

Leonardo Paulo Guimarães De Assis

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ACADEMIC POSITIONS

Stanford Univesity,USA

Instructor Stanford Pre-Collegiate University-Level Online Math & Physics 2019 - Present.

San Francisco State University, USA

Lecturer at School of Humanities & Liberal Studies 2019 - Present.

Stanford Univesity,USA

Instructor at Continuing Studies Program. 2019 - 2020.

Stanford University, USA

Lecturer at Department of Philosophy 2018 - 2018.

Stanford University, USA

Lecturer at Symbolic Systems Program 2018 - 2018.

Stanford University, USA

Research Associate at Suppes Brain Lab, Center for Study of Language and Information 2015 - 2018.

Stanford University, USA

Visiting Scholar at Suppes Brain Lab, Center for Study of Language and Information 2013 - 2015.

San Francisco State University, USA

Visiting Researcher at School of Humanities & Liberal Studies 2012 - 2012.

Brazilian Center for Research in Physics, Brazil

PDJ Pos-Doctor CNPq Fellow at Lafex Department 2011 - 2013.

Federal Rural University of Rio de Janeiro, Brazil

FAPERJ Post - Doctor Fellow at Department of Physics 2007 - 2010.

Brazilian Center for Research in Physics, Brazil

FAPERJ Post-Doctor Fellow at Lafex Department 2005 - 2007.

Catholic University of Petropolis, Brazil

Scientific Collaborator at Escola de Engenharia e Faculdade de Informatica 2001- 2002.

EDUCATION

Ph. D in Physics

Brazilian Center for Physics Research (CBPF), Rio De Janeiro, Brazil 2001 – 2005

Bachelor in Mathematics

Federal University of Rio de Janeiro (UFRJ), Rio de Janeiro, Brazil 1995 – 2000

AWARDS AND HONORS

Lemann Fellowship

Lemann Foundation – Brazil. 2013 - Present.

Visiting Researcher Science without Borders Fellowship

Granted by National Council of Technological and Scientific Development (CNPq) - Brazil, and hold at Center for Study of Language and Information, Stanford University, USA. 2013-2014.

CNPq - Postdoctoral Junior Fellowship

Granted by National Council of Technological and Scientific Development (CNPq) and hold at Brazilian Center for Physics Research – Brazil 2011 - 2013.

FAPERJ Postdoctoral Fellow - Junior PhD Fellowship

Granted by Carlos Chagas Filho Foundation for Research Support of the State of Rio de Janeiro (FAPERJ) and hold at Department of Physics -Federal Rural University of Rio de Janeiro – Seropedica, Brazil. 2007-2010.

FAPERJ-Pesquisador Associado (Research Associate) Scholarship

Granted by Carlos Chagas Filho Foundation for Research Support of the State of Rio de Janeiro (FAPERJ) and hold at Brazilian Center for Physics Research – Rio de Janeiro, Brazil. 2005-2007.

Brazilian Society of Physics membership

Brazilian Society of Physics, Brazil. 2002-Present

TEACHING EXPERIENCE

San Francisco State University, USA

Course: LS 209 Physical Sciences for Elementary School Teachers.	Fall/2021
Course: LS 209 Physical Sciences for Elementary School Teachers.	Spring/2020
Course: LS 209 Physical Sciences for Elementary School Teachers.	Spring/2019

Stanford University, USA

Course: XM521 - UL Multivariable Differential Calculus – S2	Spring/2022
Course: XM522 - UL Multivariable Integral Calculus – S2	Spring/2022
Course: XM511 - UL Linear Algebra – S2	Spring/2022
Course: XM521 - UL Multivariable Differential Calculus – S1	Fall/2021
Course: XM511 - UL Linear Algebra - S3	Summer/2021
Course: XM521 - UL Multivariable Differential Calculus - S3	Summer/2021
Course: XM511 - UL Linear Algebra - S2	Spring/2021
Course: XM521 - UL Multivariable Differential Calculus - S2	Spring/2021
Course: XM521 - UL Multivariable Differential Calculus - S3	Summer/2020
Course: XM511 - UL Linear Algebra - S2	Spring/2020
Course: XM521 - UL Multivariable Differential Calculus - S2	Spring/2020
Course: XM521 - UL Multivariable Differential Calculus - S1	Fall/2019
Course: XM511 - UL Linear Algebra - S1	Fall/2019
Course: CS 66 W An Introduction to Quantum Computing	Winter/2020
Course: PHIL 153L/253L - Computing Machines and Intelligence.	Autumn/2018
Course: SYMSYS 265 - Quantum Algorithms and Quantum Cognition.	Spring/2018
Course: SYMSYS 208 - Computer Machines and Intelligence.	Winter/2018

Brazilian Center for Research in Physics, Brazil

Course: Chaos in Gauge Theories.	07/2005 - 08/2005
Course: Theoretical Physics through symbolic languages.	02/2005 - 04/2005

Federal Rural University of Rio de Janeiro, UFRJ, Rio de Janeiro, Brazil

Course: Physics III.	08/2009 - 01/2010
Course: Introduction to Quantum Mechanics.	03/2009 - 07/2009

Course: Electromagnetism I.	08/2008 - 12/2008
Course: Electromagnetism I.	03/2008 - 07/2008
Course: Mathematical Methods of Physics I.	11/2007 - 03/2008

Catholic University of Petropolis, Brazil

Course: Numerical Calculus.	01/2002 - 12/2002
Course: Calculus-I	01/2001 - 12/2001

