

CURRICULUM VITÆ

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RESUME

João Leal graduated in Civil Engineering (Option of Hydraulics and Water Resources) at Instituto Superior Técnico (IST) in October of 1996. In May of 1997 started as lecturer/researcher (Trainee Assistant) in the Department of Civil and Architecture (DECA) of Universidade da Beira Interior (UBI), being responsible for the disciplines of Hydrology and Water Resources and of Water Supply and Waste Water Systems and lecturing practical classes of Hydraulics I and II. In December of 1999 finished the MSc in Hydraulics and Water Resources at IST, in the theme of experimental and mathematical modelling of dam-break flood wave propagation over movable beds, assuming the position of Assistant in DECA of UBI. In November of 2005 finished the PhD. in Civil Engineering at UBI, in the research theme initiated in the MSc. thesis, assuming the position of Assistant Professor in DECA of UBI. Simultaneously, from the school year of 2004/05 became responsible of the disciplines of Hydraulics I and II. In February of 2008 ceases the position at UBI, and starts, after a public tender, the position of Assistant Professor in the Department of Civil Engineering (DEC) of Faculdade de Ciências e Tecnologia of Universidade Nova de Lisboa (FCT-UNL), where from 2010, and after a CV evaluation, he had a non-end contract. In March 2014, after an international public tender, he got a Full Professor position at the University of Adger (UiA), Norway. From the teaching activity it can be highlighted the elaboration of several pedagogic texts that support the teaching of those disciplines and of some modules of other post-graduate disciplines that he taught at UBI, FCT-UNL and IST.

Among other positions held at UBI it can be highlighted the position of Director of the Civil Engineering Course (LEC) between November of 2006 and July of 2007, by nomination of the President of DECA, being responsible by the elaboration of the processes regarding the Bolonha transition (adaptation of the former course to a 1st cycle course and creation of a 2nd cycle course). He was responsible for a transition plan for students from the former course to the new courses. He was also a member of Scientific Committee of DECA and of the Pedagogic Council of UBI.

The research activity has been focused on the experimental characterization, conceptual and numerical modelling of flows propagating with sharp discontinuities in movable beds, involving areas of knowledge as flow resistance in unsteady flows and sediment transport at high shear rates (*sheet* and *debris flow*). Presently, he develops experimental and numerical work in the area of turbulence associated to uniform and non-uniform flows in compound channels. From 2007 to 2013, after unanimous approval, he was full member of the Research Centre Centro de Estudos de Hidrossistemas (CEHIDRO/IST). Since 2014, after unanimous approval, he is a full member of the Research Centre UNIDEMI/FCT-UNL. In 2005 he was distinguished with the APRH award given by the Portuguese Association of Water Resources for the best research work in the field of Engineering during the biennium of 2004/05. He published more than 70 scientific papers and communications, cited more than 80 times in over 50 scientific international publications. He has been reviewer of several scientific papers for several scientific international journals and

conferences. He participated or participates in several research projects (coordinated two of them) founded by the Portuguese Foundation for Science and Technology (FCT), in two scientific re-equipment projects, in one bilateral cooperation scientific project (Portugal/France), in one scientific PRODED project and in 3 international scientific projects founded by the European Union and by NATO. Excluding the international projects, the total amount of founding achieved was nearly 2 million euro. He supervised and supervises several scientific works, namely PhD. students with FCT scholarships and MSc. students. He participated in several scientific juries, in the majority as principal evaluator, and in several evaluation panels. He was member of the Local Organizing Committee of one international and one national conference, and is member of the Scientific Committee of several international conferences. He was one of the founding members of the Specialized Committee on Fluvial Hydraulics from the Portuguese Association of Water Resources. He is member of the Working Group in Compound Channel Flows of the International Association of Hydro-Environment Engineering and Research (IAHR¹).

In the consulting activities he elaborated several technical reports and studies in the area of Hydrology and Fluvial Hydraulics, involving interventions on the fluvial domain, the definition of flood levels and the mapping of inundation areas.

From October 2012 to August 2013 he took a sabbatical leave at Universidad Central del Ecuador and at INAMHI (Ecuadorian institute for meteorology and hydrology), financed by Prometeo project of SENESCYT (Ecuadorian National Secretary of Higher Education, Science and Technology). In Ecuador his activity was centred in conceptual modelling of river flows (working together with a mathematician PhD and a physicist PhD), in developing experimental facilities to carry out research in Fluvial Hydraulics and in consultancy in flood modelling and inundation mapping.

¹ IAHR changed its name in 2009, previously it was called *International Association of Hydraulic Engineering and Research*, and before 2008 it was called *International Association of Hydraulic Research*.

1 – IDENTIFICATION

Name: João Gouveia Aparício Bento Leal.
Place of birth: Lisbon, Portugal.
Date of birth: 29th of August of 1973.
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2 – ACADEMIC AND SCIENTIFIC DEGREES

- *PhD.* in Civil Engineering by the Universidade da Beira Interior, Covilhã, November of 2005. Thesis: *Experimental and mathematical modelling of dam-break waves over movable beds*. Classification: Approved. Supervisor: Prof. António Heleno Cardoso. Co-supervisor: Prof. António Bento Franco (the principal evaluator was Prof. Yves Zech from Université catholique de Louvain, Belgium).
- *MSc.* in Hydraulics and Water Resources by the Instituto Superior Técnico, Lisbon, December of 1999. Thesis: *Mathematical modelling of dam-break waves over movable beds*. Classification: Very good. Supervisor: Prof. António Heleno Cardoso. Co-supervisor: Prof. António Bento Franco.
- *Degree* in Civil Engineering (Option of Hydraulics and Water Resources) by the Instituto Superior Técnico, Universidade Técnica de Lisboa, October of 1996. Final classification of 16 out of 20.

3 – FIELDS OF INTEREST AND ACTIVITY

Main fields

- Hydraulics, Fluvial Hydraulics, Computational Hydraulics

Secondary fields

- Hydropower, Hydrology, Water Resources, Urban Hydraulics

4 – POSITIONS

Teaching and research at UiA (Norway):

- 2014 to Present.

Research and consulting at UiA (Norway):

- 2014 to Present.

Teaching and research at UCE (Ecuador):

- Oct. 2012 to Aug. 2013

Research and consulting at INAMHI (Ecuador):

- Oct. 2012 to Aug. 2013.

Teaching and research at FCT-UNL (Portugal):

- 2010 to Present – Assistant Professor with non-end contract, DEC (in full time dedication).
- 2008 to 2010 – Assistant Professor, DEC (in full time dedication).

Teaching and research at UBI (Portugal):

- 2005 to 2008 – Assistant Professor, DECA (in full time dedication).
- 1999 to 2005 – Assistant, DECA (in full time dedication).
- 1997 to 1999 – Trainee Assistant, DECA (in full time dedication).

Research at IST (Portugal):

- 2007 to Present – Full member of Research Centre CEHIDRO.
- 1995 to 1996 – Fellowship for Initiation to Research, founded by FCT through the research project Integrated System for Simulating Floods and Risk Assessment (PRAXIS/3/3.2/CEG/32/94).

Consulting at FCT-UNL (Portugal):

- 2008 to Present – Consultant in the fields of Hydraulics and Fluvial Hydraulics.

