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40 years old, married, two children

# Jean-Michel Pereira

*Professor of Geotechnical Engineering*

*geomechanics, poromechanics, thermodynamics, multiphysical couplings, laboratory testing, numerical analysis, unsaturated soils, CO<sub>2</sub> sequestration, offshore geotechnics*

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## Education

- 2014 **HDR in Geotechnics (Habilitation à Diriger des Recherches – accreditation to direct research)**, *Université Paris-Est*.  
Dissertation: Multiphysical couplings in geomaterials: experimental characterisation and modelling  
Committee: Dr C. Jommi (reviewer), Dr C. Santamarina (reviewer), Dr G. Viggiani (reviewer), Dr E. Alonso (examiner), Dr H. Di Benedetto (examiner), Dr J. Sulem (examiner)
- 2005 **PhD in Civil Engineering**, *École Nationale des Travaux Publics de l'État / Institut National des Sciences Appliquées de Lyon (INSA)*, Lyon.  
Dissertation: Study of hydromechanical couplings and non-saturation effects in geomaterials – Application to underground structures  
Committee: Dr F. Darve (reviewer), Dr P. Delage (reviewer), Dr P. Dangla (examiner), Dr H. Di Benedetto (examiner), Dr I. Djeran-Maigre (examiner), Dr H. Wong (co-supervisor), Dr P. Dubujet (co-supervisor)
- 2001 **Diplôme d'Études Approfondies (equiv. to MSc) in Civil Engineering**, *École Nationale des Travaux Publics de l'État*, Lyon.
- 2001 **Ingénieur des Travaux Publics de l'État (equiv. to MSc) in Civil Engineering**, *École Nationale des Travaux Publics de l'État*, Lyon.

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## Academic Experience

- 2017 – now **Professor of Geotechnical Engineering**, *École des Ponts ParisTech*, Marne-la-Vallée, France.
- 2015 – now **Deputy President of the Department of Civil Engineering**, *École des Ponts ParisTech*, Marne-la-Vallée, France.
- 2014 **Visiting Professor**, *School of Civil Engineering, The University of Sydney*, Australia.  
(3 months) Multiphase flow in 3D printed porous networks

- 2005 – now **Research Scientist**, *Laboratoire Navier, École des Ponts ParisTech*, Marne-la-Vallée, France.  
Study of multiphysical couplings in geomaterials: applications to energy and environmental geomechanics
- 2006 – 2007 (1 year) **Post-doctoral researcher**, *Technical University of Catalonia (UPC)*, Barcelona, Spain.  
Numerical modelling of the behaviour of embankments in floodable zones (modelling of THM coupled problems with the finite element software Code\_Bright)
- 2001 – 2005 **PhD student**, *École Nationale des Travaux Publics de l'État*, Lyon, France.  
Theoretical and numerical (finite elements method) modelling of unsaturated soils behaviour
- 2000 – 2001 **MSc student**, *École Nationale des Travaux Publics de l'État*, Lyon, France.  
Use of an advanced elastoplastic model to study the cavity expansion problem in unsaturated soils.
- 1998 – 2001 **Ingénieur élève des Travaux Publics de l'État**, *École Nationale des Travaux Publics de l'État*, Lyon, France.

## Awards

- 2014 **International Research Collaboration Award**, *Invited Professor Grant*, awarded by the *University of Sydney, Australia*, collaboration with Prof. I. Einav.  
10.5 k€

## Grants and Projects

- summary **Total funding: 3.229 M€**, *List of projects for which I acted as Principal Investigator (PI) or co-PI.*
- 10/2017 – 03/2018 **Excavations**, *Numerical study of deep excavations in the context of Grand Paris Express projects*, PI, funded by HUB17.  
6 k€, 0.5 years
- 11/2015 – 09/2019 **ANR Hydre**, *Mechanical behaviour of gas-hydrate-bearing sediments*, co-PI, funded by the French National Research Agency.  
478.4 k€, 4 years
- 12/2015 – 11/2018 **Piles**, *Behaviour of laterally-loaded deep foundations in soft soils – PhD fellow: Hubert Habib*, PI, funded by H2G-Experts.  
45 k€, 3 years
- 10/2015 – 09/2018 **Shrinkage**, *Mechanisms of action of shrinkage reducing admix- tures*, co-PI, with Dr M. Vandamme, funded by Lafarge.  
150 k€, 3 years
- 10/2014 – 09/2017 **Wind turbines**, *Dynamic soil-structure interaction – PhD fellow: Laura Kerner*, co-PI, with Dr P. Argoul, Dr J. Canou, Dr G. Cumunel & J.-C. Dupla, funded by the French Ministry of Ecology.  
110 k€, 3 years
- 10/2014 – 09/2017 **Creep**, *Time dependent behaviour of geomaterials – PhD fellow: Hugo Troupel*, co-PI, with Dr M. Vandamme, funded by the French Ministry of Ecology.  
110 k€, 3 years

- 01/2014 – 12/2017 **GREAT**, *Geotechnical and geological Responses to climate change: Exchanging Approaches and Technologies on a world-wide scale*, co-PI, scientist in charge for ENPC, funded by the European Commission under the FP7 People programme, contract No FP7-PEOPLE-IRSES-2013/612665.  
224.7 k€ (over a total funding of 898.8 k€ for the project), 4 years
- 09/2013 – 08/2015 **Nuclear waste disposal**, *Advanced constitutive and numerical modelling for nuclear waste repositories*, co-PI, with Dr Y.J. Cui, & Dr A.M. Tang, funded by Ondraf.  
125 k€, 2 years
- 10/2012 – 09/2015 **Cristal growth**, *Study of swelling of cementitious materials induced by sursaturation and cristal growth*, co-PI, with Dr M. Vandamme, funded by Lafarge.  
150 k€, 3 years
- 10/2011 – 09/2014 **Cristallisation in porous media**, *Study of swelling of porous media induced by sur-saturation and cristal growth*, co-PI, with Dr M. Vandamme, funded by Lafarge.  
120 k€, 3 years
- 10/2011 – 09/2014 **Anisotropy of Boom clay**, *Laboratory and numerical investigation of the anisotropic behaviour of natural Boom Clay*, co-PI, with Dr Y.J. Cui, Dr P. Delage & Dr A.M. Tang, funded by SCK-CEN.  
175 k€, 3 years
- 12/2011 – 12/2013 **CO2 and ECBM in coal**, *Study of the hydromechanical properties of coal during CO2 injection*, co-PI, with Dr M. Vandamme, funded by Total.  
320 k€, 2 years
- 03/2011 – 02/2014 **CITEPH II**, *Evaluation of geotechnical risks related to the presence of gas in marine sediments – Phase II*, PI, funded by CITEPH R&D programme, CITEPH-08/2011.  
116.5 k€, 3 years
- 01/2011 – 09/2014 **ANR PiNRJ**, *Geotechnical aspects of foundation energy piles*, co-PI, with Dr A.M. Tang & Dr G. Hassen, funded by the French National Research Agency (Starting Grants programme).  
159.8 k€, 3 years
- 10/2010 – 09/2012 **Heat Exchanger Piles**, *In-situ testing of heat exchanger piles*, co-PI, with Dr A.M. Tang, funded by ENPC.  
42.5 k€, 2 years
- 09/2010 – 12/2010 **Lorroy Chalk**, *Study of the hydromechanical behaviour of the chalk of Lorroy carry*, co-PI, with Dr A.M. Tang & Dr P. Delage, funded by INERIS.  
17.3 k€, 4 months
- 01/2011 – 12/2013 **SALTCO**, *Influence of crystallisation phenomena on the injectivity of supercritical CO2 in deep aquifers*, co-PI, with Dr T. Fen-Chong, funded by ADEME.  
128 k€ (over a total funding of 542.3 k€ for the project), 3 years
- 10/2010 – 09/2013 **CTSC**, *Sequestration of supercritical CO2 in deep saline aquifers: evolution of the petrophysical properties of the constitutive rock – PhD fellow: Florian Osselin*, co-PI, with Dr T. Fen-Chong, funded by Industrial Chair CTSC.  
86.8 k€, 3 years
- 10/2010 – 09/2013 **CO2 geological storage**, *Multiphysical approach of the perenity of CO2 geological storage – Influence of the behaviour of geomaterials and discontinuities – PhD fellow: Valérie Vallin*, PI, funded by the French Ministry of Ecology.  
100 k€, 3 years

