

eni spa E&P Geomechanical laboratory  
via F. Maritano 26, San Donato Milanese, 20097 Milano, Italy  
Tel: +39 02 520 36030 Cell: +39 338 3806462  
Email: silvia.duca@eni.com silvia\_duca@libero.it  
home address: via U. Cosmo 19, 10131 Torino, Italy  
Citizenship: Italian Date of Birth: 25.07.1983

### PRESENT POSITION

20th May 2013 : Permanent employment at eni spa, Exploration & Production division - RITE  
Petroleum Engineering Labs- LAIP - Geomechanical laboratory

### ACADEMIC and PROFESSIONAL QUALIFICATIONS

- January - June 2014: 2<sup>nd</sup> level Specializing Master, Petroleum Engineering and Operations (Reservoir engineering and simulation, Well drilling and completion) Politecnico di Torino, Italy
- April - June 2014: Reservoir Geomechanics, online course offered through Stanford Online
- May 2013: Doctor of Philosophy (PhD), Water and Territory Management Engineering, Department of Structural, Geotechnical and Building Engineering, Politecnico di Torino, Italy
- February 2010: Qualifying examination to engineer registers (Certificate n. 11608Z)
- March 2009: Master Degree in Structural Engineering, Politecnico di Torino, Italy
- September 2006: Bachelor Degree in Structural Engineering, Politecnico di Torino, Italy

### SCIENTIFIC PUBLICATIONS

Duca S., Occhiena C., Mattone M., Sambuelli L., Scavia C. "A feasibility of ice segregation location by acoustic emission detection: a laboratory test", Permafrost and Periglacial Processes, in press, published on line, DOI: 10.1002/ppp.1814.

Duca S., Alonso E.E., Scavia C. "A permafrost test on intact gneiss rock", International Journal of Rock Mechanics, under review.

Duca S., Occhiena C., Sambuelli L. "A procedure to determine the optimal sensor positions for locating AE sources in rock samples", Rock Mechanics and Rock Engineering, in press, published on line, DOI:10.1007/s00603-014-0582-0.

### TECHNICAL SKILLS AND COMPETENCES

- GEOLOG - petrophysical and geological analysis
- FRACMAN - Discrete Fracture Network Analysis & Modeling Software
- COMSOL Multiphysics engineering simulation software
- Abaqus/CAE software applications for finite element analysis
- CODE\_BRIGHT Finite Element program for thermo-hydro-mechanical analysis in geological media
- Dips, Rocfall, Phase2 (Rocscience)
- MATLAB programming language
- PYTHON programming language
- LaTeX scientific document typesetting
- AutoCAD (2- and 3-dimensional design and drafting)

### LANGUAGES

Mother tongue: Italian.

Other Languages: English - good knowledge of written and spoken language (Cambridge First Certificate in English) - Spanish - basic knowledge

Milan, November 4, 2014

Eng. Silvia Duca

