

# Fernando Henrique Gomes Zucatelli

Single – 30 anos

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## Experiences

- |                   |  |
|-------------------|--|
| 02/2017 – today   | Estimation of a quadcopter state variables.  |
| 02/2015 – 12/2017 | Human hand prothesis / robot project.<br>Interactive simulator and program to do the math in Matab.<br>Control of the real system with Arduino.            |
| 12/2013 – 02/2014 | Internship as student help force (Studenthilfskraft)<br>Technische Universität Dresden –Control Institut.<br>In a Sub-actuated non-linear systems project. |
| 10/2013 – 11/2013 | Technical translator German/English to Portuguese.<br>ADG Automatisierung Dresden GmbH   |
| 01/2008 – 12/2008 | Technical of projects – Arpifrio Indústria e Comércio Ltda.  |
| 09/2005 – 11/2005 | Internship of technical level – E.T.E. Lauro Gomes.  |

## Education

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|---------------------|--|
| 02/2017 – (01/2021) | Doctorate degree in Mechanical Engineering - Dynamic System and Control. State University of Campinas. |
| 02/2015 – 01/2017   | Master in Mechanical Engineering – Dynamic System and Control.<br>Federal University of ABC.           |
| 02/2009 – 08/2015   | Instrumentation, Automation and Robotics Engineering<br>Federal University of ABC.                     |
| 02/2006 – 12/2007   | Industrial Mechatronics Technologist<br>Termomecanica Technologist Faculty.                            |
| 02/2004 – 07/2005   | Mechatronics technical<br>E.T.E. Lauro Gomes.  |

## Languages

- German (C1 level)
- English (TOEFL ITP 593).
- Spanish (B2 level)

## Awards

2017	1 <sup>st</sup> Place – Graduated Academic Excellence Award – Master in Mechanical Engineering, UFABC's Pro-rectory of Graduate Studies.
2017	Acknowledgment by registering Intellectual Property of the software: CDMR Frequency 2.0, Innovation Office inovaUFABC.
2016	2 <sup>nd</sup> Place on UFABC Innovation Award 2016 – Project of compensators by the frequency method: Na interactive interface, Innovation Office inovaUFABC.
2016	Acknowledgment by registering Intellectual Property of the software: LagranTexPack, Innovation Office inovaUFABC.
2015	Engineer Institute Award – Best student of UFABCs Instrumentation, Automation and Robotics Engineering Course of 2015, Engineer Institute.
2015	CREA-SP Honor to Merit - Best student of UFABCs Instrumentation, Automation and Robotics Engineering Course of 2015, CREA-SP.

## Publications

ZUCATELLI, F. H. G.; de Paula Silva, Nathalia ; SUYAMA, R. . **Support vector machine implementation to recognize Brazilian Real bills.** FTT Journal of Engineering and Business, v. 1, p. 65-78, 2017.

ZUCATELLI, F. H. G.; MEZA, M. E. M. ; FENILI, A. . **LagranTexPac: A Software Tool to Obtain the Dynamic Equations of Mechanical Systems.** INTERNATIONAL JOURNAL OF COMPUTER THEORY AND ENGINEERING, v. 9, p. 242-249, 2017.

ZUCATELLI, F. H. G.; MEZA, M. E. M. . **Compensators design utilizing the frequency response methods and generating a summary report in Latex: Interactive Graphical User Interface.** International Journal of Computer Science and Software Engineering, v. 7, p. 126-134, 2016.

BANDEIRA, Ivana S. ; ZUCATELLI, Fernando Henrique G. . **A Human-Computer Interface and an Analysis on the Drawing of Curves with a Face Tracker Mouse.** In: Margherita Antona; Constantine Stephanidis}. (Org.). Lecture Notes in Computer Science. 1ed.: Springer International Publishing, 2016, v. 9738, p. 3-14.

ZUCATELLI, FERNANDO H.G.; MEZA, M. E. M. . **Backstepping Controllers for a Cart-Pole System in Two Configurations.** In: 23rd ABCM International Congress of Mechanical Engineering, 2015, Rio de Janeiro. Proceedings of 23rd ABCM International Congress of Mechanical Engineering, 2015. v. 1. p. 1-8

## Patents

MEZA, M. E. M ; ZUCATELLI, F. H. G. . CDMR FREQUENCY. 2015.  
Patent: Computer Program. Register Number: BR512015001189-8, date of register: 19/10/2015, title: "CDMR FREQUENCY" , Institute of register: INPI - Instituto Nacional da Propriedade Industrial.

ZUCATELLI, F. H. G; MEZA, M. E. M. . LagranTexPack. 2016.  
Patent: Computer Program. Register Number: BR5120160013451, date of register: 14/10/2016, title: "LagranTexPack" , Institute of register: INPI - Instituto Nacional da Propriedade Industrial.

## Not Registered Computer Programs

BANDEIRA, Ivana S. ; ZUCATELLI, F. H. G. . ev - A Human-Computer Interface to Draw Curves with a Face Tracker Mouse. 2016.

## Participation in events, congress, exposition and workshops

V Workshop UFABC Mechanical Engineering 2016..Minicourse Graphical interfaces Matlab/GUIDE.. 2016. (Workshop).

IV Workshop UFABC Mechanical Engineering. Kinematic and Dynamical Modeling of a human hand robot. 2015. (Workshop).

## Teaching Internship

07/2018 – 12/2018	Teaching internship on the subject ES710 Control of Mechanical Systems. Unicamp.
02/2018 – 06/2017	Teaching internship on the subject EM707 Control of Mechanical Systems. Unicamp.
07/2017 – 07/2017	Teaching internship on the subject EM707 Control of Mechanical Systems. Unicamp.
09/2016 – 12/2016	Teaching internship on the subject Control Systems 2 of UFABC

09/2015 – 12/2015

Teaching internship on the subject Control Systems 2 of UFABC

### **Courses and Extracurricular Activities**

- Private German and; mathematics e physics for basic to higher education Teacher.
- Presentation of research partial results of the prosthetic human hand on the event UFABC for all (*UFABC para Todos*).
- Exchange student of the Science without Border (*Ciências sem Fronteiras*) on the Technische Universität Dresden, Germany.
- Undergraduate research – FAPESP Mathematical Modeling of neurons: Models of Hodgkin-Huxley and FitzHugh-Nagumo.
- University Monitor of the disciplines: Calculus, Linear Algebra, Electric Circuits, Quantum Physics (2x) and Linear Systems and Signal Tansforms. Federal University of ABC.
- Basic course of oratory – 32 hours – Delavoro Comunicação Ltda.
- Automation and PLC – 80 hours –Hitachi's CLP. Elmar Assessoria e Treinamento Ltda.
- Volunteer on UFABC for all (*UFABC PARA TODOS*) event – presenting LEGO remote control cars on the Instrumentation, Automation and Robotics Engineering stand.
- Professor of Operational Course of HP 50g calculator, by IEEE-UFABC (2x).