Guilherme Gonçalves Sotelo

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Abstract

Guilherme G. Sotelo is Ph.D. in electrical engineering from Federal University of Rio de Janeiro (2007). He was a postdoctoral fellow at LASUP between 2007 and 2009, during this time he worked on the MagLev-Cobra project. Since 2009, he has been an associate professor with the Department of Electrical Engineering, Fluminense Federal University. During 2015 and 2016, he was in a sabbatical stage at Institute of Materials Science of Barcelona, working specifically in electromagnetic simulations of high temperature superconductors. His research interests include the application of superconductors to develop electrical power engineering devices, energy storage, and superconducting levitation.

Formal Education

2003 - 2007 Doctorate in Electric Engineering.
Universidade Federal do Rio de Janeiro, UFRJ, Rio De Janeiro, Brazil
Title: MODELAGEM DE SUPERCONDUTORES APLICADA AO PROJETO DE MANCAIS MAGNÉTICOS, Year of degree: 2007
Advisor: Rubens de Andrade Junior / Antonio Carlos Ferreira
Scholarship from : Conselho Nacional de Desenvolvimento Científico e Tecnológico

2001 - 2003 Master's in Electric Engineering.
Universidade Federal do Rio de Janeiro, UFRJ, Rio De Janeiro, Brazil
Title: COMPARAÇÃO DE ESTRUTURAS DE MÁQUINAS DE RELUTÂNCIA VARIÁVEL PARA USO EM ARMAZENADOR CINÉTICO DE ENERGIA, Year of degree: 2003
Advisor: Antonio Carlos Ferreira / Rubens de Andrade Jr.
Scholarship from : Coordenação de Aperfeiçoamento de Pessoal de Nível Superior

2002 - 2009 Graduation in Electric Engineering.
Universidade Federal do Rio de Janeiro, UFRJ, Rio De Janeiro, Brazil
Title: PROPOSTA DE UM MANCAL MAGNÉTICO SUPERCONDUTOR COM FITA DE YBCO DE SEGUNDA GERAÇÃO
Advisor: Rubens de Andrade Jr.

1996 - 2000 Graduation in LICENCIATURA EM FÍSICA.
Universidade Federal do Rio de Janeiro, UFRJ, Rio De Janeiro, Brazil

Postdoctorate

2015 - 2016 Postdoctorate .
Institut de Ciencia de Materials de Barcelona, ICMB, Spain
Scholarship from : Conselho Nacional de Desenvolvimento Científico e Tecnológico

2007 - 2009 Postdoctorate .
Universidade Federal do Rio de Janeiro, UFRJ, Rio De Janeiro, Brazil
Scholarship from : Conselho Nacional de Desenvolvimento Científico e Tecnológico

Professional Experience

Universidade Federal Fluminense - UFF

Contract institutional

2009 - Current Position: Associate Professor IV, Working hours (weekly): 40, Schemes of job: Full-time and exclusiveness

Bibliographic Production

Articles Published in Scientific Journals

1. doi GARCIA, DIEGO FERNANDO; **SOTELO, GUILHERME GONÇALVES**; FERREIRA, ANTONIO CARLOS; Sass, Felipe
Application of 2G Coil to Increase the Voltage Gain of Boost Converters. IEEE TRANSACTIONS ON APPLIED SUPERCONDUCTIVITY. JCR, v.34, p.1 - 5, 2024.

2. doi MARTINS, F. G. R.; SANTOS, G. DOS; SANTOS, B. M. O.; SASS, F.; VELANDIA, E. F. R.; SOTELO, G. G.; ANDRADE, R. DE
Vertical and Horizontal Force Measurements of a Double Crossed Loop. IEEE TRANSACTIONS ON APPLIED SUPERCONDUCTIVITY. JCR, v.34, p.1 - 5, 2024.

3. doi SANTOS, B. M. O.; SANTOS, G DOS; MARTINS, F. G. DOS REIS; SASS, F.; SOTELO, G. G.; de Andrade Jr., R.
Use of the J-A Approach to Model Homogenized 2G Tape Stacks and HTS Bulks. IEEE TRANSACTIONS ON APPLIED SUPERCONDUCTIVITY. JCR, v.34, p.1 - 5, 2024.

4. doi QUEIROZ, ANDRÉ T.; BITENCOURT, ALEXANDRE A.; NOGUEIRA, CAUÊ S. C.; MARTINS, FLÁVIO G. R.; J. M. D., FERNANDO; POLASEK, ALEXANDER; **SOTELO, GUILHERME G.**
Development of a Hybrid Fault Current Limiter. IEEE TRANSACTIONS ON APPLIED SUPERCONDUCTIVITY. JCR, v.34, p.1 - 5, 2024.