Consulting at UBI (Portugal):

- 1997 to 2008 – Consultant in the fields of Hydraulics, Fluvial Hydraulics, Hydrology, Water Resources and Urban Hydraulics.

Management at FCT-UNL (Portugal):

- 2009 to Present – Member of the Council of DEC (appointed by the President of DEC).
- 2009 to 2011 – Member of the Scientific Committee of the Integrated Master Course in Civil Engineering (MIEC) (appointed by the Coordinator of MIEC).
- 2008 to 2009 – Member of the Scientific Committee of DEC (inherently to be a doctorate at full time dedication).

Management at UBI (Portugal):

- 2006 to 2007 – Director of the Civil Engineering Course (appointed by the President of DECA), being responsible by the elaboration of the processes regarding the Bolonha transition (adaptation of the former course to a 1st cycle course and creation of a 2nd cycle course). He was responsible for a transition plan for students from the former course to the new courses.
- 2006 to 2007 – Member of the Pedagogic Council of UBI (invited by the President of the Pedagogic Council), coordinating the Special Commission responsible for reviewing the General Students Evaluation Rules.
- 2006 to 2007 – Member of the Pedagogic Council of the Engineering Faculty of UBI (inherently to be the Director of the Civil Engineering Course).
- 2005 to 2007 – Responsible for the creation and development of contents for the webpage of DECA (appointed by the Scientific Commission of DECA).
- 2002 to 2006 – Responsible for the project of scientific re-equipment “Research net in fluvial and environmental hydraulics. Experimental characterization of fluvial morphology and of sediment transport processes (CONC-REEQ/688/2001)” (appointed by the Dean of UBI). Among other activities, he elaborated the specifications necessary for the equipment acquisition tenders and monitored the installation at the Hydraulics Laboratory.
- 2005 to 2008 – Member of the Scientific Committee of DECA (inherently to be a doctorate at full time dedication).
- 2005 to 2008 – Director of the Hydraulics Laboratory (appointed by the President of DECA).
- 2007 – Member of the Evaluation Jury of the candidates over the age of 23 years (inherently to be the Director of the Civil Engineering Course).
- 2006 – Member of the Jury of two habilitation equivalence processes (appointed by the Director of the Course in Civil Engineering).
- 1999 to 2000 – Member of the Monitoring Commission of the construction works of the new Civil Engineering building. He gave support in the design and monitoring of the construction of the Hydraulics Laboratory (appointed by the Dean of UBI).
- 1998 to 2000 – Member of the Pedagogic Council of the Engineering Faculty (elected to represent the non doctorates of DECA).

5 – AWARDS

- APRH Award given by the Portuguese Association of Water Resources (APRH) for the best research work in the field of Engineering during the biennium of 2004/05, based on the PhD thesis.

- Award given by the European Water Resources Association (EWRA) for the best poster presented at the VI Int. Symp. Water Engineering and Management in a Changing Environment, June 29 - July 2, 2011, Catania, Italy.

6 – ORGANIZATION OF SCIENTIFIC CONFERENCES

- Member of the International Scientific Committee of the international conference River Flow 2014 (IAHR), Lausanne, Switzerland, 2014.
- Member of the Organizing Committee of the 3rd International Workshop on River and Reservoir Hydrodynamics and Morphodynamics, Caparica, Portugal, 2012.
- Organizer of the Technical Session Stage-discharge estimation with analytical solutions in single and two stage channel flows, under the work of the Specialized Commission in Fluvial Hydraulics of APRH, speaker Prof. Koji Shiono (Loughborough University), LNEC, Lisbon, Portugal, 2011.
- Member of the International Scientific Committee of the international conference River Flow 2010 (IAHR), Braunschweig, Germany, 2010.
- Organizer of the Technical Session 1D modelling of river floods, under the work of the Specialized Commission in Fluvial Hydraulics of APRH, speaker Dr. Sébastien Proust (CEMAGREF – Lyon), LNEC, Lisbon, Portugal, 2009.
- Member of the Local Organizing Committee of the 13th National Meeting in Sanitary Engineering, Portuguese Association of Sanitary and Environmental Engineering (APESB), UBI, Covilhã, Portugal, 2008.
- Member of the Local Organizing Committee of the international conference River Flow 2006 (IAHR), Lisbon, Portugal, 2006.

7 – INVITED PRESENTATIONS

- *Dam-break waves propagation over movable beds*, trial lecture presented at the University of Adger, Grimstad, Norway, 2014.
- *River Hydraulics Modelling*, presented at the 4th National Water Forum by invitation of the Universidad Central del Ecuador, Quito, Ecuador, 2013. (in Spanish)
- *Fluvial Hydrodynamics Modelling*, presented at the Colegio de Ingenieros by invitation of the INAMHI to celebrate the World Water Day, Quito, Ecuador, 2013. (in Spanish)
- *Research in Fluvial Hydraulics*, presented at the University of Cuenca by invitation of the Grupo de Ciencias de la Terra y Ambiente (CTA) of University of Cuenca, Cuenca, Ecuador, 2013. (in Spanish)

- *Hydraulics Modelling (the case of the Flood Warning System of Zarumilla)*, presented at the INAMHI by invitation of the INAMHI, Quito, Ecuador, 2012. (in Spanish)
- *Aplication of 1D methods for uniform river flows*, presented at the Consejo Nacional Electoral by invitation of the INAMHI, Quito, Ecuador, 2012. (in Spanish)
- *River Floods (a matter of Planning and Management)*, presented at the I Congreso Binacional de Ingeniería Sanitaria y Ambiental by invitation of the Asociaciones de Ingeniería Sanitaria y Ambiental de Ecuador y Colombia, Guayaquil, Ecuador, 2012. (in Spanish)
- *River Flooding (1D and 3D modelling)*, presented at the INAMHI Litoral by invitation of the INAMHI Litoral, Guayaquil, Ecuador, 2012. (in Spanish)
- *Dam-break flood propagation*, presented at the Hydroelectric Project Toachi Pilatón by invitation of the CELEC EP, La Palma, Ecuador, 2012. (in Spanish)
- *Research in Fluvial Hydraulics*, presented at the Universidad Central del Ecuador by invitation of the Nucleo de Investigadores Científicos, Quito, Ecuador, 2012. (in Spanish)
- *River Flooding (1D and 3D modelling)*, presented at the Colegio de Ingenieros by invitation of the INAMHI, Quito, Ecuador, 2012. (in Spanish)
- *River floods*, presented at the JORTEC 2012 by invitation of the Civil Engineering Students Association, FCT, UNL, Caparica, 2012. (in Portuguese)
- *Experimental study of uniform and non-uniform compound channel flows*, presented at the Cemagref Lyon by invitation of Dr. Sébastien Proust, Lyon, France, 2010.
- *Research Network in Fluvial Hydraulics*, presented at the Technical University of Gdansk by invitation of Prof. Piotr Kowalik, Gdansk, Poland, 2007.
- *Dam-break Waves*, presented at the Conferences Cycle in Civil Engineering by invitation of the Civil Engineering Students Association, UBI, Covilhã, 2006. (in Portuguese)
- *Experimental and Mathematical Modelling of Dam-Break Waves over Movable Beds*, presented at the 8th Water Congress by invitation of the Portuguese Association of Water Resources, Figueira da Foz, 2006. (in Portuguese)

8 – FILIATIONS IN SCIENTIFIC ASSOCIATIONS

- International Association of Hydro-Environment Engineering and Research (IAHR).
- Portuguese Association of Water Resources (APRH).
- International Association of Hydrological Sciences (IAHS).

