
Curriculum vitae

Rui Pedro Carrilho Gomes

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1. Personal data

Date and place birth: 18th October 1973, Viseu (Portugal)

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Scopus Author ID	15836689100 https://www.scopus.com/authid/detail.uri?authorId=15836689100
ORCID	http://orcid.org/0000-0002-7794-5075
Google Scholar	https://scholar.google.pt/citations?user=Ehi7D9EAAA&hl=pt-PT

Language skills	Writing	Conversation	Reading
Portuguese	Mother tongue		
English	Fluent	Fluent	Fluent
French	Good	Good	Fluent

2. Education

Year	Academic degree	Institution	Classification
2009	PhD in Civil Engineering	Instituto Superior Técnico Universidade de Lisboa	Very good
2000	MSc. In Structural Engineering (2 years)	Instituto Superior Técnico Universidade de Lisboa	Approved
1996	Degree in Civil Engineering (5 years)	Instituto Superior Técnico Universidade de Lisboa	14/20

3. Positions held

3.1. Academic experience

Period	Position	Institution
2009 – to date	Assistant Professor	Geotechnical division, Civil Eng. Dept., Instituto Superior Técnico (IST) University of Lisbon
2008 – 2009	Assistant	Geotechnical division, Civil Eng. Dept., Instituto Superior Técnico University of Lisbon
2000 – 2008	Adjunct Professor	Barreiro School of Technology, Polytechnic Institute of Setúbal

3.2. Professional experience

Period	Position	Private companies
2000 – to date	External consultant of geotechnics and earthquake engineering	Safre, Cenor, PRPC, Ferca, Factorial, Pecnon, Synege, Geoplano, Civiconcebe
1998 – 2000	Geotechnical design engineer	Cenor

3.3. Memberships

Association	Membership
Portuguese Association of Engineers (Ordem dos Engenheiros)	Senior member
SPG - Portuguese Society for Geotechnics	Member
SPES – Portuguese Society for Earthquake Engineering - Board member from 2000 to 2013	Board Member from 2000 to 2013 (4 mandates)
ISSMGE - Technical Committees:	
- TC203 - Earthquake Geotechnical Engineering and Associated Problems, International Society for Soil Mechanics and Geotechnical Engineering;	Member (2010/13) Correspondent member (2014/17)
- TC204 - Underground Construction in Soft Ground, International Society for Soil Mechanics and Geotechnical Engineering.	Member (2014/17)

APIST - Staff Association of Instituto Superior Técnico

Vice-President of the General Assembly (2015/16)

ICIST - Institute of Structural Engineering, Territory and Construction Vice-President (2017/18)

4. Consultancy – excavation and underground structures (selected)

Head

[3] Gomes, R.C., 2017. Assessment of induced deformations to the Rossio underground metro station due to the rehabilitation of the building Rua João das Regras nº5, Lisbon. Study performed for Safre.

[2] Gomes, R.C., Gouveia, F., 2016. Assessment of induced deformation on the Baixa/Chiado underground metro station due to the rehabilitation of the building Rua Ivens nº 30-34, Lisboa. Study performed for Safre.

[1] Gomes, R.C., Lopes, M., Lopes, I.F., 2012. Characterization of the ground seismic response for the expansion of Line 1 « Extension A / Place Emir Abdelkader - Place des Martyrs » from Algiers underground metro, Argelia. (2 km) Report ICIST, EP n.º 13/2012.

Member

[3] Oliveira, C.S., Lopes, M., Gomes, R.C., 2006. Reinforcement of Terreiro do Paço tunnel. Study to support the comparison between the seismic behaviour of the solution proposed by the designer and an alternative solution. Report ICIST, EP n.º 3/06.

[2] Lopes, M., Gomes, R.C., 2001. Assessment of the seismic behaviour of the retaining wall piles from the Terreiro do Paço underground station from Lisbon metro. Report ICIST, EP n.º 33/01.

[1] Oliveira, C.S., Lopes, M., Gomes, R.C., Santos, J.A., Fonseca, J., 2000. Assessment of the seismic behaviour of the Terreiro do Paço underground station from Lisbon metro. Report ICIST/CEGEO, EP n.º 32/00.

