

JOSÉ ACACIO DE BARROS

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ACADEMIC POSITIONS

Professor of Philosophy San Francisco State University Formal departmental appointment effective Fall 2026.	Fall 2026–
Director, School of Liberal Studies San Francisco State University	2022–present
Director, School of Humanities and Liberal Studies San Francisco State University	2021–2022
Professor of Liberal Studies (Physical Sciences) San Francisco State University	2018–2026
Interim Director, School of Humanities and Liberal Studies San Francisco State University	2018–2019
Visiting Scholar, Production Engineering Department Federal University of Rio de Janeiro, Brazil	2016
Associate Professor of Liberal Studies (Physical Sciences) San Francisco State University	2013–2018
Assistant Professor of Liberal Studies (Physical Sciences) San Francisco State University	2007–2013
Visiting Associate Professor of Physics, Center for the Study of Language and Information (CSLI) Stanford University	2005–2007
Visiting Associate Professor of Physics, Center for the Study of Language and Information (CSLI) Stanford University	1998–2000
Associate Professor of Physics (tenured from 1997) Federal University of Juiz de Fora, Brazil	1995–2011
Visiting Researcher, Laboratory for Experimental High Energy Physics (LAFEX) Brazilian Center for Research in Physics (CBPF), Brazil	1995–1996
Physical Sciences Associate Researcher, Institute for Mathematical Studies in the Social Sciences (IMSSS) Stanford University	1993–1994
Visiting Postdoctoral Scholar, Institute for Mathematical Studies in the Social Sciences (IMSSS) Stanford University	1991–1993

EDUCATION

Ph.D., Physics. Brazilian Center for Research in Physics (CBPF), Brazil.	1991
M.S., Physics. Brazilian Center for Research in Physics (CBPF), Brazil.	1989
B.S., Physics. Federal University of Rio de Janeiro (UFRJ), Brazil.	1988

AWARDS AND HONORS

Corresponding Member, Brazilian Academy of Philosophy.	2016–present
Postdoctoral Fellow, IMSSS; CAPES (Brazil) fellowship. Stanford University.	1991–1993

BOOKS

2026	de Barros, J. Acacio, Holik, F. H., & Krause, D. Distinguishing Indistinguishabilities: Logic and Ontology from Quantum Particles to Processes. Synthese Library, vol. 546. Springer, Cham. Forthcoming, October 2026.
2020	de Barros, J. Acacio & Krause, D. (eds.). A True Polymath: A Tribute to Francisco Antonio Doria. Series of the Brazilian Academy of Philosophy, vol. 2. College Publications, Rickmansworth, UK.
2019	de Barros, J. Acacio & Montemayor, C. (eds.). Quanta and Mind: Essays on the Connection Between Quantum Mechanics and Consciousness. Synthese Library, vol. 414. Springer, Cham.
2017	de Barros, J. Acacio, Coecke, B., & Pothos, E. (eds.). Quantum Interaction: QI 2016. Lecture Notes in Computer Science, vol. 10106. Springer, Cham.