- 01/2011 – 12/2011 **CTSC**, *Effects of supercritical CO<sub>2</sub> injection on the poromechanical properties of geomaterials – Post-doc fellow: Dr Zemenu Yigzaw*, PI, funded by Industrial Chair CTSC.  
58.9 k€, 1 year
- 01/2009 – 08/2012 **ANR INTERFACE**, *Thermo-hydro-chemo-mechanical behaviour of interface between the wellbore cement and the caprock under the solicitation of (sc)CO<sub>2</sub> and adjunct gas*, PI, funded by the French National Research Agency, ANR-08-PCO2-006-02.  
177.8 k€(over a total funding of 769.6 k€ for the project), 3.5 years
- 06/2009 – 05/2012 **GEO-EXCEL**, *GEO-engineering EXChanges between Europe and Latin-America*, co-PI, scientist in charge for ENPC, funded by the European Commission under the FP7 People programme, contract No FP7-PEOPLE-IRSES-2008/230860.  
37.8 k€ (over a total funding of 385.2 k€ for the project), 3 years
- 06/2008 – 06/2010 **CITEPH I**, *Evaluation of geotechnical risks related to the presence of gas in marine sediments – Phase I*, PI, funded by CITEPH R&D programme, CITEPH-23-24/2008.  
70.5 k€, 2 years
- 01/2006 – 12/2006 **CLAROM II**, *Study of the mechanical behaviour of deep offshore sediments from Gulf of Guinea: destructuration/restructuration & long term soil-steel interaction*, co-PI, with Dr V. De Gennaro & Dr P. Delage, funded by CLA-ROM industrial consortium.  
24 k€ (over a total funding of 514 k€ for the project), 1 year
- 01/2005 – 12/2008 **MUSE**, *Mechanics of Unsaturated Soils for Engineering*, co-PI, funded by the European Commission under the FP6 Marie Curie Research and Training Networks RTN programme, contract No MRTN-CT-2004-506861.  
195 k€ (over a total funding of 1.3 M€for the project), 4 years

## Post-doc fellows guidance – Visiting Scholars

summary

### 7 post-doc fellows supervised or co-supervised.

- 02/2016 – 08/2017 **Dr Nam Nghia Bui**, *Swelling of porous media induced by cristallisation*.  
co-supervised with Dr M. Vandamme
- 09/2014 – 08/2015 **Dr Linlin Wang**, *Modelling the anisotropic hydromechanical behaviour of coal during CO<sub>2</sub> injection*.  
co-supervised with Dr M. Vandamme
- 01/2012 – 07/2013 **Dr D. Nicolas Espinoza**, *Study of the hydromechanical properties of coal during CO<sub>2</sub> injection*.  
funded by Total project, co-supervised with Dr M. Vandamme
- 04/2011 – 09/2011 **Dr Norma Patricia López Acosta**, *Stability analyses of flood-protecting dykes submitted to rapid drawdowns*.  
visiting scholar funded by EC-FP7-PEOPLE GEO-EXCEL project
- 02/2011 – 01/2013 **Dr Diego Manzanal**, *Numerical modelling of the effects of supercritical CO<sub>2</sub> injection on the poromechanical properties of geomaterials & Evaluation of geotechnical risks related to the presence of gas in marine sediments*.  
funded by ANR INTERFACE project & CITEPH II project
- 02/2010 – 06/2012 **Dr Zemenu Yigzaw**, *Experimental characterisation of the effects of supercritical CO<sub>2</sub> injection on the poromechanical properties of geomaterials*.  
funded by ANR INTERFACE project (1 year) and CTSC industrial chair (1 year)

07/2009 – 06/2010 **Dr Seda Sendir-Torisu**, *Mechanical behaviour of ocean sediments and offshore geo-hazards.*  
funded by CITEPH I project

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## Supervision of PhD students

summary

**17 PhD students supervised or co-supervised.**

- 10/2016 – **Axelle Alavoine**, *Thesis subject: Behaviour of hydrate bearing sediments.*  
co-supervised with Dr P. Dangla
- 10/2016 – **Benjamin Dardé**, *Thesis subject: Hydromechanical behaviour of bentonite pellets and powder mixtures.*  
co-supervised with Dr. P. Dangla, Dr. J.N. Roux & Dr A.M. Tang
- 10/2015 – **Hafsa Rahoui**, *Thesis subject: Mechanisms of action of shrinkage reducing admixtures.*  
co-supervised with Dr M. Vandamme
- 12/2014 – **Hubert Habib**, *Thesis subject: Behaviour of laterally-loaded deep foundations in soft soils.*
- 10/2014 – 12/2017 **Laura Kerner**, *Thesis subject: Dynamic soil-structure interaction: application to deep foundations of wind turbines.*  
co-supervised with Dr P. Argoul, Dr. J. Canou, Dr G. Cumunel & Dr. J.-C. Dupla
- 10/2014 – 12/2017 **Hugo Troupel**, *Thesis subject: Creep of geomaterials subjected to varying environmental variables.*  
co-supervised with Dr M. Vandamme
- 10/2013 – 11/2016 **Mohamed Hassan Khalili**, *Thesis subject: Micromechanical study of creep in granular materials.*  
co-supervised with Dr M. Bornert, Dr S. Brisard & Dr J.-N. Roux
- 10/2013 – 12/2017 **Van Tri Nguyen**, *Thesis subject: Behaviour of energy piles.*  
co-supervised with Dr A. M. Tang
- 10/2013 – 04/2017 **Vinh Du Than**, *Thesis title: Mechanical behavior of bonded granular soils: experiments and discrete element modeling.*  
co-supervised with Dr A. M. Tang and Dr J.-N. Roux
- 10/2012 – 01/2016 **Nam Nghia Bui**, *Thesis title: Study of swelling of porous media induced by sursaturation and cristal growth.*  
co-supervised with Dr M. Vandamme
- 10/2011 – 01/2015 **Linh Quyen Dao**, *Thesis title: Laboratory and numerical investigation of the anisotropic behaviour of natural Boom Clay.*  
co-supervised with Dr Y. J. Cui, Dr A. M. Tang, Dr P. Delage & Dr H. Wong
- 10/2011 – 11/2014 **Neda Yavari**, *Thesis title: Geotechnical aspects of foundation energy piles*, funded by ANR PiNRJ project.  
co-supervised with Dr A. M. Tang & Dr G. Hassen
- 10/2010 – 05/2014 **Valérie Vallin**, *Thesis title: Multiphysical approach of the perenity of CO<sub>2</sub> geological storage – Influence of the behaviour of geomaterials and discontinuities*, funded by the French Ministry of Ecology.  
co-supervised with Dr T. Fen-Chong & Dr H. Wong (ENTPE)

