Curriculum Vitae

Personal Information

- Surname or Family Name: Fortin
- First and Middle Name: Sebastian Ezequiel
- E-mail: sfortin@conicet.gov.ar
- Web page: http://www.filoexactas.exactas.uba.ar/sfortin
- Nationality: Argentine

Education

- Elementary School:
  - Period: 1985 – 1991
  - Institution: Anunciación de María
- High School:
  - Degree: Electronics and Communications Technician
  - Institution: E.T. nº28 “República Francesa”
  - Period: 1992 – 1997
- University degree:
  - Degree: Licenciado en Ciencias Físicas (equivalent to M.Sc. on physics)
  - Institution: University of Buenos Aires (UBA)
  - Period: 1999 – 2008
  - Research area: Foundations of Quantum Mechanics
  - Supervisor: Prof. Dr. Mario Castagnino
- Postgraduate Degree:
  - Degree: Doctor en Ciencias Físicas (PhD on physics)
  - Institution: University of Buenos Aires (UBA)
  - Period: 2008 – 2011
  - Research area: Foundations of Quantum Mechanics
  - Supervisor: Prof. Dr. Mario Castagnino
- Postgraduate Degree:
  - Degree: Doctor en Epistemología e Historia de la Ciencia (PhD on philosophy and history of science)

- Institution: University of Tres de Febrero (UNTREF)
- Period: 2009 – 2012
- Research area: Foundations of Quantum Mechanics
- Supervisor: Prof. Dra. Olimpia Lombardi

Current Activity

- *Teaching Assistant Chief* at the Department of Physics of the University of Buenos Aires.
- *Professor (Asociated of level 1)* in Austral University.
- Researcher at the CONICET (National Council of Scientific and Technucal Research).
- Member of the Philosophy of Science Group, Faculty of Exact and Natural Sciences, University of Buenos Aires. Coordinator of the physical science area.
- Director of the two-year research project "Quantum Mechanics: Interpretation and Inter-theoretical Relationships" (UBACyT 20020190200097BA), funded by the Ministry of Science and Technology, University of Buenos Aires. Project Director: Dr. Sebastian Fortin. Amount awarded: AR$25,600. Period: 2020-2021.
- Responsible member of the three-year research project "The interpretation of quantum mechanics and its relations with other theoretical and disciplinary domains" (PICT-2018-04519), funded by Agency Science and Technology Promotion, Fund for Scientific and Technological Research (FONCyT). Project Director: Dra. Olimpia Lombardi. Amount awarded: AR$630,000. Period: 2019-2022.
- Co-director of the three-year research project "Inter-theoretical relations between quantum mechanics and other theoretical domains", funded by the Austral University. Project Director: Dra. Claudia Vanney. Amount awarded: AR$180,000. Period: 2019-202.

Visits to other institutions

1. *Max Planck Institute for the Physics of Complex Systems*, Dresden, Germany: I participate in the *International Seminar for Quantum Physics with Non-Hermitian Operators*. June 2011.
2. *Center for Nonlinear and Complex systems* de la *Universita' degli Studi dell' Insubria*, Como, Italy. In the group of Dr. Giulio Casati. February 26th to March 4th 2011.
3. Working meeting with Dr. Giulio Casati and Dr. Tomaz Prosen in the city of Como, Italy. March 2011.

4. *Abdus Salam International Centre for Theoretical Physics*, Miramare, Trieste, Italy: participate in the *School on New Trends in Quantum Dynamics and Quantum Entanglement*. February 2011.
5. *Center for Cosmology and Particle Physics* de la *New York University*, New York, USA. In the group of Dr. Román Scoccimarro. October 2010.

Scientific production

Important: All works are fully collaborative: the order of the names does not mean priority.

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Edition of journals

1. Member of the editorial committee of the journal Revista Culturas Cientificas, edited by the Universidad de Santiago de Chile since January 2023.
   https://link.springer.com/book/10.1007/978-3-030-98373-4

Edition of books and special issues

2. *Philosophical Perspectives in Quantum Chemistry*, O. Lombardi, J. C. Martínez González and Sebastian Fortin (eds.), ISBN: 978-3-030-98373-4, Springer, Cham, 2022.
   https://link.springer.com/book/10.1007/978-3-030-98373-4
3. *Quantum Worlds, Perspectives on the Ontology of Quantum Mechanics*, O. Lombardi, S. Fortin, C. López y F. Holik (eds.), ISBN: 978-1-108-47347-7, Cambridge University Press, Cambridge, 2019.
   https://www.cambridge.org/ar/academic/subjects/physics/history-philosophy-and-foundations-physics/quantum-worlds-perspectives-ontology-quantum-mechanics?format=HB
4. Special Issue “Foundations of Quantum Mechanics: Quantum Logic and Quantum Structures”, F. Holik, M. Bosyk, O. Lombardi and S. Fortin (eds.), *Entropy* (ISSN 1099-4300), 2019.
   https://www.mdpi.com/journal/entropy/special_issues/logic_struct
5. Special Issue “Selected Contributions on occasion of the ISPC Rio de Janeiro Conference”, S. Fortin, J. C. Martínez González, Alfio Zambón and W. Araujo Neto (eds.), *Foundations of Chemistry* (ISSN 1386-4238), 2019.
6. Special Issue “Quantum Chaos and Complexity”, O. Lombardi, I. Gómez, F. Holik and S. Fortin (eds.), *Entropy* (ISSN 1099-4300), 2019.
   https://www.mdpi.com/journal/entropy/special_issues/quantum_chaos_complexity

7. Special Issue "Quantum Foundations: 90 Years of Uncertainty", P. Lamberti, M. Bosyk, S. Fortin and F. Holik (eds.), *Entropy* (ISSN 1099-4300), 2018.
   https://www.mdpi.com/journal/entropy/special_issues/90_Years_Uncertainty
8. *What is Quantum Information?*, O. Lombardi, S. Fortin, F. Holik and C. López (eds.), ISBN: 978-1-10714-211-4, Cambridge University Press, Cambridge, 2017.
   http://www.cambridge.org/ar/academic/subjects/physics/history-philosophy-and-foundations-physics/what-quantum-information?format=HB

Books

1. *Quantum Foundations: 90 Years of Uncertainty*, P. Lamberti, M. Bosyk, S. Fortin and F. Holik (eds.), MDPI, Basel • Beijing • Wuhan • Barcelona • Belgrade, 2019. ISBN: 978-3-03897-755-1.
   https://www.mdpi.com/books/pdfview/book/1194
1. *El Límite Clásico Basado en Decoherencia*, S. Fortin, Editorial Academica Española (AV Akademikerverlag GmbH & Co. KG.), Saarbrücken, Germany, 2012, ISBN: 978-3-659-00664-7.
   http://www.amazon.es/Límite-Clásico-Basado-Decoherencia-conceptuales/dp/3659006645
   https://www.morebooks.de/store/es/book/el-límite-clásico-basado-en-decoherencia/isbn/978-3-659-00664-7
2. *Introduction to the modal-Hamiltonian interpretation*, O. Lombardi, S. Fortin, J. S. Ardenghi and M. Castagnino, F. Columbus (ed.), Nova Science Publishers Inc., New York, 2010, ISBN: 978-1-61761-316-6.
   http://www.amazon.com/Introduction-Modal-Hamiltonian-Interpretation-Mechanics-Technology/dp/1617613169

Book chapters

1. "Bohmian Mechanics for Quantum Chemistry" S. Fortin and O. Lombardi (2023). In: Oldofredi, A. (ed) *Guiding Waves In Quantum Mechanics: 100 Years of de Broglie-Bohm Pilot-Wave Theory*, Oxford University Press, Oxford, Reino Unido, in press.
2. "The Case of Phonons: Explanatory or Ontological Priority", H. Accorinti, S. Fortin, M. Herrera and J. A. J. Arriaga, en C. Soto (eds.), *Current Debates in Philosophy of Science: In Honor of Roberto Torretti*, ISBN: 978-3-031-32374-4, Synthese Library, Cham, Switzerland, 2023.
   https://link.springer.com/chapter/10.1007/978-3-031-32375-1_16
   http://www.filoexactas.exactas.uba.ar/sfortin/papers/phonons.pdf
3. "About the Nature of the Wave Function and Its Dimensionality: The Case of Quantum Chemistry" S. Fortin, J. A. Jaimes Arriaga (2022). In: Lombardi, O., Martínez González, J.C.,