PEER-REVIEWED PUBLICATIONS

- 2025 Jorge, J. P., & de Barros, J. A. **Nmatrices cuánticas, cuasiconjuntos y el teorema de Kochen-Specker.** *Teorema. International Journal of Philosophy*, 44(2), 1–28.
- 2025 de Barros, J. A., Jorge, J. P., & Holik, F. **On the Assumptions Underlying KS-like Contradictions.** In Krause, D. & Arenhart, J. R. B. (eds.), *Individuals and Non-Individuals in Quantum Theory*, pp. 71–86. Synthese Library, vol. 525. Springer, Cham. PDF is the preprint.
- 2025 Monchietti, E., Massri, C., de Barros, J. A., & Holik, F. **Measure-theoretic approach to negative probabilities.** *Journal of Physics A: Mathematical and Theoretical*, 58(34), 345302.
- 2024 de Barros, J. A., Montemayor, C., De Assis, L. P. G., Skokowski, P., & Perry, J. **Constraining Meanings With Contextuality.** *Foundations of Science*, 29(2), 521–541.
- 2023 de Barros, J. A., & Holik, F. **Ontological indistinguishability as a central tenet of quantum theory.** *Philosophical Transactions of the Royal Society A*, 381(2255), 20220100.
- 2021 Pizlo, Z., & de Barros, J. A. **The Concept of Symmetry and the Theory of Perception.** *Frontiers in Computational Neuroscience*, 15, 681162.
- 2021 Moreira, C., & de Barros, J. A. **Order Effects in Bayesian Updates.** *Proceedings of the Annual Meeting of the Cognitive Science Society*, 43.
- 2020 de Barros, J. A., & Holik, F. **Indistinguishability and negative probabilities.** *Entropy*, 22(8), 829.
- 2020 de Barros, J. A., & Suppes, P. **Strong Non-Contextual Holism in Quantum Macroscopic States.** *South American Journal of Logic*, 6(1), 1–23.
- 2019 de Barros, J. A., Holik, F., & Krause, D. **Indistinguishability and the origins of contextuality in physics.** *Philosophical Transactions of the Royal Society A*, 377(2157), 20190150.
- 2019 de Barros, J. A., Montemayor, C., Klein, S., & Cochran, C. **Henry Stapp and the Orthodox Interpretation.** *Activitas Nervosa Superior*, 61, 1–5.
- 2019 Montemayor, C., de Barros, J. A., & De Assis, L. P. **Implementation, Formalization, and Representation: Challenges for Integrated Information Theory.** *Journal of Consciousness Studies*, 26(1–2), 107–132.
- 2018 Passos, M. H. M., Balthazar, W. F., de Barros, J. A., Souza, C. E. R., Khoury, A. Z., & Huguenin, J. A. O. **Classical analog of quantum contextuality in spin-orbit laser modes.** *Physical Review A*, 98(6), 062116.
- 2017 de Barros, J. A., Krause, D., & Holik, F. **Contextuality and Indistinguishability.** *Entropy*, 19(9), 435.
- 2017 de Barros, J. A., & Oas, G. **Can We Falsify the Consciousness-Causes-Collapse Hypothesis in Quantum Mechanics?** *Foundations of Physics*, 47, 1294–1308.
- 2017 de Barros, J. A., Montemayor, C., & De Assis, L. P. G. **Contextuality in the Integrated Information Theory.** In de Barros, J. A., Coecke, B., & Pothos, E. (eds.), *Quantum Interaction. QI 2016*, Lecture Notes in Computer Science, vol. 10106, pp. 57–70. Springer, Cham.
- 2017 de Barros, J. A., De Assis, L. G., & Bob, P. **Is Stress Quantum-Like?** In de Barros, J. A., Coecke, B., & Pothos, E. (eds.), *Quantum Interaction. QI 2016*, Lecture Notes in Computer Science, vol. 10106, pp. 71–80. Springer, Cham.
- 2016 de Barros, J. A., Kujala, J. V., & Oas, G. **Negative Probabilities and Contextuality.** *Journal of Mathematical Psychology*, 74, 34–45.
- 2016 de Barros, J. A., Dzhamalov, E., Kujala, J., & Oas, G. **Measuring Observable Quantum Contextuality.** In Atmanspacher, H., Filk, T., & Pothos, E. (eds.), *Quantum Interaction. QI 2015*, Lecture Notes in Computer Science, vol. 9535, pp. 36–47. Springer, Cham.
- 2015 Carvalhaes, C. G., & de Barros, J. A. **The Surface Laplacian Technique in EEG: Theory and Methods.** *International Journal of Psychophysiology*, 97(3), 174–188.
- 2014 de Barros, J. A., & Oas, G. **Negative probabilities and counter-factual reasoning in quantum cognition.** *Physica Scripta*, T163, 014008.
- 2014 Oas, G., de Barros, J. A., & Carvalhaes, C. G. **Exploring non-signalling polytopes with negative probability.** *Physica Scripta*, T163, 014034.
- 2014 de Barros, J. A. **Decision Making for Inconsistent Expert Judgments Using Signed Probabilities.** *Lecture Notes in Computer Science*, 8369, 257–269.
- 2014 Carvalhaes, C. G., de Barros, J. A., Perreau-Guimarães, M., & Suppes, P. **The Joint Use of the Tangential Electric Field and Surface Laplacian in EEG Classification.** *Brain Topography*, 27(1), 84–94.
The final version is hosted in the Suppes Corpus at Stanford and is linked there rather than copied here.
- 2012 de Barros, J. A. **Quantum-like model of behavioral response computation using neural oscillators.** *BioSystems*, 110, 171–182.
- 2012 Suppes, P., de Barros, J. A., & Oas, G. **Phase-Oscillator Computations as Neural Models of Stimulus-Response Conditioning and Response Selection.** *Journal of Mathematical Psychology*, 56, 95–117.
- 2011 de Barros, J. A. **Comments on ‘There is no Axiomatic system for the quantum theory’.** *International Journal of Theoretical Physics*, 50, 1828–1830.
- 2011 Vassilieva, E., Pinto, G., de Barros, J. A., & Suppes, P. **Learning Pattern Recognition through Quasi-synchronization of Phase Oscillators.** *IEEE Transactions on Neural Networks*, 22, 84–95.
- 2010 Augsborg, T., & de Barros, J. A. **Integrating different modes of inquiry for pre-service teachers.** In Rangacharyulu, C. & Haven, E. (eds.), *Proceedings of the First Interdisciplinary CHESS Interactions Conference*. World Scientific, Singapore. Editor reviewed.
- 2010 de Barros, J. A., & Suppes, P. **Probabilistic Inequalities and Upper Probabilities in Quantum Mechanical Entanglement.** *Manuscrito*, 33, 55–71.