REFEREED PAPERS PUBLISHED IN JOURNALS

1. De Assis, L.P.G., Bridges Between Classical and Quantum. In *Quanta and Mind* (pp. 43-53). Springer, Cham, 2019.
2. Montemayor, Carlos, J. Acacio de Barros, and Leonardo PG De Assis. "Implementation, Formalization, and Representation: Challenges for Integrated Information Theory." *Journal of Consciousness Studies* 26.1-2, 107-132, 2019.
3. de Barros, J.A., Montemayor C., De Assis, L.P.G., Contextuality in the Integrated Information Theory. In: de Barros J., Coecke B., Pothos E. (eds) *Quantum Interaction. QI 2016. Lecture Notes in Computer Science*, vol 10106. Springer, 2017.
4. de Barros, J.A., De Assis, L.P.G., Bob P. Is Stress Quantum-Like?. In: de Barros J., Coecke B., Pothos E. (eds) *Quantum Interaction. QI 2016. Lecture Notes in Computer Science*, vol 10106. Springer, 2017.
5. Pinheiro, A.R.C., De Assis, L.P.G., Duarte, S.B., Santos, B.M. and Gonçalves, M., Multiparticle versus single sequential emission in nuclear evaporation processes. *Physical Review C*, 93(3), p.034612, 2016.
6. De Assis, L. P. G. Neural Binding, Consciousness, and Mental Disorders: Complexity as a Common Element. *Activitas Nervosa Superior: The Journal for Neurocognitive Research* 57, no. 3/4, p. 110, 2015.
7. Abreu, E.M.C., De Andrade, M.A., De Assis, L.P.G., Helayël-Neto, J.A., Nogueira, A.L.M.A., Paschoal, R.C., Vortex Solutions and a Novel Role for R-parity in an N=2-Supersymmetric Extension of Jackiw-Pi's Chiral Gauge Theory. *Annals of Physics*, V. 354, p. 618–636, 2015.
8. Abreu, Everton M. C.; Andrade, Marco A.; De Assis, Leonardo P. G.; Helayël-Neto, José A.; Nogueira, A. L. M. A.; Paschoal, Ricardo C., A supersymmetric model for graphene. *The Journal of High Energy Physics*, v. 2011, p. JHEP05(2011)001, 2011.
9. De Assis, L. P. G.; Gaete, Patricio; Helay el-Neto, José A.; Vellozo, S. O., Aspects of Magnetic Field Configurations in Planar Nonlinear Electrodynamics. *International Journal of Theoretical Physics*, v. 51, p. 477-486, 2011.

10. Misra, A. P., Banerjee, S., Haas, F., Shukla, P. K., Assis, L. P. G.
Temporal dynamics in the one-dimensional quantum Zakharov equations for plasmas. *Physics of Plasmas*, V.17, p.032307 - 2010.
11. Abreu, Everton M. C., De Assis, Leonardo P. G., dos Reis, Carlos M. L.
Analytical Considerations about the Constant and Dark Energy Cosmological. *International Journal of Modern Physics A*, V.24, p.5427 - 2009.
12. Vellozo, Sergio O., Helayel-Neto, J. A., Smith, A. W., De Assis, Leonardo P. G. Self-Interacting Electromagnetic Fields and the Classical Discussion on the Stability of the Electric Charge. *International Journal of Theoretical Physics*, V.48, p.1905 - 2009.
13. Vellozo, S. O., Helayel Neto, J. A., Smith, A. W., De Assis, Leonardo P. G.
Standstill Electric Charge Generates Magnetostatic Field under Born-Infeld electrodynamics. *International Journal of Theoretical Physics*, V.47, p.2934 - 2944, 2008.
14. De Assis, Leonardo P. G., Helayel-Neto, Jose A., Paschoal, Ricardo C.
Supersymmetry and integrability in Planar Mechanical Systems. *International Journal of Theoretical Physics*, V.46, p.2983 - 3004, 2007.
15. De Assis, Leonardo P. G., Vellozo, Sergio,
Born-Infeld Magnetostatic Field-like from Electrical Point Charge at Rest in an Inertial Frame. *Proceedings Of Science*, P.066 - 2006.
16. De Assis, Leonardo P. G., Nogueira, A.L.M.A. Helayel-Neto, JA, Haas, Fernando
On the integrability and Chaos of an $N = 2$ Maxwell-Chern-Simons-Higgs Mechanical Model. *Proceedings of Science*, V.59, p.1 - 13, 2006.
17. Paschoal, R, Helayel Neto, J, De Assis, Leonardo P. G.
Planar quantum mechanics of the supersymmetric charged particle in an external electromagnetic field. *Physics Letters A*, V.349, p.67 - 74, 2006.
18. Barbatti, M., De Assis, L. P. G. Jalbert, Ginette, Coelho, L. F. S., Borges, I., de Castro Faria, N. V. Collisional fragmentation of fast HeH^+ ions: The $\text{He}^{2+} + \text{H}^-$ channel, *Physical Review. A*, V.59, p.1988 - 1993, 1999.

REFEREED PAPERS PUBLISHED IN CONFERENCE PROCEEDINGS

1. Santos, B., De Assis, L.P.G., and Duarte, S.B., Simultaneous multiparticle emissions in hot nuclei evaporation process, *AIP Conference Proceedings* 1520, 409 (2013).
2. Santos, B.M., Gonçalves, M., De Assis, L.P.G., and Duarte, S.B., Spallation process with simultaneous multi-particle emission in nuclear evaporation, *AIP Conference Proceedings*, 1529, 214, 2013.
3. De Assis, L.P.G, Duarte, S.B. and Santos, B, Simultaneous multiparticle emission from compound nuclei in evaporation process, *PoS - Proceedings of Science*, PoS (XXXIV, BWNP), 144, 2012.