5. Publications

5.1 Thesis

[2] Gomes, R.C., 2009. Numerical modelling of the seismic response of the ground and circular tunnels. PhD thesis in Civil Engineering, Instituto Superior Técnico, Universidade de Lisboa (in Portuguese)

[1] Gomes, R.C., 2000. Behaviour of underground structures under seismic actions. MSc thesis in Structural Engineering, Instituto Superior Técnico, Universidade de Lisboa (in Portuguese)

5.2 Books

Editor:

LiMo: Lisbon in Motion – Risk Assessment, Rehabilitation, Urban Plan. Alexandre A. Costa, Mónica Amaral Ferreira, Alexandra Carvalho, Cristina Oliveira, Isabel Lopes and Rui Carrilho Gomes (Eds.) ISBN 978-989-20-5085-0, November 2014.

Autor:

J. de Brito, J. D. Silvestre, **R.C. Gomes**, Technology of Retaining Walls and Foundations (aprox. 400 pages, 28 chapters), Collection: Building Construction, IST Press (in Portuguese)

Under final revision by IST Press.

5.3 Chapters in books

[1] A Carvalho, RC Gomes, I Lopes, S Vilanova, Chapter 2. Seismology and Site Effects: Methodologies and Data for Participants. LiMo: Lisbon in Motion – Risk Assessment, Rehabilitation, Urban Plan. Alexandre A. Costa, Mónica Amaral Ferreira, Alexandra Carvalho, Cristina Oliveira, Isabel Lopes e Rui Carrilho Gomes (Eds.) ISBN 978-989-20-5085-0; Novembro 2014.

5.4. Papers in international scientific periodicals with referee

[10] Gouveia, F., Viana da Fonseca, A., Gomes, R.C., Teves-Costa, P., 2018. Deeper Vs profile constraining the dispersion curve with the ellipticity curve: A case study in Lower Tagus Valley, Portugal, Soil Dynamics and Earthquake Engineering, Vol. 109, 188–198.

[9] Renda, H., Bento, R. and Gomes, R.C., 2016. ‘Impact of ground movements on the seismic performance of old heritage buildings’, Int. J. Earthquake and Impact Engineering, Vol. 1, No. 4, pp.360–376.

[8] Gouveia, F., Lopes, I., Gomes, R.C., 2016. Deeper VS profile from joint analysis of Rayleigh wave data. Engineering Geology, vol. 202, pp. 85–98. (Impact Factor: 2.196)

- [7] Gomes, R.C., Santos, J.A., Modaressi-Farahmand Razavi, A., Lopez-Caballero, F., 2016. Validation of a Strategy to Predict Secant Shear Modulus and Damping of Soils with an Elastoplastic Model. *KSCE Journal of Civil Engineering*, vol. 20(2):609-622 (Impact Factor: 0.600)
- [6] Gomes, R.C., Gouveia, F., Torcato, D., Santos, J., 2015. Seismic response of shallow circular tunnels in two-layered ground. *Soil Dynamics and Earthquake Engineering*, 75, pp. 37–43. (Impact Factor: 1.481)
- [5] Lopes, I.F.; Santos, J.A.; Gomes, R.C., 2014. VS profile: measured vs empirical correlations. A Lower Tagus river valley example. *Bulletin of Engineering Geology and the Environment*, vol.73, pp.1127–1139. (Impact Factor: 1.252)
- [4] Gomes, R.C.; Lopes, I., 2014. How the response spectrum of non-liquefied loose-to-medium sand deposits is affected by the groundwater level. *Computers and Geotechnics*,
- [3] Gomes R.C. 2014. Numerical simulation of the seismic response of tunnels in sand with an elastoplastic model. *Acta Geotechnica*, Vol.9, pp.613–629. (Impact Factor: 2.426)
- [2] Gomes R.C. 2013. Effect of stress disturbance induced by construction on the seismic response of shallow bored tunnels. *Computers and Geotechnics*, Vol. 49, pp. 338-351. (Impact Factor: 1.705)
- [1] Gomes, R.C., Santos, J.A., Oliveira, C.S., 2006. Design spectrum-compatible time histories for numerical analysis: generation, correction and selection. *Journal of Earthquake Engineering*, Vol. 10, No. 6, pp.843-865. (Impact Factor: 0.922)

