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# European Union's Seventh Framework Programme (EUFP7)

Support for training and career development of researchers (Marie  
Curie)

Industry-Academia Partnerships and Pathways (IAPP)

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### Purpose of the action

**“This action seeks to open and foster dynamic pathways between public research organisations and private commercial enterprises, in particular SMEs, including traditional manufacturing industries, based on longer term co-operation programmes with a high potential for increasing knowledge-sharing and mutual understanding of the different cultural settings and skill requirements of both sectors.”**

(EU SME definition; <10-250 personnel, <€2m-50m turnover)



- **Project full title:** *Modelling Installation Effects in Geotechnical Engineering*
- **Project acronym:** *GEO-INSTALL*



### Partners

- **University of Strathclyde (UK)**
- **University of Stuttgart (Germany)**
- **Delft University of Technology (Netherlands)**
- **Stellenbosch University (South Africa)**
- **Plaxis bv (Netherlands)**
- **Geodelft Innovations bv (Netherlands)**
- **Norwegian Geotechnica Institute (Norway)**
- **Keller Ltd (UK)**



### Project Focus

The aim of the project is to develop new numerical tools for modelling large deformation problems in geotechnics associated with large deformations that occur when installing geotechnical structures. This effort is expected to result in new commercial codes, resulting eventually in a major improvement in geotechnical R&D and innovation in foundation methods. **The scientific project will be implemented via secondments and recruitment of 198 researcher months in total (72 months of recruitment and 126 months of secondment).**



### Key Outputs

- To train geotechnical engineers and scientists in advanced soil modelling and numerical analysis with MPM and finite elements. This will be done through secondments and training courses.
- To disseminate the results, as openly and transparently as possible, to scientists and geotechnical professionals via publications and annual workshops.
- The philosophy/approach is problem driven, e.g. the numerical tools are developed to solve challenging problems of practical importance.



### Dissemination Process

- Target academics and practising engineers
- A coordinated dissemination strategy consisting of single-host and multihost (joint) publications and scientific workshops aimed at academic and professionals involved in R&D
- A final international workshop with open call for papers and other contributions.
- Results will be disseminated to practising engineers through meetings with industrial partners, presentations on external seminars, conferences and workshops and presentations to learned societies
- Support to the PLAXIS international course on “Computational Geotechnics”
- Three hands-on 1-day training courses organised by the IAPP project
  - Course 1 will be held in year 2; “Advanced constitutive modelling”
  - Course 2 will deal with “Modelling large deformations”
  - Course 3 will deal with “Case studies and applications” and will aim to demonstrate how the new tools can be utilised



### Key Learning

- **Cooperation with non-SA private sector, especially SMEs**
- **Development of a network which can lead to further projects eg FP7 Thematic**
- **Development of training courses and workshops aimed beyond an academic environment**
- **Experience of working in EU research organisations and private companies**
- **Project is focused on producing tools of practical application**



## Contacts

### Project Specific

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### EU FP7 Cooperation

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