

CV

Tugba KURTULUS

Seismologist (PhD Candidate)

Adress: Mugla Sitki Kocman University,
Geology Engineering, Hydrogeology Lab.
48000 Kötekli, Mugla/Turkey
e-mail1: gurcan.tugba26@gmail.com
e-mail2: tugbagurcan@posta.mu.edu.tr

Nationality: Turkey

Date of Birth : 22.05.1989

Place of Birth: Eskisehir/Turkey

Driver's license: B (2009)



AREA of SPECIALIZATION

My main areas of specialization are “**seismology**”, “**geophysics**”, “**hydrogeology**” and “**geographic information system**” topics. I am also interested in “historical earthquakes and their seismic records”, “remote sensing”, “groundwater modelling” and “geostatistics”. I would like to focus on updating historical seismic records using seismological applications (SAC etc.) in the North Anatolian Fault System, Turkey. I view land as an integral part of the earth system, linking the atmosphere, biosphere, ocean, water environment and solid earth. I would like to use powerful methodologies to integrate and model the earth systems such as in-situ measurement, remote sensing and also numerical modeling techniques.

EDUCATIONS

- 2018-... : PhD Seismology, Mugla Sitki Kocman University, Mugla/ Turkey,
Department of Geological Engineering
Web site: <http://qeolab.mu.edu.tr/>
- 2014-2016 : Joint Master Hydrogeology,
2th year: University of Poitiers, Poitiers/France (**CGPA 12.119/20, U.S. Grade Equiv.: B+¹, Honors Student**), IC2PM laboratory. Web site: <http://ic2mp.labo.univ-poitiers.fr/>
1st year: Mugla Sitki Kocman University, Mugla/Turkey (**CGPA 3.71/4 U.S. Grade Equiv.: B+¹ Honors Student**), Department of Geological Engineering (Hydrogeology Laboratory).
Web site: <http://geolab.mu.edu.tr/>
M.Sc. Thesis Topic: “*Identification of hot and cold springs using thermal-infrared remote sensing and in-situ measurements in Mediterranean Region.*”
- 2016(Summer) : Centre of English Studies (CES), IELTS Preparation Program, Dublin-Ireland

¹ <https://www.wes.org/gradeconversionguide/index.asp>

2015(Summer) : St.Giles International English School Brighton- United Kingdom
2013-2014 : Sitki Koçman School of Foreign Languages, Mugla Turkey
2008-2012 : Bachelor of Science in Geological Engineering, University of Firat, Turkey
2003-2007 : Yalova Foreign Language Intensive High School, Yalova, Turkey

WORK EXPERIENCE & RESEARCH PROJECTS INVOLVED

2017 : Fp7 European Union-ERANET-MED Project (2015-2019)
Project Title : “Groundwater Resilience to Climate Change and High Pressure within an IWRM Approach”
Organizations : Mugla Sitki Kocman University and Poitiers University
Project Description : This project aims to develop collaborations allowing (i) to tackle some of the most crucial groundwater issues in the Mediterranean area, i.e. tourism development, urbanization, changes in agricultural practices, seawater intrusion, through three representative sites; (ii) to bring together multiple skills in science and technology in a consistent and promising way regarding groundwater issues, in particular GIS and remote sensing, climate change impacts and flow and transport modeling; and (iii) to deal with social and economic fields by involving stakeholders in Turkey, Algeria and France.
Main Job Responsibilities: **“Field hydrogeologist”**, my main job was groundwater sampling, soil characterization, water level measurement and data management

2014-2015 : KOSGEB (Small and Medium Enterprises Development Organization) Project
Project Title : “Assessment of water turbidity dynamics and water parameters using Unmanned Air Vehicle (UAV) in Asartepe Dam Lake and verification of data with in-situ measurement”
Organizations :METU (Middle East Technical University), Mugla Sitki Kocman University, EKOFly Company Ltd.Şti.
Project Description : The aim of this project is to build a new generation of unmanned air vehicle in a water environment, to test the feasibility of the UAV, to collect data using Amphibic-Unmanned Air Vehicle (A- UAV), to analyze the output of collected data and to verify these data with in-situ measurements in Asartepe Artificial Dam.
Main Job Responsibilities: **“Field hydrogeologist”**, my main job was to collect the in-situ data and predict the hydrodynamic parameters using remote sensing analyses.

