical Engineering,
University of Cape Town, South Africa

P-Band Interference Study Using Information From the New ESAR Listen
Only Channel Mode of Operation ................................................................. 415
Athanasios Potsis, National Technical University of Athens, Greece, Stefan Buckreuss, Ralf Horn,
DLR - Institut für Hochfrequenztechnik und Radarsysteme, Germany, N. Ouzunoglu,
National Technical University Of Athens, Greece

Quantitative Characteristics of 2d Adaptive Compensation for the DESTRUCTIVE
Influence of the Ionosphere on the Resolution of a VHF Space-Borne SAR .......... 419
V. Shteinshleiger, A. Dzenkevich, V. Manakov, L. Melnikov, G. Misezhnikov,
Moscow Scientific Research Institute for Instrument Engineering, Russia

VHF Antenna Arrays for Airborne SAR's ....................................................... 423
I. Porokhov, G. Koshevarov, L. Melnikov, V. Plyuschev, Moscow Scientific Research Institute
of Instrument Engineering, Russia

Session P-4   SAR Processing and Geocoding
(Poster Session, Wednesday Afternoon)

Approach to the SAR Stereo Data Processing Based on the Matching
of Multiangle Set. ......................................................................................... 427
Igor V. Elizavetin, NPO Mashinostroenia, ALMAZ Center, Russia

Optimal SAR/ISAR Data Selection for Ship Imaging ....................................... 431
Anthony Damini, George E. Haslam, Aerospace Radar and Navigation Defence Research
Establishment Ottawa, Canada

2D Data Extrapolation In SAR Imaging Using 2-D Orthogonal Lattice FILTERS .... 435
I. Erer, M. Kartal, Istanbul Technical University, Electrical & Electronics Engineering Faculty,
Turkey

Application and Characteristics of High Resolution Estimation Techniques for Range
Compression In SAR Systems ....................................................................... 439
Andreas Löhner, DaimlerChrysler Aerospace AG, Defense and Civil Systems, Germany

Interferometric Phase Corrections During Squinted-Data Geocoding .................... 443
Marc Bara, J. Andreu, Dept. Of Signal Theory and Communications, Polytechnic University
of Catalonia, Spain, Rolf Scheiber, Alberto Moreira, DLR – Institut für Hochfrequenztechnik
und Radarsysteme, Germany, Antoni Broquetas Ibars, University of Barcelona, Spain

A New Contrast Based Autofocusing Technique for High Resolution Imaging
of Rotating Targets ......................................................................................... 445
Debora Pastina, Dept. INFOCOM, University of Rome La Sapienza, Italy,
Darren Coe, Richard White, DERA Malvern, UK

High Squint Angle Processing of E-SAR Stripmap Data ..................................... 449
Wen Hong, Dept. of E. E., Beijing Univ. of Aeronautics & Astronautics China, Josef Mittermayer,
Alberto Moreira, DLR – Institut für Hochfrequenztechnik und Radarsysteme, Germany
Session P-5  SAR System Analysis, Simulation and Calibration
(Poster Session, Wednesday Afternoon)

Correction of Equipment Distortions in Data From Ekor-A1 SAR on „Almaz-1“ Satellite .................................................. 453
L. B. Neronskii, G. Koshevarov, L. Melnikov, S. G. Likhansky, Moscow Scientific Research Institute of Instrument Engineering, Russia

Radar Computer Simulator Optimised for SAR Work ........................................... 457
Michael R. Inggs, Dept. Electrical Engineering, University of Cape Town, South Africa

Model of Radar Imaging Process by Synthetic Aperture Based On Noninvariant Under Shift Spread Function .............................................. 461
I. Prudyus, Markian Sumyk, Andriy Synyavskyy, Volodymyr Ostap, State University „Lvivska Polytechnika“, Radio Engineering Faculty, Ukraine

Tropospheric Propagation Effects In SAR Measurements ................................ 465
Madhu Chandra, David Hounam, DLR – Institut für Hochfrequenztechnik und Radarsysteme, Germany

