

Information

Name: Claudio Giulio di Prisco

Tel: [REDACTED]

E-mail: [REDACTED]

Nationality: [REDACTED]

Date of Birth: [REDACTED]

Current position: Professor of Soil Mechanics and Slope Stability, Politecnico di Milano, Italy

Ministero dell'Istruzione dell'Università e della Ricerca

MIUR - BANDO 2017 - 13 -

Education

-1993: Ph.D. in Geotechnical Engineering, Politecnico di Milano, Milano, Italy. Discussion of the Ph.D thesis in Rome. Dissertation title: "The anisotropy of sands: experimental

investigation and mathematical modeling" (in Italian).

-1989: Admitted to the Vth cycle of Doctorate in Geotechnical Engineering

-1989: M.Sc. in Civil Engineering. Politecnico di Milano, Milano, Italy. Dissertation title: "A constitutive model of the anisotropic mechanical behaviour of sands". Graduated with full

marks and summa cum laude.

-1983: High School Degree (Liceo Classico) Liceo Ginnasio G. Parini

Academic appointment and employment history

-2017: Director of the Master course on Tunnel Engineering at Politecnico di Milano

-2006: Full Professor of Geotechnics at Politecnico di Milano

-2000: Associate Professor of Geotechnics at Politecnico di Milano

-1997-1999: Temporary Professor of Geotechnics at Politecnico di Milano

-1996: Temporary professor of Slope Stability at Politecnico di Milano

-1992: Assistant professor of Geotechnics at Politecnico di Milano (Department of Structural Engineering)

International Research activities

-1990: Visiting young researcher, for an eight months period, at the Laboratory 3S-R, Université J. Fourier, Grenoble, (France). Experimental research under the supervision of Prof. F.

Darve and Prof. J.Lanier

-1994: Visiting researcher at Imperial College of London (UK) (1 month)

Institutional charges

-Member of the Board of the Doctoral School of the Structural Engineering Department of Politecnico di Milano

-Member of the Board of the Doctoral School in Geotechnical Engineering of Politecnico di Torino

-Member of the LARAM Doctoral School

-Responsible for ERASMUS students for the Civil, Environmental and Territorial School of Politecnico di Milano

Main research fields

-Constitutive modeling of granular materials by taking into account the granular temperature state variable

-Solid-fluid phase transition of granular media under dry and saturated conditions

-Design of sheltering structures (artificial tunnels)

-Study of the anisotropy of the mechanical behaviour of sands

-Experimental and theoretical analysis of the phenomenon of static liquefaction of loose sands

-Theoretical analysis of the unstable response of non-associated elasto-plastic strain-hardening materials

-Time dependence of the mechanical behaviour of soils

-Experimental and theoretical study of the mechanical behavior of lightweight granular materials

-Study of the mechanical behavior of cemented materials

-Numerical analysis of the phenomenon of localization in geotechnical materials by means of non-local approaches

-Compaction bands in porous natural materials: experimental, numerical and theoretical issues

-Numerical and theoretical analysis of the response of natural slopes under seismic actions

-Analysis of the interaction between soil and buried pipelines along landslide

-Design for piles for landslide prevention

-Design of superficial anchored nets for the stabilization of natural slopes

-Impacts of rock boulders on sand strata

-Experimental and theoretical analysis of the mechanical behaviour of shallow foundations under cyclic/dynamic actions

-Analyses and design of the hydro-mechanical response of geo-encased columns

-Experimental, numerical and theoretical analysis of the mechanical behaviour of deep tunnel fronts under reinforced and unreinforced conditions

Ministero dell'Istruzione dell'Università e della Ricerca

MIUR - BANDO 2017 - 14 -

Participation to funded research projects

-2018: RELUIS project: "DPC/RELUIS2016 - Linea di ricerca geotecnica - WP2: Stabilità dei pendii"

-2017-20: Cariplo project: "DARFLIS-Distributed quantitative risk Analysis for Rapid Flow-like Landslides induced by high Intensity Storms"

