Geotechnical Consulting Group

Dr Nesha Kovacevic

BSc MSc PhD DIC CEng MICE

Senior Partner

Proven experts in a geotechnical world

Professional summary

Dr Nebojsa Kovacevic is a geotechnical engineer with more than 38 years of practical experience. He is an expert in numerical analyses of a broad range of geotechnical subjects, such as slopes, dams, embankments, deep excavations, pile foundations, tunnels and various forms of earth retaining structures. He has widely published and presented at many conferences, seminars, and workshops.

Education and Career

Since 1994: GCG, London

1997-2008: Lecturer, Imperial College London

1990-94: PhD, Imperial College London

1989-90: MSc (Distinction), Imperial College London

1984-89: Energoprojekt Holding Corportation, Belgrade, Yugoslavia

1979-84: BSc (1st Class), University of Belgrade

Memberships

Since 2005: Chartered Engineer and member of Institution of Civil Engineers (CEng MICE)

Member of the British Geotechnical Association

Member of the British Dam Society

Scholarships / Awards

2003: Fleming Award, British Geotechnical Association

1998: Telford Gold Medal, Institute of Civil Engineers

Service on technical / professional bodies

Since 2015: Member of NAFEMS Geotechnical Working Group

Experience with GCG

Since joining GCG in 1994, Dr Kovacevic has been engaged in sophisticated finite element analyses of various geotechnical problems. These include stability of slopes, deformation of dams and embankments, deep excavations in both soft and stiff clays, behaviour of shallow and deep foundations, design of earth retaining structures of various forms, modelling of tunnels and the effects of compensation grouting on tunnel linings of different types.

Dr Kovacevic has a keen interest in quantifying the role of progressive failure in stability of slopes cut in stiff plastic clays. He was awarded the Telford Gold Medal by the Institution of Civil Engineers in 1998 for his work on the stability of old railway cuttings and road embankments constructed in London Clay. He extended this work by modelling the effects of various widening schemes on the overall stability of modern motorway cuttings. He reproduced deep seated movements of London Underground ash embankments due to seasonal pore pressures fluctuations. He has also investigated the likely effects of tunnel construction on the stability of cliffs formed in London Clay. He also attempted to predict the stand-up times of temporary slopes cut in Dublin glacial tills and London clay at Terminal 5, Heathrow Airport.

Over the years he extended his interests in finite element modelling of various complex problems in offshore engineering such as: laterally loaded hydrocarbon platform pile foundations, eccentric jack-up penetration into in-filled footprint craters, stability of large submarine landslides (e.g. Ormen Lange, offshore Norway), underwater slope failures generated by salt diapirsm combined with active sedimentation (e.g. Sigsbee escarpment, Gulf of Mexico). Elements of near shore work include the complex soil-structure interaction analysis of quay walls at the Southampton Container Terminal, Port of Felixstowe's Trinity Terminal, London Gateway Port and detailed investigations into the cause of failure of a caisson wall at Muelle Prat in the Port of Barcelona.

Dr Kovacevic became a Director in 2006 and then a Senior Partner when the company became a LLP in 2011. He is responsible for GCG's numerical work carried out in association

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2010-12: Deputy chairman of Editorial Advisory Board of ICE Journal of Geotechnical Engineering

2007-09: Member of the main committee of the British Dam Society

Countries worked

UK, Ireland, Norway, US, Angola, Bangladesh, Algeria, Iraq, Yugoslavia, and Russia

Languages (other than English)

Serbian

with Imperial College. He has widely published and presented on various forms of soil-structure interaction problems, stability of slopes and deformation analyses of dams.

Previous experience

After graduation from the University of Belgrade in 1984, Dr Kovacevic worked for Energoprojekt Holding Corporation, Belgrade, Yugoslavia. As a chartered engineer of the Serbian Institution of Civil Engineers, his work involved the design of earth-rock fill structures, foundation treatments and landslide problems. His office-based work was combined with field work in both Yugoslavia and abroad.

His projects included the following: (i) reconnaissance studies, site investigation works and designs of various earth-rock fill dams in Yugoslavia; (ii) Nemencha and Sud Atlas feasibility study in Algeria, including basic designs of various dams of different type; (iii) basic and main design, and construction of Badush Dam in Iraq; (iv) landslide stabilisation works by drainage and various retaining structures; (v) design of buoyant raft and piled foundation in soft alluvial clays; (vi) design of shallow footings in highly collapsible loess strata for the agriculture complex in Kuban, Russia, and (vii) assessment of foundation conditions and liquefaction analyses for nuclear power plants.

In 1989 Dr Kovacevic came to London to attend the MSc course in Soil Mechanics at Imperial College. His MSc thesis was related to the design and analysis of concrete face rock-fill dams. Having completed the MSc course in 1990, Dr Kovacevic stayed at Imperial College and embarked on research into the numerical analysis of rock-fill dams, cut slopes and road embankments. He obtained his PhD from the University of London in 1994. In his final year at Imperial College, he took up the post of Research Assistant, where he studied the safety of old embankment dams by analysing movements during reservoir operation.