

Prof. Gürcan BÜYÜKSALİH

Personal Information

Office Phone: [+90 +90 212 440 0000](tel:+90+90+212+440+0000)

Fax Phone: [+90 +90 212 526 8433](tel:+90+90+212+526+8433)

Email: gurcanb@istanbul.edu.tr

Web: <https://avesis.istanbul.edu.tr/70650>

Address: Molla Hüsrev Mah. Müşküle Sok. No: 17 34134 Vefa-Fatih/İSTANBUL

International Researcher IDs

ScholarID: [vyS0XeYAAAAJ](https://orcid.org/0000-0002-7127-4602)

ORCID: 0000-0002-7127-4602

Publons / Web Of Science ResearcherID: HGM-5171-2022

ScopusID: 55892620000

Yoksis Researcher ID: 379260

Education Information

Post Doctorate, Eidgenössische Technische Hochschule, ETHZ (The Federal Institute of Technology, Zürich), Institute of Geodesy and Photogrammetry, Switzerland 2005 - 2005

Post Doctorate, Universitaet Hannover, Institute für Photogrammetrie and Geoinformation, Germany 2004 - 2004

Post Doctorate, Universitaet Hannover, Institute für Photogrammetrie and Geoinformation, Germany 2003 - 2003

Post Doctorate, Eidgenössische Technische Hochschule, ETHZ (The Federal Institute of Technology, Zürich), Institute of Geodesy and Photogrammetry, Switzerland 2001 - 2001

Post Doctorate, University of Glasgow, Department of Geography and Topographic Science, England 2000 - 2000

Post Doctorate, Universitaet Hannover, Institute für Photogrammetrie and Geoinformation, Germany 1999 - 1999

Doctorate, University of Glasgow, Faculty of Science, Dept. of Geography and Topographic Science, England 1994 - 1998

Postgraduate, Karadeniz Technical University, Fen Bilimleri Enstitüsü, Turkey 1991 - 1993

Undergraduate, Karadeniz Technical University, Mühendislik Fakültesi, Harita Mühendisliği, Turkey 1987 - 1991

Foreign Languages

English, C2 Mastery

Dissertations

Doctorate, Geometric and Radiometric Calibration of Video Infrared Imagers for Photogrammetric Applications, University of Glasgow, Faculty of Science, 1997

Postgraduate, KUBBELERİN FOTOGRAMETRİK YÖNTEMLE ÖLÇÜLMESİ, Karadeniz Technical University, Fen Bilimleri Enstitüsü, 1993

Research Areas

3D-Modeling, Geotechnical Engineering, Geographic Information Systems, Photogrammetry, Remote sensing, Image Processing, Lidar, Virtual Reality, Laser Scanning, Engineering and Technology

Academic Titles / Tasks

Professor, Istanbul University, Deniz Bilimleri ve İşletmeciliği Enstitüsü, Deniz Bilimleri ve İşletmeciliği Bölümü, 2022 - Continues

Associate Professor, Zonguldak Bülent Ecevit University, Faculty Of Engineering, 2005 - 2007

Assistant Professor, Zonguldak Bülent Ecevit University, Faculty Of Engineering, 1998 - 2005

Research Assistant, Zonguldak Bülent Ecevit University, Faculty Of Engineering, 1993 - 1998

Research Assistant, Karadeniz Technical University, Mühendislik Fakültesi, Harita Mühendisliği, 1991 - 1993

Academic and Administrative Experience

Enstitü Yönetim Kurulu Üyesi, Istanbul University, Deniz Bilimleri Ve İşletmeciliği Enstitüsü, Deniz Bilimleri Ve İşletmeciliği Bölümü, 2023 - Continues

Fakülte Kurulu Üyesi, Zonguldak Bülent Ecevit University, Faculty Of Engineering, 2006 - 2006

Deputy Head of Department, Zonguldak Bülent Ecevit University, Faculty Of Engineering, 2001 - 2006

Head of Department, Zonguldak Bülent Ecevit University, Faculty Of Engineering, 1998 - 2006

Courses

SUALTI FOTOGRAMETRİSİ, Doctorate, 2023 - 2024

YÜKSEK ÇÖZEBİLİRLİKLİ UZAKTAN ALGILAMA VERİLERİ VE ANALİZ YAKLAŞIMLARI, Doctorate, 2023 - 2024

COĞRAFİ BİLGİ SİSTEMLERİ VE DENİZEL BİYÖÇEŞİTLİLİK, Postgraduate, 2023 - 2024

DENİZ BİLİMLERİNDE OLASILIK VE İSTATİSTİK, Postgraduate, 2023 - 2024

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Comparative Analyses for Determining Shallow Water Bathymetry Potential of Multispectral UAVs: Case Study in Tavşan Island, Sea of Marmara**
Sefercik U. G., Nazar M., Aydın İ., Büyüksalih G., Gazioğlu C., Bayırhan İ.
FRONTIERS IN MARINE SCIENCE, vol.11, pp.1-19, 2024 (SCI-Expanded)
- II. **Editorial for a Special Issue: Assessment of Coastal Vulnerability to Sea Level Rise Using Remote Sensing**
BÜYÜKSALİH G., GAZİOĞLU C.
PFG - Journal of Photogrammetry, Remote Sensing and Geoinformation Science, vol.92, no.4, pp.315-316, 2024 (SCI-Expanded)
- III. **Improving the Accuracy of Satellite-Derived Bathymetry Using Multi-Layer Perceptron and Random Forest Regression Methods: A Case Study of Tavşan Island**
Çelik O. İ., BÜYÜKSALİH G., GAZİOĞLU C.
Journal of Marine Science and Engineering, vol.11, no.11, 2023 (SCI-Expanded)
- IV. **Rooftop photovoltaic potential in Istanbul: Calculations based on LiDAR data, measurements and verifications**
Yıldırım D., Buyuksalih G., Şahin A. D.
APPLIED ENERGY, vol.304, 2021 (SCI-Expanded)
- V. **Quality analysis of Worldview-4 DSMs generated by least squares matching and semiglobal matching**
Sefercik U. G., ALKAN M., Jacobsen K., Atalay C., Buyuksalih G.
JOURNAL OF APPLIED REMOTE SENSING, vol.15, no.3, 2021 (SCI-Expanded)
- VI. **Optimizing the Achievable Information Content Extraction from WorldView-4 Stereo Imagery**
Sefercik U. G., ALKAN M., Atalay C., Jacobsen K., Buyuksalih G., Karakis S.