Fundamental Limitations for the Resolution of SAR Sensors ................................. 467
Christian Fischer, University Karlsruhe, Germany, Joachim Fortuny, Space Applications Institute, Joint Research Center, SAI, Italy, Werner Wiesbeck, Universität Karlsruhe, Institut für Hochfrequenztechnik, Germany

A SAR Imaging and Enhancement Method Using Optimization Procedure ........ 471
S. Kargin, Air Force Academy, Dept. Of Electronic Engineering, Turkey, M. Kartal, Sedef Kent, Istanbul Technical University, Electrical&Electronics Engineering Faculty, Turkey

Computer Simulation of ISAR Images of Pec Models of Complicated Objects ............ 475
Nickolai Zh. Kolev, Department of Radar & Acoustic Engineering, Higher Naval School, Bulgaria

Synthetic Generation of SAR Raw Data for Complex Scenes ................................. 479
Sune R.J. Axelsson, Saab Dynamics AB and the National Defence Research Establishment, Sweden

Session P-6  SAR Interferometry
(Poster Session, Wednesday Afternoon)

Application of Lüke-Schotten-Codes to SAR Interferometry ................................. 483
Gerd Krämer, FGAN-FHR, Germany

Phase to Height Conversion Methods for the Airborne Interferometric Repeat-Pass Case .......................................................... 487
Andreas Ulbricht, Rolf Scheiber, DLR – Institut für Hochfrequenztechnik und Radarsysteme, Germany

Repeat-Pass Airborne SAR Interferometry .......................................................... 489
Hubert Cantalloube, Carole Nahum, ONERA, France

INSAR Block Parameter Adjustment .................................................................... 493
Hannes Raggam, Karlheinz Gutjahr, Institute for Digital Image Processing, Joanneum Research, Austria

19
Registration of Ascending-Descending SAR Images for the SRTM Mission
Sorel Stan, Walter Knöpfle, Dominic Scales, DLR, DFD, Germany

The Topology of SAR Imagery in Rough Topography
David Small, Stefan Bieger, Daniel Nüesch, Universität Zürich, Remote Sensing Laboratories, Switzerland

3D Extraction From Interferometric High Resolution SAR Images USING THE Ramses Sensor
X. Dupuis, J. Dupas, Helene Oriot, ONERA, France

Session P-7 Phase Unwrapping and DEM Validation
(Poster Session, Wednesday Afternoon)

On the Use of FFT for Phase Unwrapping of Interferogram With Poor Quality
Alexander I. Zakharov, Pavel V. Tugarinov, Institute of Radioengineering & Electronics RAS, Russia

Residue Probability InSAR Interferograms
Xiang Maosheng, Guo Jingping, Chinese Academy of Sciences, China

Interferometric Airborne SAR Observation for Evaluating X-SAR/SRTM
Seiho Uratsuka, Communications Research Laboratory, Japan

An Implementation and Characterisation of the Minimum Cost Flow Phase Unwrapping Algorithm
C. Van Dyk, A. J. Wilkinson, Michael R. Inggs, Dept. Electrical Engineering, University of Cape Town, South Africa

Assessment of the Impact of Polarimetric Coherence Optimisation on Phase Unwrapping
Giovanni Nico, Space Applications Institute, Joint Research Centre, SAI, Italy,
Juan M. López-Sánchez, Universidad de Alicante, Spain, Dario Tarchi, D. Leva, Alois Sieber,
Space Applications Institute, Joint Research Center, SAI, Italy

Session P-8 Polarimetry
(Poster Session, Wednesday Afternoon)

Wide-Band Polarimetric SAR Interferometry for Buried Mine Detection
Lluis Sagues, U.P.C., Spain, Juan M. López-Sánchez, Universidad de Alicante, Spain,
Joachim Fortuny, Space Applications Institute, Joint Research Center, SAI, Italy,
Xavier Fàbregas, Universitat Politècnica de Catalunya UPC, Spain, Antoni Broquetas Ibars,
University of Barcelona, Spain,
Alois Sieber, Space Applications Institute, Joint Research Center, SAI, Italy