Fortin, S. (eds) *Philosophical Perspectives in Quantum Chemistry*, ISBN: 978-3-030-98373-4, Synthese Library, vol 461. Springer, Cham.
https://link.springer.com/chapter/10.1007/978-3-030-98373-4_9
http://www.filoexactas.exactas.uba.ar/sfortin/papers/3Ndimensiones.pdf

4. "Hacia una ontología para la química cuántica: La naturaleza de la función de onda", J. A. Jaimes Arriaga and S. Fortin, Actas del XIX Congreso Nacional de Filosofía AFRA, N. Fernández, E. Ferreyro and D. Pared (eds.), ISBN: 978-987-811-006-6, Universidad Nacional de Mar del Plata, Mar del Plata, pp. 1528-1542, 2021.
http://www.afra.org.ar/wp-content/uploads/2021/09/Actas-XIX-Congreso-Nacional-de-Filosofi%CC%81a-AFRA.pdf
5. "Irreversibilidad, decoherencia y el eco de Loschmidt", S. Fortin, C. López and M. Losada, Actas del XIX Congreso Nacional de Filosofía AFRA, N. Fernández, E. Ferreyro and D. Pared (eds.), ISBN: 978-987-811-006-6, Universidad Nacional de Mar del Plata, Mar del Plata, pp. 1432-1440, 2021.
http://www.afra.org.ar/wp-content/uploads/2021/09/Actas-XIX-Congreso-Nacional-de-Filosofi%CC%81a-AFRA.pdf
6. "El problema de la existencia de los fonónes", S. Fortin, H. Accorinti and M. Herrera, in M. O'Lery, L. Federico and Y. Ariza (eds.), *Filosofía e Historia de la Ciencia del Cono Sur-Selección de trabajos del XI Encuentro*, ISBN: 978-65-86622-00-3, Associação de Filosofia e História da Ciência do Cone Sul (AFHIC), São Carlos, Brasil, 2020.
http://www.afhic.com/wp-content/uploads/2020/04/28_Fortin-et-al.pdf
7. "Una vez más el viejo problema del realismo estructural", H. Accorinti y S. Fortin, in M. O'Lery, L. Federico and Y. Ariza (eds.), *Filosofía e Historia de la Ciencia del Cono Sur-Selección de trabajos del XI Encuentro*, ISBN: 978-65-86622-00-3, Associação de Filosofia e História da Ciência do Cone Sul (AFHIC), São Carlos, Brasil, 2020.
http://www.afhic.com/wp-content/uploads/2020/04/2_Accorinti_Fortin.pdf
8. "Logical approach to the quantum-to-classical transition", S. Fortin, M. Gadella, F. Holik y M. Losada, en O. Lombardi, S. Fortin, C. López y F. Holik (eds.), *Quantum Worlds, Perspectives on the Ontology of Quantum Mechanics*, ISBN: 978-1-108-47347-7, Cambridge University Press, Cambridge, 2019.
https://www.cambridge.org/ar/academic/subjects/physics/history-philosophy-and-foundations-physics/quantum-worlds-perspectives-ontology-quantum-mechanics?format=HB
9. "Quantum Mechanics and Molecular Structure: The Case of Optical Isomers", J. C. Martínez González, J. A. Jaimes Arriaga and S. Fortin, en O. Lombardi, S. Fortin, C. López y F. Holik (eds.), *Quantum Worlds, Perspectives on the Ontology of Quantum Mechanics*, ISBN: 978-1-108-47347-7, Cambridge University Press, Cambridge, 2019.

https://www.cambridge.org/ar/academic/subjects/physics/history-philosophy-and-foundations-physics/quantum-worlds-perspectives-ontology-quantum-mechanics?format=HB

10. "Modelos atómicos y moleculares: ¿independencia conceptual o relativa?", H. Accorinti, J. C. Martínez González y S. Fortin, in S. Seno Chibeni, L. Zaterka, J. Ahumada, D. Letzen, C. C. Silva, L. Al-Chueyr, P. Martins, A. P. O. Pereira de Morais Brito (eds.), *Filosofía e Historia de la Ciencia en el Cono Sur, Selección de trabajos del X Encuentro*, ISBN: 978-950-33-1401-2, 459 páginas, Associação de Filosofia e História da Ciência do Cone Sul (AFHIC), Córdoba, 2018, pp. 293-304.
http://www.afhic.com/wp-content/uploads/2017/11/afhic-x-online-final.pdf
11. "A closed system approach to decoherence", S. Fortin y O. Lombardi, en O. Lombardi, S. Fortin, C. López y F. Holik (eds.), *Quantum Worlds, Perspectives on the Ontology of Quantum Mechanics*, ISBN: 978-1-108-47347-7, Cambridge University Press, Cambridge, 2019.
https://www.cambridge.org/ar/academic/subjects/physics/history-philosophy-and-foundations-physics/quantum-worlds-perspectives-ontology-quantum-mechanics?format=HB
12. "About the Concept of Information", S. Fortin and O. Lombardi, in O. Lombardi, S. Fortin, F. Holik and C. Lopez (eds.), *What is Quantum Information?* ISBN: 978-1-10714-211-4, Cambridge University Press, Cambridge, 2017, pp. 9-34.
https://www.cambridge.org/core/books/what-is-quantum-information/67DDC8AD223179EB75B26FDFABC3B148
13. "A top-down view of the classical limit of quantum mechanics", S. Fortin and O. Lombardi, in R. E. Kastner, J. Jeknic-Dugic and G. Jaroszkiewicz (eds.), *Quantum Structural Studies: Classical Emergence from the Quantum Level*, ISBN: 978-1-78634-140-2, World Scientific Europe, London, 2016, pp. 435-468.
http://www.worldscientific.com/worldscibooks/10.1142/q0041
http://www.filoexactas.exactas.uba.ar/sfortin/papers/topdownview.pdf
14. "¿Favorece la mecánica cuántica un indeterminismo epistemológico u ontológico?", L. Vanni and S. Fortin, *¿Determinismo o Indeterminismo?: Grandes preguntas de las ciencias a la filosofía*, C. Vanney y J. F. Franck (eds.), ISBN: 978-987-732-067-1, Rosario: Ediciones Logos, pp. 213-242, 2016.
https://www.amazon.com/%C2%BFDETERMINISMO-INDETERMINISMO-preguntas-ciencias-filosof%C3%ADa-ebook/dp/B01IAG56R2
http://www.filoexactas.exactas.uba.ar/sfortin/papers/determinismo2.pdf
15. "Una perspectiva diacrónica en la estructura de la lógica cuántica", S. Fortin and L. Vanni, in José Ahumada and Silvio Seno Chibeni (eds.), *Filosofía e Historia de la Ciencia en el Cono Sur, Volumen IX*, ISBN: 978-987-707-026-2, 716 pages, Associação de Filosofia e História da Ciência do Cone Sul (AFHIC), Córdoba, 2015, pp. 31-39.
http://www.filoexactas.exactas.uba.ar/sfortin/papers/afhic2012.pdf