9 – PROFESSIONAL ACTIVITY

9.1 – Teaching activity

Table 1 presents a short summary of the disciplines and the teaching hours between 1997 and 2014.

9.2 – Consulting activity

Since 1997 he participated, as a specialist, in consulting activities in the fields of Hydraulics, Fluvial Hydraulics, Hydropower, Water Resources and Urban Hydraulics (see technical reports in section 11).

Table 1. Information about disciplines taught between 1997 and 2012

Discipline	Teaching year	Course	Institution	Regent	Responsible	Type of classes
Urban Hydraulics	2010/11 2009/10	MIEC	DEC- FCT-UNL	João Leal	Fernando Henriques	Theoretical and practical
	2011/12 2008/09				João Leal	
Hydraulics	2010/11	MIEC	DEC-FCT-UNL	João Leal	Fernando Henriques	Theoretical and practical
	2013/14 2011/12 2009/10				João Leal	
Technologies in Renewable Energies I (Module of Hydropower)	2011/12 2010/11 2009/10 2008/09	MERCEUS	DEE-FCT-UNL	Amadeu Leão Rodrigues	Mário Ventim Neves	Theoretical
Physical and Mathematical Modelling in Engineering	2008/09	MIEC	DEC- FCT-UNL	João Leal	Manuel Gonçalves da Silva	Theoretical I and practical
Introduction to Civil Engineering (Module of Building Materials)	2008/09	MIEC	DEC-FCT-UNL	João Leal	António Segadães Tavares	Theoretical
Urban and Environmental Hydraulics	2007/08	LEC	DEC-FCT-UNL	João Leal	João Leal	Theoretical and practical
Hydraulics II	2007/08 2006/07 2005/06 2004/05	LEC	DECA-UBI	João Leal	João Leal	Theoretical and practical
	2003/04 1999/00 1997/98			António Heleno Cardoso	António Heleno Cardoso	Practical
Hydrology and Water Resources	2006/07 2005/06 2004/05 1999/00 1997/98	LEC	DECA-UBI	João Leal	João Leal	Theoretical and practical
Hydraulics I	2006/07 2005/06 2004/05	LEC	DECA-UBI	João Leal	João Leal	Theoretical and practical
	2003/04 2000/01 1998/99 1997/98			António Heleno Cardoso	António Heleno Cardoso	Practical
Analysis of Desertification Potential (Module of Erosion)	2006/07	Post-Graduation in Geo-referenced Information Systems	DECA-UBI	João Leal	António Albuquerque	Theoretical

Table 1 (cont.). Information about disciplines taught between 1997 and 2012

Discipline	Teaching year	Course	Institution	Regent	Responsible	Type of classes
Hydrology and Integrated Water Management (Module of Hydrology)	2006/07	Post-Graduation in Environment Management	DECA-UBI	João Leal	António Albuquerque	Theoretical
Fluvial Systems (Module of Two Dimensional Modelling)	2006/07	MSc. in Hydraulics and Water Resources	DEC-IST	João Leal	Rui Ferreira	Theoretical
Environmental Sanitation	2005/06 2004/05 2003/04 1998/99 1996/97	LEC	DECA-UBI	João Leal	João Leal	Theoretical and practical
Fluvial Hydraulics (Module of Examples of Numerical Modelling in Fluvial Hydraulics)	2006/07	MSc. in Hydraulics and Water Resources	DEC-IST	João Leal	António Heleno Cardoso	Theoretical
Environmental Impacts	1999/00	LEC	DECA-UBI	João Leal	João Leal	Theoretical and practical
Environmental Impacts (Module of Determination of flood discharges and erosion due to water)	1999/00	MSc. in Civil Engineering - Construction	DECA-UBI	João Leal	António Albuquerque	Theoretical-practical

MIEC – Integrated Master Course in Civil Engineering
 LEC – Degree in Civil Engineering (pre-Bolonha)
 DECA – Department of Civil Engineering and Architecture
 IST – Instituto Superior Técnico

MERCEUS – Master Course in Renewable Energies – Electric Conversion and Sustainable Use
 DEC – Department of Civil Engineering
 DEE – Department of Electronics Engineering
 UBI – Universidade da Beira Interior

9.3 – Research activity

Table 2 presents the scientific research projects in which, since 1995, he is a researcher or responsible researcher (coordinator)².

In the research activity he planned and designed two experimental installations to simulate one- and two-dimensional dam-break wave propagation and one experimental installation to simulate compound channel flows. The long laboratorial experience allows him to have deep knowledge in the use and installation of data acquisition systems and several measuring equipment (among others, pressure transducers, acoustic probes, ultra-sound probes, bed profilers, Pitot tubes, Laser Doppler Anemometry).

In parallel, he developed numerical work in the resolution of non-linear systems of partial differential equations, namely he programmed two computational models to simulate one- and two-dimensional dam-break wave propagation over movable beds. He has deep knowledge in the programming languages FORTRAN and MATLAB.

Presently, started to use the CFD software ANSYS-CFX for simulating turbulent flows solving Reynolds Averaged Navier-Stokes (RANS) equations with several turbulence closure models (among other, $k-\epsilon$, *Explicit Algebraic Stress Model* and *Reynolds Stresses Model*).

9.4 – Scientific supervision activity

Table 3 presents the scientific supervision activity includes PhD. and MSc. thesis, involving both experimental and numerical work.

9.5 – Participation in academic juries

Table 4 presents the participation in academic juries includes PhD. and MSc. thesis.

² In the founded projects the PhD. scholarships are also included, since in their attribution it was taken into account the quality of the working plan and also the CV of the supervisors.