5.5. Internacional conferences

- [17] Antunes, A.C., Teves-Costa, P., Gomes, R.C., 2018. The contribution of Rayleigh wave ellipticity curve to characterize soil profile. 36th General Assembly of the European Seismological Commission, Valletta, Malta, paper ESC2018-S33-465
- [16] Oliveira, L., Teves-Costa, P., Pinto, C., Gomes, R.C., Almeida, I.M., Pereira, T., Sotto-Mayor, M., 2018. Seismic microzonation based on large database of borehole data: application to Lisbon. 36th General Assembly of the European Seismological Commission, Valletta, Malta, paper ESC2018-S29-443
- [15] Ramos, A., Gomes, R.C., Viana da Fonseca, A., 2018. Assessment of seismic site response based on microtremor measurements. 16th European Conference on Earthquake Engineering, 18-21 June 2018, Thessaloniki, Greece.
- [14] Renda, H. , Bento, R. ,Gomes, R.C., 2016. Damage to Pombalino Buildings induced by ground displacements and earthquakes. International Scientific Conference BASA' 2016, Bulgarian academy of sciences and Arts.
- [13] Roque, D., Perissin, D., Falcão, A.P., Gomes, R.C., Roque, A.J., Fonseca, A.M., 2016. Displacement Measurement Using SAR Interferometry – An Application to the Lisbon Regional Outer Circular and Its Neighborhood. ICUR2016 – International Conference on Urban Risks. Lisbon, Portugal.

- [12] Gouveia, F.M., Lopes, I.F., Gomes, R.C., 2014. Combined Analysis of Ambient Vibration HVSR and Active MASW Method. Near Surface Geoscience 2014 - 20th European Meeting of Environmental and Engineering Geophysics, Athens, Greece.
- [11] Gomes, R.C., 2013. Adequate Number Of Time-Histories To Predict The Ground Seismic Response Using Non-Linear Analyses. International Conference on Earthquake Geotechnical Engineering, from Case Histories to Practice; In the Honor of Prof.Kenji Ishihara, Istanbul, 17-19 June.
- [10] Marques, F., Santos, J.A., Gomes, R.C., 2012. Coimbra Sand – Influence of Non-Plastic Fines In Liquefaction Resistance. 15th World Conference on Earthquake Engineering, Lisbon, 24-28 September, paper n° 3404.
- [9] Santos, J.A., Gomes, R.C., Lourenço, J.C., Marques, F., Coelho, P., Azeiteiro, R., Santos, L.A., Marques, V., Viana da Fonseca, A., Soares, M., Abreu, É., Taborda, D.M.G., 2012. Coimbra Sand – Round Robin Tests to Evaluate Liquefaction Resistance. 15th World Conference on Earthquake Engineering, Lisbon, 24-28 September, paper n° 4933.
- [8] Gouveia, F., Gomes, R.C., Lopes, I.F., 2012. Influence of stiffness contrast in non-horizontally layered ground on site effects. 15th World Conference on Earthquake Engineering, Lisbon, 24-28 September, paper n° 3710.
- [7] Gomes, R.C., 2012. Numerical simulation of RRTT with an elastoplastic multi-mechanism model. 2nd International Conference on Performance-Based Design in Earthquake Geotechnical Engineering. May 28-30, 2012 - Taormina, Italy.
- [6] Gomes, R.C., 2012. Prediction of permanent displacements on a gentle slope with an elastoplastic model. 2nd International Conference on Performance-Based Design in Earthquake Geotechnical Engineering. Paper 8.02, pp.963-974, May 28-30, 2012 - Taormina, Italy.
- [5] Gomes, R.C., Santos, J.A., 2011. Influence of using records and artificial time-histories on ground seismic response. 5th International Conference on Earthquake Geotechnical Engineering, Santiago, Chile, January 10-13, Paper n° 6.8.IOUGO.
- [4] Neves e Sousa, A., Guerreiro, L., Gomes, R.C., 2008. A combined approach for base isolation design. Acoustics'08, Paris, June 20 – July 04, Paper n° 3588.
- [3] Santos, J.A., Gomes Correia, A., Modaressi, A., Lopez-Caballero, F., Gomes, R.C., 2003. Validation of an elastoplastic model to predict secant shear modulus of natural soils by experimental results. 3rd International Symposium on Deformation Characteristics of Geomaterials, Lyon, September 22 - 24, pp.1057-1062.
- [2] Gomes, R.C., Oliveira, C.S., Gomes Correia, A., 2001. Seismic response analysis of underground structure cross-sections using response spectra. 4th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, 26-31 March, San Diego, California, paper 6.29.
- [1] Gomes, R.C., Oliveira, C.S., Gomes Correia, A., 1999. Analysis of the dynamic response of the Volvi valley. 2nd International Conference on Earthquake Geotechnical Engineering, LNEC, Lisboa, pp.187-192.