- 10/2010 – 04/2014 **Jean-François Bruchon**, *Thesis title: Hydro-mechanical couplings in granular materials – X-ray microtomography approach*, funded by École Normale Supérieure de Cachan scholarship.  
co-supervised with Dr M. Vandamme, Dr M. Bornert & Dr P. Delage
- 10/2010 – 12/2013 **Florian Osselin**, *Thesis title: Sequestration of supercritical CO<sub>2</sub> in deep saline aquifers: evolution of the petrophysical properties of the constitutive rock*, funded by ADEME/CTSC chair/IFFSTAR.  
co-supervised with Dr P. Dangla, Dr T. Fen-Chong & Dr A. Fabbri (ENTPE)
- 10/2009 – 03/2013 **Pengyun Hong**, *Thesis title: Modelling of the thermo-hydro-mechanical behaviour of stiff clays accounting for salinity*, funded by the Chinese Scholarship Council (CSC).  
co-supervised with Dr Y. J. Cui & Dr A. M. Tang
- 10/2007 – 03/2011 **José Muñoz-Castelblanco**, *Thesis title: Hydromechanical behaviour of a natural loess*, funded by the European Commission Alβan scholarships programme.  
co-supervised with Dr Y. J. Cui & Dr P. Delage

## Supervision of MSc students

summary **18 MSc students supervised or co-supervised.**

- 2016 **Axelle Alavoine**, *Modelling the behaviour of gas hydrates bearing sediments*, co-supervised with Dr Patrick Dangle.
- 2013 **Jing Wang**, *Evaluation of geotechnical risks related to the presence of gas in marine sediments*.
- 2012 **Duc Trung Le**, *Modelling of cyclic fatigue of salt rock around underground storage cavities*, co-supervised with Dr Ahmad Pouya.
- 2012 **Dac Loi Nguyen**, *Modelling of soil-structure interaction – application to geothermal piles*, co-supervised with Dr Diego Manzanal.
- 2012 **Majid Pourbaba**, *Experimental study of mechanical properties of an unsaturated chalk*, co-supervised with Dr Siavash Ghabezloo.
- 2012 **Andriatsimba Tahina Randriamparany**, *Pile testing – the case of geothermal piles*, co-supervised with Dr Anh Minh Tang and Neda Yavari.
- 2011 **Thi Phuong Loan Le**, *Hydromechanical couplings in partially saturated materials: experimental approach*, co-supervised with J. F. Bruchon & Dr M. Vandamme.
- 2011 **Manh Huy Tran**, *Modelling the cavity expansion in a non-saturated soil: application to the pressuremeter test*.
- 2010 **Jean-François Bruchon**, *Tridimensional imagery by X-ray microtomography of partially saturated granular materials*, co-supervised with Dr M. Vandamme.
- 2010 **Valérie Vallin**, *Modelling the behaviour of a well cement submitted to CO<sub>2</sub> injection*.
- 2010 **Tuan Hung Nguyen**, *Experimental study of the hydromechanical behaviour of a partially saturated natural loess*, co-supervised with J. Muñoz-Castellblanco.
- 2010 **Clément Desodt**, *Modelling of the behaviour of marine sediments from Gulf of Guinea*.
- 2009 **Ralid Ajabboune**, *Modelling the injection of supercritical CO<sub>2</sub> in a deep geological reservoir*, TFE.
- 2009 **Amadou Thiam**, *Behaviour of saturated and partially saturated natural soils: accounting for structure effects*.

- 2009 **Abtin Jahanbakhshzadeh**, *Accounting for partial saturation effects on the mechanical behaviour of a natural loess*, co-supervised with J. Muñoz-Castellblanco.
- 2006 **Anh Ninh Ta**, *Accounting for partial saturation effects in an elastoplastic model with damage*.
- 2004 **Samuel Heumez**, *Study of the thermomechanical behaviour of a nuclear waste storage borehole*, TFE, co-supervised with Dr H. Wong.
- 2002 **Aziz Mortaki**, *3D numerical modelling of the thermal field around a nuclear waste storage borehole accounting for galleries ventilation and thermal radiation*, TFE, co-supervised with Dr H. Wong.

## External examiner/reviewer of PhD theses

- summary **14 in total.**
- October 2017 **Daniel Da Costa Ribeiro**, *Dissertation: Prediction of the hydro-mechanical behavior of jet-grouting columns*, Universidade de Lisboa - Instituto Superior Técnico, Lisbon, Portugal.  
External reviewer
- December 2016 **Sarah Asfour**, *Dissertation: Recovery of solar energy in pavements for frost protection*, Université Blaise Pascal, Clermont-Ferrand, France.  
External reviewer
- December 2016 **Dino Mahmutovic**, *Dissertation: Study of the behaviour of soils close to saturation – numerical validation based on laboratory tests and earth structures*, Université Grenoble Alpes, Grenoble, France.  
External reviewer
- November 2016 **Sergio Samat**, *Dissertation: Thermomechanical modelling of ground response under environmental actions*, Polytechnic University of Catalonia (UPC), Barcelona, Spain.  
External reviewer
- July 2016 **Chao Yuan**, *Dissertation: Pore scale modeling and hydromechanics of partially saturated granular materials*, Université Grenoble Alpes, Grenoble, France.  
External examiner
- April 2016 **Ba Tien Lai**, *Dissertation: Modelling the behaviour of quasi-saturated fine soils including occluded air*, École Nationale des Travaux Publics de l'État, Lyon, France.  
External examiner
- December 2015 **Laurent Perrier**, *Dissertation: Couplings between adsorption and deformation in microporous media: experimentation and modelling*, Université de Pau et des Pays de l'Adour, Anglet, France.  
External reviewer
- November 2015 **Ghonwa Khaddour**, *Dissertation: Multi-scale characterisation of the hydro-mechanical behaviour of unsaturated sand : water retention and triaxial response*, Université Grenoble Alpes, France.  
External examiner
- September 2015 **Xiaoqin Lei**, *Dissertation: Theoretical modelling of coupled chemo-hydro-mechanical behaviour in unsaturated expansive clays*, École Nationale des Travaux Publics de l'État, Lyon, France.  
External reviewer