16. "Determinismo e indeterminismo en mecánica cuántica", S. Fortin, in C. Vanney and O. Lombardi (eds.), *Fronteras del Determinismo Científico. Filosofía y Ciencias en Diálogo*. Editorial Biblioteca Nueva, ISBN: 978-84-16345-72-4, Colección Fronteras, Madrid, 2015, pp. 68-84.
    https://www.amazon.com.mx/Fronteras-determinismo-cient%C3%ADfico-Filosof%C3%ADa-ciencias/dp/8416345724
    http://www.filoexactas.exactas.uba.ar/sfortin/papers/determinismo.pdf
17. "The ontological status of open quantum systems", S. Fortin, *Advances in Quantum Systems Research*, Zoheir Ezziane (ed.), ISBN: 978-1-62948-645-1, eISBN: 978-1-62948-656-7, Nova Science Publishers Inc., New York, 2014, pp. 387-410.
    https://www.novapublishers.com/catalog/product_info.php?products_id=46876&osCsid=09a6cfcfdba4bee34fa6e004c83f83bd
    http://cms.iafe.uba.ar/sfortin/articulos/NOVA2013.pdf
18. "Una descripción de la apariencia del mundo clásico sin apelar a límites reductivos", G. Bellomo and S. Fortin, *Epistemología e Historia de la Ciencia 2013*, H. Severgnini, J. G. Morales and D. L. Rabinovich (eds.), ISBN: 978-950-33-1073-1, Centro de Investigaciones de la Facultad de Filosofía y Humanidades de la Universidad Nacional de Córdoba, Córdoba, pp. 53-63, 2013.
    http://www.filoexactas.exactas.uba.ar/sfortin/papers/lafalda2012.pdf
19. "The problem of identifying the system and the environment in the phenomenon of decoherence", O. Lombardi, S. Fortin and M. Castagnino, *EPSA Philosophy of Science: Amsterdam 2009, The European Philosophy of Science Association Proceedings 1*, H. W. de Regt, S. Hartmann and S. Okasha (eds.), Springer, Berlin, 2012, pp. 161-174. ISBN 978-94-007-2403-7 eISBN 978-94-007-2404-4.
    http://www.springerlink.com/content/978-94-007-2403-7
    http://philsci-archive.pitt.edu/archive/00005183/
20. "¿Cómo se distingue el sistema que decohere de su entorno?", S. Fortin and O. Lombardi, *Filosofia e História da Ciência no Cone Sul. Seleção de Trabalhos do 7º Encontro*, C. Celestino Silva and L. Salvático (eds.), ISBN: 978-85-60084-04-3, 589 pages, Associação de Filosofia e História da Ciência do Cone Sul (AFHIC), Porto Alegre, 2012, pp. 529-535.
    http://cms.iafe.uba.ar/sfortin/articulos/AFHIC2010.pdf
21. "El problema de la definición de la base privilegiada móvil y una posible solución", M. Castagnino and S. Fortin, *Epistemología e Historia de la Ciencia 2012*, L. Salvatico and M.

Bozzoli L. Pesenti (eds.), ISBN 978-950-33-0999-5, Centro de Investigaciones de la Facultad de Filosofía y Humanidades de la Universidad Nacional de Córdoba, Córdoba, Argentina, pp. 137-145, 2012.
http://cms.iafe.uba.ar/sfortin/articulos/LaFalda2011.pdf

22. "The modal-Hamiltonian interpretation of quantum mechanics: physical relevance and philosophical implications", O. Lombardi, S. Fortin, M. Castagnino and J. S. Ardenghi, *Quantum Mechanics*, Jonathan P. Groffe (ed.), ISBN 978-1-61728-966-8, Nova Science Publishers Inc., New York, 2010, pp. 1-62.
https://www.novapublishers.com/catalog/product_info.php?products_id=12826

23. "El esquema general de la decoherencia como punto de partida para un enfoque basado en valores medios", M. Castagnino and S. Fortin, *Epistemología e Historia de la Ciencia 2009*, P. García and A. Massolo (eds.), Centro de Investigaciones de la Facultad de Filosofía y Humanidades de la Universidad Nacional de Córdoba, Córdoba, Argentina, pp. 142-150, Año 2010, ISBN 978-950-33-0816-5.
http://cms.iafe.uba.ar/sfortin/articulos/Falda09.pdf

24. "Sobre un punto de vista heurístico concerniente a la naturaleza del espacio en mecánica cuántica", S. Fortin, M. Narvaja and M. Lastiri, *Epistemología e Historia de la Ciencia 2008*, D. Letzen and P. Lodeyro (eds.), Centro de Investigaciones de la Facultad de Filosofía y Humanidades de la Universidad Nacional de Córdoba, Córdoba, Argentina, pp. 198-204, Año 2009, ISBN 978-950-33-0756-4.
http://cms.iafe.uba.ar/sfortin/articulos/Falda09.pdf

Refereed publications in journals

1. Corresponding Author de "Trans-estadística cuántica desde una ontología de propiedades", M. Pasqualini and S. Fortin, *Revista Colombiana de Filosofía de la Ciencia*, 2023, in press.
2. "On the ontological status of molecular structure: is it possible to reconcile molecular chemistry with quantum mechanics?", S. Fortin, M. Labarca y O. Lombardi, *Foundations of Science* **28**, 709-725, 2023.
http://philsci-archive.pitt.edu/15429/
https://link.springer.com/article/10.1007/s10699-022-09834-4
3. "Mathematical Models for Unstable Quantum Systems and Gamow States", M. Gadella, S. Fotin, J. P. Jorge and M. Losada, *Entropy* 24(6), 804, 2022.
https://www.mdpi.com/1099-4300/24/6/804

4. Corresponding Author of "Trans-statistical behavior of a multiparticle system in an ontology of properties", M. Pasqualini y S. Fortin, *Foundations of Physics* 52, 70 (2022).
5. https://link.springer.com/article/10.1007/s10701-022-00590-w
   http://philsci-archive.pitt.edu/19471/
6. "An Algebraic Model for Quantum Unstable States", S. Fortin, M. Gadella, F. Holik, J. P. Jorge y M. Losada, *Mathematics* 10(23), 4562, 2022.
   https://www.mdpi.com/2227-7390/10/23/4562
7. Corresponding Author of "La interpretación modal-hamiltoniana y la naturaleza relacional del tiempo", M. Pasqualini y S. Fortin, *Crítica*, Vol. 54, No. 161, pp. 3-42, 2022.
   https://critica.filosoficas.unam.mx/index.php/critica/article/view/1320
8. "Possibility and time in quantum mechanics", O. Lombardi, S. Fortin y M. Pasqualini, *Entropy*, 24(2), 249, 2022.
   https://www.mdpi.com/1099-4300/24/2/249
   http://philsci-archive.pitt.edu/20166/
9. "Entanglement and indistinguishability in a quantum ontology of properties", S. Fortin y O. Lombardi, *Studies in History and Philosophy of Modern Physics*, vol. 91, 234-243, 2022.
   https://www.sciencedirect.com/science/article/pii/S0039368121002004
   http://philsci-archive.pitt.edu/19257/
10. "Relational event-time in quantum mechanics", S. Fortin, O. Lombardi y M. Pasqualini, *Foundations of Physics*, vol. 52, 10, 2022.
    https://link.springer.com/article/10.1007/s10701-021-00528-8
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11. "Is the problem of molecular structure just the quantum measurement problem?", S. Fortin y O. Lombardi, *Foundations of Chemistry*, vol. 23, 379-395, 2021.
    https://link.springer.com/article/10.1007/s10698-021-09402-x
    http://philsci-archive.pitt.edu/18702/
12. "Acerca del estatuto ontológico de los fonones", H. Accorinti and S. Fortin, *Principia*, vol. 24, número 2, pp. 391–417, 2020.
    https://periodicos.ufsc.br/index.php/principia/article/view/67944/44671
13. Corresponding Author of "Gamow vectors formalism applied to the Loschmidt echo", S. Fortin, M. Gadella, F. Holik y M. Losada, *European Physical Journal Plus*, vol. 135, article 738, 2020.
    https://link.springer.com/article/10.1140%2Fepjp%2Fs13360-020-00756-3
    https://arxiv.org/abs/2009.10928
14. "The Frauchiger-Renner argument: A new no-go result?", S. Fortin and O. Lombardi, *Studies in History and Philosophy of Modern Physics*, vol. 70, 1-7, 2020.
    https://www.sciencedirect.com/science/article/abs/pii/S1355219819300619?via%3Dihub
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15. "Evolution of quantum observables: from non-commutativity to commutativity", S. Fortin, M. Gadella, F. Holik and M. Losada, *Soft Computing*, vol. 24, 10265–10276, 2020.
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16. "The correspondence principle and the understanding of decoherence", S. Fortin and O. Lombardi, *Foundations of Physics*, Volume 49, Issue 12, pp 1372–1393, 2019.
    https://link.springer.com/article/10.1007/s10701-019-00309-4
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17. Corresponding Author of "A new chapter in the problem of the reduction of chemistry to physics: The Quantum Theory of Atoms in Molecules", J. A. Jaimes Arriaga and S. Fortin, O. Lombardi, *Foundations of Chemistry*, Volume 21, Issue 1, pp 125–136, 2019.
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18. "Why molecular structure cannot be strictly reduced to quantum mechanics", J. C. Martinez Gonzalez, S. Fortin and O. Lombardi, *Foundations of Chemistry*, Volume 21, Issue 1, pp 31–45, 2019.
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19. "Understanding decoherence as an irreversible process", S. Fortin and O. Lombardi, *International Journal of Quantum Foundations*, Volume 4, Issue 4, pages 247-267, 2018.
    https://www.ijqf.org/archives/5166
20. "Dynamics of algebras in quantum unstable systems", M. Losada, S. Fortin, M. Gadella and F. Holik, *International Journal of Modern Physics A*, Vol. 33, Nos. 18 & 19 (2018) 1850109.
    https://www.worldscientific.com/doi/abs/10.1142/S0217751X18501099
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21. "A new application of the modal-Hamiltonian interpretation of quantum mechanics: the problem of optical isomerism", S. Fortin, O. Lombardi and J. C. Martinez Gonzalez, *Studies in History and Philosophy of Modern Physics*, Volume 62, Pages 123-135, 2018.
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22. Corresponding Author of "Classical limit and quantum logic", M. Losada, S. Fortin and F. Holik, *International Journal of Theoretical Physics*, Volume 57, Issue 2, pp 465–475, 2018.
    https://link.springer.com/article/10.1007/s10773-017-3579-0
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23. "La Teoría Cuántica de Átomos en Moléculas y su rol en la reducción de la química a la física", J. A. Jaimes Arriaga y S. Fortin, Metatheoria – Revista de Filosofía e Historia de la Ciencia, Vol. 9, Núm. 2, pp. 33-43, 2019.