5.6. Nacional conferences

[24] Teves-Costa, P., Gomes, R.C., Vicêncio, H., Gouveia, F., Marias, L., Caetano, P., 2017. A utilização de métodos não invasivos para a caracterização dos terrenos. 10º Simpósio de Meteorologia e Geofísica da APMG - Associação Portuguesa de Meteorologia e Geofísica - Lisboa, 20 a 22 Março 2017

[23] Gouveia, F., Lopes, I.F., Gomes, R.C., 2016. Identificação do perfil de velocidades do terreno em meio urbano utilizando métodos de ondas superficiais. 15º Congresso Nacional de Geotecnia, FEUP, Porto, 19 a 23 de Junho de 2016.

[22] Peniche, B., Lopes, I.F., Gomes, R.C., 2016. Modelo bi-dimensional do terreno baseado no método de ondas superficiais. 15º Congresso Nacional de Geotecnia, FEUP, Porto, 19 a 23 de Junho de 2016.

[21] Chouriço, J., Gomes, R.C., 2016. Curvas de fragilidade sísmicas para muros-cais de caixotões. 15º Congresso Nacional de Geotecnia, FEUP, Porto, 19 a 23 de Junho de 2016.

[20] Gomes, M.J., Gomes, R.C., 2014. Resposta sísmica de estruturas subterrâneas construídas através de poços. 9º Congresso Nacional de Sismologia e Engenharia Sísmica, Lisboa, LNEC, 26 a 28 de novembro de 2014.

[19] Vaz, C.B., Gomes, R.C., 2014. Influência de descontinuidades no comportamento sísmico de túneis circulares. 9º Congresso Nacional de Sismologia e Engenharia Sísmica, Lisboa, LNEC, 26 a 28 de novembro de 2014.

[18] Abreu, A.P., Gomes, R.C., 2014. Influência do comportamento não linear na interacção solo-estrutura: aplicação ao caso de uma estação subterrânea. 9º Congresso Nacional de Sismologia e Engenharia Sísmica, Lisboa, LNEC, 26 a 28 de novembro de 2014.

[17] Gouveia, F., Lopes, I.F., Gomes, R.C., 2014. Aplicação do método das ondas superficiais e método HVSR para a classificação do terreno. 9º Congresso Nacional de Sismologia e Engenharia Sísmica, Lisboa, LNEC, 26 a 28 de novembro de 2014.

[16] Delfim, A.R., Rodrigues, J., Gomes, R.C., Carvalho, A., 2014. Estudo da resposta sísmica local na área metropolitana de Lisboa e região do Algarve. 9º Congresso Nacional de Sismologia e Engenharia Sísmica, Lisboa, LNEC, 26 a 28 de novembro de 2014.

[15] Rodrigues, J., Carvalho, A., Delfim, A.R., Gomes, R.C., 2014. Leis de atenuação sísmica para Portugal Continental considerando o tipo de terreno. 9º Congresso Nacional de Sismologia e Engenharia Sísmica, Lisboa, LNEC, 26 a 28 de novembro de 2014.

[14] Gouveia, F., Lopes, I.F., Gomes, R.C., 2014. Identificação de características dinâmicas do terreno recorrendo a vibrações ambientes. 14º Congresso Nacional de Geotecnia, UBI, Covilhã.

[13] Rodrigues, F., Gomes, R.C., Lopes, I.F., Gouveia, F., Almeida, I.M., 2014. Medição e modelação de vibrações geradas pelo metropolitano. 14º Congresso Nacional de Geotecnia, UBI, Covilhã.