Vectorial Generalization of Target Helicity
D. Bebbington, University of Essex, UK, Ernst Krogager, M. Hellmann, DDRE, DK

Estimation of the Targets Backscattering Matrix and 1st Utilization in Order to Increase the SAR Information Capatibility
Vályer A. Khlusov, German S. Sharygin, V. Ju. Lebedev, Tomsk State University of Control Systems & Radioelectronics, Russia
Spaceborne Two-Dimensional Synthetic Aperture Microwave Polarimetric Interferometer for the Global Monitoring of the Earth Atmosphere and Sea Surface

G. Zagorin, Boris Kutuza, Russian Academy of Sciences, Russia, Achim Hornbostel, Arno Schroth, DLR, Germany

Using of Dual-Polarization Radar for Studying the Meteorological Objects and Detection of Dangerous Meteorological Phenomena

Arcady B. Shupiatsky, Central Aerological Observatory, Russia

Session P-9 MTI
(Poster Session, Wednesday Afternoon)

A Review of Moving Target Detection and Imaging by Airborne Synthetic Aperture Radar

HongBo Sun, Hong Gu, WeiMin Su, GuoSui Liu, Research Center of Electronic Engineering Technology, Nanjing University of Science & Technology, China

Performance Analysis of Several Clutter Cancellation Techniques by Multi-Channel SAR

HongBo Sun, WeiMin Su, Hong Gu, GuoSui Liu, JinLin Ni, Research Center of Electronic Engineering Technology, Nanjing University of Science & Technology, China

Imaging of Moving Targets Using Squint Mode SAR

Sri Ranga Rao Makanaboyina, DaimlerChrysler Research Centre India (pvt) Ltd, India, Pravas R. Mahapatra, Indian Institute of Science, India

Detection, Location and Imaging of Fast Moving Targets Using Multiple-Frequency Antenna Array SAR (Mf-SAR)

Genyuan Wang, Xiang-Gen Xia, University of Delaware, Dept. Of Electrical and Computer Engineering, USA, V. C. Chen, R.L. Fiedler, Naval Research Laboratory, USA

Optimal Detection and Imaging of Moving Objects With Unknown Velocity

Paulo A. C. Marques, Instituto Superior de Engenharia de Lisboa, Departamento de Engenharia Electrotécnica e das Com., Portugal, José M. B. Dias, Instituto Superior Técnico, Instituto de Telecomunicacoes, Portugal

Ship Shape Analysis of Airborne SAR Image

Jinsong Chong, Pei Wang, Hongqi Wang, Institute of Electronics, Chinese Academy of Science, China

Session P-10 Real Time SAR Processing and Data Compression
(Poster Session, Wednesday Afternoon)

Kronecker Products Algorithms for On Board SAR Image Formation

Domingo Rodriguez, Computational Signal Processing Group, Electrical and Computer Engineering Department, Puerto Rico

SARCM-2000: A Thomson-CSF Detexis Software Workshop for SAR Processing Portability and Scalability

Eric Normant, Damien Jugie, THOMSON-CSF DETEXIS, France
Processing Element for a Scalable On-Board SAR Processor Architecture .......................... 575
Laurens Bierens, doubleBW, Netherlands, Tim Pike, T. Helfers, Martin Süß,
Dornier Satellitensysteme GmbH, Germany

Parallelism Exploitation In SAR Data Compression Methods ................................. 579
Beatriz Botero, Nourredine Hifdi, ONERA - CERT, Computer Science Department, France

Impact of New Microprocessors and Dram Memories on Real-Time Airborne SAR Image Formation .......................... 583
Thomas H. Einstein, Mercury Computer Systems, USA

Multipstage Parallel Algorithm for Real-Time SAR Imagery ................................. 587
M. Kartal, Sedef Kent, B. Yazgan, Istanbul Technical University, Electrical&Electronics Engineering Faculty, Turkey

Session P-11 Feature Extraction and Post-Processing
(Poster Session, Wednesday Afternoon)