PFG-JOURNAL OF PHOTOGRAMMETRY REMOTE SENSING AND GEOINFORMATION SCIENCE, vol.88, no.6, pp.449-461, 2020 (SCI-Expanded)

- VII. **DSM generation with bistatic TanDEM-X InSAR pairs and quality validation in inclined topographies and various land cover classes**
Sefercik U. G., Buyuksalih G., Atalay C.
ARABIAN JOURNAL OF GEOSCIENCES, vol.13, no.13, 2020 (SCI-Expanded)
- VIII. **Preserving the Knowledge of the Past Through Virtual Visits: From 3D Laser Scanning to Virtual Reality Visualisation at the Istanbul catalca Inceviz Caves**
Buyuksalih G., Kan T., Ozkan G. E., Meric M., Isin L., Kersten T. P.
PFG-JOURNAL OF PHOTOGRAMMETRY REMOTE SENSING AND GEOINFORMATION SCIENCE, vol.88, no.2, pp.133-146, 2020 (SCI-Expanded)
- IX. **DSM Quality of Korean Satellite KOMPSAT-3 in Comparison to AW3D30 and Sentinel-1A in Respect of Airborne Laser Scanning**
Sefercik U. G., Buyuksalih G., Jacobsen K., Bayburt S.
KSCE JOURNAL OF CIVIL ENGINEERING, vol.23, no.7, pp.3162-3173, 2019 (SCI-Expanded)
- X. **Validation of Sentinel-1A and AW3D30 DSMs for the Metropolitan Area of Istanbul, Turkey**
Sefercik U. G., Buyuksalih G., Atalay C., Jacobsen K.
PFG-JOURNAL OF PHOTOGRAMMETRY REMOTE SENSING AND GEOINFORMATION SCIENCE, vol.86, no.3-4, pp.141-155, 2018 (SCI-Expanded)
- XI. **Point-based and model-based geolocation analysis of airborne laser scanning data**
Sefercik U. G., Buyuksalih G., Jacobsen K., ALKAN M.
OPTICAL ENGINEERING, vol.56, no.1, 2017 (SCI-Expanded)
- XII. **GENERATION AND VALIDATION OF HIGH-RESOLUTION DEMS FROM WORLDVIEW-2 STEREO DATA**
Sefercik U. G., ALKAN M., Buyuksalih G., Jacobsen K.
PHOTOGRAMMETRIC RECORD, vol.28, no.144, pp.362-374, 2013 (SCI-Expanded)
- XIII. **Geometric accuracy and information content of WorldView-1 images**
Alkan M., Buyuksalih G., Sefercik U. G., Jacobsen K.
OPTICAL ENGINEERING, vol.52, no.2, 2013 (SCI-Expanded)
- XIV. **Assessment of a Photogrammetric Approach for Urban DSM Extraction from Tri-Stereoscopic Satellite Imagery**
Tack F., Goossens R., Buyuksalih G.
PHOTOGRAMMETRIC RECORD, vol.27, no.139, pp.293-310, 2012 (SCI-Expanded)
- XV. **A mixed spaceborne sensor approach for surface modelling of an urban scene**
Tack F., Buyuksalih G., Goossens R.
INTERNATIONAL JOURNAL OF REMOTE SENSING, vol.33, no.19, pp.6035-6059, 2012 (SCI-Expanded)
- XVI. **3D building reconstruction based on given ground plan information and surface models extracted from spaceborne imagery**
Tack F., Buyuksalih G., Goossens R.
ISPRS JOURNAL OF PHOTOGRAMMETRY AND REMOTE SENSING, vol.67, pp.52-64, 2012 (SCI-Expanded)
- XVII. **Documentation of Istanbul Historic Peninsula by Kinematic Terrestrial Laser Scanning**
Kersten T. P., Bueyueksalih G., Baz I., Jacobsen K.
PHOTOGRAMMETRIC RECORD, vol.24, no.126, pp.122-138, 2009 (SCI-Expanded)
- XVIII. **Information content of optical satellite images for topographic mapping**
Topan H., Maktav D., Jacobsen K., Buyuksalih G.
INTERNATIONAL JOURNAL OF REMOTE SENSING, vol.30, no.7, pp.1819-1827, 2009 (SCI-Expanded)
- XIX. **Geometric accuracy evaluation of the DEM generated by the Russian TK-350 stereo scenes using the SRTM X- and C-band interferometric DEMs**
Buyuksalih G., Kocak G., Oruc M.
PHOTOGRAMMETRIC ENGINEERING AND REMOTE SENSING, vol.71, no.11, pp.1295-1301, 2005 (SCI-Expanded)
- XX. **Spot revisited: Accuracy assessment, dem generation and validation from stereo spot 5 HRG images**
Buyuksalih G., Kocak G., Topan H., Oruc M., Marangoz A.

- PHOTOGRAMMETRIC RECORD, vol.20, no.110, pp.130-146, 2005 (SCI-Expanded)
- XXI. **Accuracy assessment of interferometric digital elevation models derived from the Shuttle Radar Topography Mission X- and C-band data in a test area with rolling topography and moderate forest cover**
Kocak G., Buyuksalih G., Oruc M.
OPTICAL ENGINEERING, vol.44, no.3, 2005 (SCI-Expanded)
- XXII. **Accuracy analysis, DEM generation and validation using Russian TK-350 stereo-images**
Buyuksalih G., Kocak G., Oruc M., Akcin H., Jacobsen K.
PHOTOGRAMMETRIC RECORD, vol.19, no.107, pp.200-218, 2004 (SCI-Expanded)
- XXIII. **Geometric calibration models of infrared cameras and scanners for photogrammetric and remote sensing applications**
Buyuksalih G.
OPTICAL ENGINEERING, vol.42, no.7, pp.1923-1934, 2003 (SCI-Expanded)
- XXIV. **Practical experiences with automatic aerial triangulation using different software packages**
Buyuksalih G., Li Z.
PHOTOGRAMMETRIC RECORD, vol.18, no.102, pp.131-155, 2003 (SCI-Expanded)