- [12] Marques, F.S., Santos, J.A., Gomes R.C., 2012. Influência de finos não plásticos na resistência à liquefação da areia de Coimbra. Ensaios e modelação numérica. 13º Congresso Nacional de Geotecnia, IST/LNEC, Lisboa.
- [11] Gouveia, F., Gomes, R.C., Lopes, I.F., 2012. Avaliação dos efeitos de sítio em terrenos com estratificação não horizontal. 13º Congresso Nacional de Geotecnia. IST/LNEC, Lisboa, CD-ROM.
- [10] Marques, F.S., Santos, J.A., Gomes, R.C., 2012. Influência de finos não plásticos na resistência à liquefação da areia de Coimbra. 13º Congresso Nacional de Geotecnia, Encontro de Jovens Geotécnicos. IST/LNEC, Lisboa, CD-ROM.
- [9] Gouveia, F., Gomes, R.C., Lopes, I.F., 2012. Influência da interface entre estratos e contraste de rigidez nos efeitos de sítio. 13º Congresso Nacional de Geotecnia, Encontro de Jovens Geotécnicos. IST/LNEC, Lisboa, CD-ROM.
- [8] Chitas, P., Oliveira, C.S., Santos, J.A., Gomes R.C., 2007. Processamento de registos acelerométricos: procedimentos e comparação de métodos. Sísmica 2007 - 7º Congresso de Sismologia e Engenharia Sísmica. Universidade do Porto (artigo n.º95).
- [7] Cardoso, R., Gomes, R.C., Santos, J.A., Sena Costa, V., Caetano, J. P., 2006. Novos equipamentos para experiências pedagógicas no ensino da Mecânica dos Solos. 10º Congresso Nacional de Geotecnia, Universidade Nova de Lisboa, Lisboa, pp.619-626.
- [6] Gomes, R.C., Santos, J.A., 2006. Influência de séries temporais na resposta sísmica de depósitos de areia em condições drenadas. 10º Congresso Nacional de Geotecnia, Universidade Nova de Lisboa, Lisboa, pp.979-988.
- [5] Cardoso, R., Gomes, R.C., Santos, J.A., Sena Costa, V., Caetano, J. P., 2004. Equipamentos para experiências pedagógicas no ensino da Mecânica dos Solos. 9º Congresso Nacional de Geotecnia, Universidade de Aveiro, Aveiro, pp.209-218.
- [4] Santos, J.A., Gomes, R.C., Antão, A., 2002. Aplicação de modelos lineares e elastoplásticos na análise dos efeitos locais da acção sísmica. 8º Congresso Nacional de Geotecnia, LNEC, Lisboa, pp.1995-2004.
- [3] Dessai, P., Oliveira, C.S., Gomes, R.C., Sousa, F.M., Escuer, M., Góngora, E., 2001. Estudo da actividade sísmica na estação de Chã de Macela (São Miguel, Açores). Caracterização do campo sísmico e influência das propriedades geotécnicas do sítio. 5º Encontro Nacional de Sismologia e Engenharia Sísmica. Universidade dos Açores, Açores, pp.143-154.
- [2] Gomes, R.C., Oliveira, C.S., Gomes Correia, A., 2000. Uma contribuição para o estudo do comportamento sísmico de estruturas subterrâneas. 7º Congresso Nacional de Geotecnia, FEUP, Porto, pp.885-894.
- [1] Gomes, R.C., Oliveira, C.S., Gomes Correia, A., 1999. Modelação expedita de estruturas subterrâneas pouco profundas submetidas a acções sísmicas. Aplicação ao caso de túneis. 4º Encontro Nacional de Sismologia e Engenharia Sísmica. Universidade do Algarve, Faro, Vol.II, pp.15-25.

5.7. Reasearch projects

Last 5 years:

4. **AQUIREMOTE: Using remote sensing for supporting EU agri-environmental policies for a good groundwater status**

Transversal exploratory actions | CERIS 2017

3. **CAPACITY4RAIL – Increasing Capacity 4 Rail networks through enhanced infrastructure and optimized operation**

FP7-SST-2013-RTD-1 - Sustainable Surface Transport (2015-17) PI: Paulo Teixeira (IST)

2. **KnowRISK – Know your city, reduce seismic risk**

European Commission's Humanitarian Aid and Civil Protection Grant agreement ECHO/SUB/2015/718655/PREV28 - 2016-2017 - PI: Carlos Sousa Oliveira e Mário Lopes - IST. Partners: LNEC, INGV (Italy), University of Iceland

1. **WaveSoil – Innovative seismic wave-based tools for the characterization of damping and anisotropy of soils in routine tests**

PTDC/ECM/122751/2010 - 2012-2015 - PI: António Gomes Correia, C-TAC/Universidade do Minho. Partners: UMinho, FEUP, IST

5.8. Scientific journals

Member of the *editorial board* of the international journal *Computers and Geotechnics* (Impact Factor: 1.705 – Q1)

Outstanding Reviewer Award 2013 of *Computers and Geotechnics*.

External evaluator for *Icelandic Research Fund* (2015 and 2016).

External evaluator for National Science Center, Poland (2017).