Iteration Restoration Methods With Nonlinear Constraints Usage at the SAR Imaging .......................... 591
Ivan Prudyus, Andriy Synyavskyy, Leonid Lazko, State University „Lvivska Polytechnika“, Radio Engineering Faculty, Ukraine

Target Features Extraction In SAR/ISAR Images: High Resolution Bright Points Extraction and Wide Angle Tracking Techniques .......................... 595
Luc Vignaud, Office National d'Etudes et de Recherches Aerospatiales (ONERA), France

Target Identification of High Range Resolution Radar Based on Discretized Bayesian Classifier .......................... 599
D. Zhou, P. R. China

The Harmonic Branch of the Multiplicative Model: Properties and Applications .......................... 603
Hans-Jürgen Müller, DLR - Institut für Hochfrequenztechnik und Radarsysteme, Germany,
Alejandro C. Frery, UFPE-DI, Brazil, Julio Jacobo-Berlles, Marta Mejail, UBA-DC, Ciudad Universitaria,
Argentina, Joao R. Moreira, Aero-Sensing Radarsystems GmbH, c/o DLR Oberpaffenhofen, Germany

Synthetic Aperture Radar (SAR) Data and Fourier Grain Size and Shape Image Analysis Characterization of Eolian Sand Dynamics Over the Kuwaiti Desert .......................... 607
A. Ibrahim, H. K. AI-JasSAR, Physics Department Kuwait University, Kuwait

SAR Image Restoration by a Thin and Weak Feature Preserving Simulated Annealing Approach .......................... 611
Zuomin Ma, Faculty 203, China → Paper Not Available

A Multi-Constituent and Multi-Layer Model for Coherent Backscattering of Forested Areas .......................... 613
C. Ruiz, P. Borderies, ONERA/CERT/DEMR, France, I. Chênerie, ADE2M Université Paul Sabatier,
France, E. Mougin, C. Proisy, Centre D'Etudes Spatiales De La Biosphère, France

Radar Cross-View for Road Detection in Dense Urban Areas ................................. 617
Florence Tupin, Ecole Nationale Superieure des Telecommunications, France
Session P-12 Image Classification and Value Adding
(Poster Session, Wednesday Afternoon)

Can Spaceborne SARs Measure Oil Spill Characteristics: An Overview
Andrei Yu Ivanov, Sergey V. Pereslegin, Institute of Oceanology, Russian Academy of Sciences, Russia

An Experimental System for IR and SAR Image Exploitation
Helmut Maier-Herburger, Dieter Baschnagel, Achim Bodeit, Werner Drescher, Manfred Kling, Dieter Menges, R. Neu, Jacqueline Werner, DaimlerChrysler Aerospace, Dornier GmbH, Germany

Signal to Noise Ratio in the SAR Ocean Image at the Detection of Slight Intensive Internal Waves
M. B. Kanevsky, Russian Academy of Sciences, Institute of Applied Physics, Russia

Possibility of Forest SAR Image Using for the Estimate of the Ecological Situation
A.A. Kalinkevitch, Boris Kutuza, Russian Academy of Sciences, Institute of Radio Engineering and Electronics, Russia

Signature Prediction to Support Model-Based Target Recognition In Synthetic Aperture Radar
Eric R. Keydel, Wayne Williams, Russell Sieron, Justin Wojdacki, James Spencer, Richard Freeling, ERIM International, USA

A Comparison Between Optical and Radar Satellite Images in Detecting Burnt Tropical Forest in South Sumatra, Indonesia
Heri Sunuprapto, Yousif Ali Hussin, The International Institute of Aerospace Survey and Earth Sciences, Netherlands

An Analytic Formation of Multidimensional Boundary Conditions for Solutions of Wave Equations Described the Interaction With Matter In SAR
Volodymyr Volosyuk, Kharkov Aviation Institute, Dept. 501, Ukraine