https://www.metatheoria.com.ar/index.php/m/article/view/230

24. "¿Es posible definir una flecha cuántica del tiempo mediante la hipótesis del colapso?", C. López y S. Fortin, Metatheoria – Revista de Filosofía e Historia de la Ciencia, Vol. 9, Núm. 2, pp. 69-82, 2019.
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Publications without peer review

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4. Publications of asteroid positions in *Minor Planet Circulars* (IAU, Hardvard-Smithsonian Astrophysical Observatory, USA) and *Minor Planet Bulletin* (ALPO Minor Planet Section, Texas, USA).

Systematic teaching material

1. Author: "Decoherencia cuántica", S. Fortin, Diccionario Interdisciplinar Austral (DIA), 2017.
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2. Author: "Problemas ontológicos de la mecánica cuántica", S. Fortin y C. López, Diccionario Interdisciplinar Austral (DIA), 2017.
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3. Traduction: "Medición en teoría cuántica", S. Fortin, Diccionario Interdisciplinar Austral (DIA), 2016.
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Participation as a speaker in scientific meetings

Important: All works are fully collaborative: the order of the names does not mean priority.

1. Oral presentation, "¿Entidades emergentes o TPSs?", S. Fortin, *IV Jornadas de Fundamentos, Filosofía e Historia de la Física*, in videoconference mode. October 30th, to November 2nd, 2023.

2. Oral presentation, "¿Qué es la densidad electrónica?", S. Fortin, *IV Jornadas de Fundamentos de química*, in videoconference mode. October 2nd, to 4th, 2023.

3. Oral presentation, "Setting limits to emergence: The case of phonons", S. Fortin and M. Pasqualini, *9th biennial meeting of the European Philosophy of Science Association EPSA23*, Belgrade, Serbia, September 20th to 23rd, 2023.

4. Oral presentation, "Quantum time reduced to relations", M. Pasqualini and S. Fortin, *International Congress of Logic, Methodology and Philosophy of Science and Technology 2023 (CLMPST 2023)*, Buenos Aires, Argentina. July 24th to 29th, 2023.

5. Oral presentation, "Phonons as a case of intra-domain pluralism compatible with reduction", M. Pasqualini and S. Fortin, *International Congress of Logic, Methodology and Philosophy of Science and Technology 2023 (CLMPST 2023)*, Buenos Aires, Argentina. July 24th to 29th, 2023.

6. Oral presentation, "The ontological interpretation of the concept of electron density", S. Fortin and O. Lombardi, *International Society for the Philosophy of Chemistry Summer Symposium 2023 (ISPC 2023)*, Buenos Aires, Argentina. July 18th to 21st, 2023.

7. Oral presentation, "Possibility and time in quantum mechanics", M. Pasqualini and S. Fortin, *Third Chilean Conference on the Philosophy of Physics*, Santiago, Chile. December 14th to 16th, 2022.

8. Oral presentation, "Modality and the Dual Notion of Time in Quantum Mechanics", M. Pasqualini, S. Fortin and O. Lombardi, *XI Conference on Quantum Foundations: Contextuality, coherence and quantumness (XIJFC)*, Universidad Nacional de Córdoba, Córdoba, Argentina, 2022. November 28th to 30th, 2022.

9. Oral presentation, "Un estudio sobre la dimensionalidad de los orbitales", S. Fortin, *IV Jornadas de Historia, Filosofía y Didáctica de la Química del Cono Sur*, in videoconference mode. November 8th to 12nd, 2022.

10. Participation as a discussant in the round table, "¿Existe la ciencia química o es sólo física aplicada?", in the *IV Jornadas de Historia, Filosofía y Didáctica de la Química del Cono Sur*, in videoconference mode. November 8th to 12nd, 2022.

11. Oral presentation, "Partículas trans: Un punto de vista ontológico", M. Pasqualini and S. Fortin, *III Jornadas de Fundamentos, Filosofía e Historia de la Física*, in videoconference mode. October 11st to 13rd, 2022.

12. Oral presentation, "Posibilidad y Tiempo en Mecánica Cuántica", M. Pasqualini O. Lombardi and S. Fortin, *III Jornadas de Fundamentos, Filosofía e Historia de la Física*, in videoconference mode. October 11st to 13rd, 2022.

13. Oral presentation, "¿Cuántas dimensiones tienen los orbitales?", S. Fortin and O. Lombardi, *III Jornadas de Fundamentos de química*, in videoconference mode. October 3rd, to 5th and 7th, 2022.

14. Oral presentation, "Dimensional marginalization and other approxima tions in quantum chemistry", S. Fortin, *International Society for the Philosophy of Chemistry Summer Symposium 2022 (ISPC 2022)*, Lille, France. August 15th to 21st, 2022.

15. Oral presentation, "Entanglement and indistinguishability in a quantum ontology of properties", O. Lombardi and S. Fortin, *X Conference on Quantum Foundations: Ten Irreversible Years of Quantum Foundations In Argentina (XJFC)*, Buenos Aires, Argentina, 2021. November 30th to December 3rd, 2021.

16. Oral presentation, "Sobre las relaciones interteóricas entre química y física: Un enfoque aristotélico", J. A. Jaimes Arriaga and S. Fortin, *III JORNADAS HISTORIA, FILOSOFIA E DIDÁTICA DA QUÍMICA DO CONE SUL*, Universidade Estadual do Sudoeste da Bahia. November 16th to 20th, 2021.

17. Oral presentation, "Procesos de inversión temporal y la mecánica cuántica irreversible", S. Fortin, M. Gadella, F. Holik and M. Losada, *XIX Jornadas Rolando Chuaqui K.*, Universidad de Santiago de Chile. October 20th to 22nd, 2021.

