

CURRICULUM VITAE

YVES GUGLIELMI

Born 1965/05/03 in Antibes (Alpes-Maritimes, France)

Professor at the CEREGE Laboratory

Deputy Director of the Sedimentary Systems and Reservoirs Group

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EDUCATION

Ph.D., Geology, University of Avignon (France, 84), **1993**

Military service, **1990**

B.Sc, Geology of Mountain belts and natural Resources, Bordeaux III University, **1989**

Master of applied geology, Bordeaux III University, **1988**

PROFESSIONAL POSITIONS

Assistant professor at the University of Franche-Comté (France), **1994-2002**

Visiting scientist at the State Civil Engineering Laboratory – 6 months/yr (France), **2000-2002**

Assistant professor at the University of Nice (France), Geosciences Azur Laboratory (UMR 6526), **2002-2008**

Professor at the University of Aix-Marseille (France), CEREGE laboratory, **since 2008**

Visiting scientist (2-to-3 months/yr) at the Lawrence Berkeley National Laboratory, Earth Sciences Division (USA), **2004 – 2012**

Visiting scientist (1 month) at the Department of Energy and Mineral Engineering (Pennsylvania State University, USA), **2013 and 2014**

RESEARCH INTERESTS

Porosity/Permeability/Stiffness/Friction field characterization of fractured and faulted rocks

Hydromechanics applications to reservoirs, landslides and active faults integrity

Developments of pressure/deformation instrumentation for deep borehole hydromechanical tests

Compared role of fluids in anthropogenic and natural earthquakes nucleation

Role of Fluids in clay faults activation and in shale fracturing

TEACHING

Undergraduate and graduate field and courses in geology, hydrogeology, reservoir flow dynamics and rock physics, reservoir geomechanics, petroleum geology, natural hazards.

AWARDS

American Rock Mechanics Research Award **2014**

Scientific Excellence Fellowship from the French Ministry of Education and Research – **since 2002**

RESEARCH AND MANAGEMENT EXPERIENCE

Project Coordinator – Predicting diagenetic effects on carbonates properties at the sub-seismic scale funded by TOTAL oil compagny - **2013-2016**

Project coordinator– Regional scale estimation of groundwater reserves in large Pyrenean overthrust faults funded by VEOLIA - **2013-2016**

Project co-coordinator (with P.Henry) – Effects of fluids pressurization on clay faults permeability funded by TOTAL – **2012 – 2016**

Research coordinator **2011-actual** of the “Sedimentary Systems and Reservoirs” group in the CEREGE (Aix-Marseille University, France)

Head **2011-actual** of the Graduate program “Geology of Reservoirs Systems” at the Aix Marseille University (about 20 graduate students per year, co-funding of the program by oil companies and subcontractors)

Deputy Director **2008-2011** of the GSRC Laboratory (Aix-Marseille University, France)

Designated member of the German Geothermal Association **2010**

Project Developer of the mHPP probe dedicated to downhole pressure-deformation measurements, funded by ADEME (National French Agency of Energy) **2011 - 2014**

Project Coordinator – ANR (National Agency of Research) HPPP-CO₂ project dedicated to in situ hydromechanical research on the reservoir/caprock loss of integrity under CO₂ injection, funded by ANR **2008-2012**.

Designated Coordinator of the Geosciences Azur Seismic Hazards Monitoring Center **2007-2008**

Designated Coordinator of the Landslide Hazard group within the CURARE group funded by the Alpes Maritimes County (France) **2004-2007**

Coordinator of the fractures network in situ poroelasticity project funded by INERIS (National Institute of Industrial Risks) **2002-2005**

Coordinator with O.Maquaire, D.Amitrano and C.Delacourt of the landslide research national program funded by ACI CATNAT **2002-2004**

Coordinator of the project “Hydrogeochemistry of large gravitational movements” funded by French national PNRN **1999-2002**

Occasional designated member of the committee for designation of assistant and full professorship positions (University of Franche Comté, Grenoble University, Montpellier University, Avignon University)

