



MARIE SKŁODOWSKA-CURIE POSTDOCTORAL FELLOWSHIPS 2022

EXPRESSION OF INTEREST FOR HOSTING MARIE CURIE FELLOWS

HOST INSTITUTION

NOVA School of Science & Technology

RESEARCH GROUP AND URL

CERIS (<https://ceris.pt/>, <https://docentes.fct.unl.pt/rodrigo-goncalves/pages/research-0>)

SUPERVISOR (NAME AND E-MAIL)

Rodrigo Gonçalves (rodrigo.goncalves@fct.unl.pt)

SHORT CV OF THE SUPERVISOR

Currently employed as an Associate Professor with Habilitation, Rodrigo Gonçalves possesses over twenty years of research experience in steel and steel-concrete composite structures, structural stability and thin-walled structures. He is currently the Coordinator of the PhD Program in Civil Engineering, is currently within the world top 2% most cited scientists in his field (DOI: 10.17632/btchxktzyw.3) and has received several national and international distinctions. He is the Portuguese representative in WG3 (EN 1993-1-3 - Cold-formed steel members) and WG22 (EN 1993-1-14 - Design assisted by FEM) of CEN.

5 SELECTED PUBLICATIONS

- Gonçalves, R., Ritto-Corrêa, M., Camotim, D., "A new approach to the calculation of cross-section deformation modes in the framework of Generalized Beam Theory", *Computational Mechanics*, 46(5), pp. 759-781, 2010.
- Gonçalves, R., Ritto-Corrêa, M., Camotim, D., "A large displacement and finite rotation thin-walled beam formulation including cross-section deformation", *Computer Methods in Applied Mechanics and Engineering*, 199(23-24), pp. 1627-1643, 2010.
- Gonçalves, R., Camotim, D., "Elastic buckling of uniformly compressed thin-walled regular polygonal tubes", *Thin-Walled Structures*, 71, pp. 35-45, 2013.
- Manta, D., Gonçalves, R., "A geometrically exact Kirchhoff beam model including torsion warping", *Computers and Structures*, 177, pp. 192-203, 2016.
- Bebiano, R., Camotim, D., Gonçalves, R., "GBTUL 2.0 – a second-generation code for the GBT-based buckling and vibration analysis of thin-walled members", *Thin-Walled Structures*, 124, pp. 235-253, 2018.

PROJECT TITLE AND SHORT DESCRIPTION

"DSM-EC3". In this project the fellow will assess the accuracy of the direct strength-based method prescribed in the new version of Eurocode 3 part 1-3, for cold-formed steel members failing by local and distortional buckling, in both common (e.g., lipped channel) and uncommon section shapes. This study is essential since it has never been performed (even for standard sections) and a new version of Eurocode 3 part 1-3 will soon be available. If the rules are found to be inadequate, the supervisor will help the fellow to define a new proposal.

SCIENTIFIC AREA WHERE THE PROJECT FITS BEST*

Information Science and Engineering (ENG)

***Scientific Area where the project fits best** – Please select/indicate the scientific area according to the panel evaluation areas: Chemistry (CHE) • Social Sciences and Humanities (SOC) • Economic Sciences (ECO) •



Information Science and Engineering (ENG) • Environment and Geosciences (ENV) • Life Sciences (LIF) • Mathematics (MAT) • Physics (PHY)