- 2009 de Barros, J. A., & Suppes, P. **Quantum mechanics, interference, and the brain.** *Journal of Mathematical Psychology*, 53, 306–313.
- 2007 Suppes, P., & de Barros, J. A. **Quantum Mechanics and the Brain.** In *Quantum Interaction: Papers from the AAAI Spring Symposium*, Technical Report SS-07-08, 75–82. AAAI Press, Menlo Park, CA.
- 2007 de Barros, J. A., Corrêa Silva, E. V., Monerat, G. A., Oliveira-Neto, G., Ferreira Filho, L. G., & Romildo Jr., P. **Tunneling probability for the birth of an asymptotically de Sitter universe.** *Physical Review D*, 75, 104004.
- 2007 de Barros, J. A., de Mendonça, J. P. R. F., & Pinto-Neto, N. **Realism in Energy Transition Processes: an example from Bohmian Quantum Mechanics.** *Synthese*, 154, 349–370.
- 2006 de Barros, J. A., Carvalhaes, C. G., de Mendonça, J. P. R. F., & Suppes, P. **Recognition of Words from the EEG Laplacian.** *Brazilian Journal of Biomedical Engineering*, 21, 45–59.
- 2005 de Barros, J. A., Oliveira Neto, G., & Vale, T. B. **Bohmian Trajectories for Evaporating Black-Holes.** *Physics Letters A*, 336, 324–330.
- 2005 de Barros, J. A. **Utilizando métodos de Engajamento Interativo em um Curso de Mecânica Clássica.** *Anais do XVI Simpósio Nacional de Ensino de Física*, Niterói, RJ.
In Portuguese: *Using Interactive Engagement Methods in an Advanced Classical Mechanics Course.* Editor reviewed.
- 2004 Carvalhaes, C. G., de Barros, J. A., & Suppes, P. **O Laplaciano na Análise de Ondas Cerebrais.** *Anais do 6º Simpósio Brasileiro de Análise*, 2, 243–250.
In Portuguese: *The Laplacian as a Tool for the Analysis of Brainwaves.*
- 2004 de Barros, J. A., Remold, J., Vidal, F. V., & Barbosa, N. A. **Desempenho Conceitual de Alunos do Método de Engajamento Interativo do Curso de Física I da UFJF.** *Anais do IX Encontro de Pesquisa em Ensino de Física*, Jaboticatubas, MG, Brazil.
In Portuguese: *Conceptual Development of Students in an Active Engagement Introductory Physics Course at UFJF.*
- 2004 de Barros, J. A., Remold, J., da Silva, G. S. F., & Tagliati, J. R. **Engajamento interativo no curso de Física I da UFJF.** *Revista Brasileira de Ensino de Física*, 26, 63–69.
In Portuguese: *Interactive Engagement in UFJF's Introductory Physics Course.*
- 2003 de Barros, J. A., Remold, J., Tagliati, J. R., da Silva, G. S. F., & Matheus-Valle, J. L. **A Aplicação de uma Nova Metodologia de Ensino de Física Usando Aprendizado Colaborativo.** *Coletânea da VI Escola de Verão para Professores de Prática de Ensino de Biologia, Física e Química e Áreas Afins.* Editora da UFF, Niterói, RJ, Brazil.
In Portuguese: *Applying a New Physics-teaching Methodology Using Collaborative Learning.*
- 2001 de Barros, J. A., & Suppes, P. **Probabilistic Results for Six Detectors in a Three-Particle GHZ Experiment.** In Bricmont, J., Ghirardi, G., Dürr, D., Petruccione, F., Galavotti, M. C., & Zanghì, N. (eds.), *Chance in Physics: Foundations and Perspectives.* Lecture Notes in Physics, vol. 574, 213–223. Springer, Berlin.
- 2000 de Barros, J. A., & Suppes, P. **Inequalities for Dealing with Detector Inefficiencies in Greenberger–Horne–Zeilinger-Type Experiments.** *Physical Review Letters*, 84(5), 793–797.