Occasional expertise for national organisms (French Ministry of Research and Education, French Ministry of Environment and Sustainable Development, DS3, EDF, Pôle Grenoblois d'étude des Risques Naturels, French Agency for the Evaluation of Research Laboratories)

AFFILIATIONS

American Rock Mechanics Association (ARMA member)

American Geophysical Union (AGU member)

19 PHD STUDENTS SUPERVISING

- A.Emily (1996-2000) 35% supervising in collaboration with J.Mudry
- J.M. Vengeon (2002) Post-doctorant – 100% supervising
- A.Reynaud (1997-2000) 45% supervising in collaboration with J.Mudry
- I.Khadiri (2000-2003) 50% supervising in collaboration with V.M.Soukatchoff
- P.Fénart (2000-2003) 50% supervising in collaboration with J.P.Henry

- A.Charmoille (2001-2005) 50% supervising in collaboration with J.Mudry
- F.Cappa (2002-2005) 100% supervising, **prix Jean Goguel 2006**
- S.Binet (2002-2006) 50% supervising in collaboration with C.Scavia
- S.El Bédoui (2005-2009) 50% supervising in collaboration with T.Lebourg
- Mu Chung-Hsiang (2007 - 2010) 40% supervising in collaboration with J.Angelier
- Pierre Jeanne (2008 - 2012) 100% supervising
- Dimitri Kudelski (2009 - 2011) 25% supervising in collaboration with S.Viseur et J.L.Mari
- Benoit Derode (2009 - 2012) 50% supervising in collaboration with F.Cappa
- Pierre Olivier Brunat (2009 -2013) 50% supervising in collaboration with J.Lamarche
- Christophe Matonti (2011 - 2015) 100% supervising
- Mélody Lefevre (2012 -) 50% supervising in collaboration with P.Henry
- Dawin Baden (2013 -) 100% supervising
- Cécile Baudement (2013 -) 100% supervising
- Johan Jouves (2013 -) 50% supervising in collaboration with S.Viseur
- Alexandra Tsopela (2014 -) 50% supervising in collaboration with Frederic V. Donze
- Irfan Ghani (2014 -) Postdoctorant – 100% supervising

Numerous participations to Phd Theses Committees (3 per year in average)

COMMUNICATION / RESEARCH – INDUSTRY VALORISATION

- **2008 – 2010** – Co-Founding member with J.Virieux of ARGAL Agency that is dedicated to the transfert of scientific researches results from Academic Laboratory to End User in the domain of Natural Geological Hazards (ARGAL is supported by the Conseil Général des Alpes-Maritimes, the Conseil Général de l’Hérault, the MEDAT and is a member of the “Arc Latin” group of environmental agencies)
- **Step-Rate Injection Method for Fracture *In-Situ* Properties (SIMFIP)** Method accepted by the International Society of Rock Mechanics Testing Method (for informations about SIMFIP method contact Prof. Resat Ulusay, President of the ISRM Commission on Testing Methods, Hacettepe University, Department of Geological Engineering, 06800 Beytepe, Ankara, Turkey)
- **Scientific popularization** (recent conferences) – MEDNET (Mediterranean Network, 2014) talk on landslides, Aix-Marseille University-Sustainable Development conference on the depletion of oil and gas reserves (2014).

PUBLICATIONS/ INVITED SEMINARS AND CONFERENCES

~60 peer-reviewed publications

3 chapters in international audience books

About 80 conferences (14 invited: ETH-Zurich (2014), Pennsylvania State University (2013), CEREGE (2010), Imperial College (2009), Lawrence Berkeley National Laboratory (2009), Politecnico di Torino (2008), ETH Zurich (2007), LGIT Grenoble (2007), National Central University (Taiwan), Academia Sinica (Taiwan) (2006), Shizuoka (Japan) – France-Japan Exchanges on Natural Hazards (2005), Séminaire du Collège de France (chaire de Géodynamique de Xavier le Pichon) (2004), University of Berkeley (2004), Geosciences Azur (2001), 9thISRM (International Society of Rock Mechanics) Congress (1999))

Organisation of national and international sessions : Société Géologique de France (1999), AGU Fall Meeting (2008), Réunion des Sciences de la Terre (France, 2014), AGU Fall Meeting (2014)

Reviewer of publications for JGR, GRL, Tectonophysics, Geomorphology, International Journal of Rock Mechanics, Rock Mechanics and Rock Engineering.

