



Marco Picanço

Senior Engineer (Dr. Eng.)

- ▶ +55 48 99933-9018 (Brazil)
- ▶ Brazilian
- ▶ married

Education

Feb/2022

Data Analyst Nanodegree

Udacity

Organize data, uncover patterns and insights, draw meaningful conclusions and communicate critical findings. Develop proficiency in Python and its data analysis libraries (Numpy, pandas, Matplotlib) and SQL

Dec/2020

Machine Learning, Modeling and Simulation: Engineering Problem-Solving in the Age of AI

Massachusetts Institute of Technology - MITxPro

Simulate complex physical processes using discretization methods and numerical algorithms. Recognize the limitations of machine learning and what MIT researchers are doing to resolve them. Practice real-world forecasting and risk assessment using probabilistic methods.

Biography

Hi, my name is Marco Antonio Picanço, I am a thermal sciences doctoral Mechanical Engineer, with a master's degree in control of mechanical systems and more than 25+ years of professional experience in turbomachinery equipment at petrochemical, oil e gas and power generation industry. During my career, I have the opportunity to develop a solid academic knowledge associated with hands-on industrial experience. I truly believe that I can positively impact and contribute at a rotating equipment position bringing a multi-disciplinary approach, industrial background and project execution experience.

Work experience

GE VERNOVA | Senior Engineer

Jun/2015 - today

GE Gas Power Controls (former Nexus Controls/BH)
Axial and Centrifugal Compressor Controls Dev Team

- Compressor control suite platform migration and development.
- Centrifugal compressor analytics joint project with Nexus Controls /EIC (Energy Innovation Center)
- Patent Filled:
"SYSTEMS AND METHODS FOR OPERATING A COMPRESSION SYSTEM" S20180163736
- Artificial Neural Network based Virtual Flow Meter block development for Nexus Oncore PLC. (C/C++)
- AGA report 8 (Equation of State) block development for Nexus OnCore PLC (C/C++)

GE Oil & Gas | Field Application Engineer

May/2011 - Jun/2015

Digital Solutions | Control Solutions

Dedicated to Gas Turbine, Steam Turbines and Axial & Centrifugal Compressor Controls systems: Application development, Technical solution design and End user technical clarification support.

Odebrecht Industrial Plants- Mechanical Engineer

Dez/2009 - Sep/2010

Green Ethylene Project | Braskem

Responsible for:

- Centrifugal compressors Erection and commisioning (charge Gas and Propylene)
- Rotating Equipment erection
- Static process equipment erection
- Project wide lift and rigging management

Apr/2016

Statistical Learning

Stanford University - Stanford Online

Introductory-level course in supervised learning, with a focus on regression and classification methods. Linear and polynomial regression, logistic regression and linear discriminant analysis; cross-validation and the bootstrap, model selection and regularization methods (ridge and lasso); nonlinear models, splines and generalized additive models; tree-based methods, random forests and boosting; support-vector machines. Some unsupervised learning methods are discussed: principal components and clustering (k-means and hierarchical).

May/2000 - Nov/2006

Doctoral Degree Mechanical Engineer [Thermal Sciences] (Dr.Eng.)

Fed. University of Santa Catarina

Convective Boiling ■ *Multiphase Experimental Heat Transfer*

Doctoral's thesis: „Experimental and Theoretical Analysis of the Nucleate and Convective Regimes Inside Plain and Microfin horizontal Tubes“.

Mar/1994 - Nov/1999

Master Degree Mechanical Engineer [Manufacturing]

Fed. University of Santa Catarina

Intelligent Control ■ *Fuzzy Logic*

Master thesis: „Fuzzy logic control for a pneumatic servo-system.“.

Mar/1988 - Mar/1994

Fed. University of Bahia

Mechanical Engineer

Bachelor

Dresser Rand - Field Service Engineer

Nov/2008 - Dez/2009

Field Services Brazil

Onshore turbomachinery engineer and Contract Coordination at Petrobras UN-RIO field. (P53,P54 and P50).

- Assisted Operation and Maintenance of the DR compression train.
- Surge control system effectiveness evaluation using field data and Process simulation tools.
- On-line Operation and Condition and performance monitoring using PI operational data and System One.
- Participation at the Workgroup for Condition Based
- Spare-parts stock recommendation and resupply parameters for Motor Compressors P-53 [UO-RIO]
- RCA analysis for unplanned outages and shutdowns. P-53 [UO-RIO]
- Centrifugal compressor overhaul technical advisor (FSE)
- Maintenance Plan Effectiveness, asset reliability and availability analysis. [Reduc Refinery]

Santa Catarina Gas Company - SCGAS

Jun/2007 - Oct/2008

Senior Engineer Operation & Maintenance
(1st Place Public exams)

- Development of flow meters Calibration and maintenance plan.
- Flow Measurement Stations reliability analysis using MontCarlo methods.
- Reliability Center Plan for flow measurement stations.

Unerj - now CatolicaSC | Lecturer

Aug/2004 - Feb/2007

Teaching Classes:

- Fluid Dynamics 1 and 2
- Vibration and Acoustics
- Turbomachinery

Undergraduate research projects advisor:

- Design and construction of a Micro wind turbine (150W) with axial flux generator. 2005 - Ilka Bringhamt- Scientific Initiation Student (Mech. Eng.)
- Rolling bearing failure mode analysis and diagnostic at progressive cavity pumps. 2005; Marcio Doege - Scientific Initiation Student (Mech. Eng.)
- Design and test Stepper motor CNC axis control board for mini router milling machine; 2005; Maico Jonas Taube; Scientific Initiation Student (Mech. Eng.)
- Axial and Radial blowers test rig; 2005; Waldir Quost Junior and Gilson Gaedtek Scientific Initiation Students (Mech. Eng.)

