ANDRÉ RITTNER PIRES CORREA

@ andre.rittner.correa@gmail.com (+1) 514 445 4834 H2K-1P1, Montreal, Quebec, Canada

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 Madrd (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 approachon 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.