2013-2014 : Disaster Sensitive Settlement Convenience Maps of Turkey (TADYUS),
Project Title : “Digitizing Geological/Geotechnical Survey Appendix Settled Land Maps and Geological Survey (Disaster Survey) Reports Appendix Disaster Area Plan / Maps”
Organization : Infomab Geographic Information Technologies Inc. Ankara/ Turkey
Project Description :This project contains, creating of GIS-based softwares relating to Disaster Sensitive Settlement Convenience Maps of Turkey (TADYUS),

Disaster Area Maps or Plans; integration with current digital archive; input data within the database management system by georeferencing of construction plan based geotechnical and geological etude reports and presenting of query processes.

Main Job Responsibilities: “GIS Expert”, Digitalizing the GIS-Based maps and create database for settlement management.

2010 : Field work

Project Title : Afsin- Elbistan Coal Mine Exploration K.Maras, Turkey”

Organization : General Directorate of Mineral Research and Exploration- MTA Ankara/Turkey Feasibility studies in Elbistan Coal mine Project

Project Description : Elbistan is a large coal field located in the south-east of Turkey in Kahramanmaras Province. Elbistan represents one of the largest coal reserve in Turkey having estimated reserves of 5 billion tons of coal.

Main Job Responsibilities: “Field internship geologist”, Afsin- Elbistan Coal reserves of the field calculation with the polygon method.

PUBLICATION

Gürcan T., Kurtulus B., Avsar U. and Avsar Ö., Evaluating the thermal stratification of Köycegiz Lake (SW Turkey) using in-situ and remote sensing observations. (*Under review in Journal of African Earth Science, impact factor: 1.5*)

PROCEEDINGS

Gurcan T., Kurtulus B., Avsar O., Avsar U., Monitoring sea surface/depth temperature using Landsat thermal data and in-situ measurement in Fethiye-Gocek Bay, Turkey. *The International Symposium on Sustainable Aviation (ISSA) 9-11 July, Rome, Italy.*

Duzdas E., Kurtulus B., Erdem G., Sağır Ç., **Gurcan T.**, Avsar O., Regnier JL., Le Coz M., Razack M., Electrical Resistivity Tomography (ERT) and Induced Polarization (IP) Applied to Karst Alluvium: Case Study from Azmak Spring, Mugla, Turkey. *IGWC 2017- 7th International Groundwater Conference New Delhi 11-13 December 2017.*

Gurcan T., Kurtulus B., Avsar O., Avsar U., 3D Thermal Stratification of Koycegiz Lake, Turkey. *EGU 2017 23-28 April, Vienna, Austria.*

Gurcan T., Kurtulus B. and Avsar Ö., Mapping of Hot/Cold in a Large Lake Using Thermal Infrared Remote Sensing and In-situ Measurements, December 12-16, 2016, *The 2016 AGU Fall Meeting, San Francisco, California, USA.*

Gurcan T., Kurtulus B., Amphibious Unmanned Air Vehicle Based Remote Sensing Using Multispectral Camera, April 06-10, 2015, 68. *Turkey Geology Congress, Ankara, Turkey.*

REPORTS

Gurcan T., 2018, Discussing “An International Study of Research Misconduct Policies (Resnik et al. 2015)”

Gurcan T., 2015, Tracer Injection and Numerical Modeling of transport in porous and fractured media in Site of Experimental of Poitiers (SEH).

Gurcan T., 2015, Tracer Injection and Numerical Modeling in a River in France.

Gurcan T., 2015, Measurement of current water directions in the karst aquifer, Poitiers, France.

- Gurcan T.,** 2015, Numerical modelling of transfers in soils and aquifers by using Groundwater Vistas programme. Numerical modelling of a contaminant case study area was modelled using MODFLOW and MT3D.
- Gurcan T.,** 2015, Geostatistical Analysis of the Soil Pollution with Heavy Metals by using Suffer programme.
- Gurcan T.,** 2015, Speciation of dissolved aluminum in natural waters and gibbsite solubility of water solid reactivity and rock organization at small scale.
- Gurcan T.,** 2015, Eh-pH Diagrams of Copper Geochemical Calculation by using JCHESS program.
- Gurcan T.,** 2015, Laboratory Experimental and calculation of HFO/Pb²⁺ ions system by using JCHESS program.
- Gurcan T.,** 2015, Experimental approach and empirical modelling of contaminants in soils and groundwater: Sorption of Cu²⁺ ions onto smectite surface.
- Gurcan T.,** 2015, Impact of the repository for industrial fluorinated waste by using Jchess simulation.

FIELD TRIP

Tracer experiment in Hydrogeological Experimental Site, Poitiers, France.

River tracer experiment in Miosson River, Poitiers, France.

Measurement of current water directions in the karst aquifer, Lussac-les-Chateaux, Poitiers, France.