18. Oral presentation, "La interpretación modal-Hamiltoniana y la naturaleza relacional del tiempo", M. Pasqualini y S. Fortin, *XIX Jornadas Rolando Chuaqui K.*, Universidad de Santiago de Chile. October 20th to 22nd, 2021.

19. Oral presentation, "El problema del isomerismo", O. Lombardi and S. Fortin, *II Jornadas de Fundamentos de química*, in videoconference mode. October 5th to 7th, 2021.

20. Oral presentation, "Sobre experimentos de inversión temporal y los fenómenos irreversibles en mecánica", S. Fortin, *II Jornadas de Fundamentos, Filosofía e Historia de la Física*, in videoconference mode. September 10th to 14th, 2021.

21. Oral presentation, "Indistinguishability and entanglement: A new approach", O. Lombardi y S. Fortin, *8th biennial meeting of the European Philosophy of Science Association EPSA21*, Torino, Italy, September 15th to 18th, 2021.

22. Oral presentation, "The problem of isomerism", O. Lombardi y S. Fortin, *International Society for the Philosophy of Chemistry Summer Symposium 2021 (ISPC 2021)*, Buenos Aires, Argentina. July 12nd to 21st, 2021.

23. Oral presentation, "Partículas transestadísticas: fermiones/bosones en una ontología de propiedades", S. Fortin and M. Pasqualini, *Seminario de indistinguibilidad cuántica: Fundamentos y Aplicaciones*, in videoconference mode. April 8th, 2021.

24. Oral presentation, "En defensa de la existencia de los fonones", S. Fortin and H. Accorinti, *1º Jornadas de Fundamentos, Filosofía e Historia de la Física*, in videoconference mode. December 17th, 2020.

25. Oral presentation, "DFT y la independencia de la química cuántica", S. Fortin and J. A. Jaimes Arriaga, *I Jornadas de Fundamentos de Química*, in videoconference mode. December 15th, 2020.

26. Oral presentation, "La naturaleza disposicional de la densidad electrónica", J. A. Jaimes Arriaga and S. Fortin, *II Jornadas de Historia, Filosofía y Didáctica de la Química del Cono Sur*, in videoconference mode. November 26th to 28th, 2020.

27. Oral presentation, "Una ontología para la química cuántica", S. Fortin, *XIX Congreso Nacional de Filosofía AFRA*, Mar del Plata, Argentina, 2019. December 4th to 7th, 2019.

28. Oral presentation, "Fenómenos irreversibles en física cuántica", S. Fortin, C. López y M. Losada, *XIX Congreso Nacional de Filosofía AFRA*, Mar del Plata, Argentina, 2019. December 4th to 7th, 2019.

29. Oral presentation, "About the World Described by Quantum Chemistry", S. Fortin, *Second Chilean Conference on the Philosophy of Physics*, Santiago, Chile. December 4th to 6th, 2019.

30. Poster presentation, "On the ontology in quantum chemistry", S. Fortin, *IX Conference on Quantum Foundations: Indistinguishability and its impact on the foundations of quantum mechanics (IXJFC)*, Córdoba, Argentina, 2019. November 27th to 29th, 2019.

31. Oral presentation, "Acerca del estatuto ontológico de los fonones", S. Fortin and M. Herrera, *Coloquio SADAF 2019: Filosofía de la ciencia*, Buenos Aires, Argentina. October 30th to November 1st, 2019.

32. Oral presentation, "Irreversibilidad, decoherencia y el eco de Loschmidt", C. López, M. Losada and S. Fortin, *XXX Jornadas de Epistemología e Historia de la Ciencia*, Córdoba, Argentina. September 19th to 21st, 2019.

33. Oral presentation, "La química cuántica: un posible caso de independencia ontológica", S. Fortin, *XXX Jornadas de Epistemología e Historia de la Ciencia*, Córdoba, Argentina. September 19th to 21st, 2019.

34. Oral presentation, "About the world described by Quantum Chemistry", S. Fortin, J. A. J. Arriaga and H. Accorinti, *International Congress of Logic, Methodology and Philosophy of Science and Technology 2019 (CLMPST 2019)*, Prague, Czech Republic. August 5th to 10th, 2019.

35. Oral presentation, "On the ontology of entities in quantum chemistry", S. Fortin, J. A. J. Arriaga and H. Accorinti, *Identity in science and philosophy*, Paris, France. July 29th to 30th, 2019.

36. Oral presentation, "Towards an own ontology for quantum chemistry", S. Fortin and J. A. J. Arriaga, *International Society for the Philosophy of Chemistry Summer Symposium 2019 (ISPC 2019)*, Torino, Italy. July 15th to 17th, 2019.

37. Oral presentation, "Relaciones entre química cuántica y física: ¿es la función de onda parte de la ontología de la química cuántica?", S. Fortin, *1º Jornadas de Historia, Filosofía y Didáctica de la Química del Cono Sur*, Buenos Aires, Argentina, 2019. May 13rd to 15th, 2019.

38. Oral presentation, "Lógicas dinámicas", S. Fortin, *7ma Jornada de Lógica, Computación e Información Cuántica*, La Plata, Argentina, 2019. May 3rd, 2019.

39. Oral presentation, "La naturaleza de la función de onda desde la perspectiva de la Química Cuántica", J. A. Jaimes Arriaga and S. Fortin, *XXIX Jornadas de Epistemología e Historia de la Ciencia*, Córdoba, Argentina, 2018. October 11st to 13rd, 2018.

40. Oral presentation, "Phonons and the Particular Change of Coordinates in Quantum Mechanics", S. Fortin, H. Accorinti and J. A. Jaimes Arriaga, *First Chilean Conference on the Philosophy of Physics*, Santiago, Chile. November 28th to 30th, 2018.

41. Oral presentation, "¿Por qué hay nada y no más bien fonones?", M. Herrera, J. A. Jaimes Arriaga, H. Accorinti and S. Fortin, *XIX Jornadas Rolando Chuaqui K.*, Concepción, Chile, 2018. August 29th to 31st, 2018.

42. Oral presentation, "A quantum chemical perspective about the nature of wave function", J. A. Jaimes Arriaga and S. Fortin, *Buenos Aires Workshop on Foundations of Science*, Buenos Aires, Argentina. September 3rd to 4th, 2018.

43. Oral presentation, "Once again, the old problem of structuralism", H. Accorinti and S. Fortin, *Buenos Aires Workshop on Foundations of Science*, Buenos Aires, Argentina. September 3rd to 4th, 2018.

44. Oral presentation, "The whole and the parts in quantum mechanics: chapter phonons", S. Fortin and J. A. Jaimes Arriaga, *2nd Leuven - Buenos Aires workshop on Philosophy of Physics and Chemistry*, Leuven, Belgium, 2018. July 22nd to 23rd, 2018.

45. Oral presentation, "An approach to the problem of the 3N dimensions of the wave function from a chemical perspective", S. Fortin and J. A. Jaimes Arriaga, *2nd Leuven - Buenos Aires workshop on Philosophy of Physics and Chemistry*, Leuven, Belgium, 2018. July 22nd to 23rd, 2018.

46. Oral presentation, "Phonons: a case of intra-theoretic relationship", S. Fortin, J. A. Jaimes Arriaga and H. Accorinti, *19th U.K. and European Meeting on the Foundations of Physics (FOUNDATIONS 2018)*, Utrecht, Netherlands, 2018. July 10th to 13rd, 2018.

47. Oral presentation, "The Quantum Theory of Atoms in Molecules from a Bohmian perspective", J. A. Jaimes Arriaga and S. Fortin, *International Society for the Philosophy of Chemistry Summer Symposium 2018 (ISPC 2018)*, Bristol, UK, 2018. July 16th to 18nd, 2018.

48. Oral presentation, "About the ontological status of phonons", S. Fortin, M. Herrera and J. A. Jaimes Arriaga, *International Society for the Philosophy of Chemistry Summer Symposium 2018 (ISPC 2018)*, Bristol, UK, 2018. July 16th to 18nd, 2018.