Urban Aereas Classification With SAR and InSAR Signatures
Maurizio Santoro, Dept. of Radio & Space Science, Chalmers University of Technology, Sweden, A. Fanelli, University of Naples, Italy, J. Askne Santoro, Dept. of Radio & Space Science, Chalmers University of Technology, Sweden, P. Murino, University of Naples, Italy

Session P-13 Data Fusion
(Poster Session, Wednesday Afternoon)

Multi-Data Fusion for Forest Ressource Management
Muhammed K. Musa, Yousif Ali Hussin, The International Institute of Aerospace Survey and Earth Sciences, Netherlands

Fusion of SAR/InSAR Data and Optical Imagery for Land Use Classification
Olaf Hellwich, Manfred Günzl, Christian Wiedemann, TU-München, Chair for Photogrammetry and Remote Sensing, Germany

Ers SAR and Noaa Avhrr Applications to Study Lake Baikal Surface Features
Sergei V. Semovski, Simnological Institute SB RAS, Russia, Yu Mogilev, Institute of Solar-Terrestrial Physics SB RAS, Russia, W. Alpers, Corinna Schrum, Institut für Meereskunde, University of Hamburg, Germany
Advantages of Synchronous Multi-Spectral SAR and Microwave Radiometric Observations of Land Covers From Aircraft Platforms ................................................. 663
Boris Kutuza, Russian Academy of Sciences, Russia, A. Shutko, Institute of Radioengineering & Electronics, Russia, V.A. Plushchov, VEGA-M Corp., Russia, E. Ramsey, National Wetlands Research Center, USA, B. Logan, S. DeLoach, Earth Data Technologies, USA, A. Haldin, E. Novichikhin, Russian Academy of Sciences, Russia, I. Sidorov, V. Manakov, Moscow Scientific Research Institute for Instrument Engineering, Russia, G. Nelson, National Wetlands Research Center, USA

Analysis of Multi Temporal and Polarization Images of Jers and Sir-C SAR for Aim of Determination of Forest Parameters ......................................................... 667
Alexander S. Shmalenyuk, Institute of Radioengineering and Electronics of Russian Academy of Sciences, Russia, Neon A. Armand, Institute of Radio Engineering and Electronics, Russia

Session P-14  New Applications and Products
(Poster Session, Wednesday Afternoon)

Infoterra Business Model and Prospects ............................................................... 669
David J. Q. Carter, Matra Marconi Space UK, UK, Jörg Herrmann, Dornier Satellitensysteeme GmbH, Germany

Small Target Detection InSAR Imagery Using An SVD Transform .......................... 671
Jingxin Zhang, Jim Schroeder, Tristom Cooke, Cooperative Research Center for Sensor Signal & Information Processing, Australia, Nicholas J. Reddings, Defence Science & Technology Organization, Australia

SAR Product Control Software (SARCON) .......................................................... 675
Thomas Börner, Madhu Chandra, D. Geudtner, David Hounam, Manfred Zink, Birgit Schättler, Marco Schwerdt, DLR - Institut für Hochfrequenztechnik und Radarsysteme, Germany, A. J. Rye, Peter Meadows, Marconi Research Centre, UK, Ralph Cordey, Marconi Electronics Systems, Marconi Technology Centres, UK, P. Mancini, ESA, France, B. Rosich Tell, Daniel Esteban, ESA/ESRIN, Italy

Estimation of Watershed Soil Moisture Index From Ers/SAR Data .......................... 679
S. Le Hegarat-Mascle, F. Alem, A. Quesney, CEPT/CNRS, France, M. Normand, C. Loumagne, CEMAG REF/Hydrology, France

Session S-1  Feature Extraction and Classification
(Thursday Morning, 8:40)

State-Of-The-Art of SAR Automatic Target Detection/Recognition .......................... 683
Leslie Novak, MIT Lincoln Laboratory, USA

Phenomenology-Based and Interferometry-Guided Building Reconstruction From Multiple SAR Images ................................................................. 687
Regine Bolter, Franz Leberl, Technische Universität Graz, Austria