Reviewer for:

- *Computers and Geotechnics*
- *Géotechnique*
- *Bulletin of Earthquake Engineering*
- *Tunnelling and Underground Space Technology*
- *Journal Building Engineering*
- *Environmental Earth Sciences Journal*
- *Earthquake Engineering and Engineering Vibration*
- *European Journal of Environmental and Civil Engineering*
- *Engineering Geology*

5.9. Scientific events

Organizing committee:

2012 - Workshop LiMo - *Lisbon in Motion*, on the seismic risk for young researchers (<http://sites.google.com/site/limo15wcee/home>), 20 to 23 setember 2012, satellite to 15th World Conference on Earthquake Engineering (15WCEE)

2012 – *Local Advisory Committee* of the 15th World Conference on Earthquake Engineering (15WCEE), Lisboa, 24-28 September.

2012 - 13º National Conference on Geotechnics, April, IST/LNEC.

Scientific committee:

2017 - 9th International Symposium on Geotechnical Aspects of Underground Construction in Soft Ground, IS - São Paulo, Brasil. 4 e 5 Abril

2016 - 6th International Conference on Earthquake Geotechnical Engineering, Christchurch, New Zealand, 1-4 Novembro.

2014 - 5as Jornadas Portuguesas de Engenharia de Estruturas em conjunto com o Encontro Nacional Betão Estrutural 2014 (GPBE) e o 9º Congresso Nacional sobre Sismologia e Engenharia Sísmica (SPES), LNEC de 26 a 28 de novembro de 2014.

2012 - Second International Conference on Performance-Based Design in Earthquake Geotechnical Engineering, May 28-30, 2012 Conference Center Taormina (Italia).

2010 - 8º Nacional Congress on Seismology and Earthquake Engineering - SÍSMICA 2010, 20 to 23 October, Universidade de Aveiro.

Application:

2008 - Preparation of the Portuguese application for the organization of the 15th World Conference on Earthquake Engineering held in 2012. The organization was awarded to Portugal.

5.10. Invited lectures

3. Gomes, R.C., 2016. “Seismic design of tunnels”. Invited lecture, 4th CPT International Seminar "Tunnels. From exploration back to design", 4 e 5 February 2016, LNEC, Portugal.

2. Gomes, R.C. Invited Panellist in the Workshop ‘Round Robin centrifuge and numerical Test on Tunnels’, 2nd International Conference on Performance-Based Design in Earthquake Geotechnical Engineering. May 28-30, 2012 - Taormina, Italy.

1. Gomes, R.C. — Site effects – Local Site Conditions. (1h) International Workshop “LiMo - Lisbon in Motion” on seismic risk for young researchers, linked to the 15th World Conference on Earthquake Engineering, Lisboa, 20 September 2012.

6. Students supervision

6.1. PhD thesis

Concluded:

No.	Student	Start	Discussion	Instit.	Title	Other supervisors
1	Fátima Gouveia	2012	24th July 2017	IST	Dynamic characterization of the soil in urban areas under confined conditions.	Isabel Figueiredo Lopes (IST)

In progress:

No.	Student	Start	Expected	Instit.	Title	Other supervisors
1	Luís Miranda	2014	2018	IST	Liquefaction Mitigation Measures in Immersed Tunnel Foundations.	Laura Caldeira (LNEC), João Bilé Serra (LNEC)

6.2. MSc thesis (concluded)

No.	Student	Grade	Instit.	Year	Title	Supervisor
29	Márkosz Topalidisz	17/20	IST	2018	Numerical modelling of the seismic response of gas pipelines in liquefiable sand	(-)
28	Fernando Silva	16/20	IST	2018	Deformation of flexible retaining walls: the importance of knowing the soil's small strain stiffness	(-)
27	Ricardo Ramos	17/20	IST	2017	Protection of concrete slabs with granular material against explosive actions: experimental tests and modelling	João Marques (cap.)
26	José Cruz	16/20	IST	2017	Damage assessment of Pombalino building due to ground movements: analysis of a Pombalino building in a block at Lisbon's downtown	Rita Bento (IST)
25	André Ramos	17/20	IST	2017	Assessment of the seismic site response and susceptibility to liquefaction of an experimental campus	António Viana da Fonseca (UP)
24	Carlos Azeredo	16/20	Univ. Porto	2017	Seismic amplification on stratified massif with liquefiable sands: aggravation of settlements and lateral displacements at surface	António Viana da Fonseca (UP)