Table 2. Approved and founded scientific research projects

Title	Reference	Total founding	Founding institution	Starting date	Finishing date	Position	Dedication time
Research Network in Fluvial Hydraulics	RECI/ECM-HID/0371/2012	299 147.00€	FCT	11-03-2013	11-03-2016	Researcher	15%
Experimental characterization of instream-hyporheic fluxes in vegetated channels and wetlands	PTDC/ECM/117660/2010	123 113.00€	FCT	15-06-2012	14-06-2015	Researcher	15%
Study of open-channel vegetated flows	PTDC/ECM/099752/2008	152 076.00€	FCT	01-05-2010	30-04-2013	Researcher	12%
Numerical modelling of turbulence in compound channel flows	PhD. scholarship SFRH/BD/64337/2009	48 000.00€ (including missions and student fees)	FCT	01-03-2010	01-03-2013	Supervisor	–
Experimental study and characterization of the roughness influence on the turbulent structure of compound channel flows	PhD. scholarship SFRH/BD/33646/2009	48 000.00€ (including missions and student fees)	FCT	01-09-2009	01-09-2012	Supervisor	–
Shallow flows: influence of mass transfer due to turbulent diffusion	Cooperation Portugal/France Pessoa Programme 2009-2010 Proc. 441.00 France	6 800.00€ (exclusively missions)	FCT	01-01-2009	31-12-2010	Coordinator researcher	–
Experimental and mathematical modelling of compound channel flows	PhD. scholarship SFRH/BC/37839/2007	48 000.00€ (including missions and student fees)	FCT	01-07-2008	01-07-2011	Co-supervisor	–
Turbulence measurement and modelling in compound channel flows	PTDC/ECM/70652/2006	100 000.00€	FCT	01-01-2008	31-12-2010	Coordinator researcher	28%
Characterization of fluvial habitats: hydrodynamics and sediment transport	PTDC/ECM/65442/2006	146 000.00€	FCT	15-01-2008	14-01-2011	Researcher	16%
Local scour around bridge abutments	POCTI/ECM/59544/2004	75 000.00€	FCT	01-09-2005	31-08-2008	Researcher	7%
Network in fluvial and environmental hydraulics. Experimental characterization of fluvial morphology and of sediment transport processes	Scientific re-equipment project CONC-REEQ/688/2001	684 081.00€	FCT	01-01-2005	31-12-2007	Researcher	–
Investigation of Extreme Flood Processes and Uncertainty (IMPACT)	EVG1-CT2001-00037	–	EC Research Project	01-01-2002	31-12-2004	Researcher	20%
Mathematical and experimental modelling of dam-break waves over movable beds	POCTI/ECM/36069/99	15 000.00€	FCT	01-03-2001	30-09-2003	Researcher	60%
Mathematical and experimental modelling of dam-break waves over movable beds	Project 5.3 – 185.003	40 000.00€	PRODEP	01-12-2000	30-11-2003	Researcher	100%
Mathematical modelling of the morphological evolution of alluvial rivers	PRAXIS/C/ECM/12040/98	35 000.00€	FCT	01-03-1999	28-03-2001	Researcher	56%
EU Concerted Action on Dam Break Modelling (CADAM)	–	–	European Union	01-02-1998	31-01-2000	Researcher	10%
Dam Break Flood Risk Management in Portugal (NATO PO FLOODRISK)	–	–	NATO	1994	2001	Researcher	10%
Integrated system for simulating floods and risk assessment	PRAXIS/3/3.2/CEG/32/94	137 500.00€	FCT	01-01-1995	01-01-1998	Fellow (BIIC) and researcher	30%

Table 3. Scientific supervision activity

Type of supervision	Title	Type of programme	Student	Institution	Starting year	Finishing year	Founding
Supervisor	Numerical modelling of turbulence in compound channel flows	PhD. in Civil Engineering	Marina Filonovich	FCT-UNL	2009	2014	FCT-scholarship
Supervisor	Experimental study and characterization of roughness influence on the turbulent structure of compound channel flows	PhD. in Civil Engineering	Ricardo Azevedo	FCT-UNL	2009	2013	FCT-scholarship
Co-supervisor	Experimental and mathematical modelling of compound channel flows	PhD. in Civil Engineering	João Fernandes	IST	2008	2012	FTC-LNEC scholarship
Supervisor	CFD modelling of flows over rough beds	Research Scholarship	Moisés Brito	FCT-UNL	2011	2012	FCT-scholarship
Supervisor	Experimental characterization of flow around vegetation at river banks	Integrated MSc. in Civil Engineering	Javier Soto	FCT-UNL	2012	–	–
Supervisor	Simulation of river flows with vertical structures in the main channel banks	Integrated MSc. in Civil Engineering	Cláudia Ferreira	FCT-UNL	2012	2012	–
Supervisor	Experimental study of river flows with vegetated banks	Integrated MSc. in Civil Engineering	Célia Rodrigues	FCT-UNL	2011	2012	–
Supervisor	Three-dimensional simulation of flows over rough beds	Integrated MSc. in Civil Engineering	Tobias Silva	FCT-UNL	2011	2012	–
Supervisor	Calibration of SKM model base on turbulence measurements	Integrated MSc. in Civil Engineering	Rodrigo Vieira	FCT-UNL	2011	2012	–
Supervisor	Influence of roughness on rivers conveyance	Integrated MSc. in Civil Engineering	Pedro Duarte	FCT-UNL	2011	2012	–
Supervisor	Application of analytical solutions for studying secondary flow in rivers	Integrated MSc. in Civil Engineering	Hélder Parreira	FCT-UNL	2011	2011	–
Supervisor	Influence of bank roughness on compound channel flows	Integrated MSc. in Civil Engineering	Pedro Massa	FCT-UNL	2010	2011	–
Supervisor	Experimental study of flows in vegetated beds	Integrated MSc. in Civil Engineering	João Lory	FCT-UNL	2010	2011	FCT-scholarship
Supervisor	Study on local scour around complex bridge piers	Integrated MSc. in Civil Engineering	Ricardo Calçada	FCT-UNL	2010	2011	–
Supervisor	3D simulation of non-uniform fluvial flows	Integrated MSc. in Civil Engineering	Frederico Antunes	FCT-UNL	2010	2012	–
Supervisor	Analysis of systems to re-use pluvial water in buildings	Integrated MSc. in Civil Engineering	Francisco Sacadura	FCT-UNL	2010	2011	–
Supervisor	Experimental study of uniform and non-uniform compound channel flow	Integrated MSc. in Civil Engineering	Eduardo Teixeira	FCT-UNL	2010	2011	–

Table 3 (cont.). Scientific supervision activity

Type of supervision	Title	Type of programme	Student	Institution	Starting year	Finishing year	Founding
Supervisor	3D simulation of fluvial flows	Integrated MSc. in Civil Engineering	David Tiago	FCT-UNL	2010	2011	–
Supervisor	Experimental characterization of compound channel flows	Integrated MSc. in Civil Engineering	David Pinto	FCT-UNL	2009	2010	–
Supervisor	Hydraulics laboratory training	Research Technician Scholarship	Jorge Barros	UBI	2008	2009	FCT-scholarship
Supervisor	New methodologies for the teaching of Civil Engineering and Architecture	Undergraduate scholarship	Norberto Marques	UBI	2007	2007	PRODEP-scholarship
Supervisor	New methodologies for the teaching of Civil Engineering and Architecture	Undergraduate scholarship	Ana Couxinho	UBI	2007	2007	PRODEP-scholarship
Co-supervisor	Detailed plan of a reach of the riverside Couto	Final graduation work in Civil Engineering	Gonçalo Nunes	UBI	2005	2005	–
Co-supervisor	Mathematical and experimental modelling of the dam-break flood wave. Characterisation of the 2D flow field in non-prismatic channels	Final graduation work in Civil Engineering	Pedro Silva	IST-Université catholique de Louvain	2004	2004	–
Supervisor	Protection measures for the Portuguese coastline	Final graduation work in Civil Engineering	Luís Paulino and Ana Branco	UBI	2004	2004	–
Supervisor	Video measurements of dam-break flows	Research Initiation Scholarship	Ivone Ferreira	UBI	2002	2002	FCT-scholarship