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MAIN SCIENTIFIC PUBLICATIONS

[59] Bruna P.-O., **Guglielmi Y.**, Viseur S., Lamarche J., Bildstein O. (2015) Coupling fracture facies with in-situ permeability measurements to generate stochastic simulations of tight carbonate aquifer properties: example from the Lower Cretaceous aquifer, Northern Provence, SE France. *Journal of Hydrology*, 529, p.737–753.

[58] **Guglielmi Y.**, Cappa F., Avouac J.P., Henry P., Elsworth D. (2015). Seismicity triggered by fluid-injection-induced aseismic slip. *Science* 12 June 2015, Vol. 348, Issue 6240.

[57] Derode B., **Guglielmi Y.**, De Barros L., Cappa F. (2015). Seismic responses to fluid pressure perturbations in a slipping fault: Fault reactivation by fluid pressures. [Geophysical Research Letters](#). 04/2015; DOI: 10.1002/2015GL063671.

[56] **Guglielmi Y.**, Nussbaum C., Dick P., Henry P., Gout C. (2015). Underground Research Laboratories to Characterize Faults in Shales. 13th International Symposium on Rock Mechanics, International Society of Rock Mechanics, Montreal 2015.

[55] Matonti C., **Guglielmi Y.**, S. Viseur¹, P.O. Bruna, J. Borgomano, C. Dahl, L.Marié (2015). An insight on the outcrop scale acoustic signature of carbonate heterogeneities. *Tectonophysics*, 638(2015) 94-111.

[54] Maufroy, E., Gaffet, S., Operto, S., **Guglielmi, Y.**, & Boyer, D. (2014). Travel time inversion from ground level to gallery: protocol for the characterization of P-wave seismic signature in a fractured-porous Urgonian platform at hectometric scale. *Near Surface Geophysics*, 1(1), 1-12.

[53] Rinaldi A.P., Jeanne P., Rutqvist J., Cappa F., **Guglielmi Y.** (2014). Effects of fault-zone architecture on earthquake magnitude and gas leakage related to CO₂ injection in a multi-layered sedimentary system. *Greenhouse Gases: Science and Technology*, Volume 4, Issue 1, pages 99-120, February 2014.

[52] Jeanne P., **Guglielmi Y.**, Cappa F., Rinaldi A. and Rutqvist J. (2014). Effects of lateral permeability evolution on faults zones reactivation by industrial fluid pressurization in deep reservoir: Application to CO₂ sequestration problems. *Journal of Structural Geology*, Volume 62, May 2014, pages 97-108.

[51] Cappa F., **Guglielmi Y.**, Viseur S. and Garambois S. (2014). Deep fluids can facilitate rupture of slow-moving giant landslides as a result of stress transfer and frictional weakening. *Geophysical Research Letters*, Vol.41, 1-6, doi:10.1002/2013GL058566.

[50] Jomard H., Lebourg T., **Guglielmi Y.** (2013) Morphological analysis of deep-seated gravitational slope deformation (DSGSD) in the western part of the Argentera massif. A morpho-tectonic control? *Landslides*, Volume 11, Issue 1, pp 107-117

[49] **Guglielmi Y.**, Cappa F., Lançon H., Janowczyk, Rutqvist J., Tsang C.F. and Wang J.S.Y. (2013). ISRM Suggested Method for Step-Rate Injection Method for Fracture In-Situ Properties (SIMFIP): Using a 3-Components Borehole Deformation Sensor. *Rock Mechanics and Rock Engineering*, DOI 10.1007/s00603-013-0517-1.