- 2017-20: Cariplo project: "Rock Horizon"
- 2016: RELUIS project: "DPC/RELUIS2016 - Linea di ricerca geotecnica - WP2: Stabilità dei pendii"
- 2013-15: Prin-MIUR'13 project: "The landslide risk mitigation by means of sustainable interventions"
- 2012-2014: PON project: "Landslides risk mitigation project" PON.01
- 2010-13: RELUIS project: "Legislative proposal: seismic local amplification effects - Study of the seismic response of shallow foundations on complex stratigraphy"
- 2009-12: EU Project Accident ID 7629770: Interreg Italia-Svizzera Misura 2.2 - Programma Operativo di Cooperazione transfrontaliera Italia Svizzera 2007-2013: "Tunnels subjected to Fire and Blast"
- 2009-11: EU Safe-land: Living with landslide risk in Europe - subcontractor of UNISA
- 2008-10: Prin-MIUR'07 project: "Theoretical-numerical and experimental analysis of the triggering mechanisms of landslides in low-density granular materials"
- 2005-08: RELUIS project: Progetto Esecutivo 2005-2008 - Accordo di Programma Quadro DPC-Reluis – Task 4 - "Development of displacement approaches for the design and assessment of the vulnerability of shallow foundations"
- 2004-07: EU LESSLOSS - Risk Mitigation for Earthquakes and Landslides - subcontractor of UNIMIB
- 2004-06: FIRB-MIUR'04 project: Multidisciplinary approach for the assessment of the vulnerability of large landslides
- 2002-05: CEE Project DIGA: Degradation and Instabilities in Geomaterials with application to hazard mitigation
- 2002-04: Prin-MIUR'02 project: "Modelling of pipeline-landslide interaction"

Memberships and Affiliations

- Member of the ALERT board of Directors
- Member of the Italian Geotechnical Association AGI President council
- Member of the TC 207 "Soil-Structure Interaction and Retaining Walls" of the ISSMGE
- Member of PhD juries in France (Lyone and Grenoble) and Italy (Milan, Turin, Rome, Padua, Catania, Genoa)
- Committee member for associate professor(HDR) in France (Metz and Lyon), Czech Republic (Prague) and Italy (Milan)
- Member of the SIG (Società Italiana Gallerie) committee
- 2012-2016: Vice-president of the Italian Chapter of AGI-IGS (International Geosynthetics Society)
- 2012-2015: Member of the National Committee of Geotechnical Researchers (CNIG)
- 2005-2011: Director of the International Association Alert Geomaterials

Membership to Editorial Boards of International Journals

- Member of the Editorial Board of "European Journal of Environmental and Civil Engineering"

Member of the Editorial Board of "Engineering Geology"

Member of the Editorial Board of "Rivista Italiana di Geotecnica"

Member of the Editorial Board of "Journal of mechanical behaviour of Materials"

Member of the Editorial Board of "International Journal of Numerical and Analytical Methods in Geomechanics"

Member of the Editorial Board of "Gallerie"

-2014-2017: Member of the "Geotechnique" panel

Invited presentations to Conferences and International Advanced Schools

-Co-organizer of the International workshop "Micro to Macro", Reggio Calabria, Italy, May 2018

-Organizer of the Section "New trends in constitutive modelling" at ALERT-Geomaterials workshop, Aussois, France, October 2014

-Co-organizer of the Italian Conference "La geotecnica nella difesa del territorio e delle infrastrutture dalle calamità naturali", Baveno, Italy, May 2014

-Invited Lecturer, Italian Conference "La geotecnica nella difesa del territorio e delle infrastrutture dalle calamità naturali", Baveno, Italy, May 2014

-Co-organizer of the ALERT-Geomaterials Graduate School "Prevention and protection against hazards" (with Y. Malecot), Aussois, France, October 2011

-Co-organizer of CISM Advanced Course "Mechanical Behaviour of Soils under Environmentally Induced Cyclic Loads" (with D. M. Wood), Udine, Italy, June 2009

-Invited Lecturer, 1th ALERT Olek Zienkiewicz Doctoral School "Computational Geomechanics" (with M. Pastor). Madrid, Spain, June 2009

-Invited Lecturer, NATO Advanced Research Workshop "Cyclic and dynamic mechanical behaviour of shallow foundations on granular deposits", Borovets, Bulgaria, from 30th of

Ministero dell'Istruzione dell'Università e della Ricerca

MIUR - BANDO 2017 - 15 -

August to 3rd of September 2008

-Panelist at Seismic Engineering Conf. MERCEA08: "Dynamic Mechanical Response of Inclined Dry Granular Sand Strata", Reggio Calabria, Italy, July 2008.