49. Oral presentation, "The problem of the 3N dimensions in Quantum Mechanics: a chemical approach", S. Fortin and J. A. Jaimes Arriaga, *East European Network for Philosophy of Science (EENPS 2018)*, Bratislava, Slovakia, 2018. June 20th to 22nd, 2018.

50. Oral presentation, "Acerca del estatuto ontológico de los fonones", J. A. Jaimes Arriaga, H. Accorinti and S. Fortin, *XI Encuentro de Filosofía e Historia de la Ciencia del Cono Sur (AFHIC 2018)*, Buenos Aires, Argentina, 2018. June 11st to 15th, 2018.

51. Oral presentation, "Una propuesta de la química cuántica para la ontología de la función de onda", J. A. Jaimes Arriaga, C. López and S. Fortin, *XI Encuentro de Filosofía e Historia de la Ciencia del Cono Sur (AFHIC 2018)*, Buenos Aires, Argentina, 2018. June 11st to 15th, 2018.

52. Oral presentation, "Multiple realizability: comparing classical irreversibility and decoherence", O. Lombardi and S. Fortin, *Multiple Realizability, Causation and Reductive Explanations in Science*, Valparaíso, Chile, 2018. March 6th to 7th, 2018.

53. Oral presentation, "Logical classical limit", M. Losada and S. Fortin, *VII Conference on Quantum Foundations: 90 years of uncertainty (VIIJFC)*, Córdoba, Argentina, 2017. November 29th to December 1st, 2017.

54. Oral presentation, "What is the rol of the Quantum Theory of Atoms in Molecules in the reduction of chemistry to physics?", J. A. Jaimes Arriaga and S. Fortin, *VII Conference on Quantum Foundations: 90 years of uncertainty (VIIJFC)*, Córdoba, Argentina, 2017. November 29th to December 1st, 2017.

55. Oral presentation, "Un análisis crítico de la Teoría Cuántica de Átomos en Moléculas (TCAEM) y su rol en la reducción de química molecular a mecánica cuántica", J. A. Jaimes Arriaga and S. Fortin, *XXVIII Jornadas de Epistemología e Historia de la Ciencia*, La Falda, Argentina, 2017. October 9th to 11th, 2017.

56. Oral presentation, "Un acercamiento filosófico a la Teoría Cuántica de Átomos en Moléculas", J. A. Jaimes Arriaga and S. Fortin, *XVIII Jornadas Rolando Chuaqui K.*, Valparaíso, Chile, 2017. August 23rd to 25th, 2017.

57. Oral presentation, "Teoría cuántica de átomos en moléculas: un caso de estudio para las relaciones interteóricas", J. A. Jaimes Arriaga and S. Fortin, *XVIII Congreso Nacional de Filosofía AFRA*, San Juan, Argentina, 2017. October 4th to 6th, 2017.

58. Oral presentation, "On the ontological status of molecular structure: is it possible to reconcile molecular chemistry with quantum mechanics?", S. Fortin, M. Labarca and O. Lombardi, *International Society for the Philosophy of Chemistry (ISPC)*, Paris, France, 2017. July 3rd to 5th, 2017.

59. Oral presentation, "Acerca del estatus ontológico de la estructura molecular: ¿química molecular o mecánica cuántica?", S. Fortin, M. Labarca and O. Lombardi, *IV Congreso Iberoamericano de Filosofía de la Ciencia y la Tecnología*, Salamanca, Spain, 2017. July 3rd to 7th, 2017.

60. Oral presentation, "Non-unitary evolution of quantum logical structure", M. Losada, S. Fortin and F. Holik, *PHHQP17: Non-Hermitian Hamiltonians in Physics: Theory and Experiment*, Bad Honnef, Germany. May 15th to 19th, 2017.

61. Poster presentation, "Classical limit from a logical perspective", M. Losada y S. Fortin, *14th Granada Seminar*, Granada, España, 2017. June 20th to 23rd, 2017.

62. Poster presentation, "Non-Hermitian Hamiltonians and Dynamical Logics", M. Losada and S. Fortin, *PHHQP17: Non-Hermitian Hamiltonians in Physics: Theory and Experiment*, Bad Honnef, Germany. May 15th to 19th, 2017.

63. Oral presentation, "Decoherencia e isomerismo óptico", S. Fortin and C. Gonzalez Martinez, *II Workshop de Ontología de la Física*, Buenos Aires, Argentina. June 5th to 6th, 2017.

64. Oral presentation, "About the concept of quantum information", S. Fortin and O. Lombardi, *VI Jornadas de Fundamentos de Cuántica*, Centro Científico Tecnológico del CONICET, La Plata, Argentina. December 12th to 14th 2017.

65. Oral presentation, "Classical Limit and Quantum Logic", S. Fortin and F. Holik, *The 25th Biennial Meeting of the Philosophy of Science Association (PSA2016)*, Atlanta, USA, 2016. November 3rd to 5th, 2016.

66. Oral presentation, "¿Qué significa "ser local"?", M. Losada, C. López and S. Fortin, *XXVII Jornadas de Epistemología e Historia de la Ciencia*, La Falda, Córdoba, Argentina. November 7th to 9th, 2016.

67. Oral presentation, "La irrupción de la mecánica cuántica en el ámbito de la información", S. Fortin, *XXII Jornadas de Epistemología de las Ciencias Económicas*, Buenos Aires, Argentina. October 19th to 21st, 2016.

68. Poster presentation, "Simetrías e interpretación de la mecánica cuántica", S. Fortin and C. López, *101ª Reunión Nacional de la Asociación Física Argentina*, San Miguel de Tucumán, Tucumán, Argentina. October 04th to 07th, 2016.

69. Poster presentation, "Lógica cuántica dinámica", M. Losada, F. Holik and S. Fortin, *101ª Reunión Nacional de la Asociación Física Argentina*, San Miguel de Tucumán, Tucumán, Argentina. October 04th to 07th, 2016.

70. Oral presentation, "Modelos atómicos y moleculares: ¿independencia conceptual o relativa?", H. Accorinti, J. C. Martínez González and S. Fortin, X Encuentro de Filosofía e Historia de la Ciencia del Cono Sur (AFHIC 2016), Águas de Lindoia, Brasil. September 12nd to 15th, 2016.

71. Oral presentation, "El problema de los enantiómeros en química cuántica", J. C. Martínez González, S. Fortin and O. Lombardi, X Encuentro de Filosofía e Historia de la Ciencia del Cono Sur (AFHIC 2016), Águas de Lindoia, Brasil. September 12nd to 15th, 2016.

72. Oral presentation, "El límite clásico de los retículos de propiedades", S. Fortin and F. Holik, X Encuentro de Filosofía e Historia de la Ciencia del Cono Sur (AFHIC 2016), Águas de Lindoia, Brasil. September 12nd to 15th, 2016.

73. Oral presentation, "Límite clásico e historias cuánticas", M. Losada, P. Iturbide and S. Fortin, X Encuentro de Filosofía e Historia de la Ciencia del Cono Sur (AFHIC 2016), Águas de Lindoia, Brasil. September 12nd to 15th, 2016.

74. Oral presentation, "Isomerismo óptico e interpretación de la mecánica cuántica", O. Lombardi, S. Fortin and J. C. Martínez González, *XVII Jornadas Rolando Chuaqui Kettlun*, Universidad de Chile, Santiago, Chile. August 24th to 26th, 2016.

75. Oral presentation, "Historias cuánticas: El formalismo de Contextos Generalizados", M. Losada, C. López y S. Fortin, *XVII Jornadas Rolando Chuaqui Kettlun*, Universidad de Chile, Santiago, Chile. August 24th to 26th, 2016.

76. Oral presentation, "On the interpretation of probabilities in generalized probabilistic models", F. Holik, S. Fortin, G. Bosyk and A. Plastino, *10th International Quantum Interaction Conference (QI 2016)*, San Francisco, USA. July 20th to 22dn, 2016.

77. Oral presentation, "Bohm's Quantum Theory of Motion for Quantum Chemistry", S. Fortin, J. C. Martínez González and O. Lombardi, *International Society for the Philosophy of Chemistry (ISPC) Summer Symposium 2016*, Boca Ratón, USA. August 1st to 4th, 2016.