[48] **Guglielmi Y.**, Henry P., Cappa F. and Derode B. (2013). Relationships between slow slip, seismicity and fluids leakage during a pressurized fault zone rupture in situ experiment:

Importance for reservoir/caprock stimulation monitoring and efficiency assessment. ARMA 13-517, San Francisco 2013.

[47] Derode B., Cappa F., **Guglielmi Y.** and Rutqvist J. (2013). Coupled seismo-hydromechanical monitoring of inelastic effects on injection-induced fracture permeability. *International Journal of Rock Mechanics and Mining Sciences* 61, 266-274.

[46] Bruna P.O., **Guglielmi Y.**, Lamarche J., Floquet M., Fournier F., Sizun J.P., Gallois A., Mariè L., Bertrand C. and Hollender F. (2013). Porosity gain and loss in unconventional reservoirs : Example of rock typing in Lower Cretaceous hemipelagic limestones, SE France (Provence). *Marine and Petroleum Geology* 48, 186-205.

[45] Jeanne P., **Guglielmi Y.** and Cappa F. (2013). Hydromechanical heterogeneities of a mature fault zone: impacts on fluid flow. *Groundwater*, doi: 10.1111/gwat.12017.

[44] Lamarche J., Lavenu A.P.C., Gauthier B.D.M., **Guglielmi Y.** and Jazet O. (2012). Relationships between fracture patterns, geodynamics and mechanical stratigraphy in Carbonates (South-East Basin, France). *Tectonophysics*, 581, pp.231-245.

[43] Jeanne P., **Guglielmi Y.** and Cappa F. (2012). Dissimilar properties within a carbonate-reservoir's small fault zone, and their impact on the pressurization and leakage associated with CO₂ injection. *Journal of Structural Geology*, 11/2012, 47:25-35, DOI: 10.1016/j.jsg.2012.10.010.

[42] Jeanne P., **Guglielmi Y.** and Cappa F. (2012). Multiscale seismic signature of a small fault zone in a carbonate reservoir: Relationships between VP imaging, fault zone architecture and Cohesion. *Tectonophysics* 554-557, 185-201.

[41] Jeanne P., **Guglielmi Y.**, Lamarche J., Cappa F. and Marie L. (2012). Architectural characteristics and petrophysical properties evolution of a strike-slip fault zone hidden in a fractured porous carbonate reservoir. *Journal of Structural Geology*, 44, 93-109 – DOI: 10.1016/j.jsg.2012.08.016.

[40] Matonti C., Lamarche J., **Guglielmi Y.** and Marie L. (2012). Structural and petrophysical characterization of mixed conduit/seal fault zones in carbonates : Example from the Castellans fault (SE France). *Journal of Structural Geology*, DOI: 10.1016/j.jsg.2012.03.003.

[39] Preisig M., Cappa F., **Guglielmi Y.** and Prevost J.H. (2011). Water injection induced seismicity : Modeling a hydromechanical experiment. *Mechanics and Physics of Porous Solids – A tribute to Prof. O.Coussy*, Paris 2011, pp. 199-219.

[38] Gaffet S., **Guglielmi Y.**, Pambrun C., Cappa F., Monfret T., Amitrano D., 2010. Monitoring of seismic and rainfall effects on rockslide rheology in the La Clapière mountainous environment, France. *Geophys. J. Int.*, doi: 10.1111/j.1365-246X.2010.04683.x

[37] **Guglielmi Y.** and Cappa F., 2010. Numerical analysis of failure in mountainous rock-slopes due to gradual strength loss in the shallow crust. *Geomorphology* 117, 121 – 129.