4. De Assis, L.P.G., Duarte, S.B., Chiapparini, M., Hirsch, L.R., and Delfino Jr., A., New thermal model with distinct freeze-out temperatures for baryons and mesons, (AIP Conference Proceedings 1529, 250 (2013)).
5. Duarte, S.B., De Assis, L.P.G., Chiapparini, M., Hirsch, L.R., and Delfino Jr., A., Hadronic thermal model with distinct freeze-out temperature for baryons and mesons, (PoS-Proceedings of Science, PoS (XXXIV BWNP), 106, 2012.
6. Rojas, M.; De Assis, L.P.G, Helayel Neto, J. A.; De Andrade, M. A., See-Saw Mechanism and Dimensional Reduction in Connection with Exotic Metrics. PoS - Proceedings of Science, v. ICFI, p. 1-6, 2010.
7. Vellozo, S. O., De Assis, L. P. G., Helayel Neto, José Abdalla, Smith, A. W., Born-Infeld Magnetostatic Field-like from Electrical Point Charge at Rest in an Inertial Frame. Published as Magnetic Soliton from Point-Like Electric Charge at Rest on an Inertial Frame. In: Fifth International Conference on Mathematical Methods in Physics (IC2006), 2006, Rio de Janeiro. Proceedings of Science. Trieste - Italy: SISSA, 2006. p.066-1 - 066-9.
8. De Assis, Leonardo P. G., Oliveira, J. F. Mobilization of Colloidal Particles in Groundwater Reservoirs In: VI Meeting of the Southern Hemisphere on Mineral, 2001, Rio de Janeiro. Proceedings of the VI Meeting of the Southern Hemisphere on Mineral Technology, v.3. p.185 – 188, 200.

REFEREED SUMMARY PUBLISHED IN CONFERENCE PROCEEDINGS

1. Vellozo, Sergio O., Helayel Neto, José Abdalla, Assis, L. P. G., Gaete, P., Ten Years of Born and Infeld Electrodynamics Investigations. In: XXXVI National Meeting on Particle Physics and Fields, 2013, Passa Quatro, MG, Brazil. XXXIV National Meeting on Particle Physics and Fields, 2013.
2. Vellozo, Sergio O., Helayel Neto, José Abdalla, De Assis, L. P. G., Gaete, P., H-atom wavefunction local phase symmetry and the maximum Born-Infeld field strength. In: XXXIII National Meeting on Particle Physics and Fields, 2012, Passa Quatro, MG, Brazil.
3. De Assis, L.P.G., Duarte, S.B., Chiapparini, M., Hirsch, L.R., Delfino Jr, A., New thermal model with distinct freeze-out temperatures for baryons and mesons. In XXXV Reunião de Trabalho sobre Física Nuclear no Brasil, Maresias, SP, Brazil, 2012.
4. De Assis, Leonardo P. G., Abreu, Everton M. C., Godinho, C. F. L. Thick Brane analysis in $f(R)$ cosmology In: XVI Escola de Verão Jorge Andre Swieca de Partículas e Campos, 2010, Campos do Jordão, SP, Brazil, 2011.
5. De Assis, Leonardo P. G., Duarte, S.B., Santos, B.M. Simultaneous multiparticle emission from compound nuclei in evaporation process In: Encontro de Física, 2011, Foz do Iguaçu, PR, Brazil, 2011.
6. Helayel Neto, José Abdalla, Vellozo, Sergio O., De Assis, L. P. G., Gaete, P., Born-Infeld Potential and Hydrogen Energy Spectrum In: XVI Escola de Verão Jorge Andre Swieca de Partículas e

Campos, 2011, Campos do Jordão, SP, Brazil, 2011.

7. De Assis, Leonardo P. G., Helayel Neto, José Abdalla, Moises R., De Andrade, M. A. Mass Generation Mechanism and Dimensional Reduction in Connection with Exotic Metrics. In: XVI Escola de Verão Jorge Andre Swieca de Particulas e Campos, 2011, Campos do Jordão, SP, Brazil, 2011.

8. De Assis, L. P. G., Vellozo, Sergio O., Gaete, P., Helayel Neto, José Abdalla Born-Infeld electrodynamics in three dimensions. In: XXXI National Meeting on Particle Physics and Fields, Passa Quatro – MG, Brazil, 2010.

9. De Assis, Leonardo P. G., Nogueira, Alvaro L. M. A., Andrade, M. A., Paschoal, R., Abreu, Everton M. C., Helayel Neto, J. A. N = 2-D = 3 Supersymmetry and the Electric Charge in Graphene In: XXXI National Meeting of Particle Physics and Fields, Passa Quatro – MG, Brazil, 2010.

10. Moises Rojas, Andrade, M. A., Helayel Neto, José Abdalla, De Assis, L. P. G. See-Saw Mechanism and Hierarchy of Yukawa Coupling in Connection with (n, n)-Signatures. In: Fourth International Conference on Fundamental Interactions, Viçosa - MG, Brazil, 2010.

11. De Assis, Leonardo P. G., Abreu, Everton M. C., Godinho, C. F. L. Thick Brane analysis in f (R) cosmology In: XXXI National Meeting on Particle Physics and Fields, Passa Quatro – MG, Brazil, 2010.

12. De Assis, Leonardo P. G., Abreu, Everton M. C., Nogueira, Alvaro L. M. A., Helayel-Neto, J. A., Paschoal, Ricardo C., Andrade, M. A. Supersymmetric theory for graphene. In: VII Oficina de Teoria Quântica de Campos, Niteroi, RJ, Brazil, 2009.