Articles Published in Other Journals

- I. **3D City Modelling of Istanbul**
Baskaraca P., Buyuksalih G., Rahman A. A.
GIM INTERNATIONAL-THE WORLDWIDE MAGAZINE FOR GEOMATICS, vol.33, no.1, pp.16-19, 2019 (ESCI)
- II. **Bundle block adjustment with ultracamD images**
Buyuksalih G., Jacobsen K.
Revue Francaise de Photogrammetrie et de Teledetection, no.183, pp.42-49, 2006 (Scopus)
- III. **Generation and validation of digital elevation models based on satellite images**
Buyuksalih G., Jacobsen K.
Revue Francaise de Photogrammetrie et de Teledetection, no.184, pp.17-22, 2006 (Scopus)
- IV. **Geometric accuracy testing of Ikonos geo-product mono imagery using different sensor orientation models**
Buyuksalih G., Oruc M., Koçak G.
Turkish Journal of Engineering and Environmental Sciences, vol.27, no.5, pp.347-360, 2003 (Scopus)

Books & Book Chapters

- I. **Automated Extraction of Buildings from Aerial Lidar Point Cloud and Digital Imaging Datasets for 3D Cadastre – Preliminary Results**
Buyuksalih G.
in: Cadastre: Geo-Information Innovations in Land Administration, Tahsin Yomralioglu, John McLaughlin, Editor, Springer, London/Berlin, Zug, pp.159-165, 2017

Refereed Congress / Symposium Publications in Proceedings

- I. **Semantic Segmentation of Building Models with Deep Learning in CityGML**
Rashidan H., Musliman I. A., Rahman A. A., Coors V., BÜYÜKSALİH G.
19th 3D GeoInfo Conference 2024, Vigo, Spain, 1 - 03 July 2024, vol.48, pp.97-102
- II. **Geometric Analysis of Worldview-2 Geo-referenced Image Containing Mostly Sea**
Buyuksalih G., Gazioğlu C.

IV International Symposium on Applied Geoinformatics, Wroclaw, Poland, 8 - 10 May 2024, pp.48

- III. **3D Land Marine Properties Administration in the Context of Sea Level Rise (SLR) - Issues & Challenges**
Abdulrahman A., Hassan M. I., Musliman I. A., Rashidan H., Mutiarasar W. M., Zamzuri A., Büyüksalih G., Gazioğlu C., Bayırhan İ.
GeoAdvances 2024 – 8th International Conference on GeoInformation Advances, İstanbul, Turkey, 11 - 12 January 2024, pp.1-6
- IV. **Potential of Planet’s SkySat Collect Images for Topographic Mapping**
Büyüksalih G., Gazioğlu C.
42nd EARSeL Symposium, Bucuresti, Romania, 3 - 07 July 2023, pp.55-56
- V. **Geometry and Image Quality Assessment of SkySat Imagery for Building Identification**
Büyüksalih G., Gazioğlu C., Celik O. I., Jacobsen K.
10th International Conference on Recent Advances in Air and Space Technologies, RAST 2023, İstanbul, Turkey, 7 - 09 June 2023
- VI. **3D Citygml building models development with cross-scale query database**
Karim H., Abdul Rahman A., Abdul Halim N., Buyuksalih G., Rashidan H.
2021 Joint International Conference on Geospatial Asia-Europe 2021 and GeoAdvances 2021, Casablanca, Morocco, 5 - 06 October 2021, vol.46, pp.161-170
- VII. **Triangular mesh approach for automatic repair of missing surfaces of lod2 building models**
Rashidan H., Abdul Rahman A., Musliman I., Buyuksalih G.
2021 Joint International Conference on Geospatial Asia-Europe 2021 and GeoAdvances 2021, Casablanca, Morocco, 5 - 06 October 2021, vol.46, pp.281-286
- VIII. **3D GEOSPATIAL DATABASE SCHEMA for ISTANBUL 3D CITY MODEL**
Abdul Rahman A., Rashidan H., Musliman I., Buyuksalih G., Bayburt S., Baskaraca P.
6th International Conference on Geomatics and Geospatial Technology, GGT 2019, Kuala-Lumpur, Malaysia, 1 - 03 October 2019, vol.42, pp.11-16
- IX. **RAPID 3D DIGITALIZATION OF THE CULTURAL HERITAGE: A CASE STUDY ON ISTANBUL SULEYMANIYE SOCIAL COMPLEX (KULLIYE)**
Kan T., Buyuksalih G., Ozkan G. E., Baskaraca P.
2nd International Conference of Geomatics and Restoration (GEORES), Milan, Italy, 8 - 10 May 2019, vol.42-2, pp.645-652
- X. **VIRTUALISING AN OTTOMAN FORTRESS - LASER SCANNING AND 3D MODELLING FOR THE DEVELOPMENT OF AN INTERACTIVE, IMMERSIVE VIRTUAL REALITY APPLICATION**
Tschirschwitz F., Buyuksalih G., Kersten T. P., Kan T., Enc G., Baskaraca P.
8th International Workshop on 3D Virtual Reconstruction and Visualization of Complex Architectures (3D-ARCH), Bergamo, Italy, 6 - 08 February 2019, vol.42-2, pp.723-729
- XI. **Conceptual Framework Towards Unified 3D Topological Modelling and Visualization Based on CityGML**
Büyüksalih G.
FIG Congress 2018: Embracing our smart world where the continents connect: enhancing the geospatial maturity of societies, İstanbul, Turkey, 6 - 11 May 2018, pp.1-23
- XII. **Analysis of height models based on Kompsat-3 images**
Büyüksalih G., Bayburt S., Jacobsen K.
2018 Geoinformation for Disaster Management Conference, Gi4DM 2018, İstanbul, Turkey, 18 - 21 March 2018, vol.42, pp.115-119
- XIII. **3D CITY MODELLING OF ISTANBUL BASED ON LIDAR DATA AND PANORAMIC IMAGES - ISSUES AND CHALLENGES**
Buyuksalih G., Baskaraca P., Bayburt S., Buyuksalih I., Rahman A. A.
5th International Conference on Geoinformation Science / ISPRS Conference on Multi-Dimensional and Multi-Scale Spatial Data Modeling (GeoAdvances), Casablanca, Morocco, 10 - 11 October 2018, vol.42-4, pp.51-60
- XIV. **CALCULATING SOLAR ENERGY POTENTIAL OF BUILDINGS AND VISUALIZATION WITHIN UNITY 3D**

GAME ENGINE

Buyuksalih G., Bayburt S., Baskaraca A. P., Karim H., Rahman A. A.

