



Juliano Ferreira Martins

EDUCATION AND TRAINING

Ph. D. at Ingegneria Strutturale e Geotecnica*

Sapienza Università di Roma - Dipartimento di Ingegneria Strutturale e Geotecnica [10/2019 – Current]

Field(s) of study: Engineering, manufacturing and construction

Thesis: Piezoelectric connectors for energy harvesting purposes on wind-excited buildings

Supervisor: Francesco Petrini

Major: Piezoelectricity, Energy harvesting, Wind engineering

***To be obtained before May 2023.**

Master in Engineering Materials Integrity

Universidade de Brasilia [08/2017 – 07/2019]

Field(s) of study: Computation Mechanics

Thesis: Analytical-experimental study of optimum parameters for the passive control via the tuned liquid column damper in structures

Supervisor: Marcus V.G. de Moraes

Cosupervisor: Suzana Avila

Attended courses: Numerical methods, Introduction to finite element method, Introduction to boundary element method, Interaction fluid-structure, and Vibrations of mechanical systems.

Research: Passive vibration controls: Tuned liquid column damper (TLCD)

Bachelor in Civil Engineer

Universidade Catolica de Brasilia [02/2011 – 12/2016]

Field(s) of study: Engineering, manufacturing and construction

Final grade: 8.90/10

Thesis: Functionality of Structural Adhesives in the Treatment of Interface Zones between Concretes of Different Ages.

with exchange student through the Brazilian program 'science without borders' at the University of Toronto (2º/2014) – Capes scholarship from 09/2013 to 12/2014.

WORK EXPERIENCE

Civil engineering specialist

Carnielo Construtora [Private civil engineering firm] [31/05/2019 – 29/08/2019]

City: Brasilia

Country: Brazil

Supervision of work team, Quantitative Survey, Construction Budgets, and Refurbishments.

Civil Engineer Internship

Caixa Econômica Federal – Public Bank [03/2015 – 12/2016]

City: Brasilia

Country: Brazil

Monitoring the evaluation of public works processes, analysis of budgets, and standard projects related to the PAC program. Assistance in the elaboration of technical opinions. Technical visits for evaluation of measurement bulletins. Sanitation, paving, and buildings are the sector's most active types of work.

Civil Engineer Internship

Borges Landeiro – Real State Company [02/2012 – 01/2013]

City: Brasilia

Country: Brazil

Quantitative Survey, Budgets, Work follow-up, Monitoring of measurements, Verification of services performed.

Civil Engineer Internship

CEB – Power Company [10/2011 – 01/2012]

City: Brasilia

Country: Brazil

Quantitative Survey, Construction Budgets

LANGUAGE SKILLS

Mother tongue(s): **Portuguese**

Other language(s):

English

LISTENING C1 READING C1 WRITING C1

SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1

Italian

LISTENING B2 READING B2 WRITING B2

SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2

French

LISTENING A2 READING A2 WRITING A2

SPOKEN PRODUCTION A2 SPOKEN INTERACTION A2

DIGITAL SKILLS

Microsoft Office / Matlab / ANSYS (APDL) / AUTOCAD / Python (basic) / Labview (basic)

PUBLICATIONS

Sloshing examples modelled by a bidimensional FE eulerian approach using wave equation

[2022]

Journal of Vibration Engineering & Technologies

Under revision

Piezoelectric energy harvesting in tall buildings under wind

[2022]

Work presented at the In-Vento XVII Conference of the Italian Association for Wind Engineering

Equivalent mechanical model of rectangular container attached to a pendulum compared to experimental data and analytical solution

[2020]

JOURNAL OF THE BRAZILIAN SOCIETY OF MECHANICAL SCIENCES AND ENGINEERING, V. 42, P. 143

Parametric Optimization of TLCD-Main Structure Couple System Subject to Arbitrary Stochastic Excitations.