13. De Assis, Leonardo P. G., Abreu, Everton M. C., Helayel-Neto, J. A., Nogueira, Alvaro L. M. A., Paschoal, Ricardo C., Andrade, M. A. Supersymmetric theory for graphene. In: XXX National Meeting on Particle Physics and Fields, Passa Quatro - MG, Brazil, 2009.

14. Vellozo, Sergio O., Helayel Neto, José Abdalla, De Assis, The Neutrino in the Context of the Born-Infeld Electrodynamics. In: XXX National Meeting on Particle Physics and Fields, Passa Quatro - MG, Brazil, 2009.

15. Vellozo, Sergio O., Helayel Neto, José Abdalla, De Assis, A Discussion on the Field Internal Structure of the Born-Infeld Electromagnetostatics. In: XXIX National Meeting on Particle Physics and Fields, São Lourenço - MG, Brazil, 2008.

16. De Assis, Leonardo P. G., Paschoal, R., Nogueira, Alvaro L. M. A., Helayel Neto, Abreu, Everton M. C., J. A., Andrade, M. A. , Planar Supersymmetry and Possible Models for Quantum Hall Effec. In: XXIX National Meeting on Particle Physics and Fields, São Lourenço - MG, Brazil, 2008.

17. De Assis, L. P. G., Moises Rojas, Helayel Neto, José Abdalla, De Andrade, M. A., See-Saw Mechanism and Hierarchy of Yukawa Couplings in Connection with (n,n)-Signatures. In: XXIX National Meeting on Particle Physics and Fields, São Lourenço - MG, Brazil, 2008.

18. De Assis, Leonardo P. G., Faster Way to Probe Flux Vacua. In: XXVIII National Meeting on Particle Physics and Fields, Águas de Lindóia - SP, Brazil, 2007.
19. De Assis, Leonardo P. G., Vellozo, Sergio O., Smith, A. W., Helayel Neto, José Abdalla, Induced Magnetic Charge as a Born-Infeld Nonlinear Electrodynamics Effect. In: XXVIII National Meeting on Particle Physics and Fields, Águas de Lindóia - SP, Brazil, 2007.
20. De Assis, Leonardo P. G., Vellozo, Sergio O., Smith, A. W., Helayel Neto, José Abdalla, Induced Magnetic Charge as a Born-Infeld Nonlinear Electrodynamics Effect. In: Third International Conference on Fundamental Interactions, 2007, João Pessoa - PB, Brazil. Third International Conference on Fundamental Interactions, 2007.
21. Vellozo, Sergio O., Helayel Neto, José Abdalla, De Assis, Smith, A. W., Leonardo P. G., Born-Infeld Magnetostatic Field from Electrical Pointlike Charge at Rest in an Inertial Frame. In: Fifth International Conference on Mathematical Methods in Physics, Rio de Janeiro - RJ, Brazil, 2006.
22. Vellozo, Sergio O., De Assis, Leonardo P. G., Helayel Neto, José Abdalla, Smith, A. W. Born-Infeld Electrodynamics and anomalous magnetostatic field from point-like electrical charge at rest, In: XXIX National Meeting of Condensed Matter Physics, São Lourenço – MG, 2006.
23. De Assis, Leonardo P. G., Panza, N., Accioly, A. Carroll-Field-Jackiw Model Augmented by the Higher-Derivative Term. In: XXVII National Meeting on Particle Physics and Fields, Águas de Lindóia - SP, Brazil, 2006.
24. De Assis, Leonardo P. G., Vellozo, Sergio O., Smith, A. W., Helayel Neto, José Abdalla. Magnetostatic Soliton Solution in Born-Infeld Nonlinear Electrodynamics is the pure Electric Charge. In: XXVII National Meeting on Particle Physics and Fields, Águas de Lindóia - SP, Brazil, 2006.
25. De Assis, Leonardo P. G., Helayel Neto, José Abdala, Nogueira, Alvaro L. M. A., Haas, Fernando, On the Rôle Stabiliser of the Critical Coupling of an $N = 2$ Maxwell-Chern-Simons-Higgs Mechanical Model. In: Wanderings in Classical and Quantum Chaos, 2006, Rio de Janeiro, Brazil, 2006.
26. De Assis, Leonardo P. G., Paschoal, Ricardo C., Helayel Neto, José Abdala Supersymmetry and integrability in Planar Mechanical Systems In: Wanderings in Classical and Quantum Chaos, 2006, Rio de Janeiro, Brazil, 2006.
27. De Assis, Leonardo P. G., Helayel-Neto, JA Integrability and Chaos in a Minimally Supersymmetric Yang-Mills Mechanical Model. In: XXVI National Meeting of Particle Physics and Fields, 2005, São Lourenço - MG, Brazil, 2005.
28. De Assis, Leonardo P. G., Helayel-Neto, JA Integrability Considerations in a Supersymmetric Yang-Mills Mechanical Model with Four Degrees of Freedom. In: XXVI National Meeting of Particle Physics and Fields, 2005, São Lourenço - MG, Brazil, 2005.
29. De Assis, Leonardo P. G., Nogueira, Alvaro L. M. A. Helayel-Neto, JA, Haas, Fernando. On the Stabiliser Role of the Critical Coupling of an $N = 2$ Maxwell-Chern-Simons-Higgs Mechanical Model. In: XXVI National Meeting of Particle Physics and Fields, 2005, São Lourenço, MG, Brazil, 2005.
30. De Assis, Leonardo P. G., Helayel-Neto, JA. Probing integrability and Chaos in $N = 1$ - and $2-N =$ Pure Supersymmetric Chern-Simons Mechanical Models. In: XXVI National Meeting of Particle Physics and Fields, 2005,

São Lourenço - MG, Brazil, 2005.