ISPRS WG IV/1 International Conference on Geomatic and Geospatial Technology (GGT) - Geospatial and Disaster Management, Kuala-Lumpur, Malaysia, 04 October 2017, vol.42-4, pp.39-44

XV. FOREST STEM VOLUME CALCULATION USING AIRBORNE LIDAR DATA

Buyuksalih I., Bayburt S., Schardt M., Buyuksalih G.

ISPRS Hannover Workshop / High-Resolution Earth Imaging for Geospatial Information (HRIGI) Workshop / City Models, Roads and Traffic (CMRT) Workshop / Image Sequence Analysis (ISA) Workshop / European Calibration and Orientation (EuroCOW) Workshop, Hannover, Germany, 6 - 09 June 2017, vol.42-1, pp.265-270

XVI. THE IMPORTANCE OF DIGITAL METHODS IN PRESERVATION OF CULTURAL HERITAGE THE EXAMPLE OF ZIRNIKLI MANSION

Kan T., Buyuksalih G., Kaya Y., Baskaraca A. P.

1st International Conference on Geomatics and Restoration - Conservation of Cultural Heritage in the Digital Era, Florence, Italy, 22 - 24 May 2017, vol.42-5, pp.175-186

XVII. 3D MODELLING AND VISUALIZATION BASED ON THE UNITY GAME ENGINE - ADVANTAGES AND CHALLENGES

Buyuksalih I., Bayburt S., Buyuksalih G., Baskaraca A. P., Karim H., Rahman A. A.

4th International Workshop on Geoinformation Science / 4th ISPRS International Workshop on Multi-Dimensional and Multi-Scale Spatial Data Modeling (GeoAdvances), Safranbolu, Turkey, 14 - 15 October 2017, vol.4-4, pp.161-166

XVIII. GEOMETRIC ACCURACY ANALYSIS OF WORLDDDEM IN RELATION TO AW3D30, SRTM AND ASTER GDEM2

Bayburt S., Kurtak A. B., Buyuksalih G., Jacobsen K.

ISPRS Hannover Workshop / High-Resolution Earth Imaging for Geospatial Information (HRIGI) Workshop / City Models, Roads and Traffic (CMRT) Workshop / Image Sequence Analysis (ISA) Workshop / European Calibration and Orientation (EuroCOW) Workshop, Hannover, Germany, 6 - 09 June 2017, vol.42-1, pp.211-217

XIX. THE SELIMIYE MOSQUE OF EDIRNE, TURKEY - AN IMMERSIVE AND INTERACTIVE VIRTUAL REALITY EXPERIENCE USING HTC VIVE

Kersten T. P., Buyuksalih G., Tschirschwitz F., Kan T., Deggim S., Kaya Y., Baskaraca A. P.

1st International Conference on Geomatics and Restoration - Conservation of Cultural Heritage in the Digital Era, Florence, Italy, 22 - 24 May 2017, vol.42-5, pp.403-409

XX. SEMI-AUTOMATED APPROACH FOR MAPPING URBAN TREES FROM INTEGRATED AERIAL LIDAR POINT CLOUD AND DIGITAL IMAGERY DATASETS

Dogon-Yaro M. A., Kumar P., Rahman A. A., Buyuksalih G.

International Conference on Geomatic and Geospatial Technology (GGT), Kuala-Lumpur, Malaysia, 3 - 05 October 2016, vol.42-4, pp.127-134

XXI. EXTRACTION OF URBAN TREES FROM INTEGRATED AIRBORNE BASED DIGITAL IMAGE AND LIDAR POINT CLOUD DATASETS - INITIAL RESULTS

Dogon-yaro M. A., Kumar P., Rahman A. A., Buyuksalih G.

3rd International GeoAdvances Workshop / ISPRS Workshop on Multi-dimensional and Multi-Scale Spatial Data Modeling, İstanbul, Turkey, 16 - 17 October 2016, vol.42-2, pp.81-88

XXII. 3D Lidar Mapping of Underground Metro System

Büyüksalih G.

Capture Reality Forum - 3D, Laser Scanning, Lidar Technologies, Salzburg, Austria, 23 - 25 November 2015, pp.1-12

XXIII. Mapping with Pleiades Pan-sharpened Images

Büyüksalih G.

35th Earsel Symposium "European Remote Sensing: Progress, Challenges and Opportunities", Stockholm, Sweden, 15 - 19 June 2015, pp.1-8

XXIV. Large Area Covering LiDAR Height Models – Problems and Solution

Büyüksalih G.