- October 2014 **Tuan Anh Bui**, *Dissertation: Theoretical and numerical study of unsaturated damageable poro-plastic behaviour – application to radioactive waste storage*, École Nationale des Travaux Publics de l'État, Lyon, France.  
External reviewer
- October 2014 **Thomas Mimouni**, *Dissertation: Thermomechanical Characterisation of Energy Geostructures with Emphasis on Energy Piles*, École Polytechnique Fédérale de Lausanne, Switzerland.  
External reviewer
- May 2012 **Nathalie Dufour**, *Dissertation: Damageable poro-viscoplastic behaviour of underground cavities – application to radioactive waste storage*, École Nationale des Travaux Publics de l'État, Lyon, France.  
External examiner
- May 2011 **Vladimir Ernesto Merchán Jaimes**, *Dissertation: Small strain stiffness and residual strength of unsaturated Boom clay: a micro-structural insight*, Polytechnic University of Catalonia (UPC), Barcelona, Spain.  
External reviewer
- December 2010 **Mathilde Morvan**, *Dissertation: Behaviour of partially saturated soils under hydro-mechanical loadings: theoretical approach by the concept of bounding surface and experimental approach*, École Nationale des Travaux Publics de l'État, Lyon, France.  
External examiner

## Professional contributions

### Editorial or Review Boards

- since 2016 **Géotechnique**, *Member of the Editorial Advisory Panel.*
- since 2014 **Computers and Geotechnics**, *Member of the Editorial Board.*
- since 2014 **Frontiers in Energy Research – carbon capture, storage, and utilization**, *Review editor.*
- since 2014 **Revue Française de Géotechnique**, *Member of the Editorial Board.*
- 2010 – 2015 **Géotechnique Letters**, *Member of the Editorial Advisory Panel.*

### Scientific and Organising Committees of Conferences, Workshops & Sessions

- summary **18 in total.**
- June 2019 **IS-Glasgow**, *7th International Symposium on Deformation Characteristics of Geomaterials*, Glasgow, UK.  
member of the technical advisory committee
- September 2017 **CPEG2**, *International Symposium on Coupled Phenomena in Environmental Geotechnics*, Leeds, UK.  
member of the technical advisory committee
- July 2017 **6th Biot**, *6th Biot Conference on Poromechanics*, Paris, France.  
co-chairman (with Dr M. Vandamme & Dr. P. Dangla)
- July 2017 **GeoProc2017**, *6th International Conference on Coupled THMC Processes in Geosystems*, Paris, France.  
member of the local organising committee



- September 2016 **E-UNSAT 2016**, *3rd European Conference on Unsaturated Soils*, École des Ponts ParisTech, Marne-la-Vallée, France.  
member of the organising committee
- August 2016 **1st Energy Geotechnics**, *1st International Conference on Energy Geotechnics*, Kiel, Germany.  
member of the international advisory committee
- November 2015 **W(H)YDOC'15**, *Fifth International Workshop of Young Doctors in Geomechanics*, École des Ponts ParisTech, Marne-la-Vallée, France.  
member of the organising committee
- November 2015 **XV PCSMGE**, *15th Pan-American Conference on Soil Mechanics and Geotechnical Engineering*, Buenos Aires, Argentina.  
member of the international advisory committee
- May 2015 **IS Energy Geotechnics**, *International Symposium on Energy Geotechnics*, Barcelona, Spain.  
member of the international technical committee
- August 2013 **5th iYGEC**, *International Young Geotechnical Engineers' Conference*, École des Ponts ParisTech, Marne-la-Vallée, France.  
member of the organising committee
- July 2013 **Mini-Symposium at the Fifth Biot Conference on Poromechanics**, *"Coupled processes in geomechanics. Bridging theory and experiments"*, Vienna, Austria.  
co-organiser with Dr Enrique Romero
- July 2013 **UNSAT-WASTE 2013**, *Third International Symposium on Unsaturated Soil Mechanics and Deep Geological Waste Disposal*, Shanghai, China.  
member of the international scientific committee
- November 2012 **W(H)YDOC'12**, *4th International Workshop of Young Doctors in Geomechanics*, École des Ponts ParisTech, Marne-la-Vallée, France.  
member of the organising committee
- October 2011 **22nd ALERT Geomaterials Workshop**, *Session "Geomechanical issues in CO2 storage"*, Aussois, France.  
co-organiser with G. Pijaudier-Cabot
- April 2011 **MPPS2011**, *Symposium Mechanics and Physics of Porous Solids – A tribute to Pr Olivier Coussy*, École des Ponts ParisTech, Marne-la-Vallée, France.  
member of the organising committee
- November 2008 **W(H)YDOC'08**, *3rd International Workshop of Young Doctors in Geomechanics*, École des Ponts ParisTech, Marne-la-Vallée, France.  
member of the organising committee
- September 2008 **SEC 2008**, *International Symposium on Drought and Construction*, École des Ponts ParisTech, Marne-la-Vallée, France.  
member of the organising committee
- November 2005 **W(H)YDOC'05**, *2nd International Workshop of Young Doctors in Geomechanics*, École des Ponts ParisTech, Marne-la-Vallée, France.  
member of the organising committee

### Session Chair

summary **10 in total.**

- October 2016 **AEG, Pokolbin, Australia**, *Advancing Experimental Geomechanics Workshop*.  
session chairman
- August 2016 **ICEGT 2016**, *1st International Conference on Energy Geotechnics*, Kiel, Germany.  
co-chairman of session "Numerical methods and algorithms in energy geotechnics"
- September 2014 **IS-Cambridge**, *International Symposium on Geomechanics from Micro to Macro*,  
Cambridge, UK.  
session leader
- November 2013 **EAGE Workshop on Geomechanics and Energy**, Lausanne, Switzerland.  
co-chair of debate on "CO2 Storage"
- February 2013 **PANAM-UNSAT 2013**, *First Pan-American Conference on Unsaturated Soils*,  
Cartagena de Indias, Colombia.  
chairman of session: "Constitutive modeling and microstructure"
- June 2012 **E-UNSAT 2012**, *First European Conference on Unsaturated Soils*, Naples, Italy.  
chairman of session: "Theoretical Modelling"
- November 2011 **Pore2Field 2011**, *International Conference on Flows and Mechanics in Natural  
Porous Media from Pore to Field Scale*, Rueil-Malmaison, France.  
chairman of session: "Pore-scale modelling of multiphysics phenomena"
- July 2011 **GeoProc 2011**, *Cross Boundaries through THMC Integration*, Perth, Australia.  
chairman of a technical session
- April 2011 **MPPS2011**, *Symposium Mechanics and Physics of Porous Solids – A tribute to Pr  
Olivier Coussy*, Marne-la-Vallée, France.  
chairman of plenary session
- July 2008 **E-UNSAT 2008**, *First European Conference on Unsaturated Soils*, Durham, United  
Kingdom.  
chairman of session: "Constitutive Modelling"