31. De Assis, Leonardo P. G., Helayel-Neto, JA, Paschoal, Ricardo C.
Supersymmetry and integrability in Planar Mechanical Systems In: XXVI National Meeting of Particle Physics and Fields, 2005, São Lourenço - MG, Brazil, 2005.
32. De Assis, Leonardo P. G., Helayel-Neto, JA, Paschoal, Ricardo C.
Supersymmetry and integrability in Planar Mechanical Systems, In: III Oficina de Teoria Quântica de Campos, Niteroi, RJ, Brazil, 2005.
33. De Assis, Leonardo P. G., Nogueira, Alvaro L. M. A. Helayel Neto, José Abdala, Haas, Fernando Integrability Criteria Applied to the Reduced Descendant of an $N = 2$ Maxwell-Chern-Simons-Higgs Model In: XXV Meeting of the Physics of Particles and Fields, 2004, Caxambu, MG, Brazil, 2004.
34. De Assis, Leonardo P. G., Paschoal, R., Helayel Neto, José Abdala
Planar Supersymmetric Quantum Mechanics of a Charged Particle in an External Electromagnetic Field. In: Second International Conference on Fundamental Interactions, 2004, Pedra Azul-ES, Brazil, 2004.
35. De Assis, Leonardo P. G., Paschoal, R., Helayel Neto, J. A. Supersymmetric Quantum Mechanics of Charged Particle Planar Electromagnetic Field.
In: XXV Meeting of the Physics of Particles and Fields, 2004, Caxambu, MG, Brazil, 2004.
36. De Assis, Leonardo P. G., JR Fonseca, C. A. L. Evaluation of the generating functional for scalar models using the Source Galerkin Method In: XXIV National Meeting on Particle Physics and Fields, 2003, Caxambu, MG, Brazil, 2003.
37. Paschoal, Ricardo C., Helayel-Neto, J. A., De Assis, Leonardo P. G. Magnetic Moment of Charged Particles Interactions with External Fields in $N = 1$ - and $2-N =$ Supersymmetric Quantum Mechanics In: XXIV National Meeting on Particle Physics and Fields, 2003, Caxambu, MG, Brazil, 2003.
38. De Assis, Leonardo P. G., Helayel-Neto, JA, Nogueira, Alvaro L. M. A.
Probing Supersymmetric Systems in Chaos: the Non-Minimally Coupled Maxwell-Chern-Simons-Higgs Model In: Third International School on Field Theory and Gravitation, 2003, Victoria, ES, Brazil, 2003.
39. De Assis, Leonardo P. G., Nogueira, Alvaro L. M. A. Helayel-Neto, JA
Remarks on the Reduced Non-minimally Coupled Maxwell-Chern-Simons-Higgs Model: Critical Coupling Regime Analysis and integrability In: XXIV National Meeting on Particle Physics and Fields, 2003, Caxambu, MG, Brazil, 2003.
40. De Assis, Leonardo P. G., Nogueira, Alvaro L. M. A. Helayel-Neto, JA
Probing Supersymmetric Systems in Chaos: the Non-Minimally Coupled Maxwell-Chern-Simons-Higgs In: XXIII National Meeting of Particle Physics and Fields, Aguas de Lindóia, SP, Brazil, 2002.
41. De Assis, Leonardo P. G. Formation of H^- in the fragmentation of HeH^+ fast ions: inhibition processes and potential energy curve. In: XXII National Meeting of Condensed Matter Physics, São Lourenço – MG, Brazil, 1999.
42. De Assis, Leonardo P. G., Jalbert, G., Barbatti, M. C., Coelho, L. F. C., Borges, I., Faria, N. V. C. Collisional fragmentation of fast HeH^+ ions: The $He^{2+}+H^-$ channel,
In: XXI National Meeting of Condensed Matter Physics, Caxambu, MG, 1998.

PAPERS PUBLISHED IN CONFERENCE PROCEEDINGS (EXPANDED ABSTRACTS)

1. Vellozo, Sergio O., Helayel-Neto, JA, De Assis, Leonardo P. G., and Gaete, Patricio.
The Born-Infeld nonlinear electrodynamics tested in hydrogen atom.
In: XXXV National Meeting of Particle Physics and Fields, Caxambu, MG, Brazil, 2014.
2. Vellozo, Sergio O., Helayel-Neto, JA, De Assis, Leonardo P. G. and Gaete, Patricio.
Ten Years of Born and Infeld Electrodynamics Investigations.
In: XXXIV National Meeting of Particle Physics and Fields, Passa Quatro, MG, Brazil, 2013.
3. Rojas, M., De Andrade, M.A., Colatto L.P., Matheus-Valle, J.L, De Assis, L.P.G., and Helayel-Neto, J.A.,
Fermion Family Generation, Mass and Charge Hierarchies from 10D Matter-Gauge Models.
In: XXXIV National Meeting of Particle Physics and Fields, Passa Quatro, MG, Brazil, 2013.
4. Vellozo, Sergio O., Helayel-Neto, JA, De Assis, L. P. G., and Gaete, P. D..
H-atom wavefunction local phase symmetry and the maximum Born-Infeld field strength. In: XXXIII National Meeting of Particle Physics and Fields, Passa Quatro, MG, Brazil, 2012.
5. Rojas, M., De Andrade, M.A., Colatto L.P., Matheus-Valle, J.L, De Assis, L.P.G., and Helayel-Neto, J.A..
Fermion Family Generation and Mass Hierarchy from Higher-dimensional Matter-coupled Yang-Mills Models.
In: XXXIII National Meeting of Particle Physics and Fields, Passa Quatro, MG, Brazil, 2012.
6. Abreu, Everton M. C., De Andrade, Marco A., De Assis, Leonardo P. G., Helayel-Neto, J.A., Nogueira, Alvaro L. M. A., and Paschoal, Ricardo C.,
Remarks on the R-parity version for the Global Phase Symmetry of Electrons in Graphene.
In: XXXIII National Meeting of Particle Physics and Fields, Passa Quatro, MG, Brazil, 2012.
7. De Assis, Leonardo P. G., Duarte, S.B., Santos, B.M.
Simultaneous multiparticle emission from compound nuclei in evaporation process In: XXXIV Reunião de Trabalho sobre Física Nuclear, 2011, Foz do Iguaçu, PR, Brazil, 2011.
8. Godinho, Cresus F. L., Abreu, Everton M. C., and De Assis, Leonardo P. G.,
Thick Brane analysis in $f(R)$ cosmology. In: XXXI National Meeting of Particle Physics and Fields, Passa Quatro, MG, Brazil, 2010.
9. Vellozo, Sergio O., Helayel-Neto, JA, De Assis, Leonardo P. G. and Gaete, Patricio.
Born-Infeld Electrodynamics in three dimensions.
In: XXXI National Meeting of Particle Physics and Fields, Passa Quatro, MG, Brazil, 2010.
10. De Assis, Leonardo P. G., Abreu, Everton M. C., Helayel-Neto, Jose A., Nogueira, Alvaro L. M. A., Paschoal, Ricardo C., and De Andrade, Marco A.,