34th EARSeL Symposium "European remote sensing – new opportunities for science and practice", Warszawa, Poland, 16 - 20 June 2014, pp.1-7

- XXV. **DEM GENERATION WITH WORLDVIEW-2 IMAGES**
Buyuksalih G., Baz I., Alkan M., Jacobsen K.
22nd Congress of the International-Society-for-Photogrammetry-and-Remote-Sensing, Melbourne, Australia, 25 August - 01 September 2012, vol.39-B1, pp.203-207
- XXVI. **BENCHMARKING AND QUALITY ANALYSIS OF DEM GENERATED FROM HIGH AND VERY HIGH RESOLUTION OPTICAL STEREO SATELLITE DATA**
Reinartz P., d'Angelo P., Krauss T., Poli D., Jacobsen K., Buyuksalih G.
Canadian Geomatics Conference / Symposium of Commission I, International-Society-for-Photogrammetry-and-Remote-Sensing Convergence in Geomatics - Shaping Canada's Competitive Landscape, Calgary, Canada, 15 - 18 June 2010, vol.38
- XXVII. **Mapping with WorldView-1 Imagery**
Jacobsen K., Buyuksalih G.
29th EARSeL Symposium, Chania, Greece, 15 - 18 June 2009, pp.190-200
- XXVIII. **Semi-automatic City Model Extraction from Tri-stereoscopic VHR Satellite Imagery**
Büyüksalih G.
ISPRS Workshop on quality, scale and analysis aspects of city models, Lund, Sweden, 3 - 04 December 2009, pp.1-6
- XXIX. **Geometric and Mapping Potential of Worldview-1 Images**
Büyüksalih G.
ISPRS Hannover Workshop 2009 "High-Resolution Earth Imaging for Geospatial Information" in conjunction with 12th AGILE International Conference on Geographic Information Science, Hannover, Germany, 2 - 05 June 2009, pp.1-5
- XXX. **3D City Modelling for Planning Activities, Case Study: Haydarpasa Train Station, Haydarpasa Port and Surrounding Backside Zones, Istanbul**
Büyüksalih G.
ISPRS Hannover Workshop 2009 "High-Resolution Earth Imaging for Geospatial Information" in conjunction with 12th AGILE International Conference on Geographic Information Science, Hannover, Germany, 2 - 05 June 2009, pp.1-6
- XXXI. **Developing 3D Geospatial Database from Terrestrial Laser Scanned Data**
Büyüksalih G.
Proceedings of South East Asian Technical Universities Consortium(SEATUC) - 3rd SEATUC Symposium, Johor-Bahru, Malaysia, 25 - 26 February 2009, pp.389-398
- XXXII. **Investigation of the potential of multiscopic VHR satellite imagery for the production of 3D models of complex urban areas**
Tack F., Goossens R., Buyuksalih G.
28th European-Association-of-Remote-Sensing-Laboratories (EARSeL) Symposium and Workshops on Remote Sensing for a Changing Europe, İstanbul, Turkey, 2 - 05 June 2008, pp.618-624
- XXXIII. **3D Geospatial Database from Terrestrial Laser Scanning (TLS) data**
Büyüksalih G.
7th International Symposium & Exhibition on Geoinformation (ISG 2008), Kuala-Lumpur, Malaysia, 13 - 15 October 2008, pp.1-22
- XXXIV. **Documentation of Istanbul Historic Peninsula by Sensor Integration and Data Fusion**
Büyüksalih G.
4th EARSeL Workshop on Remote Sensing for Developing Countries/GISDECO 8, İstanbul, Turkey, 4 - 07 June 2008, pp.1-9
- XXXV. **Topographic Mapping from Space**
Büyüksalih G.
4th EARSeL Workshop on Remote Sensing for Developing Countries/GISDECO 8, İstanbul, Turkey, 4 - 07 June 2008, pp.1-10
- XXXVI. **3D City Modelling and Visualization of Istanbul Historic Peninsula in Istanbul**

- Büyüksalih G.
4th EARSeL Workshop on Remote Sensing for Developing Countries/GISDECO 8, İstanbul, Turkey, 4 - 07 June 2008, pp.1-9
- XXXVII. **DEM generation based on optical space images**
Büyüksalih G.
4th EARSeL Workshop on Remote Sensing for Developing Countries/GISDECO 8, İstanbul, Turkey, 4 - 07 June 2008, pp.1-11
- XXXVIII. **Managing 3D Geospatial Data, Case Study: Suleymaniye Region of Historic Peninsula**
Büyüksalih G.
4th EARSeL Workshop on Remote Sensing for Developing Countries/GISDECO 8, İstanbul, Turkey, 4 - 07 June 2008, pp.1-6
- XXXIX. **Digital Height Models in Mountainous Regions based on Space Information**
Büyüksalih G.
EARSeL Workshop Remote Sensing - New Challenges of High Resolution, Bochum, Germany, 5 - 07 March 2008, pp.1-11
- XL. **Mapping from space for developing countries**
Büyüksalih G.
EARSeL Workshop Remote Sensing - New Challenges of High Resolution, Bochum, Germany, 5 - 07 March 2008, pp.1-10
- XLI. **Determination of the build up area development in the Greater Municipality of Istanbul by space images**
Büyüksalih G.
EARSeL Workshop Remote Sensing - New Challenges of High Resolution, Bochum, Germany, 5 - 07 March 2008, pp.1-8
- XLII. **DSM generation with high resolution space imagery over mountainous forest area**
Buyuksalih G., Jacobsen K.
21st Congress of the International Society for Photogrammetry and Remote Sensing, ISPRS 2008, Beijing, China, 3 - 11 July 2008, vol.37, pp.865-871
- XLIII. **Detection of changes in istanbul area with medium and high resolution space images**
Bayburt S., Büyüksalih G., Baz I., Jacobsen K., Kersten T.
21st Congress of the International Society for Photogrammetry and Remote Sensing, ISPRS 2008, Beijing, China, 3 - 11 July 2008, vol.37, pp.1607-1611
- XLIV. **Documentation of Istanbul historic peninsula by static and mobile terrestrial laser scanning**
Baz I., Kersten T., BÜYÜKSALİH G., Jacobsen K.
2008 21st ISPRS International Congress for Photogrammetry and Remote Sensing, Beijing, China, 3 - 11 July 2008, vol.37, pp.993-998
- XLV. **3D city modelling of istanbul historic peninsula by combination of aerial images and terrestrial laser scanning data**
Buhur S., Kersten T., Büyüksalih G., Jacobsen K., Baz I., Dursun S., Sagir D.
21st Congress of the International Society for Photogrammetry and Remote Sensing, ISPRS 2008, Beijing, China, 3 - 11 July 2008, vol.37, pp.1239-1245
- XLVI. **Digital surface models in build up areas based on very high resolution space images**
Buyuksalih G., Jacobsen K.
ASPRS Annual Conference 2007: Identifying Geospatial Solutions, Tampa, FL, United States Of America, 7 - 11 May 2007, vol.1, pp.118-125
- XLVII. **Integrating 3D CAD Models with GeoDBMS for Istanbul Metropolitan Municipality Building Restoration**
Büyüksalih G.
Joint International Symposium and Exhibition on Geoinformation and GNSS (ISG/GNSS 2007), Johor-Bahru, Malaysia, 5 - 07 November 2007, pp.1
- XLVIII. **Mapping potential of orbview-3 panchromatic image in mountainous urban areas: Results of**

zonguldak test-field

Topan H., Büyüksalih G., Maktav D.

