

# DR ORHAN ERCAN

---

## 1. Short Summary

He was born in Turkey at 1959. He had his BSc at 1983, MSc at 1988 and PhD at 1997.

He has worked for the Turkish Government for almost quarter century and realized many cadastre and land administration works. Besides, he has been involved in many geodetic and surveying infrastructure projects; namely, CORS-TR, NSDI, Land Information System, etc. in Turkey.

Parallel to his practitioner engagements, he was also active in academic and research institutions and a part-time lecturer at the university. After retiring from the Turkish General Directorate of Land Registry and Cadastre, he has been working in the private sector for several years. Thus, he gained his private sector experience as well and widened his professional spectrum successively. In course of his private sector engagements, he has realized diverse national and international surveying projects.

He executed the World Bank's MEER/MERLIS/Cadastre (maintenance and renovation) sub component include geodetic works and photogrammetric mapping (Marmara Earthquake Emergency Reconstruction Project) and ARIP/Cadastre projects (Agricultural Reform Implementation Project). He worked as executive staff at `Turkish National Spatial Data Infrastructure Project (preparatory works) phase I and II` and Land Registry and Cadastre Information System (TAKBIS). He worked at CORS-TR project group as a critical research staff. Besides, he has been involved in various geodetic and surveying projects, regional/urban planning projects, agricultural reform, agriculture-based land use planning etc. in Turkey, Libya and neighbouring countries. He had published more than 30 papers for various academic publications.

He worked at private sector for 12 years as company manager and freelance.

He is also the Vice President of FIG.

## 2. Nationality: Turkish

## 3. Education:

Institution: Yıldız Technical University / Istanbul - Geodesy and Photogrammetry Engineering

Degree: PhD - Excellent

Dates of obtainment: 1997

Institution: Yıldız Technical University / Istanbul - Geodesy and Photogrammetry Engineering

Degree: MSc Excellent

Dates of obtainment: 1988

Institution: Karadeniz Technical University / Trabzon - Geodesy and Photogrammetry Engineering

Degree: BSc - Good

Dates of obtainment: 1983

#### 4. Current Position

- FIG (International Federation of Surveyors) Vice President
- Work as cadastre and land administration consultant / senior land administration expert at the private sector

#### 5. Membership of Professional Associations

- FIG – International Federation of Surveyors
  - Turkey`s National Representative
  - FIG 2018 Congress Director and board member
  - National delegate, Turkey, 2012 – 2018
  - Task Force on Real Estate Market Studies
  - Member of Commission VII – Cadastre and Land Management as a National Correspondence
  - Was member of FIG Working Group, 5.4, 2003-2004
- Council of European Geodetic Surveyors (CLGE)
  - National delegate, Turkey, since 2016 - 2018
- Member of the Mediterranean Surveyors Association
- Turkish Chamber of Surveying and Cadastre Engineers:
  - Chair of International Affairs Commission (2012 - 2018),
  - FIG2018 Congress Director (2014 - 2018)
  - Member of Cadastre Commission (2007 - 2018),
  - Member of GIS Commission (2007 – 2011).
- Chair of Commission II for Turkish National Union of Photogrammetry and Remote Sensing (TUFUAB) (1994-2007).
- Scientific member of the European Organization for Experimental Photogrammetric Research Commission C – OEEPE (1992-1995).
- Turkish Interministerial Committee for the Coordination Mapping Issues:
  - Secretary General of Planning Commission (1990-2007)
  - Member of Scientific Commissions (1990-2007)

#### 6. Other Training:

- Photogrammetry Postgraduate at ITC, the Netherlands (1988-1989).

#### 7. Countries of Work Experience

- Turkey (1983-2007 worked at Turkish Cadastre Organization)
- Libya (2007-2011)
- Turkey and Libya (2014 - 2015)

#### 8. Languages:

Language	Reading	Speaking	Writing
English	Good	Good	Good
Turkish	Mother tongue		

## **9. Employment Record:**

From: 2015 To: Present  
Senior Land Administration Expert

From: 2014 To: 2015  
LTIS Co., Inc Libyan Turkish Integrated Solutions  
Associated partner and General Manager

From: 2013 To: 2014  
Freelance Consultant

From: month 2007 To: January 2013  
GEOTECH Group - Geographical Information Technologies  
Associated partner and General Manager

From: month 2001 To: 2009  
Employer: Atılım University  
Positions held: Civil Engineering Department - Part time lecturer

From: month 1984 To: 2007  
Employer: General Directorate of Land Registry and Cadastre

Positions held: Senior engineer

- Surveying engineer at Department of Photogrammetry
- Surveying engineer at Besiktaş Cadastre Directorship
- Section Manager at the Department of Geodesy and Photogrammetry
- Section Manager at the Department of Research Planning and Co-ordination

From: month 1977 To: 1980  
Employer: General Directorate of Land Registry and Cadastre  
Positions held: Technician

## **10. Detailed Tasks Assigned**

He worked as a department manager at Land Registry and Cadastre for many years. In content of this duty he worked on geodetic, photogrammetric, cadastre and GIS/LIS projects.

