



Curriculum Vitae

Onur Koç **Senior Tunnel Engineer** **Project Manager**

Date of birth: 01/06/1979

Language skills: Turkish (Native), German (Fluent, C2), English (Fluent, C2), French (Intermediate, B1)

Education and Qualifications

2001	Civil Engineer, BSc, TU Istanbul
2008	Civil Engineer, MSc, TU Vienna in Geotechnics and Engineering Management

Memberships

OeGG Austrian Society for Geomechanics

Professional profile

Onur Koç has more than 15 years of experience in providing design services in tunnelling and structural engineering.

In his current position he is responsible for project management and oversight of various underground design services.

He has worked on highway, railway, transit and utility underground projects throughout Europe, North America, Middle East, Australia, Asia, and Africa.

Highlights

- Design of complex underground structures
- Experience > 15 years
- Solid engineering background

Work experience (summary)

2023 – today	Pini Group SA, Zurich (Switzerland) Senior Tunnel Engineer / Project Manager
2018 – 2023	Dr. Sauer & Partners GmbH, Salzburg (Austria) Senior Tunnel Engineer
2008 – 2018	IGT GmbH, Salzburg (Austria) Structural Engineer / Tunnel Engineer

Main references

Tunnelling and underground works

2025 – Present	Function: Project Manager / Senior Tunnel Engineer
Project	Gare de Lausanne (Train station Lausanne) / Switzerland
Client	SBB/CFF
Description	As part of the SBB “Léman 2030” program, a comprehensive renovation is taking place at Lausanne station. This includes the construction of new platforms and underpasses, with the first renovated platform expected to be commissioned in 2030. Full completion is planned for 2037, while train operations will continue throughout the construction period. Provided services: Geotechnical inspection, Structural analysis, and risk management.
Project phases	SIA 31, 32 and 33
2023 – 2025	Function: Project Manager / Senior Tunnel Engineer
Project	Cargo Sous Terrain / Switzerland
Client	CST
Description	Cargo Sous Terrain (CST) is a Swiss project creating an underground tunnel network for autonomous, electric cargo transport to improve logistics efficiency and reduce environmental impact. The design services include a 75 km long one tube TBM & SCL tunnel and other facilities (shaft, portals etc.)
Project phases	SIA 31, 32 and 33
2021 – 2023	Function: Senior Tunnel Engineer
Project	Manara Pumped Storage Power Plant / Israel
Client	Electra Infrastructure
Cost, period	450 Mio. USD, 2021 - 2026
Description	Located in the northern Israel, Manara Pump Storage Project is constructed with single 156 MW capacity, including lower and upper reservoirs, main cavern, low and high power water ways, surge tank and an access tunnel
Services / Phases	Design of the main tunnelling works (main access tunnel, powerhouse cavern, low and high power water ways (incl. concrete lining in low pressure tunnel and steel lining in high pressure tunnel) Phases: SIA 51-52
2021 – 2022	Function: Senior Tunnel Engineer
Project	Effluent Outfall Tunnel / USA
Client	Dragados USA
Cost, period	630.5 Mio. USD, 2019 - 2025
Description	Construction of a joint water pollution control plant (JWPCP) effluent outfall tunnel. Tunnel dimensions: 8 miles in length, with 18ft in diameter The project features the first use in the USA of post tensioning (PT) of the segmental lining. Up to 40% of the alignment will feature PT in order to maintain integrity as a result of internal pressure during pumping out operations.
Services / Phases	Designed a starter and tail tunnel to facilitate the TBM launch, and risk assessment as well as mitigation measures design for squeezing ground conditions of TBM drive. Phases: SIA 51-52
2019 – 2022	Function: Senior Tunnel Engineer
Project	French Hill Tunnels / Israel
Client	Electra Infrastructure
Cost, period	140 Mio. USD, 2019 - 2023
Description	The French Hill Interchange is one of the busiest junctions in Jerusalem with thousands of vehicles per day passing through. The French Hill transportation plan includes two twin tunnels running a distance of 3.5km, “TU-M” tunnel from Road 1 to Ma’ale Edomim and “TU-P” tunnel to Pisgat Zeev. The tunnels will run under roads 1 and 60, passing under ‘Uzi Narkis’ bridge and LRT tracks. The tunnelling works include excavation with low cover rock and fill material, construction of temporary access tunnel and simultaneous mining of 12 excavation faces to meet the challenging schedule
Services / Phases	Detail geotechnical & structural design of the excavation & support works, Phases: SIA 51-53