2007 Urban Remote Sensing Joint Event, URS, Paris, France, 11 - 13 April 2007

- XLIX. Investigation of BILSAT-1 Imagery**
Büyüksalih G.
27th Earsel Symposium 'Geoinformation in Europe', Bolzano, Italy, 4 - 07 June 2007, pp.1-8
- L. Bundle Block Adjustment with High Resolution ULTRACAMD Images**
Büyüksalih G.
ISPRS Hannover Workshop 2007: High-Resolution Earth Imaging for Geospatial Information, Hannover, Germany, 29 May - 01 June 2007, pp.1-6
- LI. Effects of Industrial and Municipal Solid Waste on Western Blacksea Coast**
Yıldırım Y., Çapar Ö. F., Özölçer İ. H., Büyüksalih G.
Second International Conference on Water and Environment, Blida, Algeria, 30 - 31 January 2007, pp.328-336
- LII. Comparison of very high resolution space images**
Buyuksalih G., Jacobsen K.
Annual Conference of the American Society for Photogrammetry and Remote Sensing 2006: Prospecting for Geospatial Information Integration, ASPRS 2006, Reno, NV, United States Of America, 1 - 05 May 2006, vol.1, pp.197-204
- LIII. Mapping Potential of High Resolution Space Images in Mountainous Urban Areas**
Topan H., Büyüksalih G.
ISPRS Commission VIII Mid-Congress Symposium on: "Remote Sensing Applications for a Sustainable Future, Ashdod, Israel, 4 - 07 September 2006, pp.1-6
- LIV. Comparison of DEM Generation by very high resolution optical Satellites**
Büyüksalih G.
26th Earsel Symposium 'New Developments and Challenges in Remote Sensing', Warszawa, Poland, 29 May - 02 June 2006, pp.1-9
- LV. Bundle block adjustment with Ultracam-D images**
Büyüksalih G.
ISPRS Commission I Symposium "From Sensors to Imagery", Paris, France, 3 - 06 July 2006, pp.1-8
- LVI. Generation and validation of digital elevation models based on satellite images**
Büyüksalih G.
ISPRS Commission I Symposium: From Sensors to Imagery, Paris, France, 3 - 06 July 2006, pp.1-6
- LVII. Analysis of a bundle block adjustment with UltraCamD images over Istanbul**
Büyüksalih G.
5th Turkish-German Joint Geodetic Days, Berlin, Germany, 28 - 31 March 2006, pp.1-5
- LVIII. Verification of Information Contents and Cost Considerations Using Very High Resolution Space Imagery For Object Extraction**
Marangoz A. M., Alkış Z., Büyüksalih G., Akçın H.
5th Turkish-German Joint Geodetic Days, Berlin, Germany, 28 - 31 March 2006, pp.1-6
- LIX. Mapping from Space - a Cooperation of Zonguldak Karaelmas University and University of Hannover**
Büyüksalih G.
5th Turkish-German Joint Geodetic Days, Berlin, Germany, 28 - 31 March 2006, pp.1-6
- LX. 3D Cultural Heritage Documentation of Safranbolu Test Site Using High Resolution Satellite Imagery**
Marangoz A. M., Karakış S., Sefercik U. G., Topan H., Büyüksalih G.
1st Workshop of the EARSeL-SIG Urban Remote Sensing: Urban Remote Sensing, Challenges and Solutions, Berlin, Germany, 2 - 03 March 2006, pp.1-7
- LXI. An Investigation of Industrial Plant Pollution Using Satellite Imagery as a Tool in Zonguldak Coasts, Turkey**
Yıldırım Y., Büyüksalih G.
ISPRS Workshop on Topographic Mapping from Space (with Special Emphasis on Small Satellites), Ankara, Turkey, 14 - 16 February 2006, pp.1-6

