# NICOLÒ SPIEZIA

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## Education

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| **2012 – 2014**<br>*3 years* | **Università degli Studi di Padova**<br>**PhD**<br>School of Science in Civil and Environmental Engineering<br>Area of research: Computational Geomechanics |
| **2013 – 2014**<br>*9 months* | **Stanford University**<br>**Visiting researcher student**<br>Research project: constitutive model and numerical simulations of high porous rock. Plasticity and localization around wellbore.<br>Courses: Reservoir geomechanics (M. Zoback), Computational poromechanics (R.I. Borja), Computational micromechanics (C. Linder), Large deformation computational inelasticity (R. Regueiro) |
| **2009 – 2011**<br>*2 years* | **Università degli Studi di Padova.**<br>**Master of Science in Civil Engineering (major in Structures).**<br>Final Grade: 110/110 *cum laude.*<br>Thesis: Mathematical modelling of saturated porous media at finite strain. |
| **2011**<br>*6 months* | **University of Sheffield (UK).**<br>**Exchange Student**<br>Exams: Structural Design Project, Bridge Design, Bridge Design Project. |
| **2006 – 2009**<br>*3 years* | **Università degli Studi di Padova.**<br>**Bachelor in Civil Engineering.**<br>Final Grade: 110/110 *cum laude.* |
| **2001 – 2006**<br>*5 years* | **Liceo Scientifico I. Nievo, Padova.**<br>High School Diploma. Major in Mathematics and Physics.<br>Final Grade: 100/100 |

## Work & Leadership Experience

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| **2014 – Present**<br>*Ongoing* | **Assistant researcher**<br>Department ICEA – University of Padua<br>Research and development of a FEM code for geotechnical and petroleum engeneering. |
| **2014 – Present**<br>*Ongoing* | **Geofem 973 Project – www.geofem973.it**<br>Founder and main software developer of a free open-source FEM code for geotechnical applications. |

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| **2012 – Present**<br>*Ongoing* | **Department ICEA – University of Padua**<br>Teaching assistant<br>Courses: Solid mechanics, Non-linear solid and structures. |
| **2007**<br>*3 months*<br>**2005 -2012**<br>*7 years* | **Mattioli S.p.A. - General Contractor**<br>Intership at Mattioli's technical office: project review and work planning.<br>**Volunteer for Church Activities**<br>Coordination of children summer activities and educational workshops. |

## Language and IT skills

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| *Language Skills* | **Italian** (Native Speaker)<br>**English** (Fluent)<br>**German** (Basic)<br>**Portoguese** (Beginner) |
| *IT Skills* | **MS Office, Open Office, Latex**<br>**Ansys, Abaqus, Straus 7**<br>**AutoCad**<br>**HTML** and **PHP** language (basic)<br>**Fortran** and **MatLab** |

## Extra-curricular Achievements

*November 2013*
**"Gini" Foundation scholarship**
Winner of a scholarship (6000.00 €) from the private Foundation "Gini", to support the period of study at Stanford University (California, USA).

*August 2006*
**Romania-International volunteer**
**Associazione:** ASTRU
Experience as a volunteer in an orphanage in the city of Oradea (Romania).

*August 2005*
**Germany- International volunteer**
**Associazione:** IJGD
Experience as a volunteer in the city of Bielefeld (Germany) with an international group of young.

**Guitar and Bass player**
Guitar and bass player in a band and in a choir, performing on stage.

## List of Publications

1. **N. Spiezia**, Modellazione matematica di mezzi porosi saturi in deformazioni finite, Tesi di laurea magistrale, Università degli studi di Padova, (2011).
2. **N. Spiezia**, V. Salomoni, C. Majorana (2014). FEM analysis of non-linear coupled geomechanical problems with *Scilab, International CAE Conference*, Pacengo del Garda (2014).
3. **N. Spiezia**, V. Salomoni, C. Majorana. Finite strains fully coupled analysis of a horizontal wellbore drilled through a porous rock formation. Coupled Problems 2015, Venezia (2015).
4. **N. Spiezia**, F. Ceccato, V. Salomoni, P. Simonini (2015). Simulation of consolidation in large strains: a comparison between Finite Element method and Material Point method. Coupled Problems 2015, Venezia (2015).
5. **N. Spiezia**, V. Salomoni, C. Majorana (2014). Non-linear FEM analysis of a horizontal wellbore drilled through a porous rock formation, *ALERT Workshop*, Aussois (2014), ISBN 9782-9542517-2-1