

REŞAT ULUSAY

CURRICULUM VITAE

- DATE OF BIRTH AND PLACE:** 01 September 1952; İzmir – Turkey
- PROFESSION:** Geological Engineer (MSc, PhD)
- CURRENT POSITION:** Professor
Hacettepe University, Faculty of Engineering,
Geological Eng. Dept., Applied Geology Division,
Beytepe, ANKARA, TURKEY
- FOREIGN LANGUAGE :** English
- EDUCATION :**
- BS and MSc :*** 1969-1975; Hacettepe University,
Geological Engineering Dept., Ankara, Turkey
(on Engineering Geology)
Title: *“Geo-engineering Properties of North-Central Part of
Ankara City”*
- PhD :*** 1991; Middle East Technical University,
Geological Engineering Dept., Ankara, Turkey
(on Engineering Geology)
Title: *“Geotechnical Evaluations and Deterministic Design
Considerations for Pitwall Slopes at Eskihisar (Yatağan-Muğla)
Strip Coal Mine”*
- ASSOCIATE PROFESSOR :** 1994
- PROFESSOR :** 2000
- MAIN AREAS OF INTEREST:** Engineering Geology, Rock Mechanics, Soil Mechanics
(Particularly Stability of Slopes, Open Pit Slope Design, Rock Mass Characterization and
Classification, Geotechnical Site Investigations, Soil Liquefaction and Earthquake-Induced
Ground Behavior, Swelling, Rock Weathering, Geomechanical Laboratory Testing)

PROFESSIONAL PRACTICE

July 1975- March 1976 :

Field Engineer - Radioactive Minerals and Coal
Department of Mineral Research and Exploration
Institute (MTA), Ankara, Turkey.

Assigned in a project under the supervision of alien experts within the framework of uranium explorations supported by United Nations at western Turkey. Responsibilities included; geological mapping, evaluation of borehole cores and surface prospecting.

March 1976 - August 1977 :

Military Service

August 1977 - August 1989 :

Engineering Geologist

Rock and Soil Mechanics Division, Feasibility Studies
Department, MTA, Ankara, TURKEY

Assigned in a team and assigned by MTA for the establishment and development of the Rock and Soil Mechanics Division and Test Centre, under the auspices of United Nations Technical Cooperation Department. Participated to field and laboratory investigations including stability of slopes and selection of support system at two different mines and trained by "Golder and Hoek Associates" both in Turkey and UK on geotechnical mine design between 1978 and 1981.

Assigned in a number of geotechnical projects including stability of slopes in operated mines, rock mass characterization and preliminary support selection at a railway tunnel and a mine shaft, and site investigations for buildings and a power station planned to be constructed by an Australian Company (Hollingsworth Consultant), as engineer and team leader.

August 1989 - June 1991 :

**Chief of the Rock and Soil Mechanics Division,
MTA, Ankara, Turkey**

In addition to the responsibilities including management and preparation of

project proposals, conducted several geotechnical projects, such as stability and re-design of pit wall slopes and spoil piles, and site and laboratory investigations at a power plant site for a Japanese Company (EPDS)

Coordinator of Feasibility Studies Department, MTA responsible from Geotechnical Studies, Ankara, Turkey

June 1991 - December 8, 1995 :

Responsibilities included; coordination of geotechnical projects conducted by MTA, participation to geotechnical projects, development of laboratory facilities and preparation of geotechnical project proposals. In addition, presented seminars and conferences to the engineers employed by MTA for training. He has also been continuously working as a part-time lecturer at the Geological Engineering Department of the Middle East Technical University since 1992-1993 spring semester.

December 8, 1995 – December 13, 2000 : Associate Professor at Hacettepe University, Faculty of Engg., Geological Engg. Dept., Applied Geology Division, Beytepe, Ankara, TURKEY

December 13, 2000 - present :

Professor at Hacettepe University, Faculty of Engg., Geological Engg. Dept., Applied Geology Division, Beytepe, Ankara, TURKEY

December 2004 - December 2010:

Head of Applied Geology Division of Geological Engg. Dept. at Hacettepe University, Beytepe, Ankara, TURKEY

February 1992 - 2015: Part-time instructor at Geological Engineering Department of Middle East Technical University, Ankara, Turkey

Other Scientific and Academic Responsibilities:

- Member of ISRM (International Society for Rock Mechanics & Rock Engineering) Board as the President Elect (2019-2023) (since October 2017)
- President of the Commission on Testing Methods of the International Society for Rock Mechanics (ISRM) (February 2006 -)
- Member of the Commission on Design Methodology of the International Society for Rock Mechanics (ISRM) (July 2008 -)
- President of the Commission on Rock Slope Stability of the International Association of Engineering Geology and the Environment (IAEG) (September 2009 - December 2013)
- Member of the International Geosciences Programme (IGCP) Scientific Board (2008 -

2013)

- Member of the Academic Advisory Committee of Chinese State Key Laboratory for Geomechanics and Deep Underground Engineering, Mining Univ., Beijing (September 2009 -)
- Member of the Executive Committee of the International Association of Engineering Geology and the Environment (IAEG) Turkish National Group (1998 – June 2013)
- President of the Executive Committee of the Turkish Society for Engineering Geology (July 2013– July 2017)
- Member of the Scientific Research Projects Committee of Engineering and Science at Hacettepe University (2001 - 2008; 2016 -)
- Member of the National Earthquake Council of Turkey (January 2004 - January 2007)
- Member of the Scientific Advisory Board, Institute of Earth and Marine Sciences of the Marmara Research Center of the Scientific and Technical Research Council of Turkey (TUBITAK-MAM) (December 2006 - 2012)
- Advisor of the Environment, Atmosphere, Earth & Marine Sciences Group (ÇAYDAG), TUBITAK (March 2007 - March 2009)
 - Member of the Earthquake Advisory Board of the Disaster and Emergency Management Presidency of Turkish Prime Ministry (October 2010 - 2017)
- Member of the Scientific Board of Hacettepe University (Since May 2016)

HONOURS AND AWARDS

- (i) **Hacettepe University Scholarship:** One-year scholarship (1970-1971) awarded by the Student Fund of Hacettepe University for the students with high academic average
- (ii) **MTA Scholarship:** He completed his undergraduate education at Hacettepe University as a scholarship of the Mineral Research and Exploration Institute (MTA) of Turkey (1972-1975)
- (iii) **İhsan Doğramacı (founder of Hacettepe University) Award for Outstanding Success:** He was awarded by Hacettepe University as the most successful student graduated from the Geological Engineering Program (3.67/4) at Hacettepe University (1975).
- (iv) **United Nations Scholarship:** He was trained on “Geotechnology” by Golder and Hoek Associates Consulting Geotechnical and Mining Engineers in UK on “Mining Geotechnology” for one month (June 1978) as the scholarship of the United Nations Technical Cooperation Department.
- (v) **UNESCO Scholarship:** He participated to the UNESCO sponsored courses on “Theory and Applications of Rock Mechanics” and “Rock Fracture Mechanics” held at the International Centre for Mechanical Sciences, Udine, Italy (July-August, 1982).
- (vi) **Terra Tek Scholarship:** One-month visiting scholar on rock mechanics at Terra Tek Research Centre located in the Research Park of Utah University, Salt Lake City, USA (June,1992).
- (vii) **GOEDATA Scholarship:** He was invited by GODATA S.p.A, consulting firm in Turin (Italy), to discuss on rock classification methodology practices, to present a conference at Politechnique University of Turin on “The use of geomechanics classification of complex rocks for excavations”, and to participate to technical visits to several tunnels under construction in Italian Alps (July 1993).