### Reviewer of Journal Articles

- summary **Reviewer of research papers for 30 international journals.**
- since 2012 **Acta Geotechnica**, Springer.
- since 2012 **Applied Clay Science**, Elsevier Science.
- since 2009 **Canadian Geotechnical Journal**, NRC Research Press.
- since 2009 **Computers and Geotechnics**, Elsevier Science.
- since 2016 **Construction & Building Materials**, Elsevier Science.
- since 2010 **Engineering Geology**, Elsevier Science.
- since 2016 **Environmental Earth Sciences**, Springer.
- since 2013 **Environmental Geotechnics**, ICE – Thomas Telford.
- since 2014 **European Journal of Environmental and Civil Engineering**, Thomas Telford.
- since 2008 **Géotechnique**, ICE – Thomas Telford.
- since 2015 **Geomechanics for Energy and the Environment**, Elsevier Science.
- since 2015 **Geomorphology**, Elsevier Science.
- since 2011 **Geotechnical and Geological Engineering**, Springer.
- since 2010 **Geotechnical Testing Journal**, ASTM International.
- since 2013 **Granular Matter**, Springer.

- since 2010 **International Journal for Numerical and Analytical Methods in Geomechanics**, Wiley.
- since 2015 **International Journal of Physical Modelling in Geotechnics**, ICE – Thomas Telford.
- since 2015 **Journal of Applied Geophysics**, Elsevier Science.
- since 2016 **Journal of Engineering Mechanics**, ASCE.
- since 2005 **Journal of Geotechnical and Geoenvironmental Engineering**, ASCE.
- since 2016 **Journal of the Mechanics and Physics of Solids**, Elsevier Science.
- since 2011 **Periodica-Polytechnica**, Budapest Polytechnical University.
- since 2014 **Mechanics of Time Dependent Materials**, Springer.
- since 2010 **Proceedings of the Institution of Civil Engineers – Geotechnical Engineering**, ICE – Thomas Telford.
- since 2009 **Revue Française de Géotechnique**, Comité Français de Mécanique des Sols.
- since 2012 **Rock Mechanics and Rock Engineering**, Springer.
- since 2018 **Sensors**, MDPI.
- since 2008 **Soils and Foundations**, Japanese Geotechnical Society.
- since 2018 **Transport in Porous Media**, Springer.
- since 2007 **Water Resources Research**, American Geophysical Union.

#### Reviewer of Research Proposals

- summary **External reviewer for 3 funding agencies.**
- since 2013 **GAČR – Czech Science Foundation, Czech Republic.**
- since 2012 **CIBLE Program – Région Rhône-Alpes, France.**
- since 2011 **ANR – French National Research Agency.**

#### Professional and Research Societies

- since 2014 **Poromechanics Committee, EMI/ASCE**, member.
- since 2013 **Technical Committee “Energy Geotechnics” of the ISSMGE**, core member & leader of Task Force “Carbon Dioxide Geological Storage”.
- since 2012 **Comité Français de Mécanique des Roches (CFMR)**, member.
- since 2006 **Comité Français de Mécanique des Sols (CFMS)**, member, past-member of the technical committee 2014–2016.
- 2010 – 2011 **Experts committee “Geological storage of CO<sub>2</sub>”**, member, work group animated by the French Ministry of Ecology, composed by BRGM, IFP, INERIS, École Polytechnique, Mines ParisTech, IFSTTAR, École des Ponts ParisTech.
- since 2005 **ALERT Geomaterials (Alliance of Laboratories in Europe for Research and Technology)**, member.

#### Other

- since 2009 **Conseil d’Administration**, École des Ponts ParisTech (steering committee), elected representative of researchers/lecturers.

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## Invited lectures

summary **19 in total.**

- 02/2018 **KAUST Research Conference, Saudi Arabia, *Recovery of Difficult Hydrocarbons.***  
invited lecture
- 05/2017 **4th Workshop on Characterisation and Modelling of Geomaterials, University of Biskra, Algeria, *Behaviour of unsaturated granular materials - recent advances.***  
invited lecture
- 03/2017 **Darcy Center-Interpore Workshop, Utrecht University, Netherlands, *Advances in modeling flow and deformation in unsaturated porous media.***  
invited lecture
- 10/2016 **AEG, Pokolbin, Australia, *Advancing Experimental Geomechanics Workshop.***  
invited lecture
- 05/2016 **IW-MTG4, Assisi, Italy, *4th International Workshop on Modern Trends in Geomechanics.***  
invited lecture
- 06/2015 **Geotechnics Colloquium, ETH Zurich, Switzerland, *Some challenges for research and design in geotechnical engineering.***  
invited lecture
- 11/2015 **XV PCSMGE, Buenos Aires, Argentina, *15th Pan-American Conference on Soil Mechanics and Geotechnical Engineering.***  
invited presentation in the panel "Geo-Engineering for Energy"
- 05/2015 **IS Energy Geotechnics, Barcelona, Spain.**  
invited presentation of a position paper in the session "CO2 geological storage"
- 07/2014 **UNSAT 2014 - Sixth International Conference on Unsaturated Soils, Sydney, Australia, *Unsaturated soil mechanics – experimental micro-mechanics and modelling issues.***  
invited paper
- 02/2014 **2nd Workshop on Characterisation and Modelling of Geomaterials, University of Biskra, Algeria, *Time effects in geomaterials.***  
invited lecture
- 08/2012 **EuroMech Colloquium 539, Utrecht University, The Netherlands, *On poromechanics of unsaturated media – a Tribute to Legacy of Prof. Olivier Coussy.***  
invited lecture
- 07/2012 **Universidade Federal de Pernambuco, Recife, Brasil, *Multiphysical processes in geomechanics from unsaturated soils to CO2 geological storage.***  
invited seminar
- 04/2012 **Universidad Nacional de San Juan, Argentina, *Geomechanics of partially saturated soils and rocks from unsaturated soils to CO2 storage.***  
invited seminar
- 04/2012 **Universidad de Buenos Aires, Argentina, *Geomechanics of CO2 storage and other applications related to unsaturated soil mechanics.***  
invited seminar

