

ANDRÉ RITTNER PIRES CORREA

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EXPERIENCE

Industrial Research Engineer

Siemens Gamesa Renewable Energy

Dec 2018 – Nov 2019

Denmark

- Damage Propagation Prediction in Wind Turbine Blades by Multiscale Analysis of Fiber Reinforced Composites
 - Continuum Damage Mechanics for Intraply damage modeling;
 - Cohesive Zone for Interply damage (delamination) modeling;
 - Concurrent Multiscale Analysis (Bottom-Up and Top-Down).

Industrial Research Engineer

FIDAMC

April 2017 – Dec 2018

Getafe, Spain

- CFRP Aeronautical Structures Design and Analysis;
- CFRP Characterization: Universal Tensile Machine, DIC, Rheology, DMA.

Internship

Airbus Group Innovations

Jan 2015 – Dec 2015

Ottobrunn, Germany

- Development of novel metal-oxide sensor system for monitoring CFRP exposed to random contaminants (humidity, kerosene, hydraulic fluid and deicing).
 - Metal-oxide sensors set-up (defining operational parameters: temperature, pressure, humidity);
 - Predictive Models Training: Data Science/Machine Learning.

UNDERGRADUATE PROJECTS

Skin-to-Stiffener Bonded Joint Analysis

The University of São Paulo

Jan 2016 – Dec 2016

- CFRP Mechanical Characterization;
- Mode 1 Experimental Campaign;
- Stiffener-to-Skin Bonded Joint Numerical Analysis (ABAQUS);
- Publication.

MAV (Mini Aerial Vehicle) flight control in non-structured environment

The University of São Paulo/FAPESP 2012/18359-2

Aug 2012 – Aug 2013

- Aerodynamic Stability derivatives calculation;
- Virtual PID flight controller development;
- Virtual Autonomous Flight;
- Final report submission to the sponsor: FAPESP.

STRENGTHS

Communicative

Attention to Detail

Creative

Innovative

FEM

Explicit Analysis

ABAQUS

Implicit Analysis

Ansys

Hypermesh

Patran/Nastran

Solidworks

Solid Edge

Catia V5

Programming

Fortran

Matlab

Python

C++

MS.Office

Origin

LANGUAGES

Portuguese

English

Spanish

French



EDUCATION

PhD in Mechanical Engineering

École de Technologie Supérieure (ÉTS), Université du Québec

April 2020 – today

Thesis: Thermoplastic consolidation of welding process: a numerical approach

PhD in Mechanical Engineering (not-concluded)

Universidad Politécnica de Madrid (UPM)

April 2017 – Dec 2018

Thesis: Unidirectional Thermoset Prepreg Forming Simulation

Dipl Aeronautical Engineering

University of Sao Paulo (USP)

Feb 2011 – Dec 2016

Thesis: CFRP Wing Box Design of a Cargo Aircraft

PUBLICATION/CONFERENCE PRESENTATION

Conference Publications

- André Pires-Corrêa, Juan M. González-Cantero and Carlos González (2018). "A numerical approach on Intraply and Bending behavior of uncured thermoset prepreg for Forming Process". In: 55th Annual Technical Meeting of the Society of Engineering Science.
- André R. P. Corrêa Gregorio F. O. Ferreira, Sofia T. Freitas and Volnei Tita (2016). "Computational Analysis of a Metallic T-shape Stiffener bonded to a Glare Skin". In: 1st SiPGEM EESC/USP.