Table 4. Participation in academic juries

Type of participation	Title	Type of programme	Student	Institution	Year
Principal examiner	Effects of bed-load transport in coherent structures statistics over hydraulically rough mobile beds	Integrated MSc. in Civil Engineering	Bruno Santos	FCT-UNL	2013
Principal examiner	Charaterization of coherent structures in vegetated river beds	Integrated MSc. in Civil Engineering	Sérgio Rita	FCT-UNL	2013
Principal examiner	Numerical modelling of sea waves: the case of Terminal XXI of the Harbor of Sines	Integrated MSc. in Civil Engineering	Hugo Macatrão	FCT-UNL	2013
President of the jury	Implications of thermal comfort in energy consumption: A hypothesis of adaptive model Influence of aggregates from RCD (residues of construction and demolition) and non-compliant fly ash in lime mortar	Integrated MSc. in Civil Engineering	Ana Frutuoso	FCT-UNL	2013
Member (inherently to be supervisor)	Experimental characterization of flow around river bank vegetation	Integrated MSc. in Civil Engineering	Javier Soto	FCT-UNL	2013
External member of the Monitoring Committee		PhD. in Civil Engineering	Sebastián Ludeña	IST/EPFL	2013
Member (inherently to be co-supervisor)	Experimental and mathematical modelling of compound channel flows	PhD. in Civil Engineering	João Fernandes	IST	2013
Member (inherently to be supervisor)	Simulation of river flows with vertical structures in the main channel banks	Integrated MSc. in Civil Engineering	Cláudia Ferreira	FCT-UNL	2012
Principal examiner	Study of transient flows in channels	Integrated MSc. in Civil Engineering	Bruno Oliveira	Engineering Faculty of Oporto	2012
Principal examiner	Turbidity currents over multiple obstacles	Integrated MSc. in Civil Engineering	Miguel Correia	FCT-UNL	2012
Principal examiner	Analysis of earthfill dam failure for risk assessment of both dam and reservoir	Integrated MSc. in Civil Engineering	Pedro Martins	FCT-UNL	2012
Member (inherently to be supervisor)	Experimental study of river flows with vegetated banks	Integrated MSc. in Civil Engineering	Célia Rodrigues	FCT-UNL	2012
Member (inherently to be supervisor)	Three-dimensional simulation of flows over rough beds	Integrated MSc. in Civil Engineering	Tobias Silva	FCT-UNL	2012
Member (inherently to be supervisor)	Calibration of SKM model base on turbulence measurements	Integrated MSc. in Civil Engineering	Rodrigo Vieira	FCT-UNL	2012
Member (inherently to be supervisor)	3D simulation of non-uniform fluvial flows	Integrated MSc. in Civil Engineering	Frederico Antunes	FCT-UNL	2012
Principal examiner	Risk appraisal in embankment dams	MSc. in Building Rehabilitation	Eduardo Nunes	FCT-UNL	2012
President of the jury	Implications of thermal comfort in energy consumption: A hypothesis of adaptive model	Integrated MSc. in Civil Engineering	João Abrantes	FCT-UNL	2012
Member (inherently to be supervisor)	Influence of roughness on rivers conveyance	Integrated MSc. in Civil Engineering	Pedro Duarte	FCT-UNL	2012
External member of the Monitoring Committee	Mathematical modeling of geomorphic flows with meshless particulate methods	PhD. in Civil Engineering	Ricardo Canelas	IST	2011

Table 4 (cont.). Participation in academic juries

Type of participation	Title	Type of programme	Student	Institution	Year
President of the jury	Calibration and validation of a mathematical model applied to Alcântara riverside	Integrated MSc. in Civil Engineering	Manuel Frazão	FCT-UNL	2011
President of the jury	Study of the overtopping of coastal defence structures with application of SPPhysics	Integrated MSc. in Civil Engineering	Linete Afonso	FCT-UNL	2011
President of the jury	Mass exchange within a turbidity current	Integrated MSc. in Civil Engineering	Alexandre Sousa	FCT-UNL	2011
President of the jury	Evaluation of the behaviour of bituminous mixtures under high temperatures	Integrated MSc. in Civil Engineering	Luís Barrão	FCT-UNL	2011
President of the jury	Analysis of the influence of thermal bridges in residential buildings	Integrated MSc. in Civil Engineering	Júlio Pessoa	FCT-UNL	2011
Member (inherently to be supervisor)	Application of analytical solutions for studying secondary flow in rivers	Integrated MSc. in Civil Engineering	Hélder Parreira	FCT-UNL	2011
Member (inherently to be supervisor)	Study on local scour around complex bridge piers	Integrated MSc. in Civil Engineering	Ricardo Calçada	FCT-UNL	2011
Principal examiner	Reconstitution of the failure of the Fonte Santa mine tailing. Analysis of the dam breaching process	Integrated MSc. in Civil Engineering	Marta Duque	FCT-UNL	2011
President of the jury	Techno-economic analysis of different types of pipes and accessories used in water and wastewater building installations. A case study	Integrated MSc. in Civil Engineering	Marco Pereira	FCT-UNL	2011
President of the jury	Lean Construction in Portuguese Construction and Engineering – Opportunities and challenges for owners	Integrated MSc. in Civil Engineering	João Martins	FCT-UNL	2011
President of the jury	Parameterization and validation of the dam-breaching computational model RoDab	Integrated MSc. in Civil Engineering	Cláudio Garcia	FCT-UNL	2011
President of the jury	Analysis of hydroplanning occurrence in a real case	Integrated MSc. in Civil Engineering	André Soares	FCT-UNL	2011
Member (inherently to be supervisor)	Experimental study of flows in vegetated beds	Integrated MSc. in Civil Engineering	João Lory	FCT-UNL	2011
Member (inherently to be supervisor)	Analysis of systems to re-use pluvial water in buildings	Integrated MSc. in Civil Engineering	Francisco Sacadura	FCT-UNL	2011
Member (inherently to be supervisor)	Influence of bank roughness on compound channel flows	Integrated MSc. in Civil Engineering	Pedro Massa	FCT-UNL	2011
President of the jury	Mobility in sustainable cities	Integrated MSc. in Civil Engineering	Eduardo Leandro	FCT-UNL	2011
Member (inherently to be supervisor)	3D simulation of fluvial flows	Integrated MSc. in Civil Engineering	David Tiago	FCT-UNL	2011
Member (inherently to be supervisor)	Experimental study of uniform and non-uniform compound channel flow	Integrated MSc. in Civil Engineering	Eduardo Teixeira	FCT-UNL	2011

Table 4 (cont.). Participation in academic juries

Type of participation	Title	Type of programme	Student	Institution	Year
Principal examiner	The efficient use of water in residential buildings	Integrated MSc. in Civil Engineering	Tiago Cardoso	FCT-UNL	2011
Principal examiner	2D Mathematical modelling of discontinuous shallow sediment-laden flows	Integrated MSc. in Civil Engineering	Ricardo Canelas	IST	2010
Principal examiner	Wind action and structural safety in buildings	Integrated MSc. in Civil Engineering	João Cruz	FCT-UNL	2010
Principal examiner	Sustainable Construction – Comparison of solution for the efficient use of water in residential buildings	Integrated MSc. in Civil Engineering	Luís Barroso	FCT-UNL	2010
Member (inherently to be supervisor)	Experimental characterization of compound channel flows	Integrated MSc. in Civil Engineering	David Pinto	FCT-UNL	2010
External member of the Monitoring Committee	Landfill dam-breach. Laboratorial characterization of the breach evolution and of the flood stage-discharge curve	PhD. in Civil Engineering	Sílvia Amaral	IST	2009
Principal examiner	Numerical modelling of the morphological evolution of a reach of Tagus River subjected to mining	MSc. in Hydraulics and Water Resources	Tiago Carvalho	IST	2009
Principal examiner	Study of the local scour around bridge piers	Integrated MSc. in Civil Engineering	Rui Silva	Engineering Faculty of Oporto	2008
Principal examiner	Physical modelling of the non-linear behaviour of an OWC system for wave energy conversion	MSc. in Electro-mechanical Engineering	Wilson Monteiro	UBI	2008
Member	Local scour near bridge abutments and respective countermeasures	PhD. in Civil Engineering	Cristina Fael	UBI	2008
Principal examiner	Analysis of the hydropower potential of Goldra riverside using a Cross-flow turbine	MSc. in Electro-mechanical Engineering	Bernardete Marques	UBI	2007
Principal examiner	Numerical modelling of unsteady flows in movable beds. Application to Mondego river	MSc. in Hydraulics and Water Resources	João Faísca	IST	2007

