ALLEGATO B

europass Curriculum Vitae Rita Couto

PERSONAL INFORMATION

Rita Monteiro Garcia Couto

[redacted]

Gender [redacted] | Date of birth [redacted] | Nationality

POSITION FOR WHICH YOU COMPETE

Individual collaboration for occasional self-employment "Approcci semplificati per l'identificazione di strategie ottimalo di adeguamento sismico, energetico e di impatto ambientale di strutture esistenti"

WORK EXPERIENCE

June 2019 – July 2021

University research assistant

Instituto Superior Técnico, Universidade de Lisboa, Avenida Rovisco Pais, 1049-003, Lisbon, Portugal

Development of studies within the scope of the research project entitled "*MitRisk - Framework for seismic risk reduction resorting to cost-effective retrofitting solutions*". In this project, I have conducted a survey in the area of Alvalade, Lisbon, to characterize the reinforced concrete building stock. From the analysis of this database I have modelled and analysed the seismic performance of two RC structures, taking into account the effect of the aging of materials and the presence of smooth bars. Moreover, a retrofitting solution adopting FRP was also evaluated for one of the buildings as an economic loss assessment.

November 2018 – December 2018

University research assistant

Politechnika Rzeszowska, Rzeszow, Poland

Assistance to PhD students in the development of a catalog of steel connections. The work developed focused on the calculation and design of steel connections.

EDUCATION AND TRAINING

September 2021 - present

PhD Understanding and Managing Extremes (UME)

Scuola Superiore Studi Pavia IUSS (Istituto Universitario di Studi Superiori), Palazzo del Broletto, Piazza della Vittoria, 15, 27100 Pavia PV

Proposed Thesis: Integrated Seismic and Energy Performance of Existing Buildings

Supervisor: *Prof. Ricardo Monteiro*

PhD Research: The main goal of this research is to propose a framework to integrate, in an optimal manner, the seismic and energy retrofitting of existing RC buildings, with a view to minimise the economic losses and environmental impacts.

September 2017 – May 2019

MsC in Structural Engineering

Instituto Superior Técnico, Universidade de Lisboa, Avenida Rovisco Pais, 1049-003, Lisbon, Portugal

MSc Thesis: Influence of Ground Movement on the Seismic Damage Assessment of a Pombalino Building. Grade 18/20

Supervisor: *Prof. Rita Bento*

September 2017 – May 2019

MsC Erasmus in Structural Engineering

Gent University, 9000 Ghent, Belgium

OTHER ACTIVITIES

June 2019 - present

Tutoring MSc thesis

Support in the development of students' MSc dissertations in the area of seismic assessment of reinforced concrete structures, under the guidance of Professor Rita Bento.

June 2022 – December 2022

Collaboration in the development and presentation of the course: "Integrated Assessment and Retrofitting of Existing Buildings"

The main topic of the course was to provide an overview of state-of-art methodologies for the integrated seismic/energy assessment and retrofitting of existing buildings. My role on the course was to present some of the practical lessons and to give support to the instructors.

June 2021 and September 2022

Collaboration in the development and presentation of the FUNDEC course: "Seismic Evaluation of Existing Reinforced Concrete Buildings"

Development and collaboration in the presentation of the course "Seismic Evaluation of Existing Reinforced Concrete Buildings" that took place at Instituto Superior Técnico, FUNDEC, in June 2021 and September 2022.

May 2021 – August 2021

Support in activities carried out in Laboratory of structures and strength of materials at Instituto Superior Técnico

Support in the development of experimental tests on rubble stone walls un- and strengthened, such as thermographic, ultrasonic and quasi-static cyclic tests.

15/12/2020 – 16/12/2020

Member of the 9EWICS workshop organizing committee (https://9ewics.org)

Member of the organizing committee of the Workshop "9th European Workshop on the Seismic Behaviour of Irregular and Complex Structures (9EWICS)" that took place on the 15th and 16th of December 2020 in online format.

05/03/2020 – 06/03/2020

Collaboration in the presentation of the FUNDEC course: "Evaluation and Reinforcement of Existing Masonry Buildings - Application Example"

Collaboration in the presentation of the course "Evaluation and Reinforcement of Existing Masonry Buildings - Application Example" that took place at Instituto Superior Técnico, FUNDEC, on March 5th and 6th, 2020.

PERSONAL SKILLS

Mother Language: Portuguese

Other language

	COMPREHENSION		SPEAKING		WRITING
	Listening	Reading	Interaction	Oral Production	
English	C1	C1	C1	C1	C1
Italian	B1	B1	A2	A2	A1

Livelli: A1/2 Livello base - B1/2 Livello intermedio - C1/2 Livello avanzato
Quadro Comune Europeo di Riferimento delle Lingue

Communication Skills

Good communication acquired from summer work at a restaurant and from the oral presentations given during university and research work.
Good teamwork.

Organizational and management Skills

Strong problem-solving and ability to work under pressure.
Patience, determined, and persistence to solve issues.
Good time management.

