Geotechnical Consulting Group

Professor Zeljko Cabarkapa

Dipl.Ing. MSc PhD CEng MICE FGS FSRASA

Senior Partner

Proven experts in a geotechnical world

Professional summary

Professor Zeljko Cabarkapa is a geotechnical engineer with more than 34 years of experience in practice in the UK and around the world. His area of expertise includes forensic engineering and site characterisation, ground investigation, rock slope stability, slope stabilisation, retaining wall design, groundwater flow, earthworks, embankments over soft soil, ground improvement, reclamations, foundation design, tunnel construction, seismic design, numerical analysis, and partially saturated soils. He has been involved in numerous forensic investigations and in recent years has given evidence to evidentiary hearings in many different international jurisdictions.

Education and Career

Since 2000: GCG, London

1996-2000: PhD, South Bank University, London

1995-96: MSc (Distinction), University of Belgrade, Serbia

1984-88: MEng (1st Class), University of Belgrade, Serbia

Memberships and Professional qualifications

Since 2016: Member of the Serbian Royal Academy of Science and Arts

Since 2006: Fellow of the Geological Society (FGS)

Since 2005: Member of Institution of Civil Engineers (CEng MICE)

Since 1996: Member of the British Geotechnical Association

Since 1990: Chartered member of the Serbian Institution of Civil and Structural Engineers

Scholarships / Awards

2003: Fleming Award for the Dublin Tunnel Project, British Geotechnical Association

1988: Award from Publishing Company for exceptional academic

Experience with GCG

Prof Zeljko Cabarkapa joined GCG in February 2000 and became a Director in 2010, then a Senior Partner when the company became an LLP in 2011 and a Managing Partner in 2015.

Prof Cabarkapa has advised on a wide range of civil engineering works which have included the stabilisation of large rock landslide, dams, port structures, foundations for buildings including piles, and deep excavations in both soft ground and hard ground conditions. Prof Cabarakapa has frequently been retained as an expert to assess mechanisms of failure and to design remedial works, and has given evidence in Court. Prof Cabarkapa has been involved in adjudication, mediation, the International Court of Arbitration and in the High Court of Justice processes. Expert witness cases have included the examination of excessive settlement, dewatering, failure of a dam, soil and rock slope stability, reclamation, building foundations and earthworks slope failures, unforeseen ground conditions and an embankment over soft soil. Recent arbitration works include claims relating to foundation project in UAE, a container terminal in Saudi Arabia, a container terminal in Jordan, stability of a cofferdam in Panama, a dam failure in Russia and the design and construction of a bridge in South East Europe. Since joining GCG Prof Cabarkapa has been involved in advanced finite element analyses of various geotechnical problems. He carried out a number of analyses of the Nicoll Highway collapse in Singapore aiding a team of expert witnesses.

Prof Cabarkapa has also been involved with various projects, including geotechnical aspects of near-shore and offshore developments, technical due diligence in respects of major investment in South East Europe and Turkey. Prof Cabarkapa advised recently on the ground investigation for a Nuclear Power Station in Turkey. Prof Cabarkapa has designed and analysed foundations of all kinds including rafts and piles in various locations worldwide. His design or review work has included: design, the stabilisation of rock landslide in Peru, specification and interpretation of site investigations, groundwater flow, heave and

z.cabarkapa@gcg.co.uk
gcg.co.uk
Geotechnical Consulting Group
52A Cromwell Road, London, SW7 5BE
+44(0)20-7581-8348

achievements during undergraduate studies

Service on technical / professional bodies

2011-13: Member of Geotechnique Editorial Advisory Panel

2006-09: British Geotechnical Association Executive Committee Member

Countries worked

UK, Turkey, Saudi Arabia, Bahrain, United Arab Emirates, Iraq, Algeria, Malaysia, Hong Kong, Singapore, Indonesia, Italy, Netherlands, Republic of Ireland, Greece, Romania, Croatia, Slovenia, Serbia, Montenegro, FYR Macedonia, Russia, Belorussia, Azerbaijan, Armenia, Kazakhstan, Peru, Georgia, Nicaragua, Ecuador

Languages (other than English)

Serbo-Croat, Russian, Spanish

settlement analyses, and a slope stability assessment for a coal terminal over very soft clay in Indonesia.

Prof Cabarkapa's publications cover soil behaviour of unsaturated soils, soil-structure interaction and the performance and analysis of retaining structures and slopes. He has reviewed technical papers for Geotechnique and acted as external examiner for a PhD project at Imperial College London.

Previous experience

Prof Cabarkapa started his career with Energoproject. His work in the office was combined with fieldwork both in Serbia and abroad. He was engaged in static and dynamic analyses of an arch dam in Algeria (Tichi Haff). His projects included basic and detailed design and construction of concrete dams, reservoir storage and multipurpose schemes such as: Badush I and II, Iraq – Concrete dam, Beckhme – Iraq – Earth dam, Rovni – Serbia – Earth dam, Bajina Basta –Serbia - Hollow gravity dam, Barje- Serbia – Earth dam, Kozjak – Macedonia – Earth dam, numerical analyses of tunnels, grout curtains and stability analyses of several dams.

In 1991 Prof Cabarkapa was employed as an academic staff member at the University of Belgrade, where he was involved in teaching, research and consultancy. He taught the undergraduate course in Soil Mechanics and Earthworks. Research activities involved mainly theoretical and numerical considerations of non-linear failure envelopes for soils. His MSc thesis was related to the theory of bearing capacity of shallow foundations on sand. His consulting work was concerned with site investigation, laboratory testing and foundation design for different structures such as sports arenas, historic monuments, bridges and silos.

In 1996 Prof Cabarkapa joined London South Bank University to undertake research on Mechanical Behaviour and Modelling of Unsaturated Soils. This work involved experiments using a new triaxial apparatus equipped with local strain transducers and bender elements for testing unsaturated soils. Suction controlled triaxial tests were performed to investigate the shape of the yield surface for unsaturated silt sample with particular stress history. A numerical model was applied to the simulation of coupled moisture, air and heat transfer in unsaturated soils and used for dynamic measurements of soil water retention curves.