78. Oral presentation, "Towards a dynamics for quantum logic", S. Fortin and F. Holik, *The 18th UK and European Conference on Foundations of Physics* (*FOUNDATIONS 2016*), London School of Economics, London, UK. July 16th to 18th, 2016.

79. Oral presentation, "Invariances in the interpretation of quantum mechanics", S. Fortin, *Leuven-Buenos Aires workshop on Philosophy of Physics*, KU Leuven, Leuven, Belgium. July 26th to 27th, 2016.

80. Oral presentation, "Quantum mechanics: symmetry and interpretation", S. Fortin and O. Lombardi, *The 18th UK and European Conference on Foundations of Physics* (*FOUNDATIONS 2016*), London School of Economics, London, UK. July 16th to 18th, 2016.

81. Oral presentation, "Quantum decoherence in the understanding of optical isomerism", J. C. Martínez González and S. Fortin, *V Jornadas de Fundamentos de Cuántica*, University of La Plata, Buenos Aires, Argentina. December 1st to 4th, 2015.

82. Poster presentation, "Classical limit from a quantum logical perspective", S. Fortin, F. Holik and L. Vanni, *The Fifth Conference of the European Philosophy of Science Association EPSA15*, Duesseldorf, Germany. September 23dr to 26th, 2015.

83. Oral presentation, "¿Permite el colapso definir una flecha cuántica del tiempo?", C. López and S. Fortin, *XXVI Jornadas de Epistemología e Historia de la Ciencia*, La Falda, Córdoba, Argentina. November 16th to 18th, 2015.

84. Oral presentation, "Hacia el estudio de una dinámica para la lógica cuántica", S. Fortin, L. Vanni and F. Holik, *XXVI Jornadas de Epistemología e Historia de la Ciencia*, La Falda, Córdoba, Argentina. November 16th to 18th, 2015.

85. Poster presentation, "Asimetría Temporal y Mecánica Cuántica", C. López and S. Fortin, *100ª Reunión Nacional de la Asociación Física Argentina*, Villa de Merlo, San Luis, Argentina. September 22nd to 25th, 2015.

86. Oral presentation, "Una navaja de Ockham informacional", S. Fortin and C. López, *XVI Jornadas Rolando Chuaqui Kettlun*, Universidad de Santiago de Chile, Santiago, Chile. August 26th to 28th, 2015.

87. Oral presentation, "The role of quantum decoherence in the understanding of optical isomerism", S. Fortin, O. Lombardi and J. C. Martínez González, *International Society for the Philosophy of Chemistry (ISPC) Summer Symposium 2015*, Rio de Janeiro, Brasil. July 28th to 30th, 2015.

88. Oral presentation, "A diachronic perspective on the structure of quantum lattices", S. Fortin, F. Holik and L. Vanni, *15th Congress of Logic, Methodology and Philosophy of Science*, Helsinki, Finland. August 3dr to 8th, 2015.

89. Poster presentation "A semiclassical condition for chaos based on Pesin theorem", I. Gomez, M. Losada, S. Fortin, M. Castagnino and M. Portesi, in the *School and Conference on Dynamical Systems*, Trieste, Italy. July 20th to August 7th, 2015.

90. Oral presentation, "About the concept of information", O. Lombardi and S. Fortin, *International Workshop: What is Quantum Information*, Buenos Aires, Argentina. May 18th to 22nd, 2015.

91. Oral presentation, "Entropía e Información", C. López, S. Fortin and M. Labarca, XVII Congreso Nacional de Filosofía, University of el Litoral, Santa Fe, Argentina. August 4th to 8th, 2015.

92. Oral presentation, "Repensando la Teleportación", L. Vanni and S. Fortin, *IV Jornadas de Fundamentos de Cuántica*, Rosario Institute of Physics, Santa Fe, Argentina. November 27th to 29th, 2014.

93. Oral presentation, "About the concept of quantum information", S. Fortin and O. Lombardi, *South American Workshop on the Foundations of Quantum Theory and Cosmology*, San Pablo, Brasil. November 3dr to 7th, 2014.

94. Oral presentation, "A pluralist view about information", S. Fortin, O. Lombardi and L. Vanni, *Philosophy of Science Meeting 2014*, Chicago, Illinois, USA. November 6th to 9th, 2014.

95. Oral presentation, "Isomerismo óptico y la paradoja de Hund", S. Fortin and J. C. Martínez González, *Bienal Latinoamericana de Óptica Cuántica*, La Plata, Buenos Aires, Argentina. October 22nd to 24th,2014.

96. Oral presentation, "Aplicación de modelos cuánticos de sistemas clásicos a la teoría de la información cuántica", S. Fortin and F. Holik, *IX Encuentro de Filosofía e Historia de la Ciencia del Cono Sur and XXV Jornadas de Epistemología e Historia de la Ciencia*, Los Cocos, Córdoba, Argentina. September 15th to 19th, 2014.

97. Poster presentation, "Información y flecha del tiempo", S. Fortin and C. López, *99ª Reunión Nacional de la Asociación Física Argentina*, Tandil, Buenos Aires, Argentina. September 22nd to 25th, 2014.

98. Poster presentation, "Un estudio sobre el concepto de información cuántica", S. Fortin, F. Holik, M. Labarca and J. C. Martínez González, *99ª Reunión Nacional de la Asociación Física Argentina*, Tandil, Buenos Aires, Argentina. September 22nd to 25th, 2014.

99. Oral presentation, "Entropy and information: the many faces of their relationship", S. Fortin and O. Lombardi, *International Society for the Philosophy of Chemistry (ISPC) Summer Symposium 2014*, London, United Kingdom. July 7th to 9th, 2014.

100. Oral presentation, "A closed-system perspective for decoherence", S. Fortin, *New Directions in the Foundations of Physics*, Washington, DC, USA. April 18th to 20th, 2014.

101. Oral presentation, "Quantum decoherence of logical properties", S. Fortin, *III Jornadas de Fundamentos de Cuántica*, Córdoba, Córdoba, Argentina. November 20th to 22nd, 2013.

102. Oral presentation, "La estructura molecular y la mecánica cuántica: el caso de los isómeros ópticos", S. Fortin and J. C. Martínez González, *XXIV Jornadas de Epistemología e Historia de la Ciencia*, La Falda, Córdoba, Argentina. October 17th to 20th, 2013.

103. Oral presentation, "El estatuto ontológico de las probabilidades en física", S. Fortin and M. Saenz, *XXIV Jornadas de Epistemología e Historia de la Ciencia*, La Falda, Córdoba, Argentina. October 17th to 20th, 2013.

104. Oral presentation, "The problem of optical isomerism: the hund paradox", S. Fortin and J. C. Martínez González, in *International Society for the Philosophy of Chemistry (ISPC) Summer Symposium 2013*, Montevideo, Uruguay. July 31st to 3dr August, 2013.

105. Oral presentation, "Las más recientes interpretaciones de la mecánica cuántica, ¿favorecen un indeterminismo epistemológico u ontológico?", S. Fortin, in *Workshop Determinismo e Indeterminismo: De la Física a la Filosofía*, Pilar, Argentina. August 5th to 9th, 2013.

106. Oral presentation, "Ontología de los sistemas cuánticos abiertos", S. Fortin, in *Workshop Internacional: Ontologia de la Fisica. Los Desafios Filosoficos de la Fisica Contemporanea*, La Plata, Argentina. May 30 th to 31 st, 2013.

107. Oral presentation, "Quantum decoherence: a logical perspective", S. Fortin and L. Vanni, in *UNILOG 2013: 4th World Congress on Universal Logic*, Río de Janeiro, Brazil. April 3dr to 7th, 2013.

108. Oral presentation, "El papel de la simetría en química cuántica", G. Bellomo and S. Fortin, in *XVI Congreso Nacional de Filosofía*, Buenos Aires, Argentina. March 18th to 22st, 2013.