- (viii) **Golden Hammer Award in the Category of Applied Geology – 1993:** He was awarded by the Chamber of Geological Engineers of Turkey in the category of the best paper on engineering geology from Turkey published in international journals.
- (ix) **Erguvanlı Award for the Best International Paper in the field of Engineering Geology – 1998:** He was awarded by the Turkish Society of Engineering Geology of IAEG in the category of the best paper on engineering geology from Turkey published in international journals (the Erguvanlı Award was established by the IAEG Turkish National Committee to commemorate the life and work of Professor Kemal Erguvanlı who is the founder of engineering geology in Turkey)
- (x) **Golden Hammer Award in the Category of Applied Geology – 2000:** He was awarded by the Chamber of Geological Engineers of Turkey in the category of the best paper on engineering geology from Turkey published in international journals.
- (xi) **Golden Hammer Award in the Category of “Science Award” – 2001:** He was awarded by the Chamber of Geological Engineers of Turkey for his international and national scientific contributions to engineering geology and education in university, and his services for national groups and committees throughout his academic and professional life.
- (xii) **Outstanding Reviewer Award for the journal “Environmental and Engineering Geoscience” - 2011:** He was awarded by the Association of Environmental & Engineering Geologists (AEG, USA) and the Geological Society of America as the best reviewer of 2011 for the journal.
- (xiii) **Lifetime ISRM Fellow - 2015:** He was awarded by the International Society for Rock Mechanics (ISRM) in recognition his outstanding accomplishments in the field of rock mechanics and rock engineering and his contribution to the professional community through the ISRM.
- (xiv) **ISRM Outstanding Commission Award 2015** conferred to the ISRM Commission on Testing Methods, which is chaired by Prof. Resat Ulusay, in recognition of its outstanding performance during the period 2011-2015.
- (xv) **Recipient of the 2016 Hans Cloos Medal Award of IAEG** (The senior award presented by International Association of Engineering Geology and the Environment-IAEG, and is given to an engineering geologist of outstanding merit of international repute who has made a major contribution to engineering geology.)

PROFESSIONAL AFFILIATIONS

1. International

1. “President of the Commission on Testing Methods” of the International Society for Rock Mechanics (ISRM) (*since February 2006*)
2. Member of the ISRM Board as the ISRM President Elect (2019-2023) (*since October 2017*)
3. “President of the IAEG Commission on Rock Slope Stability” (*September 2009-2011*)
4. “Scientific Board Member of the International Geosciences Programme (IGCP)” (*2008-2013*)
5. “Member of the Commission on Rock Engineering Design Methodologies” of the International Society for Rock Mechanics (ISRM) (*since July 2008*)
6. “Member of the Academic Advisory Committee of Chinese State Key Laboratory for Geomechanics and Deep Underground Engineering” (*since September 2009*)

2. National

1. Member of the Executive Committee of the Turkish Society of Engineering Geology (1998-2013)
2. President of the Executive Committee of the Turkish Society of Engineering Geology (2013-2017)
3. Member of the National Earthquake Council of Turkey (January 2004 - January 2007)
4. Member of Engineering and Science Board of the Scientific Researches Fund at Hacettepe University (2001- 2008; 2016 -)
5. Member of the Scientific Board of Hacettepe University (since May 2016)
6. Member of the Commission on Education of Engineering Faculty at Hacettepe University (2004 - 2008)
7. Member of the Scientific Advisory Board, Institute of Earth and Marine Sciences of the Marmara Research Centre of the Scientific and Technical Research Council of Turkey (TUBITAK-MAM) (December 2006-2012)
8. Advisor of the Environment, Atmosphere, Earth & Marine Sciences Group (ÇAYDAG), at TUBITAK (March 2007 – March 2009)
9. Coordinator of the Working Group on “Geo-Engineering Terms” prepared as a part of “Dictionary of Engineering Terms” which was requested to be prepared by the Turkish Academy of Sciences (September 2006-February 2008)
10. Member of the “Earthquake Advisory Board” of the Disaster and Emergency Management of Turkish Prime Ministry (October 2010-Oct)
11. Member of the Cultural-Historical Cappadocia Region Protection Board of the Ministry of Culture and Tourism of Turkish Republic (2011-2013)

