Shreyas Giridharan

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Mobile number:	+49 176 43257244
Year and place of birth:	1991 in Chennai, India
Marital status:	married

Education

02/2017 – 11/2022 **Doctorate in Applied Numerical Methods in Geotechnical Engineering, University of Stuttgart**
Degree: Doctor of Engineering (Dr.-Ing.) with magna cum laude
Title of Dissertation: Convected Particle Domain Interpolation Method for Large Deformation Geotechnical Problems

10/2014 – 11/2016 **Masters of Science in Computational Mechanics of Materials and Structures, University of Stuttgart**
Areas of focus: Multibody contact modelling in geotechnical engineering, large deformation simulation
Title of master's thesis: Improvement of the Frictional Contact Algorithm with application to Pile Installation Simulations
Final grade: 1.8

08/2008 – 05/2012 **Bachelor of Technology in Mechanical Engineering, SRM University, India**
Areas of focus: Finite Element Method, Engineering Mechanics, Thermodynamics
Final grade: 1.3

Work Experience

since 02/2017 **Teaching and Research assistant at the Institute of Geotechnical Engineering, University of Stuttgart**

- Development of a parallelised Fortran-based Material Point Method code for simulating large deformations, with a focus on porous media and soil-structure interaction.
- Active involvement in offshore wind energy research projects, including VIBRO-II (RWE AG) [2016], VIBRO-III/CAFÈ (RWE AG) [2017-2019] und VISSKA (BMWK) [2021-today].
- Contributed to the analysis and presentation of results to external project partners and stakeholders, and publication of reports and scientific papers.
- Lecturer for the master courses "Engineering Materials", "Numerical Modelling of Soils", "Geoengineering" and "Geostatik" at the Institute for Geotechnical Engineering.
- Preparation of lecture and home exercise scripts as well as conception, creation, and correction of final examinations.
- Supervision of students for seminar and master's theses.
- Active engagement in routine institute tasks, such as organising institute meetings and coordinating open days.

04/2015 – 12/2016

Student assistant at the Institute for Geotechnical Engineering, University of Stuttgart

- Programming tasks to simulate element tests for soil constitutive models written in Fortran and C++.
- Programming tasks on implementation of soil constitutive laws in an in-house finite element program.
- Testing open-source Material Point Method codes for simulating fluid flow and large deformations.
- Implementing a penalty contact algorithm for the in-house finite element code written in Fortran.
- Assistance in lecture preparation and correction of assignments.

09/2012 – 08/2014

Assistant Manager, Sundram Fasteners Limited, India

- Contribution to feasibility studies, cost estimation and manufacturing layouts for prototype parts.
- Lead a team to conform and certify compliance in accordance with MMOG/LE material management guidelines.
- Single point contact for export customers regarding pre-production parts
- Preparation and upkeep of legal documents necessary for Special Economic Zone (SEZ) exports.
- Participation in preparation of annual business plan and monthly departmental budgets.

Internships

07/2012 – 08/2012

Auto Tech Precision Engineering, India
Non-destructive testing (NDT) and metallurgical testing of marine crankshafts

06/2011

Ashok Leyland Limited, India
Suspension assembly, truck final assembly

11/2009

Simpson & Co. Limited, India
Truck engine assembly, engine test bench

Language and Technical Skills

Languages:

Tamil – native language
English – native language (education entirely in English)
German – business fluent
Hindi – business fluent
Telugu – business fluent

Operating systems: Linux, MacOS, Windows

Office applications: LATEX, Microsoft Office, OpenOffice, Origin, SAP (MM)

Graphics software: CorelDRAW, Inkscape, GIMP

Simulation software: Abaqus, ANSYS, AutoCAD, Plaxis

Programming languages: Fortran, C++, Python, Matlab, Maple, Git