

ALESSANDRA INSANA

Civil Engineer



[Redacted phone number]



[Redacted email address]



[Redacted social media link]

GENERAL PERSONAL INFO

Nationality:

Italian

Date of birth:

[Redacted date of birth]

Place of birth:

Moncalieri (Turin, Italy)

Address:

via P. Togliatti, 6
10028 Trofarello, TO

Italy

Driving licence:

B

Current post

Nov 2016 – present

PhD Candidate

Civil and Environmental PhD programme supplied by Politecnico di Torino (32nd cycle) and the Department of Structural, Building and Geotechnical Engineering

Theme: *Thermo-mechanical behaviour of energy tunnel linings*

Supervisor: Prof. Marco BARLA

Co-Supervisor: Prof. Jean SULEM (cotutelle agreement with Ecole des Ponts ParisTech)

Education

Oct 2013 – Mar 2016

Master of Science

Geotechnical Civil Engineering

Politecnico di Torino, Italy

Thesis title: *Modeling hydrofracking for deep geothermal energy exploitation by Voronoi tessellation*

Supervisor: Prof. Marco Barla (Politecnico di Torino, Italy)

Co-supervisor: Prof. Davide Elmo (University of British Columbia, Vancouver, Canada)

Magna cum laude

Oct 2010 – Oct 2013

Bachelor of Science

Civil Engineering

Politecnico di Torino, Italy

Magna cum laude

Sep 2005 – Jun 2010

High school diploma

Liceo scientifico Ettore Majorana (Moncalieri, TO)

100/100

Experience

Oct 2017 – present

Co-supervisor of Master projects at

Politecnico di Torino and **assistant for the "Numerical methods in geotechnical engineering" course** (Prof. Marco BARLA)

Nov 2016 – present

Member of Supervisory Commissions for "Esame di Stato"

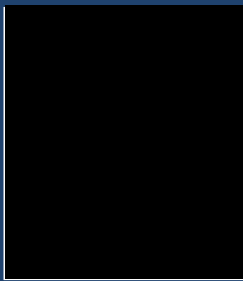
Member of Supervisory Commissions at Politecnico di Torino for written tests (1st, 2nd and 3rd) of "State examinations for enabling the profession of Engineer", sections A and B, Civil and Environmental Engineering area

Jun 2016 – Nov 2016

Research Assistant

Politecnico di Torino, Department of Structural, Building and Geotechnical Engineering

Scientific responsible: Prof. Marco BARLA



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Sep 2015 – Dec 2015

Thesis abroad - Visiting student

University of British Columbia
Norman B. Keevil Inst. of Mining Engineering
Vancouver, Canada
Research project for Master thesis degree
involved the co-supervision of Prof. Davide Elmo
(Assistant Professor Rock Mechanics)

Jun 2008 – Aug 2008

Stage

Chambéry, France

Awards

Nov 2018

My research in three minutes – III ed.

First prize

May 2017

Award Giorgio Dardanelli

Graduation Award in Civil Engineering Year 2016
Best voting in the regular course of studies

Nov 2010

Scholarship “Donna: professione Ingegnere”

To increase the presence of women in graduate programs in engineering and encourage the involvement of women in technical and scientific careers.

Certifications

Sep 2016

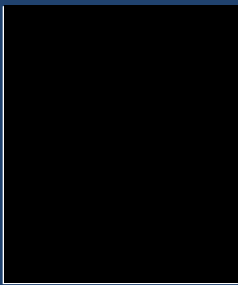
Professional qualification as an engineer