5. doi SANTOS, BÁRBARA MARIA OLIVEIRA; DIAS, FERNANDO JORGE MONTEIRO; TRILLAUD, FREDERIC; **SOTELO, GUILHERME GONÇALVES**; DE ANDRADE JUNIOR, RUBENS
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6. doi BITENCOURT, ALEXANDRE; NOGUEIRA, CAUÊ; DOS SANTOS, GABRIEL; DIAS, D. H. N.; FRANÇA, B.W.; SASS, F.; **SOTELO, G. G.**
Analysis and experimental tests of a solid-state fault current limiter. ELECTRICAL ENGINEERING. JCR, v.-, p.- - , 2023.

7. doi SANTOS, GABRIEL DOS; Sass, Felipe; HUGO, VITOR; **SOTELO, GUILHERME**; VILHENA, NUNO; OLIVEIRA, ROBERTO; PRONTO, ANABELA; PINA, JOAO MURTA
Optimization Design of a Saturated Iron Core Fault Current Limiter Using a GA and PSO Algorithms Coupled With Finite Element Method. IEEE TRANSACTIONS ON APPLIED SUPERCONDUCTIVITY. JCR, v.33, p.1 - 11, 2023.

8. doi SILVA, R.F.; MAFRA, G.R.F.Q.; **Sotelo, G.G.**; FORTES, M.Z.; TRILLAUD, F.; GUILLEN, D.
Impact of superconducting fault current limiters on Delayed Current Zeros in industrial power systems. INTERNATIONAL JOURNAL OF ELECTRICAL POWER & ENERGY SYSTEMS. JCR, v.145, p.108594 - 9, 2023.

9. doi YAZDANI-ASRAMI, MOHAMMAD; SONG, WENJUAN; MORANDI, ANTONIO; DE CARNE, GIOVANNI; MURTA-PINA, JOAO; PRONTO, ANABELA; OLIVEIRA, ROBERTO; GRILLI, FRANCESCO; PARDO, ENRIC; PARIZH, MICHAEL; SHEN, BOYANG; COOMBS, TIM; SALMI, TIINA; WU, DI; COATANEA, ERIC; MOSELEY, DOMINIC A; BADCOCK, RODNEY A; ZHANG, MENGJIE; MARINOZZI, VITTORIO; TRAN, NHAN; WIELGOSZ, MACIEJ; SKOCZE', ANDRZEJ; TZELEPIS, DIMITRIOS; MELIOPOULOS, SAKIS; VILHENA, NUNO; **SOTELO, GUILHERME**; JIANG, ZHENAN; GROßE, VEIT; BAGNI, TOMMASO; MAURO, DIEGO;

SENATORE, CARMINE; MANKEVICH, ALEXEY; AMELICHEV, VADIM; SAMOILENKOV, SERGEY; YOON, TIEM LEONG; WANG, YAO; CAMATA, RENATO P; CHEN, CHENG-CHIEN; MADUREIRA, ANA MARIA; ABRAHAM, AJITH
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10. doi OLIVEIRA SANTOS, BÁRBARA MARIA; SANTOS, GABRIEL DOS; DOS REIS MARTINS, FLÁVIO GOULART; Sass, Felipe; **SOTELO, GUILHERME GONÇALVES**; ANDRADE JUNIOR, RUBENS; GRILLI, FRANCESCO
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11. doi DOS SANTOS, GABRIEL; SANTOS, BÁRBARA MARIA OLIVEIRA; Sass, Felipe; MARTINS, FLÁVIO GOULART DOS REIS; **SOTELO, GUILHERME GONÇALVES**; DE ANDRADE JUNIOR, RUBENS
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16. doi COELHO, LUCIANO; **SOTELO, GUILHERME**; LIMA, ANTONIO C.S.
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20. doi TRILLAUD, FREDERIC; DOS SANTOS, GABRIEL; **GONÇALVES SOTELO, GUILHERME**
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21. doi DOS SANTOS, G; MARTINS, F G R; SASS, F; Dias, D H N; **Sotelo, G G**; MORANDI, A
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23. DE SOUZA, MARCELO F.; QUEIROZ, ANDRÉ T.; **SOTELO, GUILHERME G.**; MONTEIRO, PAULO R. D.; FORTES, MÁRCIO Z.; POLASEK, ALEXANDER
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25. BITENCOURT, ALEXANDRE; DIAS, DANIEL H. N.; FRANÇA, BRUNO W.; Sass, Felipe; **SOTELO, GUILHERME G.**
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26. MIYAMOTO, H. K.; QUEIROZ, A. T.; DIAS, D. H. N.; FRANCA, B. W.; SASS, F.; **SOTELO, GUILHERME GONÇALVES**
Novel Design of a Hybrid Superconducting Fault Current Limiter with Controlled Solid-State Device. JOURNAL OF MICROWAVES, OPTOELECTRONICS AND ELECTROMAGNETIC APPLICATIONS. , v.20, p.334 - 347, 2021.