- 2000 de Barros, J. A., Sagiore-Leal, M. A., & Pinto-Neto, N. **The Causal Interpretation of the Conformally Coupled Scalar Field Quantum Cosmology.** *General Relativity and Gravitation*, 32, 15–39.
- 1999 de Barros, J. A., Shapiro, I. L., & Pinto-Neto, N. **Quantum gravity correction, evolution of scalar field and inflation.** *Classical and Quantum Gravity*, 16, 1773–1782.
- 1998 de Barros, J. A., Pinto-Neto, N., & Sagiore-Leal, M. A. **The Causal Interpretation of Dust and Radiation Fluids Non-Singular Quantum Cosmologies.** *Physics Letters A*, 241, 229–239.
- 1998 de Barros, J. A., & Pinto-Neto, N. **The Causal Interpretation of Quantum Mechanics and the Singularity Problem and Time Issue in Quantum Cosmology.** *International Journal of Modern Physics D*, 7, 201–214.
- 1997 de Barros, J. A., & Shapiro, I. L. **Renormalization Group Study of the Higher Derivative Conformal Scalar Model.** *Physics Letters B*, 412, 242–252.
- 1997 de Barros, J. A., & Pinto-Neto, N. **Comments on the Quantum Potential Approach to a Class of Quantum Cosmological Models.** *Classical and Quantum Gravity*, 14, 1993–1995.
- 1997 de Barros, J. A., & Pinto-Neto, N. **The Causal Interpretation of Quantum Mechanics and the Singularity Problem in Quantum Cosmology.** *Nuclear Physics B (Proceedings Supplements)*, 57, 247–250.
- 1996 Suppes, P., & de Barros, J. A. **Photons, Billiards and Chaos.** In Weingartner, P. & Schurz, G. (eds.), *Law and Prediction in the Light of Chaos Research.* Lecture Notes in Physics, vol. 473, 189–201. Springer, Berlin.
- 1996 Suppes, P., de Barros, J. A., & Oas, G. **A Collection of Probabilistic Hidden-Variable Theorems and Counterexamples.** In Pratesi, R. & Ronchi, L. (eds.), *Waves, Information and Foundation of Physics: a tribute to Giuliano Toraldo di Francia on his 80th birthday.* Italian Physical Society, Florence.
- 1996 Suppes, P., de Barros, J. A., & Sant'Anna, A. S. **Violation of Bell's Inequalities with Local Photons.** *Foundations of Physics Letters*, 9, 551–560.
- 1996 Suppes, P., Sant'Anna, A. S., & de Barros, J. A. **A Pure Particle Theory of the Casimir Effect.** *Foundations of Physics Letters*, 9, 213–223.
- 1995 Ravaglia, R., de Barros, J. A., & Suppes, P. **Computer-Based Advanced Placement for Physics for Gifted Students.** *Computers in Physics*, 9, 380–386.
- 1994 Suppes, P., & de Barros, J. A. **Diffraction with Well-Defined Photon Trajectories: a Foundational Analysis.** *Foundations of Physics Letters*, 7, 501–514.
- 1994 da Costa, N. C. A., Doria, F. A., Furtado do Amaral, A. F., & de Barros, J. A. **Two Questions on the Geometry of Gauge Fields.** *Foundations of Physics*, 24, 783–800.
- 1994 Suppes, P., & de Barros, J. A. **A Random-Walk Approach to Interference.** *International Journal of Theoretical Physics*, 33, 179–189.
- 1990 da Costa, N. C. A., Doria, F. A., & de Barros, J. A. **A Suppes Predicate for General Relativity and Set-Theoretically Generic Spacetimes.** *International Journal of Theoretical Physics*, 29, 935–961.