Copene - (Now BRASKEM)

Apr/1998 - May/2000

Ethylene plant Turbomachinery engineer

- Quality programs TPM and TQC.
- Predictive and Preventive Maintenance programs.
- Reliability Centered Maintenance Plan for a Propylene Centrifugal Compressor and Steam Turbine.
- Teaching: Medium and low Power Steam Turbine safety and operation course.
- Contract negotiation.
- Overhauls medium and low power turbo-machinery.
- Revamp technical discussions with OEM for the ethylene, propylene and cracked gas compressors (DRESSER-RAND) and steam turbine (GE) at the Ethylene Plant II.

Skills

Turbomachinery a applicable standards (API,ISO,ASME and ANSI) 20+ yrs

Thermal Systems Engineering

System & Turbomachinery Controls 10+ yrs.

Process modeling & simulation

Scientific Computing & Simulation with Matlab, Python, R, C/C++

Data Aquisition Signal Processing

CFD / FEA

Data science & Analytics 4+ yrs.

Languages

Portuguese L1

English C1

Spanish B2

French A2

Contact

Rua Rev. Gelson S. Castro, 445
Florianopolis/SC
88048-340 Brazil

+55 48 99933 9018

mpicanco@gmail.com

github.com/mpicanco

linkedin.com/in/mapicanco

CEMAN - (Now - Abb Service)

Rotating Equipment engineer

Apr/1996 - May/1998

- Field Engineer on a 42MW FUJI Steam Turbo Generator Overhaul at COPENE (now Braskem) Camaçari-BA.
- ABB Steam Turbines drivers for the ethylene, propylene and cracked gas compressors overhauls at the Ethylene Plant II at COPENE.
- Combustion Chamber and Gas Path Revision on FRAME 6 EGT/GE GAS-TURBINES at COPENE.
- Field Experience on plant-wide overhauls at petrochemical, oil and gas and cement plants. Ex. Refineries, Fertilizer plant, Steel Mills, Cement plants, etc..
- Overhauls on medium and low power turbo-machinery including centrifugal and reciprocating compressors, blowers, pumps, electric motors.
- Machinery and Plant Overhaul Planning and Scheduling using MSPROJECT and PRIMAVERA.

Publications

- PICANÇO, M. A. S. ; STAROSELSKY, S. ; GALEOTTI, D., Centrifugal compressor Performance and antisurge control under high pressure natural gas applications with large changes in CO2 content. 2013, 9th Petrobras Turbomachinery Forum.
- PICANÇO, M. A. S. ; Passos, Julio Cesar ; Bandarra Filho, Enio . Heat Transfer Coefficient Correlation for Convective Boiling Inside Plain and Microfin Tubes Using Genetic Algorithms. Heat Transfer Engineering , v. 30, p. 316-323, 2009.
- PICANÇO, M. A. S. ; BORGES, A. J. W. K. . Influência da pressão em sistemas de medição de gás natural com totalizadores de volume tipo turbinas - fatores a considerar. In: Rio Oil & Gas Expo and Conference 2008, 2008, Rio de Janeiro -RJ - BR. Anais do Rio Oil & Gas Expo and Conference 2008 - CDROM. Rio de Janeiro, 2008.
- PICANÇO, M. A. S. ; PASSOS, J. C. . Flow Boiling of R-141b Inside Plain and Microfin Tubes.. In: 6th International Conference on Boiling Heat Transfer, 2006, Spoleto - IT. Proceedings of the 6th ICBHT. ROME - IT: ECI - I-ICBHT, 2006.

Personal Projects

- Design of a micro-turboexpander for domestic and commercial refrigeration systems.BRPI0504398A (Patent Claimed)

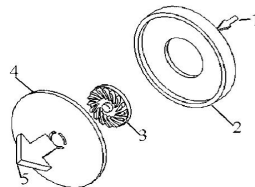
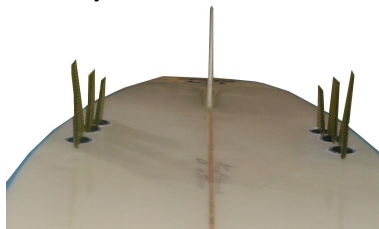
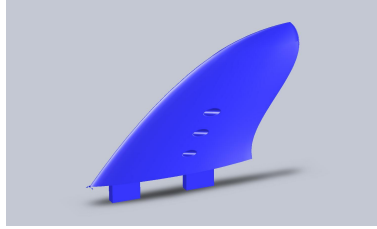


FIGURA 1

- HEAT SINK FOR ELECTRONIC COMPONENT - BR8300987U (Patent Claimed)
- Multi-Hydrofoil Cascade Forward-swept surfboard fins (Patent Claimed)



- Low cavitation Eppler hydrofoil with pressure equalization holes and small winglets
surfboard fins CFD optimization using OpenFoam



- Oceanographic buoy for directional spectral coastal wave measurement

Florianopolis/SC, 19th May 2023

Marco Antonio Silva Picanço