-Panelist at XXIII Convegno Nazionale di Geotecnica, Previsione e Controllo del Comportamento delle Opere: "Criteri di scelta nella modellazione costitutiva dei terreni", Padova-Abano

Terme, Italy, May 2007.

-Co-organizer of the ALERT-Geomaterials Graduate School "Geodynamics and Cyclic Modelling" (with L. Daudeville), Aussois, France, October 2003

Bibliometric informations

He is author of 92 scientific publications according to Scopus, with 843 citations and an H-index 16.

1.a National and international grants (as Principal Investigator)

-2017-2020: Cariplo project: "DARFLIS-Distributed quantitative risk Analysis for Rapid Flow-like Landslides induced by high Intensity Storms"

-2004-2007: FIRB project: "Approccio multidisciplinare alla valutazione della pericolosità di grandi frane"

1.b National and international acknowledgments

2. Principal scientific publications of PI

1. Calvetti Francesco, di Prisco Claudio Giulio, Vairaktaris Emmanouil (2017). DEM assessment of impact forces of dry granular masses on rigid barriers. ACTA

GEOTECHNICA, vol. 12, p. 129-144, ISSN: 1861-1125, doi: 10.1007/s11440-016-0434-z - Articolo in rivista

2. Giofrè, Domenico, Mandaglio, Maria Clorinda, Di Prisco, Claudio, Moraci, Nicola (2017). Evaluation of rapid landslide impact forces against sheltering structures. RIVISTA

ITALIANA DI GEOTECNICA, vol. 51, p. 64-76, ISSN: 0557-1405, doi: 10.19199/2017.3.0557-1405.064 - Articolo in rivista

3. Pisanò F, di Prisco C. (2016). A stability criterion for elasto-viscoplastic constitutive relationships. INTERNATIONAL JOURNAL FOR NUMERICAL AND ANALYTICAL

METHODS IN GEOMECHANICS, vol. 40, p. 141-156, ISSN: 0363-9061, doi: 10.1002/nag.2395 - Articolo in rivista

4. Redaelli I, di Prisco C., Vescovi D. (2016). A visco-elasto-plastic model for granular materials under simple shear conditions. INTERNATIONAL JOURNAL FOR

NUMERICAL AND ANALYTICAL METHODS IN GEOMECHANICS, vol. 40, p. 80-104, ISSN: 0363-9061, doi: 10.1002/nag.2391 - Articolo in rivista

5. Buscarnera G., di Prisco C. (2013). Soil stability and flow slides in unsaturated shallow slopes: Can saturation events trigger liquefaction processes?. GEOTECHNIQUE, vol.

63, p. 801-817, ISSN: 0016-8505 - Articolo in rivista

6. D. Vescovi, C. di Prisco, D. Berzi (2013). From solid to granular gases: the steady state for granular materials. INTERNATIONAL JOURNAL FOR NUMERICAL AND

ANALYTICAL METHODS IN GEOMECHANICS, vol. 37, p. 2937-2951, ISSN: 1096-9853, doi: 10.1002/nag - Articolo in rivista

7. G. B. Crosta, DI PRISCO, CLAUDIO GIULIO, P. Frattini, FRIGERIO, GABRIELE, CASTELLANZA, RICCARDO, F. Agliardi (2013). Chasing a complete understanding of the

triggering mechanisms of a large rapidly evolving rockslide. LANDSLIDES, vol. 11, p. 747-763, ISSN: 1612-510X, doi: 10.1007/s10346-013-0433-1 - Articolo in rivista