PROFESSIONAL AND SCIENTIFIC ACTIVITIES ON ABROAD

- (a) He was trained on “Geotechnology” by “Golder and Hoek Associates Consulting Geotechnical and Mining Engineers (UK)” from June 18, 1978 through February 1, 1981 under the auspices of the United Nations Technical Cooperation Department. In the first part of the training, he participated to technical courses and laboratory practices on rock mechanics (by Prof. Ted Brown and Dr. Stephen D. Priest) at Imperial College, London (UK), visited some manufacturers producing rock and soil mechanics testing equipment in UK, and underground and open pit mines in Wales and Ireland. In the second part of the training, he participated to a geotechnical project conducted for designing an open pit and underground mine in Turkey under the consultancy of Golder and Hoek Associates. **He received a certificate on “Geotechnical Investigation and Design for Mining Feasibility Studies” at the end of this 2.5-year training.**
- (b) He participated to the UNESCO sponsored courses at the seat of International Centre for Mechanical Sciences in Udine (Italy) on “Theory and Application of Rock Mechanics “, and “Rock Fracture Mechanics” (July-August, 1982) and received certificates.
- (c) He was invited by GEODATA Geo-Engineering Consultants in Turin (Italy) to exchange technical experience in rock characterization with the personnel of GEODATA, to give a conference on “The Use of Geomechanics Classification of Complex Rocks for Excavations” at Turin Politechnique University (Italy), and to participate technical visits to several tunnels under construction in Italian Alps (three weeks in July 1993).
- (d) He was invited by Terra Tek Research, located in the Research Park of the Utah University, Salt Lake City, USA, as a visiting scholar to be trained on rock mechanics testing and to give a seminar to the personnel of Terra Tek on rock mass classification (June,1992).

- (e) He was involved in an international joint research project, which is entitled "*Environmental Study on Derinkuyu Underground City, Turkey*" and supported by the Japanese Ministry of Education, Culture, Sports, Science and Technology (MONBUSHO- Research Project No.: 09044154), and visited Japan in 1997 and 1998 to participate to the project meetings.
- (f) He was involved in an international tri-lateral collaborative research project with experts from Japan and USA. The title of the project, leaded by Prof. Masanori Hamada, was "*Research on the Liquefaction and Faulting Induced Permanent Ground Deformation and Associated Damage to Structures in Kocaeli Earthquake of August 17, 1999*".
- (g) He was invited by Prof. Kazuo Konagai from the Institute of Industrial Science (IIS) at University of Tokyo (Japan), as an invited speaker to participate to the workshop entitled "*Seismic Fault Induced Failures - Possible Remedies for Damage to Urban Facilities*" in January 2001.
- (h) He was invited by Prof. Hisataka Tano from Nihon University (Japan) for two weeks in November 2003 for participating to the workshop organized for an ongoing international joint research project entitled "*A Research on the Environmental Co-existence in Mountains Regions and Non-Metropolitan Cities and Its Supporting Information Technology*" supported by the Japanese Ministry of Education, Culture, Sports, Science and Technology (MONBUSHO- Research Project No: 09044154) and the project meeting.
- (i) He was invited by Prof. Xia-Teng Feng, who is the director of the Rock Mechanics Institute of the Chinese Academy of Sciences in Wuhan, China, to visit this institute and to give two lectures on "*Recent Earthquakes Occurred in Turkey and Their Geotechnical Aspects*" and "*Geo-environmental Factors Affecting Slope Movements and Investigation of a Long-term Slope Instability at a Settlement in Turkey*". Prof. Prof. Zuyu Chen also invited him to chair a specialized session entitled "*Representing Landslide and Slope Engineering Data in Electronic Form*" in the "*10th International Symposium on Landslides and Engineered Slopes,*" held in China in July 2008.
- (j) He was invited by the President of the ISRM Commission on Education as one of the four speakers to give lectures in the "*2009 ISRM Lecture Tour in China*" between May 8 and 15. He introduced the lectures entitled "*Testing methods, site investigation, rock properties in rock engineering design*" and "*Presentation of the Blue Book (ISRM Suggested Methods-2007)*" at four universities and some institutions in China and Hong Kong.
- (k) Invited by the University of the Ryukyus, Department of Civil Engineering & Architecture to participate to a workshop and give a conference on the role of thermo-hydro-chemico-mechanical processes on the deterioration of antique settlements and by the Japanese Society for Rock Mechanics and Rock Mechanics Division of the Society of Materials Science of Japan to give conferences on Testing Methods and ISRM Suggested Methods.
- (l) Invited by Prof. Xia-Ting Feng (Dean of School of Resources and Civil Engineering, Director of State Key Laboratory of Ministry of Education on Safe Mining of Deep Metal Mines in Northeastern University, ISRM Immediate Past President) and visited Northeastern University in Shenyang, China. He gave a 4-day short course on "*Engineering Geology in Tunneling*" for Rock Mechanics Group and collaborated in research for true 3-axial testing and acoustic emission measurement along with rock mechanics research counterparts in Northeastern University. In addition, he gave a seminar on "*Standardization on rock characterization, testing and monitoring with emphasize on the ISRM Suggested Methods, practical issues and difficulties, future trends*" and participated to meetings to discuss on the proposals for new ISRM Suggested Methods.
- (m) Invited by Prof. Xia-Ting Feng (Vice President of Northeastern University, Director of State Key Laboratory of Ministry of Education on Safe Mining of Deep Metal Mines in Northeastern