N=2-D=3 Supersymmetry and the Electric Charge in Graphene.

In: XXXI National Meeting of Particle Physics and Fields, Passa Quatro, MG, Brazil, 2010.

11. De Assis, Leonardo P. G., Nogueira, Alvaro L. M. A., Helayel Neto, José Abdala, Paschoal, R., Andrade, M. A., Abreu, Everton M. C.

Supersymmetric Theory for Graphene In: XXX National Meeting of Particle Physics and Fields, Passa Quatro, Brazil, 2009.

12. De Assis, Leonardo P. G., Nogueira, Alvaro L. M. A., Helayel Neto, Jose Abdalla, Paschoal, R., Andrade, M. A., Abreu, Everton M. C..

Quantum Hall Effect in Graphene Models from Planar Supersymmetric Theory. In: VII Workshop on Quantum Field Theory, Niteroi, RJ, Brazil, 2009.

13. De Assis, Leonardo P. G., Vellozo, Sergio O., Helayel-Neto, J. A.

The Neutrino in the Context of the Born-Infeld Electrodynamics.

In: XXX National Meeting on Particle Physics and Fields, Passa Quatro - MG, Brazil, 2009.

14. De Assis, L. P. G., Abreu, E. M. C., Helayel Neto, J. A., Nogueira, A. L. M. A., Paschoal, R., and Andrade, M. A., Supersymmetric Theory for Graphene.

In: XXX National Meeting on Particle Physics and Fields, Passa Quatro – MG, Brazil, 2009.

15. Vellozo, Sergio O., Helayel-Neto, JA, De Assis, Leonardo P. G.

A Discussion on the Field Internal Structure of the Born-Infeld Electromagnetostatics.

In: XXIX National Meeting of Particle Physics and Fields, São Lourenço, MG, Brazil, 2008.

16. Abreu, Everton M. C., Carlos M. L. dos Reis, De Assis, Leonardo P. G.

An analytical description for the cosmological constant and dark energy considerations In: XXIX National Meeting of Particle Physics and Fields, São Lourenço, MG, Brazil, 2008.

17. De Assis, Leonardo P. G., Everton M. C. Abreu, Nogueira, Alvaro L. M. A. Paschoal, Ricardo C., Marco A. De Andrade, Helayel Neto, José Abdalla

Planar Supersymmetry and Possible Models for Quantum Hall Effect in Graphene In: XXIX National Meeting of Particle Physics and Fields, São Lourenço, MG, Brazil, 2008.

18. De Assis, Leonardo P. G., Moises Rojas, Marco A. De Andrade

See-Saw Mechanism and Hierarchy of Yukawa Couplings in Connection with (n, n) -Signatures In: XXIX National Meeting of Particle Physics and Fields, 2008, São Lourenço, MG, Brazil, 2008.

19. De Assis, Leonardo P. G. Faster Way to Probe Flux Vacua, In: XXVIII National Meeting of Particle Physics and Fields, 2007, Aguas de Lindóia - SP.

XXVIII National Meeting of the Physics of Particles and Fields, 2007.

20. De Assis, Leonardo P. G., Vellozo, Sergio O., Helayel Neto, Jose Abdalla, Smith, A. W. Induced Magnetic Charge as a Born-Infeld Nonlinear Electrodynamics Effect

In: XXVIII National Meeting of Particle Physics and Fields, Aguas de Lindóia, SP, Brazil, 2007

21. Vellozo, S. O., Helayel Neto, J. A., Smith, A. W., and De Assis, L. P. G.

Magnetostatic Soliton Solution in Born-Infeld Nonlinear Electrodynamics for a pure Electric Charge.

In: XXVII National Meeting of Particle Physics and Fields, Aguas de Lindóia, SP, Brazil, 2006.