[36] Jomard H., Lebourg T., **Guglielmi Y.** and Tric E. (2010). Electrical imaging of sliding geometry and fluids associated with a deep seated landslide (La Clapière, France). *Earth Surface Processes and Landforms*, Doi: 10.1002/esp.1941

- [35] Binet S., Spadini L., Bertrand C., **Guglielmi Y.**, Mudry J. and Scavia C., 2009. Variability of the groundwater sulphate concentration in fractured rock slopes: a tool to identify active unstable areas. *Hydrol. Earth Syst. Sci.*, 13, 2315-2327.
- [34] El Bedoui S., **Guglielmi Y.**, Lebourg T. and Perez J.L., 2009. Deep-seated failure propagation in a fractured rock slope over 10,000 years: The La Clapiere slope, the south-eastern French Alps. *Geomorphology*, 105, pp.232-238.
- [33] Charmoille A., Binet S., Bertrand C., **Guglielmi Y.**, Mudry J., 2009. Hydraulic interactions between fractures and bedding planes in a carbonate aquifer studied by means of experimentally induced water-table fluctuations (Coaraze experimental site, SouthEastern France). *Hydrogeology Journal* 17(7):1607-1616.
- [32] Féraud, G., Potot, C., Fabretti, J. F., Guglielmi, Y., Fiquet, M., Barci, V., & Maria, P. C. (2009). Trace elements as geochemical markers for surface waters and groundwaters of the Var River catchment (Alpes Maritimes, France). *Comptes Rendus Chimie*, 12(8), 922-932.
- [31] Cappa F., **Guglielmi Y.**, Rutqvist J., Tsang CF. and Thoraval A., 2008. Estimation of fracture flow parameters through numerical analysis of hydromechanical pulses. *Water Resources Research*, Vol.44, W11408, doi:10.1029/2008WR007015.
- [30] Bois T., Bouissou S., **Guglielmi Y.**, 2008. Influence of major inherited faults zones on gravitational slope deformation : A two-dimensional physical modelling of the La Clapière area (Southern French Alps). *Earth and Planetary Science Letters* 272 (2008), pp.709-719.
- [29] **Guglielmi Y.**, Cappa F., Amitrano D., 2008. High-definition analysis of fluid-induced seismicity related to the mesoscale hydromechanical properties of a fault zone. *Geophys Res Lett*, Vol.35, L06306, doi:10.1029/2007GL033087.
- [28] **Guglielmi Y.**, Cappa F., Rutqvist J., Tsang C-F., and Thoraval A., 2008. Mesoscale characterization of coupled hydromechanical behavior of a fractured-porous slope in response to free water-surface movement. *Int J Rock Mech Min Sci* 45 (2008), pp 862-878.
- [27] Cappa F., **Guglielmi Y.**, and Virieux J., 2007. Stress and fluid transfer in a fault zone due to overpressures in the seismogenic crust. *Geophys Res Lett*, 34, L05301, doi:10.1029/2006GL028980.
- [26] Bogaard T., **Guglielmi Y.**, Marc V., Emblanch C., Bertrand C., Mudry J., 2007. Hydrogeochemistry in landslide research:A review. *Bulletin de la Société Géologique de France*, 178 : 113 – 126.
- [25] Binet S., **Guglielmi Y.**, Mudry J., Bertrand C. – 2007 – Multiscale analysis of unstable rock slopes hydrogeology. *Bulletin de la Société Géologique de France*, 178 : 159 – 168.
- [24] Binet S., Mudry J., Scavia C., Campus S., Bertrand C., **Guglielmi Y.**, 2007. In situ characterization of flows in a fractured unstable slope. *Geomorphology* 86, 193-203.
- [23] Charmoille A., Fabbri O., Mudry J., **Guglielmi Y.**, Bertrand C., 2006. Post-seismic permeability change in a shallow fractured aquifer following a ML 5.1 earthquake (Fourbanne karst aquifer, Jura outermost thrust unit, eastern France). *Geophys Res Lett*, 32, L18406, doi:10.1029/2005GL023859.

