



**Dr A. Grammatikopoulou**  
**Dipl. Eng. MSc DIC PhD CEng MICE**  
**Associate Director**

**Areas of expertise**

Advanced numerical analysis of geotechnical problems. Advanced constitutive modelling, Site investigations, Impact assessments, Slope stability assessments.

**Experience with GCG**

Dr Grammatikopoulou joined GCG in April 2004. Since then she has undertaken finite element analyses of complex geotechnical problems, including foundations (both onshore and offshore), retaining walls, deep excavations, tunnels, dams and reservoirs.

Following on from her PhD work at Imperial College, on the constitutive modelling of stiff overconsolidated clays, she has led the derivation and calibration of parameters for sophisticated constitutive models, on a large number of offshore and onshore projects, and a variety of soil conditions, before using them in advanced numerical analyses. Examples of offshore foundation projects include her work on monopile foundations for a number of offshore wind farms in the Irish and North Sea, as well as the eccentric installation of spudcans for jack-up structures in the North Sea. Onshore projects include the derivation and calibration of model parameters for the numerical analyses of the Crossrail bored tunnels and the design of an embankment dam at Abingdon for Thames Water, in which the constitutive models developed during her PhD were employed. She has also aided GCG's work in expert witness legal cases.

Dr Grammatikopoulou has project managed and technically led a number of projects, including deep basements for prestigious redevelopments in London and projects related to the effects of excavation and construction on existing London Underground Limited, Network Rail and Thames Water tunnels. As part of the Bank Station Capacity project she has technically led the Phase 3 building damage assessments for all the heritage buildings. Further assessment work included the effects of the Tottenham Court Road Station Upgrade and the combined effect of the Victoria Station Upgrade and the adjacent Land Securities Nova Victoria project, on existing LUL tunnels.

Dr Grammatikopoulou has managed site investigations, including specification, supervision and interpretative reporting and provided advice on geotechnical issues (e.g. foundation design, drainage etc.) for projects in the UK and abroad. She has undertaken Category III Checks of slope stabilisation works for embankments on soft and stiff clays and carried out settlement analyses. She previously worked with Lord Mair as geotechnical advisor to Thames Water on the effects of the redevelopment of Battersea Power Station.

Dr Grammatikopoulou has published a number of journal and conference papers on soil constitutive models and their application in boundary value problems, including tunnels, retaining walls, embankments and offshore foundations. She has also been acting as a reviewer for journal publications.

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**GEOTECHNICAL CONSULTING GROUP**

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**Areas worked**

UK, Spain, Serbia, Australia, Greece

**Previous experience**

Prior to joining GCG, Dr Grammatikopoulou was a member of the Soil Mechanics research group at Imperial College. Initially she was a research student and thereafter was employed as a Research Assistant in the Department of Civil and Environmental Engineering. Her research focused on the study of elasto-plastic constitutive models for clays. As part of her work, two kinematic hardening models were improved, two new models were developed, and all four were implemented into the finite element code ICFEP. Dr Grammatikopoulou applied the models in the analyses of two problems, an embankment founded on a soft clay deposit and the construction of tunnels within the stiff London Clay. The latter part of the project included finite element analyses of the twin tunnels constructed at St. James's Park, London, as part of the Jubilee Line Extension. Dr Grammatikopoulou was awarded her PhD degree in August 2004.

Between 1998 and 1999 Dr Grammatikopoulou completed her MSc degree on "Soil Mechanics and Engineering Seismology" at Imperial College from which she graduated with distinction. Her dissertation investigated the effect of soil anisotropy on the behaviour of sheet pile retaining walls and involved finite element analyses using ICFEP. For this work she was awarded the Soil Mechanics Prize for the best MSc dissertation.

From 1993 to 1998 Dr Grammatikopoulou studied Civil Engineering at the Aristotle University of Thessaloniki, Greece, where she graduated as the top student. During the summer of 1997 she worked through IAESTE (International Association for the Exchange of Students for Technical Experience) for "Ingenieria del Suelo" in Madrid, Spain.

**Education/Research**

PhD and DIC, Imperial College, London, 2004

MSc (Distinction) and DIC, Imperial College, London, 1999

Diploma of Engineering, Aristotle University of Thessaloniki, 1998

**Awards**

Imperial College Soil Mechanics Prize, 1999

Greek State Scholarship for Top Student 1998, 1997, 1996, 1995

Award of the Greek Chamber of Civil Engineers (TEE) for top student 1998, 1997, 1996

**Qualifications & Memberships**

Member of the Institution of Civil Engineers (ICE)

Member of the Greek Chamber of Civil Engineers (TEE)

Member of the British Geotechnical Association (BGA)

**Service on Technical/Professional Committees**

BGA Executive Committee, present

**Languages (other than English)**

Greek