At the same time, he worked as a secretary general of Inter-ministerial Board for the Coordination of Mapping Issues.

He was the coordinator of Marmara Emergency Reconstruction Project-Marmara Earthquake Region Land Information System (MEER/MERLIS) Cadastre sub component and Agricultural Reform Implementation Project (ARIP) sub component Cadastre projects between the years 2001-2007 which were financed by World Bank.

## 11. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned

**a) Name of assignment or project:** Land Registry and Cadastre Information System – TAKBİS-I

Year: 2000-2001

Location: Ankara- Turkey

Client: General Directorate of Land Registry and Cadastre

Main project features: Establishment of Land Registry and Cadastre Information System

Positions held: Project team leader

Activities performed; Determination of the problems by analyzing the land registry and cadastral services under the content of GIS/LIS, Creating solutions under the content of existing legislations through improving of work process, Establishment of Land registry and Cadastral services electronically. Pilot project consists of 1.000.000 cadastral parcel.

**b) Name of assignment or project:** Land Registry and Cadastre Information System – TAKBİS-II

Year: 2005

Location: Ankara- Turkey

Client: General Directorate of Land Registry and Cadastre

Main project features: Establishment of Land Registry and Cadastre Information System

Positions held: Project team member

Activities performed; Bidding document preparation, bidding procedure, automation of land registration transaction in the concept of land related information system.

**c) Name of assignment or project:** Land Registry and Cadastre Information System – TAKBİS

Year: 2011

Location: Ankara- Turkey

Client: General Directorate of Land Registry and Cadastre (as a team member of Scientific And Technological Research Council of Turkey)

Main project features: Examination of TAKBİS system, identification of problems, preparation of suggestion for better system operation

Positions held: Scientific And Technological Research Council of Turkey (TUBİTAK) team member

**d) Name of assignment or project:** Marmara Earthquake Emergency Reconstruction Project (MEER/MERLIS)

Year: 2001 - 2004

Location: Marmara Earthquake region - Turkey

Client: General Directorate of Land Registry and Cadastre

Main project features: Marmara earthquake region land information system

Positions held: Project Coordinator

Activities performed; initial cadastre and cadastre renovation process of conversion and integration of existing analogue and digital cadastre, land registry and related topographic data into consistent and standardized files of TAKBIS input data.

This may involve map digitizing, mapping, staking out the existing legal map to the field and appropriate legal actions.

**e) Name of assignment or project:** Marmara Earthquake Emergency Reconstruction Project (MEER)

Year: 2003 - 2004

Location: Marmara Earthquake region - Turkey

Client: General Directorate of Land Registry and Cadastre

Main project features: Marmara earthquake region geodetic network densification

Positions held: Project Manager

Activities performed; Establishment of 373 geodetic ground control points in different accuracy levels, adjustment of them on GRS80 ellipsoid and ITRF 96 datum were completed. GPS leveling method was used on determining Helmert orthometric heights. For this purpose, 586 new height points was established and precise leveling is performed on 97 points.

**f) Name of assignment or project:** Marmara Earthquake Emergency Reconstruction Project (MEER)

Year: 2003 - 2004

Location: Marmara Earthquake region - Turkey

Client: General Directorate of Land Registry and Cadastre

Main project features: Marmara earthquake region 1K Photogrammetric Mapping Project

Positions held: Project Manager

Activities performed; 1K digital map production in Yalova, Kocaeli, Sakarya provinces

**g) Name of assignment or project:** Agricultural Reform Implementation Project (ARIP), Sub Component A-2

Year: 2004 - 2006

Location: Turkey

Client: General Directorate of Land Registry and Cadastre

Main project features: Initial cadastre works

Positions held: Project Coordinator

Activities performed; in the concept of 564 tenders the 12 million parcels produced.

**h) Name of assignment or project:** Continuously Operating Reference Stations CORS-TR

Year: 2005 - 2006

Location: Turkey

Client: General Directorate of Land Registry and Cadastre – General Command of Mapping

Main project features: CORS

Positions held: Project team member / Critical researcher

Activities performed; CORS are geodetic quality GPS receivers and antennas that are permanently installed. These stations collect GPS data continuously, and transmit data via internet to a central server. At the server, the data is archived for future use, and made available for download by any user. The incoming data is also processed at the server to generate corrections which are made available over the internet users in real-time. The Turkish Network has been named CORS – TR (Transmission of Real-time corrections) to emphasize the expanded range of products available. Real-Time Kinematic GPS (RTK) is a method of surveying with GPS that provides positioning accuracy at a level of 1–3 cm. The CORS stations will serve as permanent bases.