9.6 – Editorial activity

During his research activity was and is reviewer of several papers for the following international scientific journals:

- Journal of Hydraulic Research, International Association of Hydro-Environment Engineering and Research (IAHR).
- Journal of Hydraulic Engineering, American Association of Civil Engineers (ASCE).
- Proceedings of the Institution of Civil Engineers (ICE) - Water Management.
- Canadian Journal of Civil Engineering, National Research Council Canada (NRC).

Has been also reviewer of several papers for the following international conferences:

- River Flow 2014 (IAHR).
- IAHR Congress 2011 (IAHR).
- POWERENG2011.
- River Flow 2010 (IAHR).

9.7 – Representation in national and international commissions

- 2009 to Present – founding member of the Specialized Commission in Fluvial Hydraulics of the Portuguese Association of Water Resources.
- Member of the Working Group in Compound Channel Flows from IAHR. Elected as participant in the Pilot Group, along with Dr. Didier Bousmar and Prof. Koji Shiono, that will elaborate the modelling benchmarks for all researchers involved.

9.8 – Participation in evaluation panels

- Member of the Jury for evaluating research proposals, 2012 (by invitation of the Romanian National Council for Scientific Research).
- Member of the Jury for the attribution of a PhD. Scholarship, DEC, FCT-UNL, 2011 (appointed by the President of DEC).
- Member of the Jury for the attribution of a PhD. Scholarship, DEC, FCT-UNL, 2010 (appointed by the President of DEC).
- Member of the Jury for the attribution of a PhD. Scholarship, DEC, FCT-UNL, 2009 (appointed by the President of DEC).
- Member of the Jury of the had-hoc exam for candidates over 23 years, scholar year of 2007/2008 (appointed by the Dean of UBI).

- Member of the Jury of two equivalence habilitation processes, DECA, UBI, 2006 (inherently to be Course Director).
- Member of the Jury of the International Public Tender for the acquisition and installation of a 3D Laser Doppler Anemometry within the project CONC-REEQ/688/2001, DECA, UBI, 2005 (appointed by the Dean of UBI).
- Member of the Jury of the Limited Tender for the acquisition of a high-speed video camera within the project CONC-REEQ/688/2001, DECA, UBI, 2005 (appointed by the Dean of UBI).
- Member of the Jury of the Public Tender for acquisition and installation of the hydraulic circuits in the Hydraulics Laboratory, DECA, UBI, 2005 (appointed by the Dean of UBI).
- Member of the Jury of the Public Tender for acquisition and installation of the electro-mechanical equipment in the Hydraulics Laboratory, DECA, UBI, 2005 (appointed by the Dean of UBI).

9.9 – Divulcation activities

- Responsible of DECA of UBI in the initiative “Open Days at UBI”, March of 2007. The objective of this initiative was to open the institution doors to high school students. Elaboration and coordination of the programme. Elaboration of a presentation (38 slides) of the Hydraulics Laboratory and of a set of experiments in pedagogic equipment. Elaboration of a presentation (38 slides) of the Hydraulics Group.
- Responsible by the creation, text writing, content production and structure of the webpage of DECA, UBI in 2006 (<http://www.deca.ubi.pt/>).
- Responsible of DECA of UBI in the initiative “Science and Technology Week” that occurred in November of 2006. This national initiative (<http://www.cienciaviva.pt/semanact/>) aimed the divulgation of the activities of science institutions, universities, schools, associations and museums. Programme elaboration and coordination.

10 – TRAINING COURSES

- *Stage-discharge estimation with analytical solutions in single and two stage channel flows*, lecturer Prof. Koji Shiono (Loughborough University), organized by the Specialized Commission in Fluvial Hydraulics of APHR, LNEC, February of 2011 (2 hours duration).
- *Turbulence and sediment transport processes in rivers*, lecturer Prof. Subhasish Dey, Full Professor of Hydraulics and Water Resources at the Department of Civil Engineering of the Indian Institute of Technology, Kharagpur, organized by the Specialized Commission in Fluvial Hydraulics of APHR, IST, December of 2009 (5 hours duration).

- *1D modelling of river floods*, lecturer Dr. Sébastien Proust (CEMAGREF-Lyon), organized by the Specialized Commission in Fluvial Hydraulics of APHR, LNEC, April of 2009 (2 hours duration).
- *MATLAB Development of Interactive Programs*, UBI, Covilhã, April to September of 2007 (24 hours duration).
- *Post-Processing of Experimental and Numerical Data*, Von Karman Institute, Brussels, Belgium, April of 2002 (1 week duration).
- *Finite Volume Upwind and Centred Methods for Hyperbolic Conservation Laws*, lecturer Prof. E.F. Toro, Numeritek Ltd., Barcelona, Spain, April of 2001 (1 week duration).

11 – TECHNICAL REPORTS

- [TR.1] CARDOSO, A.H.; LEAL, J.G.A.B.; FERREIRA, R.M.L. 2002. *Viaducts 1.2-1 and P2 over Tâmega River near Chaves. Hydrologic and hydraulic constrains*, A1V2 – Engenharia Civil e Arquitectura, IST, Lisbon. (in Portuguese)
- [TR.2] CARDOSO, A.H.; LEAL, J.G.A.B.; FERREIRA, R.M.L. 2002. *Viaduct of IP6 highway over the Real and Galvão Rivers near A-da-Gorda. Hydraulic constrains and local scour countermeasures*, A2P – CONSULT, Estudos e Projectos, Lda., IST, Lisbon. (in Portuguese)
- [TR.3] CARDOSO, A.H.; LEAL, J.G.A.B.; FERREIRA, R.M.L. 2002. *Viaduct of A13 highway over the Muge riverside. Hydrologic and hydraulic constrains*, A2P – CONSULT, Estudos e Projectos, Lda., IST, Lisbon. (in Portuguese)
- [TR.4] CARDOSO, A.H.; LEAL, J.G.A.B.; FERREIRA, R.M.L. 2002. *Bridge of A25 highway over the Côa River near Castelo Bom, Hydologic and hydraulic constrains and local scour countermeasures*, A2P – CONSULT, Estudos e Projectos, Lda., IST, Lisbon. (in Portuguese)
- [TR.5] LEAL, J.G.A.B. 2006. *Orientation and reviewing of the Project of water supply and wastewater systems of the city of Bragança*, A1V2 – Engenharia Civil e Arquitectura, Lisbon. (in Portuguese)
- [TR.6] CARDOSO, A.H.; LEAL, J.G.A.B.; FERREIRA, R.M.L. 2008. *Railway bridge over the Zêzere River near Tortosendo. Hydraulics constrains and local scour countermeasures*, A2P – CONSULT, Estudos e Projectos, Lda., CEHIDRO/IST, Lisbon. (in Portuguese)