- 1987 Doria, F. A., de Barros, J. A., & Ribeiro da Silva, M. **Noncomputable Functions, Generic Functions and Random Sequences.** *Boletim da Sociedade Paranaense de Matemática*, 8, 197–216.

OTHER PUBLICATIONS AND CHAPTERS

- 2025 Franco, V. R., Moreira, C., & de Barros, J. A. **Efeitos de contextualidade na avaliação psicológica.** In Pereira da Silva, M. P. & Peixoto, E. M. (eds.), *Vieses de Resposta na Testagem e Avaliação Psicológica: Conceitos e Métodos de Controle*. Editora Hogrefe CETEPP, São Paulo, Brazil.
- 2024 de Barros, J. A. **On the Wave-function Collapse and Mind-Matter Interaction.** In Kafatos, M. C., Banerji, D., & Struppa, D. C. (eds.), *Quantum and Consciousness Revisited*. D. K. Printworld, New Delhi.
- 2023 de Barros, J. A. **Can Quantum Non-identity Exist in Social Phenomena?** In Plotnitsky, A. & Haven, E. (eds.), *The Quantum-Like Revolution: A Festschrift for Andrei Khrennikov*, pp. 361–377. Springer, Cham.
- 2022 de Barros, J. A., & Montemayor, C. **Quantum Mentality: Panpsychism and Panintentionalism.** In Gao, S. (ed.), *Consciousness and Quantum Mechanics*, pp. 83–98. Oxford University Press.
PDF is the accepted manuscript (2019).
- 2022 de Barros, J. A., Holik, F., & Krause, D. **Quantum Identity, Content, and Context: From Classical to Non-classical Logic.** In Wuppuluri, S. & Stewart, I. (eds.), *From Electrons to Elephants and Elections: Exploring the Role of Content and Context*, pp. 489–521. The Frontiers Collection. Springer, Cham.
- 2020 de Barros, J. A., & Sant'Anna, A. S. **Classical Fields, Bell's inequalities, and the quantum limit.** In de Barros, J. A. & Krause, D. (eds.), *A True Polymath: a Tribute to Francisco Antonio Doria*. College Publications, Rickmansworth, UK.
- 2020 Montemayor, C., & de Barros, J. A. **Information and the Hard Problem of Consciousness.** In de Barros, J. A. & Krause, D. (eds.), *A True Polymath: a Tribute to Francisco Antonio Doria*. College Publications, Rickmansworth, UK.
- 2020 de Barros, J. A. **On Information, Quanta, and Context.** In Wuppuluri, S. & Doria, F. A. (eds.), *Unravelling Complexity: The Life and Work of Gregory Chaitin*, pp. 239–270. World Scientific, Singapore.
- 2019 de Barros, J. A., & Montemayor, C. **Where Does Quanta Meet Mind?** In de Barros, J. A. & Montemayor, C. (eds.), *Quanta and Mind: Essays on the Connection between Quantum Mechanics and Consciousness*, pp. 55–66. Synthese Library, vol. 414. Springer, Cham.
- 2018 de Barros, J. A., & Oas, G. **Mapping quantum reality: what to do when the territory does not make sense?** In Wuppuluri, S. & Doria, F. A. (eds.), *Map and Territory: Exploring the Foundations of Science, Thought and Reality*. The Frontiers Collection. Springer.
- 2017 de Barros, J. A., & Oas, G. **Quantum Cognition, Neural Oscillators, and Negative Probabilities.** In Haven, E. & Khrennikov, A. (eds.), *The Palgrave Handbook of Quantum Models in Social Science: Applications and Grand Challenges*, pp. 195–228. Palgrave Macmillan, London.