23	João Belo	17/20	IST	2017	Numerical Modelling of the excavation of shafts	(-)
22	Giulia Mazzocchi	104/110	UPavia (Italy)	2016	Risk Assessment of Soil Liquefaction across Southern Europe	Carlo Lai (UPavia)
21	Sandra Reis	17/20	IST	2016	Influence of backfill slope on the dynamic response of flexible retaining walls	Baldomiro Xavier (TD)
20	Rodrigo Baptista	17/20	IST	2016	Ground Investigation in Urban Environment Based on Seismic Methods: Analysis of the influence of the boundary conditions	Isabel Lopes (IST)
19	Hugo Renda	18/20	IST	2016	Damage to masonry buildings induced by ground displacements. Study of a Pombalino building located at Lisbon downtown	Rita Bento (IST)
18	Joana Chouriço	17/20	IST	2015	Seismic fragility curves for caisson-type quay walls	A. Trigo Teixeira (IST)
17	José Rodrigues	18/20	IST	2015	Ground Motion Prediction Equations for Mainland Portugal for different ground types	Alexandra Carvalho (LNEC)
16	Bárbara Peniche	18/20	IST	2015	Use of seismic methods for 2D soil dynamic characterization	Isabel Lopes (IST)
15	Ana Abreu	17/20	IST	2015	Geological and geotechnical characterization of urban areas using seismic methods	Isabel Lopes (IST)
14	Ana Delfim	16/20	IST	2014	Study of the seismic site effects at Lisbon metropolitan area	Alexandra Carvalho (LNEC)
13	Sónia Pereira	15/20	IST	2014	Technical Control of geotechnical risk in buildings: Geotechnical investigation	Nuno Almeida (IST)
12	Catarina Vaz	17/20	IST	2013	“Irregularities” influence on underground structures seismic behaviour	(-)
11	Maria Gomes	16/20	IST	2013	Seismic Behaviour of Underground Structures Built from Shafts	(-)
10	Teresa Ferreira	15/20	IST	2013	Two-dimensional seismic response of Lisbon’s downtown	Isabel Lopes (IST)
9	António Abreu	17/20	IST	2013	Effect of nonlinear behavior in soil-structure interaction: application to tunnels	(-)
8	Filipe Rodrigues	15/20	IST	2013	Measurement and modeling of vibrations induced by the subway	Isabel Lopes (IST)
7	Telmo Antunes	17/20	IST	2012	Rehabilitation of foundations of old buildings using micropiles	João Ferreira (IST)
6	David Brito	17/20	IST	2012	Collapse analysis of the Daikai station in Kobe Metropolitan	(-)

5	Tiago Henrique	15/20	IST	2012	Performance of a ground anchored bored pile wall	João Ferreira (IST)
4	Francisco Marques	19/20	IST	2011	Coimbra sand - Influence of non-plastic fines in liquefaction resistance	Jaime Santos (IST)
3	Fátima Gouveia	18/20	IST	2011	The influence of geologic-geotechnical characteristics on site effects	Isabel Lopes (IST)
2	João Santos	17/20	IST	2011	Behavior Analysis of a Berlin-type Retaining Wall	João Ferreira (IST)
1	Diogo Torcato	19/20	IST	2010	Seismic behaviour of shallow tunnels in stratified ground	Jaime Santos (IST)

7. Training courses

Coordinator

[4] Course on “Conception and execution of excavations in urban environment”. March 15 and 16, 2018, IST, Lisbon, Portugal

[3] Workshop Plaxis/IST. Excavation Modelling in Urban Environment with PLAXIS 2D, June 09, 2016, Lisbon, Portugal

[2] Course on “Eurocode 7: Application to the design of current geotechnical structures”. 11 September 2015, OE/Viseu.

[1] Course on "Seismic design of geotechnical structures according to Eurocode 8 - Part 5". 9 and 10 February 2015, IST.

Lecturer

[6] Gomes, R.C. Rehabilitation of the foundation of old buildings: intervention principles and analysis (1h30) - Course on “Rehabilitation of concrete and masonry structures”. 4 July 2018, Fundec/IST.

[5] Gomes, R.C. Geotechnical conditions and seismic action. Criteria for the geotechnical design of port structures (4h30) - Course on "Japanese port standard: Technical Standards for Port and Harbours Facilities in Japan". Fundec/IST, 3 and 4 April 2017.