3d Polarimetric SAR Measurements of a Wheat Canopy ................................ .... 691
Enhancement of Interferometric DEMS by Spatially Adaptive Model-Based Filtering of Non-Stationary Noise
Marc Walessa, Mihai Datcu, DLR, DFD, Germany

A Fuzzy Edge Detector (FED) for SAR Images
Alexandros Dimou, National Technical University of Athens, Greece, Gunther Jäger, Ursula Benz, DLR – Institut für Hochfrequenztechnik und Radarsysteme, Germany, Vassilios Makios, University of Patras, Electrical Engineering & Computer Technology Department, Greece

Using Wavelet Methods for Coastline-Extraction From SAR-Images
Andreas Niedermeier, TU München, Germany, Edzard Romaneßen, Susanne Lehner, DLR, DFD, Germany

Influence of Roughness Profile Length On the Comparison Between SAR Data and Estimations From Backscattering Physical Models (IEM, GOM)
Nicolas Baghdadi, BRGM, France, P. Paillou, Observatoire de Borbeaux, France, M. Davidson, CESBIO, France, G. Grandjean, BRGM, France P. Dubois, DGA/CEGN, France

Global Measurements of Wind Using Complex Synthetic Aperture Radar images
Susanne Lehner, Johannes Schulz-Stellenfleth, Birgit Schättler, DLR, DFD, Germany Jochen Horstmann, GKSS Research Center, Germany

Detection of Power Lines by Milimeterwave SAR
Helmut Essen, S. Boehmsdorff, G. Biegel, H. Schimpf, FGAN-FHR, Germany

Session S-2 ScanSAR and Spotlight SAR Processing
(Thursday Morning, 8:40)

Processing Techniques for Repeat-Pass ScanSAR Interferometry
Richard Bamler, Jürgen Holzner, DLR, DFD, Germany

ScanSAR Interferometry for SRTM: First Results and Algorithm Comparisons from the Prototype Global Topo
P. A. Rosen, S. Hensley, Jet Propulsion Laboratory, California Institute of Technology, USA

Visibility of Permanent Scatterers by ScanSAR
A. Monti Guarnieri, A. Ferretti, Dipartimento di Elettronica e Informazione - Politecnico di Milano, Italy

COTS SAR Ground Data Processing for PalSAR Application
Heinrich Frick, Marzban Palsetia, Richard E. Carande, John Curlander, Vexcel Corporation, USA

Data Processing of An Innovative Forward Looking SAR System for Enhanced Vision
Josef Mittermayer, Michael Wendler, G. Krieger, Alberto Moreira, Thomas Sutor, Stefan Buckreuss, DLR – Institut für Hochfrequenztechnik und Radarsysteme, Germany

Comparison of Stripmap and Spotlight Interferometric SAR Processing Using E-SAR Raw Data
Josef Mittermayer, Alberto Moreira, DLR – Institut für Hochfrequenztechnik und Radarsysteme, Germany, Otmar Loffeld, Universität Gesamthochschule Siegen, Germany
Time-Domain Pre-Processing for Spotlight SAR Data Focusing Via Conventional Stripmap Techniques .................................................. 741
G. Fonaro, Riccardo Lanari, E. Sansosti, M. Tesauro, Consiglio Nazionale delle Ricerche, IRECE, Italy, Simone Zoffoli, Agenzia Spaziale Italiana, Italy

Performances of Hybrid Strip-Map/Spotlight Spaceborne SAR Processing .......................... 745
Stephane Henrion, L. Savy, J.-G. Planes, Alcatel Space Industries, France

Extended Chirp Scaling SAR Data Processing in Stripmap, ScanSAR and Spotlight Imaging Modes ........................................... 749
Alberto Moreira, Josef Mittermayer, Rolf Scheiber, DLR - Institut für Hochfrequenztechnik und Radarsysteme, Germany

Synthetic Aperture Processing Using Fast Factorised Backprojection .................................. 753
Lars Ulander, Hans Hellsten, Gunnar Stenström, Swedish Defence Research Establishment (FOA), Sweden