- [TR.7] CARDOSO, A.H.; LEAL, J.G.A.B. 2009. *Viaduct of A5 highway over the Barcarena riverside. Hydraulic study and regularization of the main channel*, Armando Rito Engenharia S.A., CEHIDRO/IST, Lisbon. (in Portuguese)
- [TR.8] LEAL, J.G.A.B.; CARDOSO, A.H. 2009. *Bridge over the Souto riverside (IC5 – Murça IP4 – alternative solution South). Hydrologic and hydraulic study*, Armando Rito Engenharia S.A., CEHIDRO/IST, Lisbon. (in Portuguese)
- [TR.9] LEAL, J.G.A.B.; CARDOSO, A.H. 2009. *Bridge over the Tua River (IC5 – Murça IP4 – alternative solution South). Hydrologic and hydraulic study*, Armando Rito Engenharia S.A., CEHIDRO/IST, Lisbon. (in Portuguese)
- [TR.10] LEAL, J.G.A.B.; CARDOSO, A.H. 2009. *Bridge over the Tua River (IC5 – Murça IP4 – alternative solution North). Hydrologic and hydraulic study*, Armando Rito Engenharia S.A., CEHIDRO/IST, Lisbon. (in Portuguese)
- [TR.11] LEAL, J.G.A.B.; CARDOSO, A.H. 2009. *Bridge over the Coina River (IC32 - Palhais - Coina). Hydraulic constrains and local scour countermeasures*, Armando Rito Engenharia S.A., CEHIDRO/IST, Lisbon. (in Portuguese)
- [TR.12] LEAL, J.G.A.B.; CARDOSO, A.H. 2009. *Bridge over the Laje riverside (A5 – Highway of Costa do Estoril). Hydraulic constrains and bank stabilization*, Armando Rito Engenharia S.A., CEHIDRO/IST, Lisbon. (in Portuguese)
- [TR.13] FRANCA, M.J.; FERREIRA, R.M.L.; LEAL, J.G.A.B. 2009. *Characterization of the flood wave in case of dam failure for the Intern Emergency Plan of Odelouca dam*, Águas do Algarve, Lda. and Tetraplano Engenharia, CEHIDRO/IST, Lisbon. (in Portuguese)
- [TR.14] LEAL, J.G.A.B. 2010. *Final reach of Jamor River. Hydrology and hydraulic study (inundation map)*, Silcoge S.A., DEC, FCT-UNL, Caparica. (in Portuguese)
- [TR.15] LEAL, J.G.A.B.; CARDOSO, A.H. 2011. *Viaduct of IC3 highway over the Lapas da Abelheira riverside. Hydrology and hydraulic study*, Armando Rito Engenharia S.A., CEHIDRO/IST, Lisbon. (in Portuguese)
- [TR.16] LEAL, J.G.A.B.; CARDOSO, A.H. 2011. *Bridge of IC3 highway over the Braçais riverside. Hydrology and hydraulic study*, Armando Rito Engenharia S.A., CEHIDRO/IST, Lisbon. (in Portuguese)
- [TR.17] LEAL, J.G.A.B.; CARDOSO, A.H. 2011. *Bridge of IC3 highway over the Mondego River. Hydraulic constrains*, Armando Rito Engenharia S.A., CEHIDRO/IST, Lisbon. (in Portuguese)

- [TR.18] LEAL, J.G.A.B.; PÁES, S.; HURTADO, J.; ERAZO, B., GUACHAMIN, W.; ARTIAGA, M. 2013. *Flood Warning System of river Zarumilla*, INAMHI, Quito. (in Spanish)
- [TR.19] LEAL, J.G.A.B.; PÉREZ, K.; ORDOÑEZ, F. 2013. *Preliminary Study (base line) for the implementation of the Flood Warning System of river Cañar*, INAMHI, Quito. (in Spanish)

12 – PUBLICATIONS

12.1 – Thesis and book edition

- [TBE.1] LEAL, J.G.A.B. 1999. *Mathematical modelling of dam-break waves propagation over movable beds*, MSc. Thesis in Hydraulics and Water Resources, IST, Lisbon. (in Portuguese)
- [TBE.2] LEAL, J.G.A.B. 2005. *Experimental and mathematical modelling of dam-break waves propagation over movable beds*, PhD. Thesis in Civil Engineering, UBI, Covilhã. (in Portuguese)
- [TBE.3] FERREIRA, R.M.L.; ALVES, E.; LEAL, J.G.A.B.; CARDOSO, A.H. 2006. *River Flow 2006*, Vols. 1 and 2, Taylor & Francis/Balkema (ISBN 0415408156).

12.2 – Papers and discussions in international scientific journals

- [PIJ.1] LEAL, J.G.A.B.; FERREIRA, R.M.L.; FRANCO, A.B.; CARDOSO, A.H. 2002. Experimental study on dam-break flood waves over movable bed channels, *International Journal of Sediment Research*, **17**(3), 186-196.
- [PIJ.2] FERREIRA, R.M.L.; LEAL, J.G.A.B.; CARDOSO, A.H. 2003. Discussion of “Coupled and decoupled numerical modeling of flow and morphological evolution in alluvial rivers”, by Cao, Z.; Day, R.; Egashira, S.; *Journal of Hydraulic Engineering*, **129**(9), 741-742, DOI:10.1061/(ASCE)0733-9429(2003)129:9(741).
- [PIJ.3] LEAL, J.G.A.B.; FERREIRA, R.M.L.; CARDOSO, A.H. 2006. Dam-break wave-front celerity, *Journal of Hydraulic Engineering*, **132**(1), 69-76, DOI:10.1061/(ASCE)0733-9429(2006)132:1(69).
- [PIJ.4] LEAL, J.G.A.B.; FERREIRA, R.M.L.; CARDOSO, A.H. 2008. Closure to “Dam-break wave-front celerity”, *Journal of Hydraulic Engineering*, **134**(6), 867-869, DOI:10.1061/(ASCE)0733-9429(2008)134:6(867).
- [PIJ.5] FERREIRA, R.M.L.; FRANCA, M.J.; LEAL, J.G.B.; CARDOSO, A.H. 2009. Mathematical modelling of shallow flows: Closure models drawn from grain-scale mechanics of

