RAFAEL ACCÁCIO NOGUEIRA

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▬▬▬▬ Education

nov 2019 dec 2022	**Ph.D in Automatic Control (ongoing)**, *CentraleSupélec/Université Rennes 1*, Rennes, France. *Sécurité de la Commande Prédictive distribuée sous injection de données faussées* **Directeur:** Hervé Guéguen ○ Utilisation des méthodes d'estimation/classification pour la détection d'attaques et mitigation de ses effets.
sep 2017 sep 2018	**Master 2 Research in Electronics** - **Signal, Imaging,Embedded Systems and Control**, *Control Path* *CentraleSupélec/Université Rennes 1*, Rennes, France.
sep 2016 sep 2018	**Automatic Systems Engineering** - **Supélec Formation**, *CentraleSupélec*, Rennes, France.
apr 2013 dec 2019	**Control and Automation Engineering Bachelor Degree**, *Universidade Federal do Rio de Janeiro*, Rio de Janeiro, Brazil. *Identification d'un système mécatronique* **Superviseur:** Marcos Vicente de Brito Moreira ○ Modélisation en réseau de Petri d'un système mécatronique multi-agent, implementation dans un automate en Ladder, et surveillance pour l'identification global (modèle DAOCT) utilisant python.
apr 2010 dec 2012	**Electronics Technical**, *Centro Federal de Ensino Tecnológico Celso Suckow da Fonseca*, Rio de Janeiro, Brazil.
	Elementary and High School, *Colégio Pedro II - Unidade Escolar Centro*, Rio de Janeiro, Brazil.

▬▬▬▬ Experience

oct 2018 feb 2019	**Engineering Intership**, *Team: Machine Learning/Fraud Detection - Stone Pagamentos*, Rio de Janeiro - RJ - Brasil, Development of tools used by the internship. Data analyses for payment solutions. ○ Programs in Scala using Microsoft SQL Server and other tools ○ API Rest, Data Streams, State Machines etc using Akka library
apr 2018 aug 2018	**Engineering Internship**, *DEA - IRMV - TECH. VEH. INTELLIGENT - Renault*, Technocentre Renault - Guyancourt - Île de France - France, Development of supervision system for autonomous vehicle. ○ Interface ROS/Simulink using C++, Python and Matlab/Simulink ○ State machine using Stateflow
nov 2017 apr 2018	**Industrial Study Project**, *RTE - Réseau de Transport d'Électricité*, Rennes ↔ Paris,France, Development and validation of automaton to optimize the insertion of Renewable Energies.

🐙 *http://github.com/Accacio*

ⓘD *http://orcid.org/0000-0001-9341-1877*

g⁺ *http://scholar.google.com/citations?user=ThbzClMAAAAJ*

july 2017 aug 2017	**Engineering Internship**, *Institut d'Électronique et de Télécommunication de Rennes*, Rennes,France, Study of voltage control in Distribution Nets. ○ Simulation using PowerFactory ○ Interface between PowerFactory and Simulink ○ Automation of simulations with Python scripts ○ Control Validation
aug 2015 jun 2016	**Scientific Initiation**, *Laboratório de Processamento de Sinais e Imagens Médicas, UFRJ*, Rio de Janeiro, Brazil. Design of Secure Control for prosthetic robotic arm for muscle atrophy suffering patients ○ Modeling and servomotors control ○ Signal Processing
apr 2013 sep 2013	, *Rede Globo - Matriz, TV GLOBO*, Rio de Janeiro, Brazil. ○ Central de Transmissão e Recepção de Sinais - CTRS – Transmission et Réception de Signaux Audiovisuels par Satellites, Fibres Optiques et Internet – Traitement des Signaux

Teaching

2022	**Tutoring**, *ECAM*, Rennes, France. ○ Analyse et commande dans l'espace d'état 2A (36h) ○ Asservissement 2A (18h)
2020-2022	**Tutoring**, *CentraleSupélec*, Rennes, France. ○ Commande Prédictive pour bâtiment intelligent 2A (15h) ○ Commande Prédictive 3A (24h) ○ Automatique 2A (24h) ○ Projet Optimisation pour Microgrid isolé (10h)
2014-2015	**Tutoring**, *Universidade Federal do Rio de Janeiro*, Rio de Janeiro, Brazil. ○ Logic Circuits: – Algèbre de Boole, Machines de Mealy et de Moore. – Fonctions logiques combinatoires et séquentielles

Publication

2022	**Expectation-Maximization based defense mechanism for dMPC**. 9th IFAC Conference on Networked Systems NECSYS 2022 `https://doi.org/10.1016/j.ifacol.2022.07.238`
2021	**Detection and mitigation of corrupted information in dMPC based on resource allocation**. 5th Conference on Control and Fault-Tolerant SYSTOL 2021 `https://doi.org/10.1109/SysTol52990.2021.9595927`
2019	**Identification of a mechatronic system**. Bachelor Thesis `http://repositorio.poli.ufrj.br/monografias/monopoli10029376.pdf`

IT Competences

Programming	C, C++, Matlab, Scala, Python, Java, LADDER, Grafcet, Wolfram Language, Fanuc's TP, LaTeX, SQL, Emacs Lisp, C#, Assembly, etc
Tools	Git, Bash, Tikz, Simulink, PowerFactory, Siemens' Step7, ROS, ESTEREL'S SCADE Suite / export to VxWorks, SysML, UML, HTML, Fanuc's Roboguide, SketchUp, Trello, Asana, Jira, Confluence, Github Projects, Blender, Godot, Gimp, etc
Operating Systems	Linux and Windows

Languages

	Listening	Speaking	Reading	Writing
Portuguese	Native	Native	Native	Native
French	Fluent	Fluent	Fluent	Fluent
English	Fluent	Fluent	Fluent	Fluent
German	Basic	Basic	Basic	Basic

Prizes

3rd	Industrial Robotics Olympics - FANUC - France

Interests

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- Programming   - Smart Grids

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