Session S-3 Polarimetric SAR Interferometry and Applications
(Thursday Morning, 8:40)

Quantitative Comparison of Classification Capability: Fully-Polarimetric Versus Partially Polarimetric SAR .................................................. 757
J.S. Lee, M.R. Grunes, T.L. Ainsworth, Naval Research Laboratory, USA, Eric Pottier, Université de Rennes, France, Ernst Krogager, DDRE, DK, W.-M. Boerner, UIC-EECS, Communications, Sensing & Navigation Laboratory, USA

Assessment of Partial Polarimetry Versus Full Polarimetry Architectures for Target Analysis .................................................. 761
Patrick Imbo, Centre d'Etudes Spatiales de la BIOrshere - Institt National Polytechnique de Toulouse, France, J.-C. Souyris, Centre d'Etudes Spatiales (CNES), Department Systemes Radar, France

Dual Polarimetric Image Analysis for SAR Data Classification .............................................. 765
Laurent Ferro-Famil, IRESTE, University of Nantes, France, Eric Pottier, Université de Rennes, France

Polarimetric Speckle Reduction: a Comparison Between Spatial Filtering and a New Approach Based on Wavelet Transform ................................................. 769
Carlos Lopez, Xavier Fabregas, Universitat Politècnica de Catalunya UPC, Spain, Eric Pottier, Université de Rennes, France, Lars Empacher, IRESTE, University of Nantes, France

Air/Space-Borne Polarimetric Optical and Radar Imaging in Remote Sensing of Terrestrial and Planetary Covers ............................................ 773
Wolfgang-Martin Boerner, University of Illinois at Chicago EECS-CSN, USA

Mapping of a Finnish Boreal Forest Under Changing Snow Conditions With Airborne Polarimetric Synthetic Aperture Radar .................................. 779
Heiko Balzter, Centre for Ecology & Hydrology, Institute of Terrestrial Ecology, UK, John R. Baker, Remote Sensing Applications Consultants Ltd., UK, Martti Hallikainen, Helsinki University of Technology, Finland, Erkki Tomppo, Finnish Forest Research Institute, Finland

SAR Polarimetric Parameters for Land Use Classification .................................................. 783
Paul Spencer, Vito Alberga, Madhu Chandra, David Hounam, Wolfgang Keydel, DLR-Institut für Hochfrequenztechnik und Radarsysteme, Germany
Crop Height Retrieval By Polarimetric Radar Interferometry: Indoor and Outdoor Results With Ground-Based Systems ................................. 787
Lluis Sagues, U.P.C., Spain, Juan M. Lopez-Sánchez, Universidad de Alicante, Spain, Xavier Fabregas, Universitat Politècnica de Catalunya UPC, Spain, Antoni Broquetas Ibars, University of Barcelona, Spain, Joachim Fortuny, Alois Sieber, Space Applications Institute, Joint Research Center, SAI, Italy

Interpretation of High-Resolution Polarimetric SAR Data Using Detailed Ground Truth Information ......................................................... 791
Ernst Krogager, DDRE, DK, W.-M. Boerner, UIC-EECS, Communications, Sensing & Navigation Laboratory, USA, T.L. Ainsworth, J.S. Lee, Remote Sensing Division, Naval Research Laboratory, USA, James Salvatore Verdi, Naval Air Warfare Center, USA

Session S-1 Airborne and Inverse SAR Systems
(Thursday Afternoon, 13:40)

Compact Forward Looking SAR Using Digital Beamforming on Receive Only ........ 795
Yan Venot, Marwan Younis, Werner Wiesbeck, Universität Karlsruhe
Institut für Hochstfrequenztechnik, Germany

Recent Developments of the Airborne SAR System E-SAR of DLR ...................... 799
Ralf Horn, Alberto Moreira, Stefan Buckreuss, Rolf Scheiber, DLR - Institut für Hochfrequenztechnik und Radarsysteme Germany

Extending the Capabilities of the Pharus System ...................................... 801
M. P. G. Otten, TNO Physics and Electronics Laboratory, Netherlands