- LXII. Verification of Automatic and Manual Road Extraction Methods Using Quickbird Imagery**
Alkan M., Marangoz A. M., Karakiş S., Büyüksalih G.
ISPRS Workshop on Topographic Mapping from Space (with Special Emphasis on Small Satellites), Ankara, Turkey, 14 - 16 February 2006, pp.1-3
- LXIII. Analysis of Segmentation Parameters in Ecognition Software Using High Resolution Quickbird MS Imagery**
Karakış S., Marangoz A. M., Büyüksalih G.
ISPRS Workshop on Topographic Mapping from Space (with Special Emphasis on Small Satellites), Ankara, Turkey, 14 - 16 February 2006, pp.1-5
- LXIV. Geometry of ORBVIEW-3 Images**
Büyüksalih G., Akçın H.
ISPRS Workshop on Topographic Mapping from Space (with Special Emphasis on Small Satellites), Ankara, Turkey, 14 - 16 February 2006, pp.1-5
- LXV. Accuracy And Morphological Analyses of GTOPO30 and SRTM X -C Band DEMs in the Test Area Istanbul**
Büyüksalih G.
ISPRS Workshop on Topographic Mapping from Space (with Special Emphasis on Small Satellites), Ankara, Turkey, 14 - 16 February 2006, pp.1-7
- LXVI. Information Contents of Orbview-3 for Topographic Mapping**
Topan H., Büyüksalih G.
ISPRS Workshop on Topographic Mapping from Space (with Special Emphasis on Small Satellites), Ankara, Turkey, 14 - 16 February 2006, pp.1-7
- LXVII. Temporal Analysis of Multi Epoch LANDSAT Geocover Images in Zonguldak Testfield**
Büyüksalih G.
ISPRS Workshop on Topographic Mapping from Space (with Special Emphasis on Small Satellites), Ankara, Turkey, 14 - 16 February 2006, pp.1-6
- LXVIII. Potential of KOMPSAT-1 for mapping purposes**
Buyuksalih G., Akcin H., Marangoz A., Jacobsen K.
25th Symposium of the European-Association-of-Remote-Sensing-Laboratories (EARSeL), Oporto, Portugal, 6 - 11 June 2005, pp.647-654
- LXIX. The critical role of geographic information system (GIS) and remote sensing (RS) in forest site classification and mapping**
Günlü A., Kadioğullari A. I., Başkent E. Z., GÜNEY D., Buyuksalih G.
7th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences, ACCURACY 2006, Lisbon, Portugal, 5 - 07 July 2006, pp.595-602
- LXX. Optimized geometric handling of high resolution space images**
Büyüksalih G., Jacobsen K.
Annual Conference 2005 - Geospatial Goes Global: From Your Neighborhood to the Whole Planet, Baltimore, MD, United States Of America, 7 - 11 March 2005, vol.1, pp.60-68
- LXXI. DEM Generation and Validation Based on Optical Satellite Systems**
Büyüksalih G.
EARSeL Workshop on 3D Remote Sensing – Use of the Third Dimension for Remote Sensing Purposes, Porto, Portugal, 10 - 11 June 2005, pp.1-7
- LXXII. Information Contents of High Resolution Satellite Images**
Büyüksalih G., Topan H.
EARSeL Workshop on 3D Remote Sensing – Use of the Third Dimension for Remote Sensing Purposes, Porto, Portugal, 10 - 11 June 2005, pp.1-7
- LXXIII. Generation and Analysis of Height Models Based on Satellite Information**
Büyüksalih G., Marangoz A. M.
ISPRS Hannover Workshop 2005 “High-Resolution Earth Imaging for Geospatial Information”, Hannover, Germany, 17 - 20 May 2005, pp.1-7

- LXXIV. **Geometric Models for the Orientation of High Resolution Optical Sensors**
Büyüksalih G., Topan H.
ISPRS Hannover Workshop 2005 "High-Resolution Earth Imaging for Geospatial Information", Hannover, Germany, 17 - 20 May 2005, pp.1-7
- LXXV. **Geometric evaluation, automated DEM and orthoimage generation from along-track stereo ASTER images**
Marangoz A., Büyüksalih G., Büyüksalih I., Sefercik U., Akcin H.
2nd International Conference on Recent Advances in Space Technologies, İstanbul, Turkey, 9 - 11 June 2005, pp.505-510
- LXXVI. **Semantic analysis of space imagery for mapping purposes**
Karakis S., Topan H., Büyüksalih G., Marangoz A., Jacobsen K.
2nd International Conference on Recent Advances in Space Technologies, İstanbul, Turkey, 9 - 11 June 2005, pp.500-504
- LXXVII. **Geometric conditions of space imagery for mapping**
Jacobsen K., Büyüksalih G., Marangoz A., Sefercik U., Büyüksalih I.
2nd International Conference on Recent Advances in Space Technologies, İstanbul, Turkey, 9 - 11 June 2005, pp.511-516
- LXXVIII. **Investigation of zonguldak coasts for coastal management**
Özölçer I. H., Yildirim Y., Büyüksalih G., Çapar Ö. F., Öztürk B.
7th International Conference on the Mediterranean Coastal Environment, MEDCOAST 2005, Kusadasi, Turkey, 25 - 29 October 2005, vol.1, pp.83-94
- LXXIX. **Quality Assessment of DEM Derived from the SRTM X and C-bands Data: A Case Study for Rolling Topography and Dense Forest Cover**
Büyüksalih G.
3rd Workshop of the EARSEL Special Interest Group on Remote Sensing for Developing Countries, Cairo, Egypt, 26 - 29 September 2004, pp.1-6
- LXXX. **Information Content Analysis of KVR-1000 Ortho-image Based on the Available Topographic Maps in the GIS Environment**
Büyüksalih G., Akçın H., Topan H., Karakış S., Marangoz A. M.
3rd Workshop of the EARSEL Special Interest Group on Remote Sensing for Developing Countries, Cairo, Egypt, 26 - 29 September 2004, pp.1-15
- LXXXI. **Geometric Accuracy Evaluation, DEM Generation and Validation for SPOT-5 Level 1B Stereo Scene**
Büyüksalih G., Topan H.
3rd Workshop of the EARSEL Special Interest Group on Remote Sensing for Developing Countries, Cairo, Egypt, 26 - 29 September 2004, pp.1-8
- LXXXII. **Object-oriented Image Analysis and Semantic Network for Extracting the Roads and Buildings from Ikonos Pan-sharpened Images**
Marangoz A. M., Büyüksalih G.
XXth ISPRS Congress, İstanbul, Turkey, 12 - 23 July 2004, pp.1-5
- LXXXIII. **Generation and Validation of High Resolution Space Image DEMs**
Büyüksalih G.
ASPRS 2004 Annual Conference "Mountains of Data – Peak Decisions", Colorado, United States Of America, 23 - 28 May 2004, pp.1-11
- LXXXIV. **Comparison of information contents of high resolution space images**
Topan H., Büyüksalih G., Jacobsen K.
20th ISPRS Congress on Technical Commission VII, İstanbul, Turkey, 12 - 23 July 2004, vol.35
- LXXXV. **Spatial and temporal analysis of forest covers change: Human impacts and natural disturbances in Bartın Forests, NW of Turkey**
Atesoglu A., Tunay M., Büyüksalih G.
20th ISPRS Congress on Technical Commission VII, İstanbul, Turkey, 12 - 23 July 2004, vol.35
- LXXXVI. **GIS based analysis of landcover changes arising from coal production wastes in Zonguldak**

Metropolitan Area-Turkey

Akçin H., Karakiş S., Büyüksalih G., Oruç M.