8. Galli A., di Prisco C. (2013). Displacement-based design procedure for slope-stabilizing piles. CANADIAN GEOTECHNICAL JOURNAL, vol. 50, p. 41-53, ISSN: 0008-3674,

doi: 10.1139/cgj-2012-0104 - Articolo in rivista

9. Murianni A., di Prisco C., Federico A. (2013). Numerical stability of non-local viscoplastic FEM analyses for the study of localisation processes. GEOMECHANICS AND

GEOENGINEERING, vol. 8, p. 215-228, ISSN: 1748-6033 - Articolo in rivista

Ministero dell'Istruzione dell'Università e della Ricerca

MIUR - BANDO 2017 - 16 -

10. C. di Prisco, M. Pastor, F. Pisanò (2012). Shear wave propagation along infinite slopes: A theoretically based numerical study. INTERNATIONAL JOURNAL FOR NUMERICAL AND ANALYTICAL METHODS IN GEOMECHANICS, vol. 36, p. 619-642, ISSN: 0363-9061, doi: 10.1002/nag.1020 - Articolo in rivista
11. CALVETTI, FRANCESCO, DI PRISCO, CLAUDIO GIULIO (2012). ROCKFALL IMPACTS ON SHELTERING TUNNELS: REAL SCALE EXPERIMENTS. GEOTECHNIQUE, vol. 62, p. 865-876, ISSN: 0016-8505, doi: 10.1680/geot.9.P.036 - Articolo in rivista
12. G. Buscarnera, C. Di Prisco (2012). Discussing the definition of the second-order work for unsaturated soils. INTERNATIONAL JOURNAL FOR NUMERICAL AND ANALYTICAL METHODS IN GEOMECHANICS, vol. 36, p. 36-49, ISSN: 0363-9061, doi: 10.1002/nag.991 - Articolo in rivista
13. C. di Prisco, F. Pisanò (2011). An exercise on slope stability and perfect elastoplasticity. GEOTECHNIQUE, vol. 61, p. 923-934, ISSN: 0016-8505 - Articolo in rivista
14. D. Berzi, C.G. Di Prisco, D. Vescovi (2011). Constitutive relations for steady, dense granular flows. PHYSICAL REVIEW E, STATISTICAL, NONLINEAR, AND SOFT MATTER PHYSICS, vol. 84, p. 031301-1-031301-6, ISSN: 1539-3755 - Articolo in rivista
15. G. BUSCARNERA, C. DI PRISCO (2011). Stability criteria for unsaturated shallow slopes. GÉOTECHNIQUE LETTERS, vol. 10, p. 1-6, ISSN: 2045-2543, doi: 10.1680/geolett.11.00034 - Articolo in rivista
16. G. Buscarnera, C. G. di Prisco (2011). Discussing the definition of second-order work in unsaturated soils. INTERNATIONAL JOURNAL FOR NUMERICAL AND ANALYTICAL METHODS IN GEOMECHANICS, vol. 35, p. 1-14, ISSN: 0363-9061 - Articolo in rivista
17. G. Buscarnera, G. Dattola, C. G. di Prisco (2011). Controllability uniqueness and existence of the incremental response: a mathematical criterion for elastoplastic constitutive laws. INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES, vol. 48, p. 1867-1878, ISSN: 0020-7683 - Articolo in rivista
18. C. di Prisco, M. Vecchiotti (2010). Design Charts for Evaluating Impact Forces on Dissipative Granular Soil Cushions. JOURNAL OF GEOTECHNICAL AND GEOENVIRONMENTAL ENGINEERING, vol. 136, p. 1529-1541, ISSN: 1090-0241, doi: 10.1061/ASCEGT.1943-5606.0000363 - Articolo in rivista
19. G. Cocchetti, C. G. di Prisco, A. Galli (2009). Soil-pipeline interaction along unstable slopes: an uncoupled/coupled 3D approach – Part 2: Numerical analyses. CANADIAN GEOTECHNICAL JOURNAL, vol. 46, p. 1305-1321, ISSN: 0008-3674, doi: 10.1139/T09-102 - Articolo in rivista
20. G. Cocchetti, C. G. di Prisco, A. Galli, R. Nova (2009). Soil-pipeline interaction along unstable slopes: an uncoupled/coupled 3D approach – Part 1: Theoretical formulation.