27. ROCHA, L. M. M.; POLASEK, ALEXANDER; **SOTELO, GUILHERME GONÇALVES**; DIAS, DANIEL H. N; BORBA, B. S. M. C.; FERNANDES, D. P.
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28. RIBEIRO JUNIOR, SALVADOR PAES; TOLENTINO, RICARDO CHAGAS; FORTES, MARCIO ZAMBOTI; **SOTELO, GUILHERME GONÇALVES**
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29. HENRIQUES, HENRIQUE OLIVEIRA; VIZEU, CARLOS EDUARDO; SOUZA, PAULO CESAR; COSTA, MAURICIO CALDORA; **SOTELO, GUILHERME GONÇALVES**; SOUSA, JONAYLTON MOURA; FORTES, MARCIO ZAMBOTI; FERREIRA, VITOR HUGO
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32. NOUDEM, J G; BERNSTEIN, P; DUPONT, L; MARTIN, F G R; **Sotelo, G G**; Dias, D H N; DE ANDRADE, R; MURALIDHAR, M; MURAKAMI, M
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33. BITENCOURT, ALEXANDRE; KOJI, HENRIQUE; SCOFANO, GUILHERME; HENRIQUE NOGUEIRA DIAS, DANIEL; W. FRANÇA, BRUNO; Sass, Felipe; **GONÇALVES SOTELO, GUILHERME**
TECHNICAL AND OPERATIONAL ANALYSIS OF FAULT CURRENT LIMITERS. ELETRÔNICA DE POTÊNCIA (IMPRESSO). , v.25, p.1 - 8, 2020.

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A Novel Configuration for Resistive SFCL with bifilar 2G tapes. JOURNAL OF PHYSICS. CONFERENCE SERIES (PRINT). , v.1559, p.012098 - pp. 8, 2020.

35. DIAS, FERNANDO JORGE MONTEIRO; SANTOS, BARBARA MARIA OLIVEIRA; **Sotelo, Guilherme Goncalves**; POLASEK, ALEXANDER; de Andrade, Rubens

Development of a Superconducting Machine With Stacks of Second Generation HTS Tapes. IEEE TRANSACTIONS ON APPLIED SUPERCONDUCTIVITY. JCR, v.29, p.1 - 5, 2019.

36. doi LESSA, TARCISIO SILVA; LOPES, DANIEL SOUTO; ANTUNES, PAULO SÉRGIO FONSECA; ROCHA FILHO, SERGIO M. D.; FORTES, MARCIO ZAMBOTI; FERREIRA, VITOR HUGO; **SOTELO, GUILHERME GONÇALVES**
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Measurement, evaluation and proposed solution for power distribution arrangements with electrical cables in parallel. MEASUREMENT. JCR, v.119, p.196 - 204, 2018.

38. doi **Sotelo, Guilherme Goncalves**; Sass, Felipe; CARRERA, MIQUEL; LOPEZ-LOPEZ, JOSEP; GRANADOS, XAVIER
Proposal of a Novel Design for Linear Superconducting Motor Using 2G Tape Stacks. IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS. JCR, v.65, p.7477 - 7484, 2018.

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Application of a Resistive Superconducting Fault Current Limiter in a Distribution Grid. Electric Power Components and Systems. JCR, v.44, p.2084 - 2098, 2016.

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Optimization of the Superconducting Linear Magnetic Bearing of a Maglev Vehicle. IEEE TRANSACTIONS ON APPLIED SUPERCONDUCTIVITY. JCR, v.26, p.3601905 - 1-5 pags., 2016.

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Tests with a hybrid bearing for a flywheel energy storage system. SUPERCONDUCTOR SCIENCE & TECHNOLOGY. JCR, v.29, p.095016 - 1-10 pags., 2016.

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A Full Scale Superconducting Magnetic Levitation (MagLev) Vehicle Operational Line. IEEE Transactions on Applied Superconductivity (Print). JCR, v.25, p.1 - 5, 2015.

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