Sezione A, Settore Civile e Ambientale

Released by Ordine degli Ingegneri della Provincia di Torino

International conferences

- VI CNRIG, Bologna, Sep 22-23, 2016
- 4th Working Group Meeting of COST Action TU1405 Geothermal Applications for Buildings and Infrastructure GABI, Torino, Dec 6-7, 2016
- 5th Working Group Meeting of COST Action TU1405 Geothermal Applications for Buildings and Infrastructure GABI, Warsaw (Poland), Mar 20-21, 2017
- World Tunnel Congress, Bergen (Norway), Jun 11 -14, 2017
- 6th Working Group Meeting of COST Action TU1405 Geothermal Applications for Buildings and Infrastructure GABI, Sofia (Bulgaria), Sep 25-26, 2017
- 15th IACMAG, Wuhan (China), 19-23 Oct 2017
- 7th Working Group Meeting of COST Action TU1405 Geothermal Applications for Buildings and Infrastructure GABI, Alexandroupolis (Greece), Mar 6-7, 2018
- World Tunnel Congress, Dubai (UAE), May 23-25, 2018
- Incontro Annuale Ricercatori di Geotecnica (IARG), Genova, Jul 4-6, 2018
- 8th Working Group Meeting of COST Action TU1405 Geothermal Applications for Buildings and Infrastructure GABI, Lausanne (Switzerland), Sep 25, 2018
- International Symposium on Energy Geotechnics (SEG), Lausanne (Switzerland) Sep 26, 2018
- 9th Working Group Meeting of COST Action TU1405 Geothermal Applications for Buildings and Infrastructure GABI, Paris (France), Jan 31-Feb 01, 2019
- Computational & Geoenvironmental Geomechanics for Underground and Subsurface Structures COGGUS2, Nancy (France), Feb 12-14, 2019
- World Tunnel Congress, Naples, May 3-9, 2019



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Publications

Insana, A., Barla, M. and Elmo D., Multi scale numerical modelling related to hydrofracking for deep geothermal energy exploitation, VI Convegno Nazionale dei Ricercatori di Ingegneria Geotecnica, Bologna 22-23 September 2016

Insana, A., Barla, M. and Elmo D. (2016). Multi scale numerical modelling related to hydrofracking for deep geothermal energy exploitation, *Procedia Engineering*, 158, 314-319

Barla, M., Di Donna, A. and Insana, A., Energy tunnel experimental site in Turin metro. 15th IACMAG, Wuhan (Cina) 19-23 October 2017

Insana, A., and Barla, M., A Voronoi-based Algorithm for Hydraulic Fracturing Simulation in Deep Geothermal Wells. 15th IACMAG, Wuhan (Cina) 19-23 October 2017

Barla, M. and Insana A., Energy Tunnel Segmental Lining: an Experimental Site in Turin Metro, World Tunnel Congress, Dubai (United Arab Emirates) 21-26 April 2018

Olivero, M., Insana, A., Vallan, A., Gaudino, R., Barla, M. and Perrone, G., Fibre Bragg Gratings Monitoring in a Pilot Project of an Energy Tunnel, 20a edizione del Convegno Italiano delle Tecnologie Fotoniche, Lecce, 23-25 May 2018

Insana, A., Barla, M., Pereira, J.M. and Sulem, J., Analisi del comportamento termomeccanico di gallerie energetiche in conci prefabbricati, Incontro Annuale dei Ricercatori di Geotecnica (IARG), Genova, 4-6 July 2018

Barla, M., Di Donna, A. and Insana A. (2019). A novel real scale experimental prototype of energy tunnel, *Tunnelling and Underground Space Technology*.

Barla, M., Insana, A. and Zacco, F., Testing of an Enertun segment prototype in Turin metro line 1, World Tunnel Congress, Napoli, 3-9 May 2019

Barla, M., Baralis, M., Insana, A., Zacco, F., Aiassa, S., Antolini, F., Azzarone, F. and Marchetti, P., Feasibility study for the thermal activation of Turin metro line 2, World Tunnel Congress, Napoli, 3-9 May 2019

Networks

Dec 2018 – present **Member of AGI** (Associazione Geotecnica Italiana)

Jun 2018 – present **Member of CFMR** (Comité Français de Mécanique des Roches)

Dec 2016 – Apr 2019 **Member of COST Action GABI TU1405** (European network for shallow geothermal energy applications in buildings and infrastructures)

Languages



Mother tongue



FIRST Certificate Examination grade A, June 2009



DELFL Niveau B1 91/100, May 2008