

Giovanni GRASELLI, Ph.D.
Research Associate in Rock Mechanics



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Born on April 2nd, 1972
Parma, Italy

Education

- 5.1998-6.2001 **Laboratory of Rock Mechanics – Swiss Federal Institute of Technology of Lausanne (EPFL)**
Ph. D. Thesis: *Shear Strength of Rock Joints Based on Quantified Surface Description*
- 3.2001-6.2001 **CREATE - Swiss Federal Institute of Technology of Lausanne, Switzerland**
Entrepreneurship Diploma
- 4.1999-10.2000 **EPFL – ETHZ – University of St. Gall, Switzerland**
Risk Management Diploma
- 9.1990-12.1995 **Università degli studi di Parma (UniPr), Italy**
M.Sc Civil Engineering

Work Experience

- 10.2001-present **Research associate in the Petroleum Engineering and Rock Mechanics research group of Imperial College, London**
Research
 - Shear strength of unconsolidated sands
 - Surface influence on the hydro-mechanical behaviour of rock fractures
- 3.1996-6.2001 **Research assistant in the Rock Mechanics Laboratory at EPFL, Switzerland**
Passive bolts in rock
 - Study of the behavior of different types of passive bolts subjected to shear stress
 - Large scale shear tests*Dam foundation on rock mass. Project funded by the Federal Office for Water and Geology.*
 - Study of the shear behavior of rough rock joints for dam stability reasons*Teaching*
 - Help for student diploma work (Passive rock bolts)
 - Exercises for the course on Underground Works
- 4.2000-12.2000 **Fellowship at the Lawrence Berkeley National Laboratory, USA**
Research
 - Analytical model for the behavior of sheared rock joints
- 9.1997-3.2000 **Instructor in physique at the V. Pareto high school in Lausanne, Switzerland**
- 6.1999-9.1999 **Consultant on geotechnical problems, Parma, Italy**
 - Z-SOIL model of urban excavation for the construction of an underground parking in via Primo Groppi, Parma, Italy

IT Skill

Programs	Z_SOIL, RockWare, SigmaPlot, Mathematica, MatLab, S-Plus, Autocad, Origin
Systems	Windows, LINUX, MacOS
Languages	C++, Fortran, Visual Basic, HTML
Others	Word, Excel, PowerPoint, FrontPage, Photoshop, Illustrator, Acrobat

Languages

Italian	native speaker
French	read, speak, write
English	read, speak, write
Spanish	read, speak

Publications

Theses

- Grasselli G.**, 2001, *Shear Strength of Rock Joints Based on Quantified Surface Description*, Ph.D. dissertation, advisors Prof. Descoedres F. & Prof. Egger P., Ecole Polytechnique Fédérale de Lausanne.
- Grasselli G.**, 1995, *Comportamento meccanico di masse rocciose discontinue rinforzate con bulloni passivi*, M.Sc. dissertation, advisors Prof. Giani G. P. & Prof. Egger P., Università degli studi di Parma. (in Italian)

Referred journal articles

- Grasselli G., Egger P.**, 2002, *Constitutive Law for Shear Strength of Rock Joints Based on Quantitative 3-Dimensional Surface Parameters*, International Journal of Rock Mechanics and Mining Sciences, in press.
- Grasselli G., Wirth J., Egger P.**, 2002, *Quantitative three-dimensional description of a rough surface and parameter evolution with shearing*, International Journal of Rock Mechanics and Mining Sciences, 36/6, pp. 789-800.

Referred conference papers

- Grasselli G., Egger P.**, 2000, *Shear strength equation for rock joints, based on 3D surface characterization*, in Proc. GeoEng2000, ed. Ervin, Melbourne, Australia, p 88 (complete paper on CD)

Conference papers

- Grasselli G., Wirth J., Zimmerman R. W.**, 2002, *Surface Parameters for Quantifying the Hydro-Mechanical Anisotropy of Rock Discontinuities* in Proc. ISRM 10th International Conference on Rock Mechanics, 8-12 September 2003, Gauteng-Johannesburg, South Africa.
- Grasselli G.**, 2002, *A New Peak Shear Strength Criterion for Rock Joints*, in Proc. W(H)YDOC 02, 4-6 December 2002, Paris, France.
- Grasselli G., Wirth J., Zimmerman R. W.**, 2002, *Functional Parameters for Quantifying the Surface Anisotropy of Rock Discontinuities*, in Proc. Eurock 2002 Conference, November 25-28, 2002, Funchal, Madeira Island, Portugal, pp. 715-721.
- Grasselli G., Egger P., Wirth J., Hopkins D.**, 2001, *Characterization of the parameters that govern the peak shear strength of rock joint*, in Proc. of DCRocks 2001, Washington DC, USA, pp. 817-821.
- Grasselli G., Egger P.**, 2000, *Three-dimensional optical measurement and characterization of rough surfaces*, in GSA meeting, Reno, USA.
- Grasselli G., Egger P.**, 2000, *3D surface characterization for the prediction of the shear strength of rough joint*, in Proc. Eurock 2000, ed. Wittke, Aachen, Germany, pp. 281-286.
- Grasselli G., Kharchafi M., Egger P.**, 1999, *Experimental and numerical comparison between fully grouted and frictional bolts*, in Proc. 9th Int. Cong. on Rock Mechanics, ed. Vouille & Berest, Paris, France, pp. 903-907.
- Kharchafi M., Grasselli G., Egger P.**, 1998, *3D behaviour of bolted rock joints: experimental and numerical study*, in Mechanics of jointed and faulted rock, ed. Rossmannith, Vienna, Austria, pp. 299-304.

Software developed

- Wirth J., Grasselli G.**, *Rock3CAD*, 2002.