**i) Name of assignment or project:** 3rd Generation Planning Program - Libya

Year: 2007 – 2011

Location: Benghazi Region / Libya

Client: Urban Planning Authority - Libya

Main project features: Urban planning

Positions held: Coordinator

Activities performed; 1/250,000 and 1/25,000 scale development plans at national, regional and sub-regional levels; 1/10,000 and 1/5,000 scale urban plans along with 1/1,000 scale implementation projects at local levels, respectively.

**j) Name of assignment or project:** Initial Cadastre Projects

Year: 2007 – 2009

Location: 1) Ayvacık/Samsun, 2) Kavak 3) Beyşehir and 4) Sinop

Client: General Directorate of Land Registry and Cadastre

Main project features: Implementation of initial cadastre works

Positions held: Project Manager

Activities performed; Initial cadastral surveying of app. 53,000 cadastral parcels.

**k) Name of assignment or project:** Istanbul Photogrammetric Mapping Project

Year: 2007 – 2008

Location: Istanbul

Client: Istanbul Municipality

Main project features: 1/1,000 scale photogrammetric map production both vector and raster based 491 map sheets.

Positions held: Project Manager

Activities performed; Geodetic works, aerial triangulation, plotting, editing, field verification, conversion to GIS

**l) Name of assignment or project:** E-transformation Turkey – NSDI Preparatory Work (Government Action Plan 47)

Year: 2004

Location: Turkey

Client: State Planning Organization

Main project features: Preliminary Study on establishment of Turkish National Geographic Information System

Positions held: Coordinator

Activities performed; Evaluation of GIS projects, preparing future plans

**m) Name of assignment or project:** E-transformation Turkey - NSDI Preparatory Work (Government Action Plan 36)

Year: 2005

Location: Turkey

Client: State Planning Organization

Main project features: Preparatory works on constitution of Turkish National Spatial Data Infrastructure

Positions held: Coordinator

Activities performed; Preliminary study on National Spatial Data Infrastructure

**n) Name of assignment or project:** Libyan National Mapping and Geodatabase Project

Year: 2009 – 2011

Location: Tripoli - Libya

Client: Surveying Department of Libya

Main project features: Main project features: Digital Mapping, CORS establishment, geoid determination, photogrammetric map production [aerial photography, aerial triangulation, orthophoto and line mapping of entire Libya with 50 cm gsd], geodatabase and Portal GIS, Institutional Strengthening and Capacity Building

Positions held: Project Manager

Activities performed; preparation of technical specifications and RFP, bidding procedures, institutional development and capacity building

**o) Name of assignment or project:** Land Registry and Cadastre Information System – TAKBİS – III (worked for Scientific And Technological Research Council of Turkey)

Year: 2011

Location: Ankara- Turkey

Client: General Directorate of Land Registry and Cadastre

Main project features: Establishment of Land Registry and Cadastre Information System

Positions held: Individual Consultant (worked for Turkish National Science Counsel)

Activities performed; Evaluation of TAKBİS

**p) Name of assignment or project:** Designing a macro framework for Agricultural Land Use Planning

Year: 2013

Location: Edirne, Kirklareli and Tekirdag Provinces - Turkey

Client: General Directorate of Agricultural Reform

Main project features: spatial and land use plans,

Positions held: Project Manager

Activities performed; preparation of the planning methodology, elaborations in the pilot vicinities, and scheduling of the planning program.

**r) Name of assignment or project:** Turkish Geospatial Market Survey

Year: 2012

Location: Ankara Turkey

Client: Leica Switzerland (together with Kaufman Ltd, Jürg Kaufman)

Main project features: It has requested to make a market study in the field of surveying equipment market by the client. The focus of the Market Study was to get a clear answer of the followings;

- Quantities & prices of key products
- The market volume
- Market positions by brand
- Market prices + margins
- Market trends (growth rate)
- Market opportunities

Detailed Market Survey about the Surveying Market (investments per year)

Activities performed; The Market Study comprised the following activities:

- Contacts/investigations/preliminary work planning
- Instruction of Contractor, clarification of task
- Work planning/arrangements



- Development/translation of questionnaire
- Collection/scanning Address material
- Distribution of questionnaires
- Collection of answers incl. contacts for reminder and clarification
- Interpretation of answers
- Elaboration report market assessment and recommendations
- Presentation and discussion of result

**s) Name of assignment or project:** Orthophoto production with 5cm GSD and the underlying DTM data using by Unmanned Air Vehicles.