2020 – 2021	Function: Senior Tunnel Engineer
Project	Eglinton Crosstown LRT / Canada
Client	CTSC: SNC-Lavalin, Dragados, Aecon, EllisDon JV
Cost, period	8.25 Bio. USD, 2015 - 2021
Description	The Crosstown is a light rail transit line, which is part of the regional transportation plan for the Greater Toronto and Hamilton Area. The project provides a 19km corridor across Eglinton Avenue, connecting ten stops and 15 underground stations with a 10km twin-bored tunnel.
Services / Phases	Design of the false ceiling connections and reinforced concrete design, Phases: SIA 51-53
2018 – 2021	Function: Senior Tunnel Engineer
Project	Purple (D) Line Section III / USA
Client	The Los Angeles County Metropolitan Transportation Authority (LACMTA)
Cost, period	1.3 Bio. USD, 2020 - 2026
Description	This project consists of a 2.32-mile double track heavy rail transit line and the contract involves tunnels and thirteen Cross Passages. De-watering and ground improvement measures are needed for the individual Cross Passages and excavation and support concepts include SEM toolbox items, which will be used to counter unforeseen ground conditions.
Services / Phases	Analysis and design of the cross passages, Phases: SIA 31-33
2015 – 2016	Function: Structural Engineer
Project	Tunnel Arlberg Road Tunnel / Austria
Client	ASFINAG – Austrian Motorway and Expressway Company
Description	The Arlberg Road Tunnel with a length of 13.976 kilometers is Austria's longest road tunnel. When it was inaugurated, it was the longest road tunnel in the world. It carries the S16 Arlberg Schnellstraße (German for "Arlberg Highway") under the Arlberg massif from Tyrol to Vorarlberg.
Services / Phases	Refurbishment of the Road tunnel (structural analysis of the various tunnel components), Phases: SIA 51-52
2017 – 2018	Function: Structural and Geotechnical Engineer
Project	Subway stations Vienna U5 – U2 / Austria
Client	Wiener Linien GmbH
Description	The subway stations are planned at the heart of the city below high story shopping malls. A settlement analysis of the surface buildings was also conducted by Onur
Services / Phases	Analysis and design of two new subway stations in the city center, Phases: SIA 31-33 / 41
2015 – 2017	Function: Structural and Geotechnical Engineer
Project	Koralmbahn Tunnelkette Granitztal BL 50.4, Railway Tunnel/ Austria
Client	OeBB – Austrian Federal Railways
Description	The length of the whole project yields to approx. 6.5 km. The length of the cut & cover section of the tunnel adds up to 600 meters covering the high-speed tunnel and connecting two mined tunnels
Services / Phases	Structural analysis and design of the Cut & Cover tunnel, Phases: SIA 51-53
2015 – 2017	Function: Structural Engineer
Project	Tunnel Geisswand, Road Tunnel/ Austria
Client	ASFINAG – Austrian Motorway and Expressway Company
Description	The length of the road tunnel is approx. 2.2 km. The cross-section area, excavated using NATM, is 76 m ² comprising two lanes
Services / Phases	Refurbishment of the tunnel, design of the road pavements resisting against swelling, Phases: SIA 51-53
2014 – 2015	Function: Structural Engineer
Project	Tunnel Gleinalm, Road Tunnel/ Austria
Client	ASFINAG – Austrian Motorway and Expressway Company
Description	The Gleinalm Tunnel is a highway tunnel in Styria, Austria. It lies along the Pyhrn Autobahn and it is 8320 m long. It connects the district of Leoben with the district Graz-Umgebung. It was opened on 1978. A second tube with approximately same length has been opened on July 21, 2017 after which the old tube was closed for refurbishment
Services / Phases	Analyses of the final lining of the new tube, refurbishment works of the old tube, Phases: SIA 51-53