- April 2011 **MPPS2011**, *Symposium Mechanics and Physics of Porous Solids – A tribute to Pr Olivier Coussy*, Marne-la-Vallée, France.  
invited lecture in plenary session
- 03/2011 **CLAROM/Géotechnique Seminar**, *Behaviour of saturated soft West Africa clays: experimental data and modelling*.  
invited presentation
- 08/2010 **EMI2010 – Engineering Mechanics Institute Conference, Los Angeles, USA**, *On the thermodynamics of partially saturated poroplastic materials*.  
invited presentation at the Symposium in memory of Olivier Coussy
- 12/2006 **Universitat Politècnica de Catalunya, Barcelona, Spain**, *Study of hydromechanical couplings and unsaturation effects in geomaterials. Application to underground works*.  
invited seminar
- 11/2005 **W(H)YDOC'05, Marne-la-Vallée, France**, *Constitutive models extension to unsaturated states: a general framework and its application to CJS model*.  
invited fellow

## Publications

summary **61 journal papers, 5 book chapters, 9 edited books and proceedings, 42 conference papers, 8 technical reports, H-index = 16 (Scopus, 2017/11).**

### Journal papers

- Pereira, J. M., H. Wong, P. Dubujet, and P. Dangla (2005). Adaptation of existing behaviour models to unsaturated states: application to CJS model. *International Journal for Numerical and Analytical Methods in Geomechanics* **29**(11), 1127–1155. DOI: 10.1002/nag.453.
- Wong, H., C. J. Leo, J. M. Pereira, and P. Dubujet (2007). Sedimentation–consolidation of a double porosity material. *Computers and Geotechnics* **34**(6), 532–538. DOI: 10.1016/j.compgeo.2006.12.001.
- Yang, C, Y. J. Cui, M. S. Huang, J. M. Pereira, and J. P. Karam (2008). Damage model for unsaturated structural loess under cyclic loading. *Chinese Journal of Rock Mechanics and Engineering* **27**(4), 805–810.
- Yang, C, Y. J. Cui, J. M. Pereira, and M. S. Huang (2008). A constitutive model for unsaturated cemented soils under cyclic loading. *Computers and Geotechnics* **35**(6), 853–859. DOI: 10.1016/j.compgeo.2008.08.005.
- De Gennaro, V, J. M. Pereira, M. S. Gutierrez, and R. J. Hickman (2009). Viscoplastic modelling of fluids filled porous chalks. *Italian Geotechnical Journal* **1/09**, 44–64.
- Alonso, E. E., J. M. Pereira, J. Vaunat, and S. Olivella (2010). A microstructurally based effective stress for unsaturated soils. *Géotechnique* **60**(12), 913–925. DOI: 10.1680/geot.8.P.002.
- Coussy, O., J. M. Pereira, and J. Vaunat (2010). Revisiting the thermodynamics of hardening plasticity for unsaturated soils. *Computers and Geotechnics* **37**(1-2), 207–215. DOI: 10.1016/j.compgeo.2009.09.003.
- D'Onza, F, D. Gallipoli, S. J. Wheeler, F. Casini, J. Vaunat, N. Khalili, L. Laloui, C Mancuso, D. Mašín, M. Nuth, J. M. Pereira, and R Vassalo (2011). Benchmark of constitutive models for unsaturated soils. *Géotechnique* **61**(4), 283–302. DOI: 10.1680/geot.2011.61.4.283.
- Muñoz-Castelblanco, J. A., P. Delage, J. M. Pereira, and Y. J. Cui (2011). Some aspects of the compression and collapse behaviour of an unsaturated natural loess. *Géotechnique Letters* **1**(April-June), 17–22. DOI: 10.1680/geolett.11.00003.
- Tarantino, A, D. Gallipoli, C. E. Augarde, V De Gennaro, R Gomez, L. Laloui, C Mancuso, G El Mountassir, J. J. Muñoz, J. M. Pereira, H Péron, J Pisoni, E. Romero, A Raveendraraj, J. C. Rojas, D. G. Toll, S Tombolato, and S. J. Wheeler (2011). Benchmark of experimental techniques for measuring and controlling suction. *Géotechnique* **61**(4), 303–312. DOI: 10.1680/geot.2011.61.4.303.

11. Dufour, N, H. Wong, C. Arson, F Deleruyelle, and J. M. Pereira (2012). A thermodynamically consistent framework for saturated viscoplastic rock-materials subject to damage. *Mechanics Research Communications* **45**, 15–21. DOI: 10.1016/j.mechrescom.2012.06.009.
12. Hong, P. Y., J. M. Pereira, Y. J. Cui, and A. M. Tang (2012). Explicit Integration of a Thermo-Mechanical Model for Clays. *Computers and Geotechnics* **46**(November), 13–25. DOI: 10.1016/j.compgeo.2012.05.016.
13. Kalantidou, A., A. M. Tang, J. M. Pereira, and G. Hassen (2012). Preliminary study on the mechanical behaviour of heat exchanger pile in physical model. *Géotechnique* **62**(11), 1047–1051. DOI: 10.1680/geot.11.T.013.
14. Muñoz-Castelblanco, J. A., P. Delage, J. M. Pereira, and Y. J. Cui (2012). On-sample water content measurement for a complete local monitoring in triaxial testing of unsaturated soils. *Géotechnique* **62**(7), 595–604. DOI: 10.1680/geot.10.P.129.
15. Muñoz-Castelblanco, J. A., J. M. Pereira, P. Delage, and Y. J. Cui (2012a). The Influence of Changes in Water Content on the Electrical Resistivity of a Natural Unsaturated Loess. *Geotechnical Testing Journal* **35**(1), 103587. DOI: 10.1520/GTJ103587.
16. Muñoz-Castelblanco, J. A., J. M. Pereira, P. Delage, and Y. J. Cui (2012b). The water retention properties of a natural unsaturated loess from northern France. *Géotechnique* **62**(2), 95–106. DOI: 10.1680/geot.9.P.084.
17. Sendir-Torisu, S, J. M. Pereira, V De Gennaro, P. Delage, and A Puech (2012a). Strain-rate effects in deep marine clays from the Gulf of Guinea. *Géotechnique* **62**(9), 767–775. DOI: 10.1680/geot.12.OG.015.
18. Arson, C. and J. M. Pereira (2013a). Influence of damage on pore size distribution and permeability of rocks. *International Journal for Numerical and Analytical Methods in Geomechanics* **37**(8), 810–831. DOI: 10.1002/nag.1123.
19. Baudet, B. A. and J. M. Pereira (2013). Editorial: Experimental micro-mechanics for geomaterials. *Géotechnique Letters* **3**(2), 42–43. DOI: 10.1680/geolett.2013.3.2.42.
20. Bruchon, J.-F., J. M. Pereira, M. Vandamme, N. Lenoir, P. Delage, and M. Bornert (2013a). Full 3D investigation and characterisation of capillary collapse of a loose unsaturated sand using X-ray CT. *Granular Matter* **15**(6), 783–800. DOI: 10.1007/s10035-013-0452-6.
21. Bruchon, J.-F., J. M. Pereira, M. Vandamme, N. Lenoir, P. Delage, and M. Bornert (2013b). X-ray microtomography characterisation of the changes in statistical homogeneity of an unsaturated sand during imbibition. *Géotechnique Letters* **3**(April-June), 84–88. DOI: 10.1680/geolett.13.00013X-ray.
22. De Gennaro, V and J. M. Pereira (2013). A viscoplastic constitutive model for unsaturated geomaterials. *Computers and Geotechnics* **54**(October), 143–151. DOI: 10.1016/j.compgeo.2013.06.005.
23. Espinoza, D. N., M. Vandamme, P. Dangla, J. M. Pereira, and S. Vidal-Gilbert (2013). A transverse isotropic model for microporous solids - Application to coal matrix adsorption and swelling. *Journal of Geophysical Research: Solid Earth* **118**, 6113–6123. DOI: 10.1002/2013JB010337.
24. Hong, P. Y., J. M. Pereira, A. M. Tang, and Y. J. Cui (2013). On some advanced thermo-mechanical models for saturated clays. *International Journal for Numerical and Analytical Methods in Geomechanics* **37**(17), 2952–2971. DOI: 10.1002/nag.2170.
25. Osselin, F., T. Fen-Chong, A. Fabbri, A. Lassin, J. M. Pereira, and P. Dangla (2013). Dependence on injection temperature and on aquifer's petrophysical properties of the local stress applying on the pore wall of a crystallized pore in the context of CO<sub>2</sub> storage in deep saline aquifers. *The European Physical Journal Applied Physics* **64**(2), 21101. DOI: 10.1051/epjap/2013120529.
26. Pereira, J. M. and C. Arson (2013). Retention and permeability properties of damaged porous rocks. *Computers and Geotechnics* **48**, 272–282. DOI: 10.1016/j.compgeo.2012.08.003.
27. Vallin, V., J. M. Pereira, A. Fabbri, and H. Wong (2013). Numerical modelling of the hydro-chemo-mechanical behaviour of geomaterials in the context of CO<sub>2</sub> injection. *International Journal for Numerical and Analytical Methods in Geomechanics* **37**(17), 3052–3069. DOI: 10.1002/nag.2192.
28. Bourne-Webb, P, J. M. Pereira, G. A. Bowers, T Mimouni, F. A. Loveridge, S Burlon, C. G. Olgun, J. S. McCartney, and M Sutman (2014). Design tools for thermoactive geotechnical systems. *The Journal of the Deep Foundations Institute* **8**(2), 121–129. DOI: 10.1179/1937525514Y.0000000013.

