



### Professional summary

Dr Felix Schroeder is a geotechnical engineer with nearly 20 years of experience. Building on his research work he has developed an in-depth expertise in numerical modelling and has applied this form of analysis to a wide range of projects in the UK and around the world. His extensive experience covers onshore infrastructure and building projects as well as near-shore and offshore projects, including ports and windfarms.

### Education and Career

Since 2003: GCG, London

1998-2003: PhD, Imperial College  
London

1994-98: MEng (1st Class), Imperial  
College London

### Memberships and Professional Qualifications

Since 2009: Member of Institution of  
Civil Engineers (CEng MICE)

Member of the British Geotechnical  
Association (BGA)

Member of the Society for Underwater  
Technology

Member of the Offshore Engineering  
Society

Affiliate member of the American  
Society of Civil Engineering

### Scholarships / Awards

2019 & 2021: ICE's David Hislop Award  
- Best paper on offshore matters

2008: ASCE's International Journal of  
Geomechanics Excellent Paper Award

2002: BGA Cooling Prize

1998: Imperial College Skempton Prize  
for excellence in Soil Mechanics

### Experience with GCG

Dr Schroeder joined the Geotechnical Consulting Group in 2003 and has been a Senior Partner since April 2017. He has carried out advanced numerical analyses of many geotechnical problems, including tunnels and tunnel openings, cut slopes, deep excavations in stiff and soft clays, foundations for offshore wind turbine generators and offshore oil & gas platforms, and he has assessed the effects of the construction of various structures on surface and sub-surface infrastructure as well as buildings.

Felix has worked on, and on many occasions led, numerous projects requiring assessments of the effects of proposed developments on existing tunnels and services. These include deep excavations in London for Terminal 5C at Heathrow Airport and the Francis Crick Institute, Land Securities' Nova development at Victoria and Canary Wharf Contractors' Spire London, Newfoundland Tower and the re-development of the Shell Centre (Southbank Place). For other projects he assessed the potential for building damage due to proposed tunnelling and excavation works, including Transport for London's Elizabeth Line (Crossrail), Bank Station Capacity Upgrade (BSCU) and Northern Line Extension projects. He also analysed many deep excavations as part of the design process, including 100 Bishopsgate and BBC Broadcasting House in central London. Aiding a team of expert witnesses, he carried out analyses of the Nicoll Highway collapse in Singapore.

Building on his PhD work at Imperial College, Dr Schroeder developed an expertise in 3D FE analysis and applied this form of analysis to many of the projects listed above. In addition, using 3D FE analyses, he assessed the effects of offshore well drilling on adjacent foundation piles and analysed the behaviour of monopiles. Felix's work on offshore windfarms started more than 10 years ago, and since then, he has technically led and managed GCG's work for numerous offshore wind farm projects in the Irish Sea, the German and UK sectors of the North Sea, in the Taiwan Strait, offshore Japan and off the East Coast of the USA. His work covered guidance and advice for site investigation campaigns and pile testing programmes, the development and application of different pile design methodologies, as well as the

## Service on technical / professional bodies

Since 2019: SUT Offshore Site Investigation and Geotechnics Committee

2012-15: Member of the BGA Executive Committee

## Countries worked

UK, Germany, Norway, Italy, Hong Kong, Singapore, Taiwan, Japan, USA, Brazil, Azerbaijan, Malaysia, Iran, Russia

calibration of sophisticated constitutive models and performance of 3D FE analyses for comparison and verification of simpler design approaches.

Dr Schroeder has been leading GCG's contributions to major JIP programmes; e.g. the PISA project aimed at improving the design approach for monopile foundations, a UK Innovate supported programme with Scottish Power Renewables (SPR) and Imperial College looking at new design approaches for driven piles in difficult ground, particularly Chalk as well as the PAGE project investigating pile ageing on the basis of dynamic pile load test data together with Cathie Associates and Imperial College. He also sat on the Steering Committee of the ALPACA JIP extending the work of the earlier Innovate UK supported JIP and the associated ALPHA project on numerical analysis of laterally loaded piles driven in chalk.

Over the last few years, Felix has been responsible for GCG's design review activities of a number of dry stacking projects for the disposal of mine waste in Brazil. These projects required a detailed understanding and characterisation of the ground based on available field and laboratory testing.

Dr Schroeder has been the technical lead and project manager on a large number of GCG projects, including the Nova Victoria development in central London where GCG fees exceeded £750k and design elements for BSCU where the fees were around £500k. Dr Schroeder has published a number of journal and conference papers, presented his work at international conferences and the Institution of Civil Engineers in the UK and has been acting as a reviewer for international journals and conferences.

## Previous experience

From October 1998 until August 2003 Dr Schroeder worked at first as a Research Student (10/98 - 07/00) and thereafter as a Research Assistant at Imperial College, London, undertaking research into the influence of bored piles on existing tunnels. The main focus of the research was the numerical analysis of this complex soil-structure interaction problem. However, the numerical results were complemented by field measurements taken in and around a tunnel on the LUL network. Dr Schroeder was heavily involved in extending the three dimensional capabilities of ICFEP and, as a part of this, developed shell elements for use in three dimensional soil-structure interaction problems. Dr Schroeder presented his research findings at numerous international conferences, in a number of journal papers and on a lecture tour of the Far East and Australia. As a result of his research Dr Schroeder was awarded a PhD in March 2003.

Prior to his research work, Dr Schroeder completed his undergraduate degree in Civil Engineering at Imperial College with First Class Honours in 1998.