2012 – 2016	Function: Tunnel Engineer
Project	Semmering Base Tunnel / Austria
Client	OeBB – Austrian Federal Railways
Description	Around 27 kilometers in length and 14 years in making under challenging geological conditions: The Semmering Base Tunnel ranks amongst the most complex tunnel building projects in Europe. After completion two tubes will serve the high-speed train connecting Vienna to Graz
Services / Phases	3D analysis of the TBM advancement through a fault zone, Phases: SIA 31-33
2011 – 2013	Function: Structural & Tunnel Engineer
Project	Istanbul Strait Road Crossing Tunnel (NATM section)/ Turkey
Client	Yapi Merkezi Construction
Description	The Istanbul Strait Road Crossing Tunnel, also known as the Eurasia Tunnel, is a road tunnel in Istanbul, Turkey, crossing underneath the Bosphorus strait. The tunnel was officially opened on 20 December 2016 and opened to traffic on 22 December 2016. The 5.4 km double-deck tunnel connects Kumkapı on the European part and Koşuyolu, Kadıköy, on the Asian part of Istanbul with a 14.6 km route including the tunnel approach roads. It crosses the Bosphorus beneath the seabed at a maximum depth of –106 m.
Services / Phases	Structural analysis of the intersections (design of the primary and final lining), design of various cut & cover sections, Phases: SIA 51-53
2011	Function: Structural Engineer
Project	Tunnel Himmelreich/ Austria
Client	ASFINAG – Austrian Motorway and Expressway Company
Description	The enormous traffic congestion on the B73 road has significantly worsened the original quality of living in the residential area of Hausmannstätten in the Austrian state of Styria. The bypass currently under construction ought to lead to a considerable improvement. The route of the Hausmannstätten bypass starts in the west at the connection to the existing state road B73 and runs 2,320 m to the east. In the central section, the route passes under the Himmelreich mountain ridge through the approximately 1,045 m long Himmelreich Tunnel and then connects again to the existing B73.
Services / Phases	Design of various RC-Sections of the tunnel, analysis of the formwork stripping of the false ceiling (determining the point of stripping time), Phases: SIA 51-53
2008 – 2011	Function: Tunnel Engineer
Project	Road Tunnel T2 and T3, upgrade of the national roadway RN43/ Bejaia, Algeria
Client	Özgün Construction
Description	The whole length of the road runs along a coastal cliff with some vertical or overhanging cuttings. Options studies were undertaken for two tunnels and the tunnel portals moved away from the geologically unfavorable weathered breccia slopes. The studies also optimized the tunnel alignments. The tunnel works comprise 880m-long T1, 635m-long T2, 268m-long T3 and emergency escape tunnels 137m-long E1 and 145m-long E2. The project area lies in heavily karstified limestone and areas of block breccia lie along the existing road. Near the end of the alignment there are folded clay and siltstones.
Services / Phases	Analysis of the typical cross sections in Tunnel, Phases: SIA 51-53
2008 – 2011	Function: Structural & Geotechnical Engineer
Project	A10 Tauern highway, Tauern road tunnel/ Austria
Client	ASFINAG – Austrian Motorway and Expressway Company
Description	The Tauern Road Tunnel is located on the Tauern Autobahn (A10) in the Austrian federal state of Salzburg. With a length of 6,546 m (21,476 ft) (4.07 miles), the tunnel ranks as one of the longest frequently travelled road tunnels in Austria. The two tubed tunnel comprises two lanes on each tube.
Services / Phases	Analysis and design of the final lining, the false ceiling, and the ventilation cavern. Analysis and design of a retention dam, Phases: SIA 51-53

Publications

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|------|--|
| 2023 | P. Salak, O. Nathan, O. Koc, A. Pamsl
French hill road tunnels: A pragmatic rock support approach
Proceedings of WTC 2023, Athens |
| 2016 | B. Kohlböck, O. Koc, T. Ayten
Istanbul Strait Road Tube Crossing: Design of NATM Tunnels and Asian Transit Box Excavation
Geomechanics and Tunnelling 2015, vol.9, no.4, S. 338-344 |
| 2013 | O. Koc
Strategies for Design of the Support Measures in Tunneling on Basis of Eurocode
Proceedings of the third international symposium and exhibition on underground excavations for transportation 29 Nov 2013, Istanbul, Turkey |