- [22] Binet S., Mudry J., **Guglielmi Y.**, Bertrand C., 2006. Estimation of quantitative descriptors of Mediterranean karst behaviour. Multiparametric study and local validation on the Siou-Blanc massif (Toulon, France), *Hydrogeology Journal*, volume 14, Issue 7, pp. 1107-1121, doi: 10.1007/s10040-006-0044-1.
- [21] Cappa F., **Guglielmi Y.**, Rutqvist J., Tsang C-F., and Thoraval A., 2006. Hydromechanical modelling of pulse tests that measure fluid pressure and fracture normal displacement at the Coaraze Laboratory site, France. *Int J Rock Mech Min Sci*, 43(7):1062:1082.
- [20] Cappa F., **Guglielmi Y.**, Gaffet S., Lançon H., and Lamarque I., 2006. Use of in situ fiber optic sensors to characterize highly heterogeneous elastic displacement fields in fractured rocks. *Int J Rock Mech Min Sci*, 43(4):647-654.
- [19] Kadiri I., Merrien-Soukatchoff V., **Guglielmi Y.** and Su K., 2005. Measurement and 2D modeling of fluid control on the hydromechanical behavior of a fractured reservoir *Elsevier Geo-Engineering Book Series*, 2:739-744.
- [18] Gunzburger Y., Merrien-Soukatchoff V. and **Guglielmi Y.**, 2005. Influence of daily surface temperature fluctuations on rock slope stability: case study of the Rochers de Valabres slope (France). *Int J Rock Mech Min Sc*, 42(3): 331-349
- [17] Bigot-Cormier F., Braucher R., Bourlès D., **Guglielmi Y.**, Dubar M. and Stéphan J.-F., 2005. Chronological constraints on processes leading to large active landslides. *Earth and Planetary Science Letters*, 235, Issues 1-2, (30):141-150
- [16] **Guglielmi Y.**, Cappa F., and Binet S., 2005. Coupling between hydrogeology and deformation of mountainous rock slopes: Insights of La Clapière area (Southern-Alps, France). *C R Géosciences*, 337:1154-1163.
- [15] Cappa F., **Guglielmi Y.**, Fénart P., Merrien-Soukatchoff V., and Thoraval A., 2005. Hydromechanical interactions in a fractured carbonate reservoir inferred from hydraulic and mechanical measurements. *Int J Rock Mech Min Sci*, 42:287-306.
- [14] Cappa F., **Guglielmi Y.**, Merrien-Soukatchoff V., Mudry J., Bertrand C., and Charmoille A., 2004. Hydromechanical modeling of a large moving rock slope inferred from slope levelling coupled to spring long-term hydrochemical monitoring: example of the La Clapière landslide (Southern-Alps, France). *J Hydrol*, 291(1-2):67-90.
- [13] Gaffet S., **Guglielmi Y.**, Virieux J., Waysand G., Chwala A., Stolz R., Emblanch C., Auguste M., Boyer D. and Cavaillou A., 2003. Simultaneous seismic and magnetic measurements in the Low Noise Underground Laboratory (LSBB) of Rustrel, France, during the 2001, 26th January Indian earthquake, *Geophys. J. Int.*, 155, 977-986
- [12] Debieche T. H., **Guglielmi Y.** and Mudry J., 2002. Modeling the hydraulical behavior of a fissured-karstic aquifer in exploitation conditions. *J Hydro*, 257,(1-4): 247-255

[11] **Guglielmi Y.**, Vengeon J., Bertrand C., Mudry J., Follacci J. and Giraud A., 2002. Hydrogeochemistry: an investigation tool to evaluate infiltration into large moving rock masses (case study of La Clapière and Séchillienne alpine landslides). *Bull Eng Geol Env*, *61(4)*311-324.

[10] **Guglielmi Y.** and Mudry J., 2001. Quantitative measurement of channel-block hydraulic interactions by experimental saturation of a large, natural, fissured rock mass. *Groundwater*, *39(5)*:696-701.