29. Dangla, P. and J. M. Pereira (2014). A thermodynamic approach to effective stresses in unsaturated soils incorporating the concept of partial pore deformations. *Vadose Zone Journal* **13**(5), 2136. ISSN: 15391663. DOI: 10.2136/vzj2013.06.0110.
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31. Dao, L.-Q., P. Delage, A. M. Tang, Y. J. Cui, J. M. Pereira, X. L. Li, and X. Sillen (2014). Anisotropic thermal conductivity of natural Boom Clay. *Applied Clay Science* **101**, 282–287. DOI: 10.1016/j.clay.2014.09.003.
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36. Pereira, J. M., F. Wuttke, and J. C. Santamarina (2014). Editorial: Energy geostorage. *Géotechnique Letters* **4**, 118. DOI: 10.1680/geolett.2014.4.2.118.
37. Tang, A. M., A. Kalantidou, J. M. Pereira, G. Hassen, and N. Yavari (2014). Mechanical Behaviour of Energy Piles in Dry Sand. *Geotechnical Engineering Journal of the SEAGS* **45**(3).
38. Yavari, N., A. M. Tang, J. M. Pereira, and G. Hassen (2014a). A simple method for numerical modelling of mechanical behaviour of an energy pile. *Géotechnique Letters* **4**, 119–124. DOI: 10.1680/geolett.13.00053.
39. Yavari, N., A. M. Tang, J. M. Pereira, and G. Hassen (2014b). Experimental study on the mechanical behaviour of a heat exchanger pile using physical modelling. *Acta Geotechnica* **9**(3), 385–398. DOI: 10.1007/s11440-014-0310-7.
40. Dao, L.-Q., Y. J. Cui, A. M. Tang, J. M. Pereira, X. L. Li, and X. Sillen (2015). Impact of excavation damage on the thermo-hydro-mechanical properties of natural Boom Clay. *Engineering Geology* **195**, 196–205. ISSN: 00137952. DOI: 10.1016/j.enggeo.2015.06.011.
41. D'Onza, F, S. J. Wheeler, D. Gallipoli, M Barrera Bucio, M. Hofmann, M. Lloret-Cabot, A. Lloret Moranchó, C Mancuso, J. M. Pereira, E. Romero, M. Sánchez, W. Sołowski, A Tarantino, D. G. Toll, and R Vassalo (2015). Benchmarking selection of parameter values for the Barcelona basic model. *Engineering Geology* **196**, 99–118. ISSN: 00137952. DOI: 10.1016/j.enggeo.2015.06.022.
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43. Hong, P. Y., J. M. Pereira, A. M. Tang, and Y. J. Cui (2015). A two-surface plasticity model for stiff clay. *Acta Geotechnica*. ISSN: 1861-1125. DOI: 10.1007/s11440-015-0401-0.
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47. Hong, P. Y., J. M. Pereira, Y. J. Cui, and A. M. Tang (2016). A two-surface thermomechanical model for saturated clays. *International Journal for Numerical and Analytical Methods in Geomechanics* **40**(7), 1059–1080. ISSN: 03639061. DOI: 10.1002/nag.2474.
48. Mokhbi, H., M. Mellas, A. Mabrouki, and J. M. Pereira (2016). Numerical study of a vertical pullout capacity of strip anchor plate on a frictional soil. *Journal of Applied Engineering Science & Technology* **2**(1), 31–37.
49. Sánchez, M., F. Falcão, M. Mack, J. M. Pereira, G. A. Narsilio, and L. Guimarães (2016). Salient comments from an expert panel on energy geotechnics. *Environmental Geotechnics*, 1–8. ISSN: 2051-803X. DOI: 10.1680/jenge.16.00008.
50. Than, V. D., S. Khamseh, A. M. Tang, J. M. Pereira, F. Chevoir, and J.-N. Roux (2016). Basic Mechanical Properties of Wet Granular Materials: A DEM Study. *Journal of Engineering Mechanics*, C4016001. ISSN: 0733-9399. DOI: 10.1061/(ASCE)EM.1943-7889.0001043.
51. Yavari, N., A. M. Tang, J. M. Pereira, and G. Hassen (2016a). Effect of temperature on the shear strength of soils and the soil–structure interface. *Canadian Geotechnical Journal* **53**(7), 1186–1194. ISSN: 0008-3674. DOI: 10.1139/cgj-2015-0355.
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### Books chapters

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2. Tang, A. M., J. M. Pereira, G. Hassen, and N. Yavari (2013). “Behaviour of heat-exchanger piles from physical modelling”. In: *Behaviour of heat-exchanger piles from physical modelling*. Ed. by L. Laloui and A. Di Donna. ISTE-Wiley. Chap. 4, pp.16.
3. Hassen, G., J. M. Pereira, A. M. Tang, and N. Yavari (2014). “Etude du comportement des pieux échangeurs de chaleur par modélisation physique”. In: *Géostructures énergétiques*. Ed. by L. Laloui and A. Di Donna. Paris: Lavoisier. Chap. 4, pp.14.