[2019]

Annals of XL Ibero Latin American Congress on Computational Methods in Engineering (CILAMCE 2019).

Experimental Study of Equivalent 1DOF Main Structure Coupled to TLCD: Validation of Optimum Parameter Obtained by Parametric Optimization.

[2019]

Annals of 25th International Congress of Mechanical Engineering (COBEM – out/2019).

CONFERENCES AND SEMINARS

In-Vento XVII Conference of the Italian Association for Wind Engineering

[Milan, 04/09/2022 – 07/09/2022]

Work presented: Piezoelectric energy harvesting in tall buildings under wind

The 18th International Advanced School on Wind Engineering (IAS18)

[IAS18 - Online, 21/08/2021 – 22/08/2021]

Research topics on passive suppression of oscillations using non-linear vibration absorbers

[Rome, 07/02/2020]

Prof. Guilherme Rosa Franzini

Brazilian Congress of Building's Pathology

[Belem - Brazil, 18/04/2016 – 20/04/2016]

Congresso Brasileiro de Patologias das Edificacoes - Attending the conference, participating in short courses

CORSI DI PERFEZIONAMENTO POST-LAUREA

Finite Elements

[03/05/2021 – 06/05/2021]

Prof. Daniela Addessi - Sapienza Università di Roma

DISG - Online

Modeling of Offshore Structures

[25/03/2021 – 29/03/2021]

Dr. Nicholas Fantuzzi - Alma Mater Studiorum Università di Bologna

Online - DISG

Direct and Inverse Dynamic Problems in Random Vibrations

[03/06/2020 – 10/06/2020]

Prof. Vincenzo Gattulli (Sapienza University of Rome)

Prof. Luca Caracoglia (Northeastern University, Boston)

Costruzioni esistenti in Muratura “Marcello Ciampoli”

[13/05/2020 – 29/05/2020]

DISG

Teorie Strutturali

[24/02/2020 – 28/02/2020]

Prof. Achille Paolone

DISG

Continuum Mechanics

[07/02/2020 – 17/02/2020]

Prof. A. Favata

DISG

TEACHING ASSISTANT

Teaching assistant at Steel and Timber Structures

[08/2016 – 12/2016]

at Universidade Catolica de Brasilia. 4h/week

Teaching assistant at Soil Mechanics I

[08/2015 – 12/2015]

at Universidade Catolica de Brasilia. 4h/week

Teaching assistant at Mechanical Vibration

[08/2018 – 12/2018]

at Universidade de Brasilia as a requirement for master's degree curriculum.

Under the supervision of Marcus v. De Moraes and Aline S. de Paula

NETWORKS AND MEMBERSHIPS

Associazione Nazionale dell'Ingegneria del Vento sezione Giovani (ANIV-G)

[Italy]

From 2022

REFERENCE CONTACTS

Prof. Patrizia Trovalusci

Coordinator of the Doctorate of Structural and Geotechnical Engineering

Sapienza Universita di Roma

e-mail: patrizia.trovalusci@uniroma1.it

Prof. Marcus V. G. de Moraes - Universidade de Brasilia

e-mail: mvmoraes@unb.br

Prof. Aline S. de Paula- Universidade de Brasilia

e-mail: alinedepaula@unb.br

PERSONAL STATEMENT

Research background

Particularly to the present call, I want to state that my expertise meets those mentioned in the article of the published 'bando'. Recently on my Ph.D. project, I have been working on the conception of energy harvesting devices with piezoelectric materials to be applied on tall buildings under wind effect. Those buildings, in which the device is equipped, are conceived as steel structures due to their sensitivity to the wind. Hence, the project englobes in an overall all those mentioned areas. Before that, I had worked with passive-tuned dampers, in particular with Tuned Liquid Column Dampers (TLCD) in numerical and experimental ways.

Data: 09/12/2022

'Autorizzo il trattamento dei miei dati personali presenti nel cv on accordo con le norme vigente'