University, ISRM Immediate Past President, President of FedIGS) and visited Northeastern University in Shenyang, China. He gave a master course namely "Engineering Geology in Deep Rock Excavation and Rock Slope Engineering" and participated to meetings to discuss on the proposals for new ISRM Suggested Methods and on the preparation of a paper on true 3-axial experiments between 11 and 30 June 2018.

- (n) Invited by Prof. Faquan Wu (Secretary General of the International Association of Engineering Geology and the Environment, IAEG) from the Civil Engineering College at Shaoxing University, China, between 8 and 15 July 2018 to give a keynote and short course in Shaoxing University and to discuss on the improvement of the cooperation on Engineering Geology and Rock Mechanics in the future.

MAIN AREAS OF INTEREST

Prof. Ulusay carried out and supervised researches on a wide variety of engineering geology, rock mechanics and other geotechnical topics both in industry and university over a period of 41 years. His major personal research efforts have been in the areas of:

- Stability analysis and design of rock and soil slopes, particularly stability of open pit slopes, spoil piles and tailings dam, and slope monitoring;
- Earthquake induced ground deformations, particularly liquefaction and prediction of magnitudes of liquefaction-induced lateral spreading, and site amplification and development of an acceleration attenuation relationship for Turkey; microzonation maps;
- Geotechnical characterization of rock masses (rock mass classification systems, rock mass strength and rock weathering);
- Geotechnical site investigations;
- Engineering properties of rock materials, rock mechanics and soil mechanics testing, particularly development of some index tests (i.e. contributions to the block punch strength index test and needle penetration test), engineering behaviour of clay-bearing weak rocks;
- Swelling behaviour of clay soils and geo-engineering properties and mechanical behaviour of peats.
- Short- and long-term stabilities of rock structures at historical sites.

EDITORSHIPS & EDITORIAL BOARD MEMBERSHIPS

1. Editorships for International and National Journals

- **Editor-in-Chief**, "**YERBİLİMLERİ** (*Earthsciences*)", Journal of the Earthsciences Application and Research Centre of Hacettepe University. The journal is indexed and/or abstracted by some international indexes (*May 1996 – January 2012*)
- **Associate Editor**, "**Environmental & Engineering Geoscience**", Bulletin of the Association of Environmental and Engineering Geologists (AEG) and the Geological Society of America (*since June 2008*)
 - **Editor**, "**Bulletin of Engineering Geology**", publication of the IAEG Turkish Society of Engineering Geology (*2002-2010*)
 - **Co-Editor**, "**Turkish Journal of Rock Mechanics**", Journal of ISRM Turkish National Society for Rock Mechanics (*since 2004*)

2. Memberships to the Editorial Board of International Journals

- **Bulletin of Engineering Geology and the Environment**, publication of IAEG (*since January 2007*) (*He was assigned by the IAEG Council as the Co-editor-in-chief of this journal and will take over this mission on 1 January 2019*)
- **Engineering Geology** (*since April 2013*)
- **Rock Mechanics and Rock Engineering** (*since July 2013*)
- **Journal of Rock Mechanics and Geotechnical Engineering (JRMGE)**, publication of Chinese Society for Rock Mechanics and Engineering, Institute of Rock and Soil Mechanics, Chinese Academy of Sciences and Wuhan University (*since September 2008-2014; Honorary Member of Editorial Board" for 2014-2019*)
- **Turkish Journal of Earth Sciences**, publication of TUBITAK (*1999-2015*)

3. Memberships to the Editorial Boards of National Journals

- Turkish Journal of Rock Mechanics
- Bulletin of Engineering Geology and the Environment
- Geological Bulletin of Turkey
- Journal of Mineral Research and Exploration Institute
- Geosound
- Blue Planet (Popular Geosciences Journal)
- National Journal of Hazards