22. Accioly, Antonio, De Assis, Leonardo P. G., and Panza, Nelson. Carrol-Field-Jackiw Model Augmented by a Higher-Derivative Term. In: XXVII National Meeting of Particle Physics and Fields, Aguas de Lindóia, SP, Brazil, 2006.
23. Vellozo, Sergio O., De Assis, Leonardo P. G., Smith, A. W., Helayel Neto, José Abdala, Induced Magnetic Charge to the Born-Infeld Nonlinear Electrodynamics Effect In: Third International Conference on Fundamental Interactions, João Pessoa, Paraíba, Brazil, 2007.
24. Vellozo, Sergio O., De Assis, Leonardo P. G., Helayel Neto, José Abdalla, Smith, A. W. Born-Infeld Electrodynamics and anomalous magnetostatic field from point-like electrical charge at rest, In: XXIX National Meeting of Condensed Matter Physics, São Lourenço, MG, Brazil, 2006.
25. De Assis, Leonardo P. G., Helayel-Neto, J.A., Integrability and Chaos in a Minimally Supersymmetric Yang-Mills Mechanical Model. In: XXVI National Meeting of Particle Physics and Fields, 2005, São Lourenço, MG, Brazil, 2005.
26. De Assis, Leonardo P. G., Helayel-Neto, JA, Integrability Considerations in a Supersymmetric Yang-Mills Mechanical Model with Four Degrees of Freedom. In: XXVI National Meeting of Particle Physics and Fields, São Lourenço, MG, Brazil, 2005.
27. De Assis, Leonardo P. G., Nogueira, Alvaro L. M. A. Helayel-Neto, JA, Haas, Fernando On the Stabiliser Role of the Critical Coupling of an $N = 2$ Maxwell-Chern-Simons-Higgs Mechanical Model. In: XXVI National Meeting of Particle Physics and Fields, São Lourenço, MG, Brazil, 2005.
28. De Assis, Leonardo P. G., Helayel-Neto, J. A., Probing integrability and Chaos in $N = 1$ - and $2-N$ = Pure Supersymmetric Chern-Simons Mechanical Models. In: XXVI National Meeting of Particle Physics and Fields, São Lourenço, MG, Brazil, 2005.
29. De Assis, Leonardo P. G., Helayel-Neto, JA, Paschoal, Ricardo C. Supersymmetry and integrability in Planar Mechanical Systems In: XXVI National Meeting of Particle Physics and Fields, 2005, São Lourenço, MG, Brazil, 2005.
30. De Assis, Leonardo P. G., Nogueira, Alvaro L. M. A. Helayel Neto, José Abdala, Haas, Fernando Integrability Criteria Applied to the Reduced Descendant of an $N = 2$ Maxwell-Chern-Simons-Higgs Model In: XXV Meeting of the Physics of Particles and Fields, 2004, Caxambu, MG, Brazil, Brazil, 2004.
31. De Assis, Leonardo P. G., Paschoal, R., Helayel Neto, J. A. Supersymmetric Quantum Mechanics of Charged Particle Planar Electromagnetic Field in an In: XXV Meeting of the Physics of Particles and Fields, 2004, Caxambu, MG, Brazil, 2004.
33. De Assis, Leonardo P. G., JR Fonseca, C. A. L. Evaluation of the generating functional for scalar models using the Source Galerkin Method In: XXIV National Meeting on Particle Physics and Fields, 2003, Caxambu, MG, Brazil, 2003.
34. Paschoal, Ricardo C., Helayel-Neto, J. A., De Assis, Leonardo P. G. Magnetic Moment of Charged Particles Interactions with External Fields in $N = 1$ - and $2-N$ = Supersymmetric Quantum Mechanics In: XXIV National Meeting on Particle Physics and Fields, 2003, Caxambu, MG, Brazil, 2003.

35. De Assis, Leonardo P. G., Nogueira, Alvaro L. M. A. Helayel-Neto, JA
Remarks on the Reduced Non-minimally Coupled Maxwell-Chern-Simons-Higgs Model: Critical Coupling Regime
Analysis and integrability In: XXIV National Meeting on Particle Physics and Fields, Caxambu, MG, Brazil, 2003.

PRESENTATIONS

1. De Assis, L. P. G.; What Is Quantum Cognition?, The Symbolic Systems Forum at Stanford, Stanford, 2018.
2. De Assis, L. P. G.; Bridges between classical and quantum, International Conference on Quanta and Mind (ICQM2018), San Francisco, CA, 2018.
3. de Barros, J. A., De Assis, L. P. G., and Bob, P.; Is Stress Quantum-Like?, 10th international conference on Quantum Interaction, San Francisco, CA, 2016.
4. De Assis, Leonardo P. G., Vellozo, Sergio O., Helayel Neto, José Abdala, Gaete, P.
Born-Infeld Electrical Potential Energy and the Hydrogen Spectrum, XVI Escola de Verão Jorge André Swieca de Partículas e Campos. Campos do Jordão, SP-Brazil, 2011.
5. De Assis, Leonardo P. G., Helayel Neto, José Abdala, Moises Rojas, De Andrade, M. A. Mass Generation Mechanism and Dimensional Reduction in Connection with Exotic Metrics, XVI Escola de Verão Jorge André Swieca de Partículas e Campos. Campos do Jordão, SP-Brazil, 2011.
6. A Nova Versão da Integral de Caminho da Mecânica Quântica segundo Witten. Atividades Formativas de Verão-CBPF, Rio de Janeiro, Brazil, 2011.

JOURNAL REFEREE

- | | |
|--|-------------|
| 1 International Journal of Modern Physics C. | 2016 - 2016 |
| 2 Journal: Physics of Plasmas. | 2011 - 2013 |
| 3 Journal: PoS - Proceedings of Science. | 2011 - 2011 |

THESIS COMMITTEES:

- 1 Master Committee member of Jefferson Neves Pereira. Generating a Cross Section Library From AIEA Nuclear Database. Institute of Military Engineering, Brazil, 2013.
- 2 Master Committee member of Elias Marcelo O. Quantitative Analysis of Idiopathic Parkinsonism Characterization by Means of Time Series. Institute of Military Engineering, Brazil, 2008.