- sediment transport and flow hydrodynamics, *Canadian Journal of Civil Engineering*, **36**(10), 1605-1621.
- [PIJ.6] LEAL, J.G.A.B.; FERREIRA, R.M.L.; CARDOSO, A.H. 2009. Maximum Level and Time to Peak of Dam-break Waves on Mobile Horizontal Bed, *Journal of Hydraulic Engineering*, **135**(11), 995-999, DOI:10.1061/(ASCE)HY.1943-7900.0000099.
- [PIJ.7] LEAL, J.G.A.B.; FERREIRA, R.M.L.; CARDOSO, A.H. 2010. Geomorphic dam-break flows. Part II: numerical simulation, *Proceedings of the Institution of Civil Engineers (ICE) - Water Management*, **163**(6), 305-313, ISSN: 1741-7589, DOI:10.1680/wama.2010.163.6.305.
- [PIJ.8] LEAL, J.G.A.B.; FERREIRA, R.M.L.; CARDOSO, A.H. 2010. Geomorphic dam-break flows. Part I: 1D conceptual model, *Proceedings of the Institution of Civil Engineers (ICE) - Water Management*, **163**(6), 297-304, ISSN: 1741-7589, DOI:10.1680/wama.2010.163.6.297.
- [PIJ.9] FERNANDES, J.N.; LEAL, J.B.; CARDOSO, A.H. 2011. Discussion of “Apparent friction coefficient in straight compound channels”, by Moreta, P.J.M.; Martin-Vide, J.P.; *Journal of Hydraulic Research*, 49(6), 836-839, DOI:10.1080/00221686.2011.618058.
- [PIJ.10] FERREIRA, R.M.L.; FRANCA, M.J.; LEAL, J.G.A.B.; CARDOSO, A.H. 2012. Flow over rough mobile beds: friction factor and vertical distribution of the longitudinal mean velocity, *Water Resources Research*, 48, W05529, DOI:10.1029/2011WR011126.
- [PIJ.11] FERNANDES, J.N.; LEAL, J.B.; CARDOSO, A.H. 2012. Flow Structure in a Compound Channel with Smooth and Rough Floodplains, *European Water*, E.W. Publications, 38, 3-12.
- [PIJ.12] FILONOVICH, M.S.; AZEVEDO, R.; ROJAS-SOLÓRZANO, L.R.; LEAL, J.B. 2013. Credibility Analysis of Computational Fluid Dynamic Simulations for Compound Channel Flow, *Journal of Hydroinformatics*, IAHR, 15(3), 926-938, doi:10.2166/hydro.2013.187.
- [PIJ.13] PROUST, S.; FERNANDES, J.N.; PELTIER, Y.; LEAL, J.B.; RIVIERE, N.; CARDOSO, A.H. 2013. Turbulent non-uniform flows in straight compound open-channels, *Journal of Hydraulic Research*, IAHR, 51(6), 656-667, doi: 10.1080/00221686.2013.818586.
- [PIJ.14] FERNANDES, J.N.; LEAL, J.B.; CARDOSO, A.H. Assessment of stage-discharge predictors for compound open-channels, *Journal of Hydraulic Engineering*, ASCE. (submitted for publication ref: HYENG-8311, accepted with corrections that were already resubmitted)
- [PIJ.15] FERNANDES, J.N.; LEAL, J.B.; CARDOSO, A.H. Lateral Distribution Method improvement based on the mixing layer width, *Advances in Water Resources*, Elsevier.

(submitted for publication ref: AWR-13-310, accepted with corrections that were already resubmitted)

12.3 – Papers in national scientific journals

- [PNJ.1] FERREIRA, R.M.L.; LEAL, J.G.A.B.; CARDOSO, A.H. 1999. Mathematical modelling of dam-break waves propagation over movable beds, *Recursos Hídricos*, **20**(1), 51-69. (in Portuguese)
- [PNJ.2] LEAL, J.G.A.B.; FERREIRA, R.M.L.; FRANCO, A.B.; CARDOSO, A.H. 2001. Dam-break waves over movable beds. Experimental study, *Recursos Hídricos*, **22**(1), 25-36. (in Portuguese)

12.4 – Papers in proceedings of international conferences

- [PIC.1] FERREIRA, R.M.L.; LEAL, J.G.A.B. 1998. 1-D Mathematical modelling of the instantaneous-dam-break flood wave over mobile bed, Proceedings of the 2nd CADAM meeting, Oct. 26-29, Munich, Germany, www.hrwallingford.co.uk/projects/CADAM/CADAM (edited in CD-Rom; without scientific referee).
- [PIC.2] FERREIRA, R.M.L.; LEAL, J.G.A.B.; CARDOSO, A.H. 2001. On the structure of the solution of the dam-break problem over a cohesionless erodible bed, *XXIX IAHR Congress*, Sep. 16-21, Beijing, China, Theme C, 319-326, Tsinghua University Press (ISBN 7-302-04676-X).
- [PIC.3] LEAL, J.G.A.B.; FERREIRA, R.M.L.; FRANCO, A.B.; CARDOSO, A.H. 2001. Dam-break waves over movable bed channels. Experimental study, *XXIX IAHR Congress*, Sep. 16-21, Beijing, China, Theme C, 232-239, Tsinghua University Press (ISBN 7-302-04676-X).
- [PIC.4] FERREIRA, R.M.L.; LEAL, J.G.A.B.; CARDOSO, A.H. 2002. Turbulent structures and near-bed sediment transport in open-channel flows, in *River Flow 2002*, Bousmar, D. and Zech, Y. eds., Balkema, Vol. 1, 553-563 (ISBN 9058095159).
- [PIC.5] LEAL, J.G.A.B.; FERREIRA, R.M.L.; CARDOSO, A.H. 2002. Dam-break waves on movable bed, in *River Flow 2002*, Bousmar, D. and Zech, Y. eds., Balkema, Vol. 2, 981-990 (ISBN 9058095159).
- [PIC.6] FERREIRA, R.M.L.; LEAL, J.G.A.B.; CARDOSO, A.H. 2003. Transport of graded sediment in turbulent open-channel flows. A phenomenological approach, *XXX IAHR Congress*, Augt. 24-29, Thessaloniki, Greece, Theme C, Vol. I, 517-524 (edited in CD-Rom).

- [PIC.7] LEAL, J.G.A.B.; FERREIRA, R.M.L.; CARDOSO, A.H. 2003. Dam-break wave propagation over a cohesionless erodible bed, *XXX IAHR Congress*, Augt. 24-29, Thessaloniki, Greece, Theme C, Vol. II, 261-268 (edited in CD-Rom).
- [PIC.8] FERREIRA, R.M.L.; LEAL, J.G.A.B.; CARDOSO, A.H.; ALMEIDA, A.B. 2003. Sediment transport by dam-break flows. A conceptual framework drawn from the theories for rapid granular flows, *Proceedings of the 3th IMPACT Workshop*, Louvain-la-Neuve, Belgium, <http://www.samui.co.uk/impact-project/cd3/default.htm> (edited in CD-Rom; without scientific referee).
- [PIC.9] LEAL, J.G.A.B.; FERREIRA, R.M.L.; CARDOSO, A.H.; ALMEIDA, A.B. 2003. Overview of the IST group results on the sediment benchmark, *Proceedings of the 3th IMPACT Workshop*, Louvain-la-Neuve, Belgium, <http://www.samui.co.uk/impact-project/cd3/default.htm> (edited in CD-Rom; without scientific referee).
- [PIC.10] LEAL, J.G.A.B.; FERREIRA, R.M.L.; CARDOSO, A.H.; ALMEIDA, A.B. 2003. Comparison between numerical and experimental results on dam-break waves over dry mobile beds, *Proceedings of the 3th IMPACT Workshop*, Louvain-la-Neuve, Belgium, <http://www.samui.co.uk/impact-project/cd3/default.htm> (edited in CD-Rom; without scientific referee).
- [PIC.11] LEAL, J.G.A.B.; FERREIRA, R.M.L.; CARDOSO, A.H. 2004. 1-D model for dam-break waves over mobile beds, *6th International Conference on Hydroscience and Engineering*, Brisbane, Australia (edited in CD-Rom).
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