- 2016 de Barros, J. A. **On a Model of Quantum Mechanics and the Mind.** In O'Nuallain, S. (ed.), *Dualism, Platonism and Voluntarism: Explorations at the Quantum, Microscopic, Mesoscopic and Symbolic Neural Levels*. Cambridge Scholars Publishing.
- 2015 Carvalhaes, C. G., & de Barros, J. A. **A Review of the Method of Using the Scalp Electric Field in EEG Analysis.** *Cosmos and History: The Journal of Natural and Social Philosophy*, 11(2), 154–159.
- 2015 de Barros, J. A., & Oas, G. **Quantum Mechanics & the Brain, and some of its Consequences.** *Cosmos and History: The Journal of Natural and Social Philosophy*, 11(2), 146–153.
- 2015 de Barros, J. A., Oas, G., & Suppes, P. **Negative probabilities and Counterfactual Reasoning on the double-slit Experiment.** In Béziau, J.-Y., Krause, D., & Arenhart, J. R. B. (eds.), *Conceptual Clarifications: Tributes to Patrick Suppes (1922–2014)*, pp. 1–30. College Publications, London.
- 2015 de Barros, J. A., & Oas, G. **Some examples of contextuality in Physics: implications to quantum cognition.** In Dzhafarov, E., Zhang, R., & Jordan, S. M. (eds.), *Contextuality, from Quantum Physics to Psychology*. World Scientific.
- 2015 Oas, G., & de Barros, J. A. **A Survey of Physical Principles Attempting to Define Quantum Mechanics.** In Dzhafarov, E., Zhang, R., & Jordan, S. M. (eds.), *Contextuality, from Quantum Physics to Psychology*. World Scientific.
- 2015 de Barros, J. A. **Beyond the Quantum Formalism: Consequences of a Neural-Oscillator Model to Quantum Cognition.** In Liljenström, H. (ed.), *Advances in Cognitive Neurodynamics (IV)*, 401–404. Springer, Netherlands.
- 2014 de Barros, J. A., & Oas, G. **Response Selection Using Neural Phase Oscillators.** In Crangle, C., Garcia de la Sienra, A., & Longino, H. (eds.), *Foundations and Methods from Mathematics to Neuroscience: Essays Inspired by Patrick Suppes*. CSLI Publications, Stanford University.
- 2012 de Barros, J. A. **Joint Probabilities and Quantum-Cognition.** *AIP Conference Proceedings*, 1508, 98–109.
- 2008 Carvalhaes, C. G., de Barros, J. A., Perreau-Guimarães, M., & Suppes, P. **Performances of Spline-Laplacian Filters in a Two-Class EEG Experiment.** Unpublished manuscript.
- 2008 de Barros, J. A., Remold, J., & dos Santos, G. S. F. **Inquiry in Cultural Context: Interactive Engagement among Brazilian Students.** Presented at the AAPT Summer Conference, Edmonton, Canada.
- 2005 Remold, J., de Barros, J. A., & dos Santos, G. S. F. **Communities of Practice in Brazil: An Ethnographic Study of Changes to University Physics Instruction.** Preprint, UFJF.
- 2004 de Barros, J. A., Oliveira Neto, G., & Vale, T. B. **The de Broglie-Bohm Interpretation of Evaporating Black-Holes.** Unpublished manuscript.
- 2000 de Barros, J. A., & Suppes, P. **Some conceptual issues involving probability in quantum mechanics.** Preprint prepared for *Reverberations of the Shaky Game* (Jones, R. & Ehrlich, P., eds.), University of Chicago Press.
- 1997 de Barros, J. A. **Causalidade e Probabilidade.** In Abdalla-Neto, H. (ed.), *Pós-Modernismo: Anticiência e Antihumanismo?* Universidade Católica de Petrópolis, Petrópolis, RJ, Brazil.
In Portuguese: *Causality and Probability*.