EVENTS ORGANIZING COMMITTEE MEMBER

1. International Conference on Quanta and Mind (ICQM2018), San Francisco, CA, 2018.

- | | |
|--|-------|
| 2. 10th international conference on Quantum Interaction, San Francisco,CA, | 2016. |
| 3. Global Teacher / School at Home - Edition III. | 2005. |
| 4. World Year of Physics. Rio de Janeiro, Brazil, | 2005. |
| 5. Física em Debate II. Rio de Janeiro, Brazil, | 2003. |
| 6. Oficina do Pensar 2. Rio de Janeiro, Brazil, | 1999. |

PARTICIPATION IN EVENTS

- 1 International Conference on Quanta and Mind (ICQM2018), San Francisco, CA, 2018.
- 2 10th international conference on Quantum Interaction (QI 2016), Member of the Organizing Committee, 2016.
- 3 Foundations of Mind Conference, 2015.
- 4 XVI Escola de Verão Jorge André Swieca de Partículas e Campos. Mass generation Mechanism and Dimensional Reduction in Connection with Exotic Metrics. 2011.
- 5 XVI Escola de Verão Jorge André Swieca de Partículas e Campos. Born-Infeld Electrical Potential and Hydrogen Energy Spectrum. 2011.
- 6 Fourth International Conference on Fundamental Interactions. See-Saw Mechanism and Hierarchy of Yukawa Couplings in Connection with (n,n)-Signatures. 2010. (Congresso).
- 7 VIII Oficina de Teoria Quântica de Campos do Rio de Janeiro. 2010.
- 8 XXXI Encontro Nacional de Física de Partículas e Campos. Thick Brane analysis in $f(R)$ cosmology; Born-Infeld Electrodynamics in three dimensions; N=2-D=3 Supersymmetry and the Electric Charge in Graphene. 2010. (Encontro).
- 9 VII Oficina de teoria Quântica de Campos.Supersymmetric Theory for Graphene. 2009.
- 10 XXX Encontro Nacional de Física de Partículas e Campos.The Neutrino in the Context of the Born-Infeld Electrodynamics. 2009.
- 11 XXIX Encontro Nacional de Física de Partículas e Campos.Planar Supersymmetry and Possible Models for Quantum Hall Effect in Graphene. 2008.
- 12 Third International Conference on Fundamental Interactions. Induced Magnetic Charge as a Born-Infeld Electrodynamics Effect. 2007.

- 13 XXVIII Encontro Nacional de Física de Partículas e Campos. Faster Way to Probe Flux Vacua. 2007.
- 14 LASS-07: The Latin American String-School. 2007.

- 15 The International Congress of Mathematical Physics (ICMP). 2006.

- 16 Young Researchers Symposium. 2006.

- 17 XXVII Encontro Nacional de Física de Partículas e Campos. Carroll-Field-Jackiw Model Augmented by a Higher-Derivative Term. 2006.

- 18 Professor Global / Escola em Casa - Jornada III. Membro da Comissão organizadora. 2005. (Global Teacher / School at Home - Edition III. Member of the Organizing Committee - Edition III. 2005.).

- 19 III Oficina de Teoria Quântica de Campos. Supersymmetry and Integrability in Planar Mechanical System. 2005.

- 20 XXVI Encontro Nacional de Física de Partículas e Campos. Born-Infeld Electrodynamics and anomalous magnetostatic field from point-like electrical charge at rest. 2005.

- 21 World Year of Physics. Member of the organizing committee of the events commemorating the World Year of Physics, the Brazilian Center for Physics Research / MCT. 2005.

- 22 Fourth International Winter Conference on Mathematical Methods in Physics - CBPF- Brazil. 2004.

- 23 Ciência e tecnologia no Brasil Contemporâneo. 2004.

- 24 XXV Encontro Nacional de Física de Partículas e Campos. Integrability Criteria Applied to a Reduced Descendant of an N=2 Maxwell-Chern-Simons-Higgs Model. 2004.

- 25 Introductory School on Recent Developments in Supersymmetric Gauge Theories. 2004.
- 26 Summer School in Cosmology and Astroparticle Physics. 2004.

- 27 Third International School on Field Theory and Gravitation. Probing Chaos in Supersymmetric Systems: the Non-Minimally Coupled Maxwell-Chern-Simons-Higgs Model. 2003.

- 28 Física em Debate. Member of the organizing committee of the event sponsored by the Theoretical Physics Group Jose Leite Lopes aimed to make a broad debate on the situation in the Teaching of Physics and analysis of possible solutions to current problems. 2003.

- 29 Física em Debate II. Member of the organizing committee of the event sponsored by the Theoretical Physics Group Jose Leite Lopes aimed to make a broad debate on the situation in the Teaching of Physics and analysis of possible solutions to current problems. 2003.

- 30 Educação e Sociedade Brasileira: desafios Contemporâneos. 2003.

- 31 XXIV Encontro Nacional de Física de Partículas e Campos. Evaluation of the generating functional for scalar models using the Source Galerkin Method. 2003.
- 32 Tempo: Debates Provocados. 2002.
- 33 XXIII Encontro Nacional de Física de Partículas e Campos. Probing Chaos in Supersymmetric Systems: The Non-Minimally Coupling Maxwell-Chern-Simons-Higgs. 2002.
- 34 Oficina do Pensar 2. Member of the Organizing Committee and speaker at the event Oficina do Pensar 2. 1999.