Onera Experimental Airborne SAR Facility (Ramses) Core System ................. 805
Jean-Paul Bruyant, Office National d'Études et de Recherches Aerospatiales, Department Electro-Magnetisme et Radar, France

Derivation of Two-Dimensional Images of Targets By Measurement and Prediction .... 809
Dudley Bird, Racal Detence Electronics Lingted, UK

Blurring in Inverse Synthetic Aperture Radar Images of Aircraft Caused by Attitude Changes ......................................................... 813
Trygve Sparr, Svein-Erik Hamran, Erik Korbsbakken, Norwegian Defence Research Establishment, Division for Electronics (FFI/E), Norway

Session S-2 MTI and Change Detection
(Thursday Afternoon, 13:40)

Effect of Bistatic Radar Configurations on Stap .................................... 817
Richard Klemm, FGAN-FHR, Germany

Real-Time Stap as a Key Technology for Subclutter Moving Target Detection ....... 821
Jochen Meyer-Hilberg, Bernhard Bickert, DaimlerChrysler Aerospace AG, Germany
Sostar-X, a High Performance Radar Demonstrator for Airborne Ground Surveillance .......................... 825  
Peter Hoogeboom, D. van Halsema, TNO-FEL, Netherlands, E. Herpfer, F. Martin, Dornier, Germany, P. Fournet, D. Perthus, Thomson-CSF Detexis, France, G. Canafoglia, M. Giunti, FIAR, Italy

Change Detection Techniques Using High Resolution Coherent SAR Data .................. 829  
Douglas G. Corr, Alex Rodrigues, DERA Space Dept., UK

A Maximum Likelihood Approach to the Detection of Changes Between Multitemporal SAR Images .......................... 833  
Pierfrancesco Lombardo, Dept. INFOCOM, University of Rome La Sapienza, Italy, Chris J. Oliver, DERA, UK

Focusing of Moving Targets in an Ultra-Wideband SAR GMTI System ......................... 837  
Mats I. Petterson, National Defence Research Establishment, Dept. of sensor Technology, CARABAS Lab., Sweden

Session S-3 Ultra Wide and Low Frequency SAR 841  
(Thursday Afternoon, 13:40)

3D Imaging for Near-Range Ground-Penetrating Radar Based on w-K Migration ................. 841  
Christian Fischer, University Karlsruhe, Germany, Joachim Fortuny, Space Applications Institute, Joint Research Center, SAI, Italy, Werner Wiesbeck, Universität Karlsruhe
Institut für Höchstfrequenztechnik, Germany

Measurements and Characteristics of Rfi for a Low Bandwidth VHF SAR System .............. 845  
Richard T. Lord, Michael R. Inggs, Dept. Electrical Engineering, University of Cape Town, South Africa

End-To-End Calibration of Polarimetric P-Band Data of DLR Experimental SAR (E-SAR) .................. 849  
Athanasios Potsis, National Technical University of Athens, Greece,  
B. Gabler, Ralf Horn, DLR - Institut für Hochfrequenztechnik und Radarsysteme, Germany, Konstantinos P. Papathanassiou, Applied Electromagnetics, UK, Andreas Reigber, DLR - Institut für Hochfrequenztechnik und Radarsysteme, Germany

SASAR VHF SAR Interferometry: Early Results ..................................... 853  
A.J. Wilkinson, Jasper M. Horrell, Michael R. Inggs, Dept. Electrical Engineering, University of Cape Town, South Africa

P-Band Interference Study Using Information From the New ESAR Listen Only Channel Mode of Operation ..................................... 855  
Athanasios Potsis, National Technical University of Athens, Greece, Stefan Buckreuss, Ralf Horn, DLR - Institut für Hochfrequenztechnik und Radarsysteme, Germany, N. Ouzunoglu, National Technical University Of Athens, Greece

Optimal Processing of Ultra-Wideband Radar Signals ..................................... 857  
Igor J. Immoreev, Moscow State Aviation Institute, Russia

Author Index ..................................... 861