4. Kerner, L., J.-C. Dupla, G. Cumunel, P. Argoul, J. Canou, and J. M. Pereira (2017). "Experimental Study on a Scaled Model of Offshore Wind Turbine on Monopile Foundation". In: *Models, Simulation, and Experimental Issues in Structural Mechanics*. Ed. by M. Frémond, F. Maceri, and G. Vairo. Springer, pp.249–267.
5. López Acosta, N. P., D. F. Barba Galdámez, J. M. Pereira, and W. I. Zavala Paniagua (2017). "Pilas de Energía". In: *Ingeniería de Cimentaciones Profundas*. Ed. by SMIG. Mexico. Chap. 8, pp.37.

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### Conference papers

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4. Pereira, J. M., H. Wong, and P. Dubujet (2005a). Constitutive models extension to unsaturated states: a general framework and its application to CJS model. In: *W(H)YDOC'05 - 2nd International Workshop of Young Doctors in Geomechanics*. Ed. by V De Gennaro, J.-M. Pereira, and P Delage. Champs-sur-Marne, France, pp.43–45.
5. Pereira, J. M., H. Wong, and P. Dubujet (2005b). Unsaturated behaviour of soils: a refined theoretical model with complex volumetric mechanisms. In: *Poromechanics III - Biot Centennial (1905-2005)*. Ed. by Y. N. Abousleiman, A.-D. Cheng, and F.-J. Ulm. University of Oklahoma, Norman, Oklahoma - USA: Balkema publishers, pp.473–479.
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7. De Gennaro, V and J. M. Pereira (2008). Viscoplastic modelling of partially saturated geomaterials. In: *Proceedings of the 12th International Conference of International Association for Computer Methods and Advances in Geomechanics (IACMAG)*. Goa, India.
8. Pereira, J. M., A. N. Ta, Y. J. Cui, J. P. Karam, and H. Y. Chai (2008). A damage model for unsaturated natural loess submitted to cyclic loading. In: *Unsaturated Soils: Advances in Geo-Engineering*. Ed. by D. G. Toll, C Augarde, D Gallipoli, and S. J. Wheeler. Durham, UK: Taylor & Francis Group, pp.647–652.
9. Rouainia, M and J. M. Pereira (2008). A constitutive model for unsaturated soils with structure degradation. In: *Proceedings of the 8th World Congress on Computational Mechanics (WCCM8)*. Venice, Italy.
10. Coussy, O. and J. M. Pereira (2009). Modelling plasticity of unsaturated soils in a thermodynamically consistent framework. In: *Poromechanics IV - Proceedings of the 4th Biot Conference on Poromechanics*. Ed. by H. I. Ling, A Smyth, and R Betty. Columbia University, New-York: DEStech Publications, Inc., pp.252–257.
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- Acker, P., P. Dangla, T. Fen Chong, A. Feraille, M. F. Kaspi, J. M. Pereira, N. Shahidzadeh Bonn, J. Sulem, M. Thiery, M. Valenti, H. Van Damme, M. Vandamme, and G. Vue, eds. (2011). *MPPS 2011, Symposium on Mechanics and Physics of Porous Solids : A tribute to Pr. Olivier Coussy*. Marne-la-Vallée, France: IFSTTAR, p. 406.
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- Cui, Y. J., F Emeriault, F Cui, S. Ghabezloo, J. M. Pereira, M Reboul, H Ravel, and A. M. Tang, eds. (2013). *Proceedings of the 5th International Young Geotechnical Engineers' Conference*. Amsterdam, The Netherlands: IOS Press, p. 609.
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- Pereira, J. M., P. Delage, S. Ghabezloo, and M. Vandamme, eds. (2015). *W(H)YDOC'15 - 5th International Workshop of Young Doctors in Geomechanics*. Champs-sur-Marne, France: École des Ponts ParisTech, 120 p.
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- Pereira, J. M. (2001b). "Utilisation d'une loi élastoplastique adaptée au comportement des sols pour la résolution du problème d'une cavité en milieu isotrope". Mémoire de Travail de Fin d'Etudes (MSc thesis). ENTPE.
- Pereira, J. M. (2005). "Etude des couplages hydromécaniques et effets de non-saturation dans les géomatériaux : application aux ouvrages souterrains". Thèse de doctorat (PhD thesis). INSA Lyon – ENTPE, p. 198.
- Pereira, J. M. (2014b). "Multiphysical couplings in geomaterials: experimental characterisation and modelling". Mémoire d'Habilitation à Diriger des Recherches (Habilitation thesis). Université Paris-Est, p. 216.

## Teaching experience

### École des Ponts ParisTech

- since 2008 **Geotechnical engineering, 2nd year (MSc level)**  
professor since 2017
- since 2009 **Mechanics of Soils and Rocks, 2nd year (MSc level)**  
lecturer in charge
- since 2012 **Numerical Approaches for Non-linear Mechanics, MSc "Mechanics of Materials and Structures"**  
lecturer

- since 2017 **Advanced Geotechnics and Geomechanics, 3rd year (MSc level).**  
lecturer
- [Université Pierre-et-Marie-Curie \(Paris 6\)](#)
- 2013 – 2015 **Civil Engineering Materials, Licence 3 (Bachelor level).**  
lecturer
- [Université Paris-Est Marne-la-Vallée](#)
- 2008 – 2010 **Soil Mechanics, Licence 3 (Bachelor level).**  
lecturer in charge
- [École des Ingénieurs de la Ville de Paris \(EIVP\)](#)
- 2007 – 2009 **Soil Mechanics, 1st year (Bachelor level).**  
lecturer (recitations)
- [École Nationale des Travaux Publics de l'État \(ENTPE\)](#)
- 2002 – 2004 **Geotechnics, 2nd year (MSc level).**  
lecturer (practical classes)
- 2002 – 2003 **Structures, 2nd year (MSc level).**  
lecturer (practical classes)
- 2002 – 2005 **Computer science & algorithmics, 1st year (Bachelor level).**  
lecturer in charge
- 2003 – 2004 **Strength of Materials, 1st year (Bachelor level).**  
lecturer (practical classes)
- [Conservatoire National des Arts et Métiers \(CNAM\), Lyon](#)
- 2002 – 2003 **Geotechnics & underground works, Engineer cycle.**  
lecturer in charge
- [École d'Architecture de Lyon](#)
- 2003 – 2004 **Mathematics, 1st year (Bachelor level).**  
lecturer (recitations)

## Languages

French	<b>Mother tongue</b>
English	<b>Fluent</b>
Spanish	<b>Fluent</b>
Portuguese	<b>Fluent</b>
German	<b>Strong basis</b>