- 1996 Suppes, P., de Barros, J. A., & Sant'Anna, A. S. **A Proposed Experiment Showing that Classical Fields Can Violate Bell's Inequalities**. Preprint.
- 1995 Suppes, P., & de Barros, J. A. **A Descoberta dos Raios-X**. *Jornal Tribuna de Minas: Caderno Leitura*, Juiz de Fora, MG, Brazil, 17 December.
In Portuguese: *The Discovery of X-Rays*.
- 1990 Doria, F. A., Furtado do Amaral, A. F., & de Barros, J. A. **Noncurvature Solutions for the Bianchi Differential Conditions**. CETMAC-5/IDEA, School of Communications, UFRJ, Rio de Janeiro.
- 1989 da Costa, N. C. A., Doria, F. A., & de Barros, J. A. **On a Formally Undecidable Statement in Classical Electromagnetic Theory**. In Bertulani, C. A. & Lopes Neto, J. (eds.), *Encontro de Física Teórica do Rio de Janeiro: Homenagem Póstuma ao Prof. Carlos Márcio do Amaral*. Editora da UFRJ.
- 1988 Doria, F. A., & de Barros, J. A. **Chaos, Entropy, Set-Theoretic Models and Higher Cardinals**. *Atas do Simpósio UNICAMP "Ordem e Desordem"*. Editora da Unicamp.
- 1988 Doria, F. A., & de Barros, J. A. **On a Set-Theoretic Property Equivalent to the Negation of the Continuum Hypothesis**. CETMAC/IDEA, School of Communications, UFRJ, Rio de Janeiro.

DOCTORAL DISSERTATION AND MASTER'S THESIS

- 1991 de Barros, J. A. **Dois Exemplos de Indecidibilidade e Incompletude em Física**. Doctoral dissertation, Brazilian Center for Research in Physics (CBPF), Rio de Janeiro, Brazil. Committee: F. A. Doria (chair), N. C. A. da Costa, J. J. Giambiagi, A. F. F. Teixeira, D. Krause, W. C. S. da Silva, J. Helayel-Neto, F. Caruso.
In Portuguese: *Two Examples of Undecidability and Incompleteness in Physics*.
- 1989 de Barros, J. A. **Conjuntos Genéricos Segundo Cohen e suas Aplicações à Física**. Master's thesis, Brazilian Center for Research in Physics (CBPF), Rio de Janeiro, Brazil. Committee: F. A. Doria, N. C. A. da Costa, M. Dutra Fragoso, A. F. F. Teixeira.
In Portuguese: *Generic Sets According to Cohen and their Applications to Physics*. The thesis title page is dated 1989. Originally written in ChiWriter and converted to LaTeX, so some conversion errors may remain.

GRANTS AND SCHOLARSHIPS

1. Project: Effective Action in Quantum Gravity and Consequences to Cosmology, Minas Gerais Research Support Foundation (FAPEMIG) Research Grant, Co-PI, 2001–2003. Collaborators: Ilya Shapiro, Nelson Pinto Neto.
2. Project: Computational Limits to Constructs in Classical and Quantum Theories, Minas Gerais Research Support Foundation (FAPEMIG) Research Grant, PI, 1996–1997. Collaborators: Francisco Doria.
3. Project: Computational Limits (in Turing's sense) in Classical Theories, Special Program for Joint Research (PREVI/UFJF) Research Grant, PI, 1996. Collaborators: Francisco Doria.
4. Project: Ontological Interpretations of Quantum Mechanics and Applications to Quantum Cosmology, Special Program for Joint Research (PREVI/UFJF) Research Grant, PI, 1996. Collaborators: Nelson Pinto Neto.
5. Doctoral Scholarship at the Brazilian Center for Research in Physics, Brazilian National Science and Technology Council (CNPq), 1989–1991
6. Master's Scholarship at Brazilian Center for Research in Physics, Brazilian National Science and Technology Council (CNPq), 1988–1989
7. Scientific Initiation Undergraduate Scholarship, Brazilian National Science and Technology Council (CNPq), 1987–1988

LANGUAGES AND AFFILIATIONS

Languages

English and Portuguese (fluent)
French and Spanish (basic reading and comprehension)

Affiliations

American Association of Physics Teachers (AAPT)
Association for Mathematical Consciousness Science (AMCS)
Brazilian Academy of Philosophy — Corresponding Member (ABF)
Brazilian Physical Society (SBF)
Center for Contextuality in Physics and the Social Sciences (Purdue University)
Center for the Explanation of Consciousness (Stanford University)
Institute for Quantum Social and Cognitive Science (IQSCS)