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Attention to detail

Professional Skills

- Structural assessment of buildings.
- Seismic assessment of buildings.
- Risk assessment of buildings.
- Retrofit solutions for buildings.
- Energy performance assessment of buildings.
- Programming in Matlab and Python.

Software Skills

FEM Softwares	Programming Languages	Other Softwares
3MURI	Matlab	ArcGIS
DIANA FEA	Python	Autocad
Opensees	Tcl	Edilclima
Sap2000		Microsoft Office
SeismoBuild		OpenQuake
SeismoStruct		SeismoSelect
Tremuri		SeismoSignal

Driving License B (11/2013)

Pubblications

Journal paper

- Peres, R., Couto, R., Sousa. I., Castro, J.M., Bento. R. (**2023**) Modelling and evaluation of brittle shear effects on the seismic performance and loss assessment of RC buildings. *Engineering Structures* 275:115230, DOI: 10.1016/j.engstruct.2022.115230

- Xavier, V., Couto, R., Monteiro. R., Castro, J.M., Bento. R. (**2022**) Detailed Structural Characterization of Existing RC Buildings for Seismic Exposure Modelling of the Lisbon Area. *Buildings* 12(5): 642, DOI: 10.3390/buildings12050642

- Sousa, I., Peres, R., Couto, R., Bento. R., Castro, J.M. (**2022**) Numerical Modelling and Damage Assessment Criteria for Frp Retrofitted Rc Elements. SSRN Electronic Journal, DOI: 10.2139/ssm.4087299

- Requena-Garcia-Cruz, M.V., Couto R., Bento, R., Morales-Esteban, A. (**2022**) Seismic Assessment of RC Buildings Considering the Influence of Vertical Irregularities: Framed and Wall-Frame Structures in book "*Seismic Behaviour and Design of Irregular and Complex Civil Structures IV*", DOI: 10.1007/978-3-030-83221-6_24

- Couto, R., Sousa, I., Bento. R., Castro, J.M. (**2021**) 2. Seismic vulnerability assessment of RC structures: research and practice at building level, chapter 2 of book *Research and Practice on the Seismic Vulnerability Assessment of Civil Engineering Structures at Multiple Scales*, *Elsevier.*

- Couto, R., Requena-García-Cruz M.V., Bento, R. and Morales-Esteban, A. (**2020**) Seismic capacity and vulnerability assessment considering ageing effects: case study – three local Portuguese RC buildings, *Bulletin of Earthquake Engineering*, Springer. DOI: https://doi.org/10.1007/s10518-020-00955-4

- Couto, R., Bento, R and Gomes, R. (**2020**) Seismic performance and fragility curves of historical residential buildings in Lisbon downtown affected by settlements, *Bulletin of Earthquake Engineering*, Springer. DOI: https://doi.org/10.1007/s10518-020-00906-z

- Couto, R., Bento, R and Gomes, R. (**2020**) Análise sísmica de edifícios Pombalinos afetados por assentamentos do terreno, *RPEE*, Laboratório Nacional de Engenharia Civil, Série III, nº 14, 85-96 (in Portuguese)

Conferences

- Xavier, V., Couto, R., Bento. R., Monteiro. R., Castro, J.M., (**2022**) Characterization of Existing RC Buildings in Lisbon for Earthquake Risk Assessment. *3rd European Conference on Earthquake Engineering and Engineering Seismology,* Bucharest, Romania
- Sousa, I., Peres, R., Couto, R., Bento. R., Castro, J.M. (**2022**) Numerical Modelling of FRP- Retrofitted RC Elements. *3rd European Conference on Earthquake Engineering and Engineering Seismology*, Bucharest, Romania
- Couto, R., Sousa, I., Peres, R., Castro, J.M., Bento. R. (**2021**) Evaluation of the seismic performance of old existing RC residential buildings, *17th World Conference on Earthquake Engineering*, Japan.
- Sousa, I., Couto, R., Peres, R., Castro, J.M., Bento. R. (**2021**) Evaluation of a numerical modelling approach for the simulation of retrofitted RC elements, *8th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering*, Greece.
- Requena-Garcia-Cruz, M.V., Couto R., Bento, R., Morales-Esteban, A. (**2020**) Influence of vertical irregularities on the seismic assessment of RC framed and wall-frame buildings, *Proceedings of the 9th European Workshop on the Seismic behaviour of Irregular and Complex Structures*, Online Workshop, 15-16 December 2020. ISBN: 978-989-33-1269-8. Retrieved from https://9ewics.org/
- Couto, R., Bento, R. e Gomes, R. (**2019**) Influência de movimentos do terreno nos danos e na capacidade resistente sísmica de edifícios Pombalinos, *11º Congresso Nacional de Sismologia e Engenharia Sísmica*. Lisboa, Portugal (in Portuguese)

ATTACHMENTS

- Copy of MSc degree obtained

Date 28/02/2023

Signature

Documento firmato
in originale
conservato agli atti