Mapping of Coal Mine Afsin-Elbistan K.Maras, Turkey

Investigation of Alacakaya Marble and Mine Area, Elazig, Turkey

Investigation of Ataturk Dam and Hydroelectric Power Plant, Adiyaman, Turkey

Investigation of Karakaya Dam and Hydroelectric Power Plant, Diyarbakir, Turkey

Investigation of Keban Dam and Hydroelectric Power Plant, Elazig, Turkey

Cukuralan Gold Mine Operations and Development Field Izmir, Turkey

Water sampling and in-situ measurement using spectroradiometer in Salda Lake, Burdur, Turkey

LANGUAGES

English (Advanced)

French (beginner)

Turkish (mother tongue)

FELLOWSHIP

The Scientific and Technological Research Council of Turkey (TÜBİTAK) Master of Science Fellowship (2017)

French Government Master Fellowship (2015-2016)

Sitki Koçman Foundation Master Fellowship (2015-2016)

COMPUTATIONAL SKILLS

OS : Windows Operating System (Windows 8, 7, Vista), Mac OS X, Linux

Software : GMT 5.4.3, Groundwater Vistas, AquiferWIN32, Suffer, Rockworks 14, ARCGIS

10.4, Jchess, MODFLOW, MT3D, SPSS, Global Mapper, MS Office (Word, Excel, Power Point)

Languages : Matlab 2014b

CONFERENCE ORGANIZATION

- Summer School on Earth Observation Applications 2018 (UYGU 2018), Hyperspectral Image Processing, Gebze Technical University, on June 18-21, 2018, as a participant. <http://bte.gtu.edu.tr/uygu2018/>
- 8th International Congress on Environmental Modelling and Software (iEMSS) in Toulouse, France, on July 10-14, 2016, as a participant. <http://www.iemss.org/sites/iemss2016/>
- Staff Member "ISEM 8th International Symposium on Eastern Mediterranean Geology." 13-17 October 2014, <http://isemg.org/>

CERTIFICATES

- 2018 : UYGU 2018, Hyperspectral Image Processing, Gebze Technical University.
- 2016-Spring : Centre of English Studies (CES), IELTS preparation program in Dublin, Ireland
- 2015-Summer : St.Giles International English School Brighton- United Kingdom
- 2015 : English Language Training Programme, B2 Levels, British Street Course, Mugla, Turkey
- 2014 : 8th International Symposium on Eastern Mediterranean Geology (ISEMG), 13-17 October, Mugla Sitki Kocman University, Turkey
- 2012 : The European Language Portfolio, American Cultural Association Language Schools Elazığ, Turkey
- 2012 : ArcGIS 10.2 training certificate, Esri, Ankara, Turkey

HOBBY

- 2018-present : Playing Tennis, Mugla Sitki Kocman University, Mugla, Turkey
- 2018-present : Grow Flower, Mugla Sitki Kocman University, Mugla, Turkey
- 2017-present : Using DRONE, Hydrogeology Lab. Mugla Sitki Kocman University, Turkey
- 2008-2010 : Acting in children's theatre, Elazığ State Theatre, Turkey
- 2008 : Sportsmanship Arm Wrestled Team, Firat University, Elazığ, Turkey
- 2004-2006 : Chorister Music Choir, Yalova Foreign Language Intensive High School, Turkey
- 2003 : Sportsmanship Taekwondo Team, Yalova Foreign Language Intensive High School, Turkey
- 2001 : Sportsmanship Volleyball Team, Ziya Gokalp Junior High School, Yalova, Turkey

MEMBER

- AGU (American Geophysical Union)
- EGU (European Geosciences Union)
- Chamber of Geological Engineers of Turkey
- Association Science Culture des Anciens Boursier Français (ASCBF) "www.ascbfr.com"

REFERENCES

Assoc. Prof.Dr. Bedri Kurtulus

Adress : Muğla Sıtkı Koçman University Geological Engineering Department – Hydrogeology Laboratory Kotekli, 48000, Muğla,Turkey

Mobile: +90 531 966 24 25

| webmail : bkurtulus79@gmail.com

Prof.Dr. Moumtaz Razack

Adress: Université de Poitiers , Faculté de Sciences Fondamentales et Appliquées–

SFA - UMR 7285 - Institut de Chimie des Milieux et Matériaux de Poitiers (IC2MP), Campus Bâtiment B5 (Administration) 9 rue Charles-Claude Chenou TSA 51106 86073 Poitiers Cedex 9, France

Mobile: +33 5 49 45 36 81

| webmail : moumtaz.razack@univ-poitiers.fr