4. Reviewer for International Journals

- Engineering Geology
- Environmental Earth Sciences
- Computers & Geosciences
- International Journal of Rock Mechanics and Mining Sciences
- Rock Mechanics and Rock Engineering
- Bulletin of Engineering Geology and the Environment
- Environmental & Engineering Geoscience
- Canadian Geotechnical Journal
- Natural Hazards
- Applied Clay Science
- International Journal of Mining and Mineral Engineering
- The Arabian Journal for Science and Engineering
- Geotechnical and Geological Engineering
- Geologos
- Geotechnical Testing Journal

- Soil Dynamics and Earthquake Engineering
 - Tunnelling and Underground Space Technology
 - Geodinamica Acta
 - Tectonophysics
 - Arabian Journal of Geosciences
 - International Journal of Mining Science and Technology
- 5. Member of Scientific Boards of international and national symposia and congresses on engineering geology and rock mechanics (details are not listed)**

PROFESSIONAL MEMBERSHIPS

1. International Memberships

- (i) International Association of Engineering Geology and the Environment (IAEG)
- (ii) International Society for Rock Mechanics and Rock Engineering (ISRM)
- (iii) Association of Environmental & Engineering Geologists (AEG)
- (iv) International Society for Clay Sciences (ISCS)
- (v) Japan Society of Civil Engineers (JSCE)

2. National Memberships

- (i) IAEG Turkish Society of Engineering Geology
- (ii) ISRM Turkish National Society for Rock Mechanics
- (iii) Turkish Branch of Japan Society of Civil Engineers (JSCE)
- (iv) National Clay Science Society
- (v) Chamber of Geological Engineers of Turkey
- (vi) Earthquake Engineering Association of Turkey

CONTRIBUTIONS TO EDUCATION AT UNDERGRADUATE AND GRADUATE LEVELS

Reşat Ulusay supervised a total of **19** MSc and **12** PhD theses. He is also currently supervising ongoing **one** PhD thesis and **2** MSc theses. In addition, he participated to a number of defence juries of MSc and PhD students from the geological, civil and mining engineering departments of various universities in Turke, and to the two PhD theses from South Africa (University of Witwatersrand) and Austria (Graz University of Technology), respectively, as jury member.

1. Courses Given

(a) Geological Engineering Department at Hacettepe University:

1. Undergraduate Compulsory Courses:

- JEO 452: Engineering Geology
- JEO 455: Graduation Project (Design and Project I)
- JEO 456: Graduation Project (Design and Project II)
- JEO 156: Introduction to Geological Engineering (*2017-2018 fall semester*)

2. Undergraduate Elective Courses:

- JEO 469: Geotechnical Data Collection and Evaluation Techniques

- JEO 494: Natural Hazards (*between 2002 and 2005*)
- JEO 492: Principles of Scientific Writing and Presentation (since 2016 in spring semesters)

3. Graduate Courses:

- JEM 618: Engineering Geology Case Studies
- JEM 683: Geotechnical Site Investigations
- JEM 719: Stability and Design of Slopes
- JEM 720: Discontinuity Analysis and Rock Mass Classification Systems

(b) Geological Engineering Department at Middle East Technical University as part-time instructor (in English):

- GEOE 104: Geology for Civil Engineers
(*Undergraduate course for civil engineering students, both in fall and spring semesters between 1992 and 1997*)
- GEOE 544: Stability of Soil Slopes in Engineering Practice
(*Graduate course, between 1997 and 2015 in every spring semester*)
- GEO 717: Topics in Active Tectonics (Seismic Zoning) (*Graduate Course, co-instructor, between 2012-2014 fall semesters*)

PUBLICATIONS

Resat Ulusay is the author of **116 Journal Articles** (*98 and 18 papers published in international and national peer review journals, respectively*), **164 Conference Papers** (*100 and 64 papers published in international and national conference proceedings, respectively*) and **4 Chapters in International Books, Editor and Co-Editor of 2 International Books, Author of 6 National Books**, one of the authors of **2 Technical Dictionaries, 2 Technical Guidelines, 4 Articles published in National Popular Science Journals, 3 Course Notes** (in Turkish). **1 Short Course Note** (in English, given in Northeastern University, China), **1 Master Course Note** (in English, given in Northeastern University, China, 2017-2018 Spring Semester).

PROJECTS

He participated to 7 and 22 international and national research projects, respectively. In addition, he is one of the authors of a total of 42 project and consultancy reports prepared for industry.