20th ISPRS Congress on Technical Commission VII, İstanbul, Turkey, 12 - 23 July 2004, vol.35

LXXXVII. **Analysis of digital elevation models determined by high resolution space images**

Kocak G., Büyüksalih G., Jacobsen K.

20th ISPRS Congress on Technical Commission VII, İstanbul, Turkey, 12 - 23 July 2004, vol.35

LXXXVIII. **Precise georeferencing of rectified high resolution space images**

Büyüksalih G., Oruc M., Jacobsen K.

20th ISPRS Congress on Technical Commission I 2004, İstanbul, Turkey, 12 - 23 July 2004, vol.35, pp.184-188

LXXXIX. **Comparison of pixel-based and object-oriented classification approaches using landsat-7 ETM spectral bands**

Oruc M., Marangoz A., Buyuksalih G.

20th ISPRS Congress on Technical Commission VII, İstanbul, Turkey, 12 - 23 July 2004, vol.35

XC. **Results of Automatic Aerial Triangulation Using Different Commercial Software Packages**

Büyüksalih G.

6th Conference on Optical 3D Measurement Techniques, Zürich, Switzerland, 14 - 16 October 2003, pp.1-10

XCI. **Handling of Ikonos Images from Orientation up to DEM Generation**

Büyüksalih G.

Joint ISPRS/EARSeL Workshop "High Resolution Mapping from Space 2003, Hannover, Germany, 6 - 08 October 2003, pp.1-17

XCII. **DEM Generation by ASTER and TK-350**

Büyüksalih G.

Joint ISPRS/EARSeL Workshop "High Resolution Mapping from Space 2003", Hannover, Germany, 6 - 08 October 2003, pp.1-6

XCIII. **Temporal Analysis of Changes in the Bartın Part of North-West Anatolian Forests Using Remotely-Sensed Images**

Tunay M., Ateşoğlu A., Büyüksalih G.

1st Int. Conference Studying Land Use Effects in Coastal Zones with Remote Sensing and GIS, Antalya, Turkey, 13 - 16 August 2003, pp.382-392

XCIV. **Detection of Environmental Changes Arising from Coal Production Wastes in the Coastal Zone of Zonguldak Metropolitan Area**

Buzkan İ., Akçın H., Büyüksalih G.

1st Int. Conference Studying Land Use Effects in Coastal Zones with Remote Sensing and GIS, Antalya, Turkey, 13 - 16 August 2003, pp.355-368

XCV. **Determination and Improvement of Digital Elevation Models Based on MOMS-2P Imagery**

Büyüksalih G.

Fourth Turkish-German Joint Geodetic Days, Berlin, Germany, 3 - 06 April 2001, pp.1-8

XCVI. **Geometric Aspects of MOMS-2P Three-Line Imagery for Mapping Applications**

Büyüksalih G.

RSS2000 Symposium on 'Adding Value to Remotely Sensed Data', Leicester, England, 12 - 14 September 2000, pp.1-9

XCVII. **Remote Sensing Activities in Turkey**

Büyüksalih G.

1st Workshop of the EARSEL Special Interest Group on Remote Sensing for Developing Countries, Ghent, Belgium, 4 - 06 September 2000, pp.1-18

XCVIII. **New Infrared Imagers for Airborne Applications**

Büyüksalih G.

International Symposium on Remote Sensing & Integrated Technologies, İstanbul, Turkey, 20 - 22 October 1999, pp.103-112

XCIX. **Geometric & Radiometric Calibration of Frame-Type Infrared Imagers**

Büyüksalih G.

ISPRS Joint Workshop "Sensors and Mapping from Space 1999", Hannover, Germany, 27 - 30 September 1999, pp.1-11

Supported Projects

Gazioğlu C., Büyüksalih G., Çağlar N., Taş S., Aksu A., Vardar D., Dursun F., Bayırhan İ., Çetintaşoğlu M. E., Project Supported by Higher Education Institutions, 2023 - 2024

Alkan M., Büyüksalih G., TUBITAK Project, 106Y157 - Kültürel Mirasın Kaydı, Analizi, Korunması ve Yaşatılmasına Yönelik Bir Bilgi ve Yönetim Sisteminin Geliştirilmesi, Örnek Uygulama: Safranbolu Tarihi Kenti, 2009 - 2011

Büyüksalih G., TUBITAK Project, 104Y050 - Batı Karadeniz Bölgesinin Uzay Görüntülerinin Harita Yapım Amaçlı Geometrik ve Semantik Analizi ve Veritabanı Oluşturulması, 2004 - 2005

Büyüksalih G., TUBITAK Project, 101Y090 - Geometric and Semantic Analysis of Space Imagery for Topographic Mapping & Database Construction of Selected Experimental Test Area in Turkey, 2002 - 2005

Activities in Scientific Journals

THE PHOTOGRAMMETRIC RECORD, Committee Member, 2023 - Continues

PFJ-JOURNAL OF PHOTOGRAMMETRY, REMOTE SENSING AND GEOINFORMATION SCIENCE, Special Issue Editor, 2023 - Continues

Memberships / Tasks in Scientific Organizations

European Association of Remote Sensing Laboratories (EARSeL) , Principal Member, 2023 - Continues, France

International Society for Photogrammetry and Remote Sensing (ISPRS), Member, 2004 - 2012, Germany

Türkiye Ulusal Fotogrametri ve Uzaktan Algılama Birliği (TUFUAB), Member, 2005 - 2006, Turkey

American Society for Photogrammetry and Remote Sensing (ASPRS), Member, 2004 - 2006, United States Of America

Scientific Refereeing

GISCIENCE AND REMOTE SENSING, Journal Indexed in SCI-E, October 2023

EARTH SCIENCE INFORMATICS, Journal Indexed in SSCI, July 2023

International Journal of Environment and Geoinformatics, SCI Journal, May 2023

JOURNAL OF APPLIED REMOTE SENSING, Journal Indexed in SCI-E, September 2022

PHOTOGRAMMETRIC ENGINEERING AND REMOTE SENSING, Journal Indexed in SCI-E, June 2019

Scholarships

Doktora Sonrası Araştırma Bursu, TUBITAK, 1999 - 1999

Doktora, YOK, 1993 - 1997