Year: 2013

Location: Antalya - Turkey

Client: NZ Aerial Mapping Limited – New Zealand

Main project features: 5cm Aerial Imagery collection in Golf Course by UAV, DTM and Orthophoto production

Activities performed; project implementation

**t) Name of assignment or project:** Development of Agricultural Land Use Planning and Soil Database

Year: 2013

Location: Turkey

Client: General Directorate of Agricultural Reform

Main project features: spatial and land use plans,

Positions held: Project Developer, Adviser to Director General

Activities performed; Developing RFP and ToR

**u) Name of assignment or project:** Software Development on Cadastral Applications Using by OpenSource Technology

Year: 2013

Location: Turkey

Client: General Directorate of Land Registry and Cadastre

Main project features: analysis, design and software development

Positions held: Coordinator

Activities performed; Software development

**v) Name of assignment or project:** Technical Consultancy on Software Development

Year: 2013 - 2014

Location: Turkey

Client: NETCAD Inc. Co.

Main project features: Technical advices

Positions held: Technical adviser

**y) Name of assignment or project:**

Acquisition and Creation of Orthophotos under Digitisation of Land Parcel Identification System (EU funded Project)

Year: 2014 - 2015

Location: Entire Turkey (780.000 sqm)

Client: General Directorate of Agriculture Reform

Project definition: Creation and delivery of seamless and homogenous database of orthoimages of 0.5 m pixel size (less will be an assets) and DEM in raster format of 5m grid size, covering whole Turkey according to a predefined tiles, in compliance with technical requirements valid for LPIS creation, further implementation of IACS and to serve as background data for other related issues (such as forestry, environmental assessment and protection, rural development measures, land management projects, etc)

Main project features: The purpose of the project was the delivery of a seamless, updated and homogeneous base data (orthoimages & DEM) for the whole country to be used as the basic source material or graphical infrastructure for LPIS generation, further implementation of IACS and as background data for other related measures (protection, environmental assessment etc.).

The following activities performed within the scope of this project;

- Geodetic works for GCPs and control points (CP) establishment
- Post-processing of aerial imagery (AI) and/or satellite imagery (SI)
- Aerial Triangulation of AI blocks and exterior orientation of satellite sensors
- DEM Production for the AI areas
- DEM Provision for SI areas
- Ortho production, mosaicking and tiles cutting from the AI and SI
- Internal quality controls during any stage of the production procedure

Positions held: Adviser to JV of FUGRO Geospatial the Netherlands and Mescioğlu Inc Co Turkey

**z) Others;**

involved several projects in Turkey

- Environ Plans (100K planning projects at province level – 6 provinces in Turkey)
- Surveying projects (city digital vector map productions)
- Engineering survey projects (road route surveying, drinking water route surveying projects etc.)
- Large scale photogrammetric (1K and 5K) projects
- Geodetic projects (establishing geodetic networks)
- Consultancy etc.

In addition, in order to start the World Bank Azerbaijan Cadastral Project at the request of Lynn Holstein who was the World Bank Consultant, organized a 2-day workshop in Baku and shared our experiences with them.

## **12. Expertise, Qualifications, Skills & Publications**

- Expertise : Land administration
- Qualifications Cadastre, Land Consolidation, Photogrammetry, Geodesy, GIS Applications, Personnel - Budget and Project Planning & Management
- Publications
- Many Technical and Administrative Reports about the Projects
  - 1 Lecture Notes on Fundamentals of Surveying (Drafted, but not published yet)
  - 1 Dictionary of professional terms, Turkish - English (Member of Dictionary Project Group)
  - About 30 Articles/Paper in National – International Congress, Conferences (available upon request)

## **13. Academic Works**

- a) Atılım University (2001-2009); part time Academic Staff for the courses of
- Fundamentals of Surveying CE 209,
  - Principles of GIS CE 414 / 512,
  - Digital Mapping Techniques CE 511,
- b) Atılım University; MSc thesis supervisor
- Change Detection in Densely Populated Urban Area and Rural Area Using High Resolution Satellite Image, Atılım University, (2005)
  - Design and Implementation of Earthquake Management Project, Case Study: Korfez Municipality, Atılım University, (2005)
- c) Jury member of GIS/GPS/RS related MSc Thesis at Geodetic and Geoinformatics Technologies Department at Middle East Technical University (2000-2002)  
MSc Thesis jury member of GIS and GPS related four theses.
- d) Cadastre Vocational School (1989-2004); part time Lecturer for
- Surveying III,
  - Cartography

## **14. Certification**

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience.

Date: 5/03/2020

Dr.Orhan ERCAN