

AHMET ALI MERT

Senior Geotechnical & Civil Engineer • PhD, MSc

Family member of EU citizen (eligible for EU residence/work rights) • Ankara, Türkiye

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PROFILE

Senior Geotechnical, Civil & Environmental Engineer with 10+ years in safety-critical infrastructure. Owner-side Geotechnical Engineer at Türkiye's State Hydraulic Works (DSİ), leading independent LE/FE verification for slopes, deep excavations, spillways and diversion tunnels under static, rapid-drawdown and seismic loading. Combines consultancy and national-scale delivery with international research (MSc — UT Austin) and a completed PhD on slope stability — bridging rigorous analysis with constructible, cost-aware solutions.

CORE SKILLS

Geotechnical	Slope stability (static / seismic / rapid-drawdown) • Deep excavations & retaining • Foundations • Ground improvement • Site investigation & ground modelling • Back-analysis & parameter calibration
Underground & Civil	Tunnels & portals • Dams, spillways & appurtenant structures • Bridges, viaducts & highways • Earthworks & drainage
Owner's Engineer	Design review & verification • Technical specs & GBR-style documentation • Tender & BoQ • QA/QC & HSE • Contract & multidisciplinary coordination
Hydraulic-Geotechnical	Spillway & diversion-tunnel review • Uplift / seepage stability • Flood routing (PMF) • Energy-dissipation interfaces
Software & code	Slide2 • RS2 • PLAXIS 2D • GEO5 • MIDAS GTS NX • GeoStudio • UTEXAS4 • DEEPSOIL • HEC-HMS/RAS • AutoCAD • ArcGIS • SAP2000 • MATLAB • C++

EXPERIENCE

Senior Geotechnical Engineer (Owner's Engineer) — General Directorate of State Hydraulic Works (DSİ), *Aug 2019 – Present • Ankara*
ICOLD Member

- Owner's technical representative for national-scale hydraulic infrastructure (spillways, diversion tunnels, portals, deep excavations); lead client reviewer of consultant deliverables, issuing formal comments for code-compliant, constructible, cost-effective solutions.
- Lead and run independent LE/FE stability analyses (Slide2, RS2, PLAXIS 2D) for spillways, portals, abutments and slopes under static, rapid-drawdown and seismic conditions; develop stabilization concepts (anchors, retaining, drainage, ground improvement).
- Define investigation scopes and technical specifications; translate drilling/lab testing into project-specific ground models; lead hydraulic-geotechnical interfaces (uplift/seepage stability, flood routing, energy dissipation).
- **Key projects:** Silvan Dam (175.5 m CFRD — spillway stabilization in deep colluvium; back-analysis, 65 m prestressed anchors, load-cell verification) • Koçali Dam (diversion-tunnel remediation informed by InSAR/inclinometer monitoring & paleo landslide analysis; alternative shaft spillway) • Okçular / Oyuklu / Hamzalı Dams.

Civil Works & Construction Manager — Huawei Technologies Co. Ltd. *May 2014 – Jan 2016 • Istanbul*

- Led civil works for Türkiye's first 4G LTE programme — coordinated ~15 subcontractor teams across concurrent sites; foundations, base-station construction, concrete quality, QA/QC and HSE; prepared BoQ/tender packages and as-built documentation.

Geotechnical Design Engineer — Emay International Engineering & Consultancy Inc. *Oct 2012 – Dec 2013 • Istanbul*

- Geotechnical design for 10+ structures — viaducts, overpasses and underpasses on the North Marmara Highway & 3rd Bosphorus Bridge (BOT) and municipal bridge works; derived soil/rock parameters (RocLab) from field and laboratory data; settlement, bearing-capacity and global-stability analyses for foundations, high embankments and retaining structures.

EDUCATION

PhD, Civil Engineering (Geotechnical) — Eskişehir Technical University | 2020–2026 • GPA 3.92/4.00 • Dissertation: Static & Dynamic Slope Stability

MSc, Geotechnical Engineering — The University of Texas at Austin, USA | 2017–2019 • Graduate Dean's Fellowship • Thesis: Oso Landslide clays

MSc, Soil Mechanics & Geotechnical Engineering — Istanbul Technical University | 2013–2015 • coursework completed

BSc, Civil Engineering (Double Major with Environmental Engineering) — Anadolu University | 2007–2012 • MÜDEK / EUR-ACE® • Top-5 in Civil & Valedictorian (1st) in Environmental • TÜBİTAK 2nd Prize for Bachelor's Thesis

SELECTED PUBLICATIONS

- Mert, A.A., Salman, M. & Çalışkan, F. (2026). *Overcoming Geological Challenges in the Construction of a CFSGD Diversion Tunnel*. Accepted, ITA-AITES WTC 2026, Montreal.
- Mert, A.A. & Çalışkan, F. (2024). *Stability of Diversion-Tunnel Portal Slopes after the Feb 6, 2023 Kahramanmaraş Earthquakes*. ITA-AITES WTC 2024, Shenzhen.
- Additional: ICOLD dam-earthquake performance study; ISSMGE Hurricane Harvey case history; soil-property determination trends; 5+ publications overall.

CERTIFICATIONS, MEMBERSHIPS & HONORS

Certifications: QHSE Internal Auditor (ISO 9001, 14001, OHSAS 18001) • SAP2000 (Structural Analysis & Design) • Netcad GIS

Honors: UT Austin Graduate Dean's Prestigious Fellowship • MoNE–DSİ Scholarship (2016–2019, Global Top-500) • TÜBİTAK (National Research Council of Türkiye) 2nd Prize • Honor Graduate (Civil & Environmental)

Memberships & volunteering: Turkish Chambers of Civil (İMO) & Environmental (ÇMO) Engineers • TEMA • Mühendis TEK-SEN Enerji engineers' union — workplace representative (DSİ) • MÜDEK Student Evaluator (EUR-ACE®)