[4] Gomes, R.C. — Pathologies of masonry buildings due to foundation issues. (1h) Seminar on Masonry Structures: Conception, Modelling and checking the safety of existing and new structures. 7, 9, 14, 16, 21 e 23 January de 2014. Coordinator: Prof. António Sousa Gago (IST), FUNDEC, IST.

[3] Gomes, R.C., Lopes, I.F., Gouveia, F. – Definition of the seismic action: classification of the ground through seismic methods in confined areas. (1h) Seminar on Masonry Structures: Conception, Modelling and checking the safety of existing and new structures.

7, 9, 14, 16, 21 e 23 January de 2014. Coordinator: Prof. António Sousa Gago (IST), FUNDEC, IST.

[2] Gomes, R.C. — Numerical modelling of the seismic response of the ground using recorded time-histories. (15 min.) — Workshop Improving Strong Motion Data for Engineering Applications, Lisbon, IST, March 25-27, 2010. Coordinator: Prof. Carlos Sousa Oliveira (IST)

[1] Gomes, R.C. — Ground improvement. (1h) — Seminar on Techniques to Rehabilitate Constructions. 23 de janeiro a 3 de fevereiro de 2012, com 30h de duração total. Coordinators: Prof.s Fernando Branco, João Gomes Ferreira e João Ramôa Correia (IST). FUNDEC, IST.

8. Teaching activity

8.1. Courses

Degree / course	Academic year / duration	Responsability
<u>Integrated Master in Civil Engineering (IST)</u>		
Soil and Rock Mechanics - MSR	3 rd year	
Analysis of Geotechnical Structures - AEG	4 th year	
Geotechnical Works - OG	4 th year	2009/10 to 11/12
Geotechnical Earthquake Engineering - ESG	5 th year - specialization in geotechnics	since 2009/10
Tunnels - T	5 th year - specialization in geotechnics	
<u>Degree in Industrial Engineering and Management (IST)</u>		
Elements of Civil Engineering – geotechnics – EEC;	2 nd year	
<u>Advanced Specialization Diploma (DEA) in Structural Engineering (IST)</u>		
Foundations of Structures – FE	25 hours	2009
<u>Master in Structural Engineering, Universidade Agostinho Neto, Luanda, Angola</u>		
Foundations of Structures and Retaining Walls	30 hours	2014
<u>Master in Civil Engineering for Mitigation of Risk from Natural Hazards, jointly offered by the University of Pavia and the School of Advanced Studies of Pavia (IUSS)</u>		

Foundations Engineering and Earth Retaining Structure - FEERS	51 hours	2018
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The courses ESG, T and FEERS are lectured in English.

8.2. Class notes

Degree / course	Content
<hr/>	
Integrated master in Civil Engineering (IST)	
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Geotechnical Works (2012)	Flexible retaining structures.
Geotechnical Earthquake Engineering (2009)	Description of the seismic motion. Modal analysis and response spectrum analysis. Seismic code: Eurocode 8 part 1 and part 5. Application of Eurocode 8 part 5. Liquefaction. Shallow foundations. Slopes. Topographic effects.
Tunnels (2013)	Phenomenology of shallow tunnels. Preliminary analysis: empirical and simplified methods. Numerical simulation of tunnel construction.
Construction Pathology and Rehabilitation (2012)	Foundations pathology and reinforcement.
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Advanced Specialization Diploma (DEA) in Structural Engineering (IST)	
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Foundations of Structures (2009)	Ground improvement: replacement, densification, injection, mixture, inclusions.
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Master in Structural Engineering, Universidade Agostinho Neto, Luanda, Angola	
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Foundations of Structures and Retaining Walls (2014)	Current laboratory tests. Geology of Luanda. Revisions of the mechanical behaviour of the soil. Field tests. Correlations. Shallow foundations in soils and rocks. Deep foundations: vertical loads, trasversal loads and pile groups. Strengthening and ground improvement. Retaining walls: types, behaviour, construction sequence, design. Instrumentation of geotechnical works. Observational method.

Master in Civil Engineering for Mitigation of Risk from Natural Hazards, jointly offered by the University of Pavia and the School of Advanced Studies of Pavia (IUSS)

Foundations Engineering and Earth Retaining Structure (2018)	Eurocode 7 – design of current geotechnical structures. Static and seismic design of shallow foundations. Static and seismic design of deep foundations. Static and seismic design of earth retaining walls.
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IST, Lisboa, 09th September 2018