[9] **Guglielmi Y.**, Bertrand C., Compagnon F., Follacci J. P. and Mudry J., 2000. Acquisition of water chemistry in a mobile fissured basement massif: its role in the hydrogeological knowledge of the La Clapière landslide (Mercantour massif, southern Alps, France). *J Hydro*, *229*, (3-4):138-148

[8] Reynaud A., **Guglielmi Y.**, Mudry J. and Emily A., 2000. Apport de l'hydrochimie à la reconstitution paléogéographique du Trias du S.E. de la France (Alpes du Sud et Provence). *Heclogae Helveticae*, Vol.93/1, 55.

[7] Reynaud A., **Guglielmi Y.**, Mudry J. and Mangan C., 1998. Hydrochemical approach to the alterations of the recharge of a karst aquifer consecutive to a long pumping period : Example taken from Pinchinade graben (Mouans-Sartoux, French Riviera) - *GroundWater (Dublin, Ohio, USA)* *37 (3)* : 414 - 417, 3 fig. .

[6] **Guglielmi Y.**, Mudry J. and Blavoux B., 1998. Estimation of the water balance of alluvial aquifers in region of high isotopic contrast: an example from southeastern France *J Hydro*, *210*, (1-4):106-115

[5] **Guglielmi Y.**, 1998. Hydromechanics of fractured rock masses: results from an experimental site in limestone. In: *Mechanics of jointed and faulted rock*, Rossmanith H-P. (ed), A.A. Balkema, Rotterdam, 621-624

[4] **Guglielmi Y.** and Prieur L., 1997. Locating and estimating submarine freshwater discharge from an interstitial confined coastal aquifer by measurements at sea: example from the lower Var valley, France. *J Hydro*, *190(1-2)*:111-122

[3] Compagnon F., **Guglielmi Y.**, Mudry J., Follacci J.P. et Ivaldi J.P., 1997. Approche chimique et isotopique de l'origine des eaux en transit dans un grand glissement de terrain : exemple du glissement de la Clapière (Alpes-Maritimes). *C.R.Acad.Sci., Paris*, *325 (II)*, pp. 565-570.

[2] **Guglielmi Y.** and Mudry J., 1995. Estimation of spatial and temporal variability of recharge fluxes of an alluvial water in a fore land area by water chemistry and isotopes. *Ground Water (Dublin, Ohio, USA)* - *34 (6)*: 1017 - 1023, 9 fig.

[1] **Guglielmi Y.** and Blavoux B., 1994. Détermination de l'origine des nitrates dans un aquifère alluvial au moyen du traçage isotopique des eaux : exemple de la nappe du Var. (Alpes-Maritimes, France). *C.R.Acad.Sci., Paris*, *319 (II)*: 325-330.

Chapters in International Books

[1] Cappa F., **Guglielmi Y.**, Rutqvist J., Tsang C-F., Thoraval A. 2006 - A new in situ test for determination of rock fractures hydromechanical properties: the "HydroMechanical Pulse Injection Test (HMPIT)" (accepté - "Coupled thermo-hydro-mechanical-chemical processes in

geo-systems – Fundamentals, Modelling, Experiments and Applications”, *Elsevier Geo-Engineering Book Series, Edited by J.A. Hudson and C-F. Tsang, Elsevier Ltd., Oxford, UK, 2006*).

[2] **Guglielmi Y.**, Cappa F., Rutqvist J., Tsang C-F., Thoraval A. 2006 - Coupled hydromechanical behaviour of a multi-permeability fractured rock slope subjected to a free-water surface movement: Field and numerical investigations(accepté - “Coupled thermo-hydro-mechanical-chemical processes in geo-systems – Fundamentals, Modelling, Experiments and Applications”, *Elsevier Geo-Engineering Book Series, Edited by J.A. Hudson and C-F. Tsang, Elsevier Ltd., Oxford, UK, 2006*).

[3] I.Kadiri, V.Merrien-Soukatchoff, **Y.Guglielmi**, K.Su – 2004 – Measurement and 2D modelling of fluid control on the hydromechanical behavior of a fractured reservoir. In “Coupled thermo-hydro-mechanical-chemical processes in geo-systems”, *Elsevier Geo-engineering book series, John A.Hudson Editor, p. 739 – 744*.