109. Oral presentation, "Una perspectiva diacrónica en la estructura de la lógica cuántica", S. Fortin and L. Vanni, in *VIII Encuentro de Filosofía e Historia de la Ciencia del Cono Sur (AFHIC)*, Santiago de Chile, Chile. October 16th to 20th, 2012.

110. Oral presentation, "Una ontología para la mecánica cuántica desde una perspectiva estructuralista", S. Fortin and M. Lastiri, in *VIII Encuentro de Filosofía e Historia de la Ciencia del Cono Sur (AFHIC),* Santiago de Chile, Chile. October 16th to 20th, 2012.

111. Oral presentation, "Non-uniraty evolutios and non hermitina hamiltonians in decoherence of closed systems", M. Castagnino and S. Fortin, in *PHHQP XI: Non-Hermitian Operators in Quantum Physics*, Paris, France. August 27th to 31st, 2012.

112. Oral presentation, "Las múltiples ontologías de las ciencias físico-químicas", M. Córdoba and S. Fortin, in *X International Ontology Congress*, Sán Sebastián y Barcelona, Spain. October 1st to 9th, 2012.

113. Oral presentation, "Symmetry and observability", S. Fortin and O. Lombardi, in *International Society for the Philosophy of Chemistry (ISPC) Summer Symposium 2012*, Leuven, Bélgica. August 7th to 10th, 2012.

114. Poster Presentation, "Un límite clásico-cuántico para los sistemas abiertos", G. Bellomo and S. Fortin, in *97ª Reunión Nacional de la Asociación Física Argentina*, Villa Carlos Paz, Córdoba, Argentina. September 25th to 28rd, 2012.

115. Oral presentation, "La estructura de la lógica cuántica en un álgebra de conjuntos", S. Fortin and L. Vanni, in *Segundo Congreso de la Asociación Latinoamericana de Filosofía Analítica*, Buenos Aires, Argentina. August 21st to 24th, 2012.

116. Oral presentation, "Pérdida de unitariedad en sistemas cerrados", S. Fortin, *II Jornadas de Fundamentos de Cuántica*, La Plata, Buenos Aires, Argentina. November 15th to 16th, 2012.

117. Oral presentation, "Una descripción de la apariencia del mundo clásico sin apelar a límites reductivos", G. Bellomo and S. Fortin, *XXIII Jornadas de Epistemología e Historia de la Ciencia*, La Falda, Córdoba, Argentina. November 12th to 14th, 2012.

118. Poster Presentation, "Un límite clásico-cuántico para los sistemas abiertos", G. Bellomo and S. Fortin, *97º Reunión Nacional de Física AFA*, Villa Carlos Paz, Córdoba, Argentina. September 25th to 28th, 2012.

119. Poster Presentation, "Decoherencia en cadenas de espines", D. Bendersky y S. Fortin, *1st Joint Meeting of AFA-SUF*, Montevideo, Uruguay, September 20th to 23rd, 2011.

120. Oral presentation, "The conceptual meaning of reduced states: decoherence and interpretation", S. Ardenghi, S. Fortin and O. Lombardi presentado, *14th Congress CLMPS*, Nancy, France. July 19th to 26th, 2011.

121. Oral presentation, "Non-unitary evolutions and non-hermitian hamiltonians in decoherence and equilibrium tehory", M. castagnino and S. Fortin, *International Seminar and Workshop: Quantum Physics with Non-Hermitian Operators*, Dresden, Germany, June 13th to 26th, 2011.

122. Poster Presentation "The moving preferred basis in open systems", M. castagnino and S. Fortin, *International Seminar and Workshop: Quantum Physics with Non-Hermitian Operators*, Dresden, Germany, June 13th to 26th, 2011.

123. Poster Presentation "Defining the moving preferred basis", M. Castagnino and S. Fortin, *Workshop on New Trends in Quantum Dynamics and Entanglement*, Miramare, Trieste, Italy, February 21st to 25th, 2011.

124. Oral presentation, "Los sistemas abiertos desde el punto de vista del sistema cerrado: una perspectiva conveniente", S. Fortin, *I Jornadas de Fundamentos de Cuántica*, Buenos Aires, Argentina. December 7th, 2011.

125. Oral presentation, "El problema de la definición de la base privilegiada móvil y una posible solución", M. Castagnino and S. Fortin, *XXII Jornadas de Epistemología e Historia de la Ciencia*, La Falda, Córdoba, Argentina. October 27th to 29th, 2011.

126. Oral presentation, "Decoherencia y circularidad: Una ¿posible? Interpretación hermenéutica en filosofía de la física", M. Córdoba and S. Fortin, *XV Congreso Nacional de Filosofía*, Buenos Aires, Argentina. December 6th to 10th, 2010.

127. Oral presentation, "Compatibility between environment-induced decoherence and the modal-Hamiltonian interpretation of quantum mechanics", O. Lombardi, S. Ardenghi, S. Fortin and M. Castagnino, *Philosophy of Science Meeting*, Montreal, Canadá, November 4th to 6th, 2010.

128. Oral presentation, "Un enfoque de valores medios para sistemas cuánticos abiertos (y cerrados)", M. Castagnino and S. Fortin, Simposium "Cuestiones cuánticas" in *III Congreso*

Iberoamericano de Filosofia de la Ciencia y de la Tecnologia, Buenos Aires, Argentina. September 6th to 9th, 2010.

129. Poster Presentation, "Un enfoque basado en valores medios para la decoherencia", M. Códoba and S. Fortin, *95th National Meeting of Physics AFA*, Malargüe, Mendoza, Argentina, September 28th to 1st October, 2010.

130. Poster Presentation, "La interpretación modal-hamiltoniana de la mecánica cuántica", J. Ardenghi, D. Bendersky, E. Bernatene, M. Códoba, S. Fortin, M. Lastiri, M. Narvaja and L. Vanni, *95th National Meeting of Physics AFA*, Malargüe, Mendoza, Argentina, September 28th to 1st October, 2010.

131. Poster Presentation, "Una aplicación especifica de la versión "polar" de la decoherencia", D. Bendersky and S. Fortin, *95th National Meeting of Physics AFA*, Malargüe, Mendoza, Argentina, September 28th to 1st October, 2010.

132. Poster Presentation, "Una conjetura sobre la naturaleza del espacio en mecánica cuántica", S. Fortin, M. Lastiri and M. Narvaja, *95th National Meeting of Physics AFA*, Malargüe, Mendoza, Argentina, September 28th to 1st October, 2010.

133. Poster Presentation, "Una perspectiva pluralista para el problema del realismo en física", M. Córdoba and S. Fortin, *95th National Meeting of Physics AFA*, Malargüe, Mendoza, Argentina, September 28th to 1st October, 2010.

134. Oral presentation, "¿Cómo se distingue el sistema que decohere de su entorno?", M. Castagnino and S. Fortin, *VII Meeting AFHIC*, Canela, Brazil, May 3rd to 6th, 2010.

135. Oral presentation, "The modal-Hamiltonian interpretation of quantum mechanics: facing the interpretive problems of the theory", S. Ardenghi, S. Fortin, M. Narvaja and O. Lombardi, *Quantum Gravity and the Foundations of Physics: A conference in honor of Prof. Mario A. Castagnino*, Rosario, Argentina, March 17th to 19th, 2010.

136. Oral presentation, "The problem of identifying the system and the environment in the phenomenon of decoherence", M. Castagnino, S. Fortin and O. Lombardi, *Second Conference of the European Philosophy of Science Association EPSA09*, Amsterdam, October 21st to 24th, 2009.

137. Poster Presentation, "Aspectos formales del Esquema General de la Decoherencia", S. Fortin, *94th National Meeting of Physics AFA*, Rosario, Argentina, September 14th to 18th, 2009.

138. Oral presentation, "El esquema general de la decoherencia como punto de partida para un enfoque basado en valores medios", M. Castagnino and S. Fortin en las *XX XX Jornadas de Epistemología e Historia de la Ciencia*, La Falda, Argentina, November 25th to 28th, 2009.

139. Poster Presentation, "La generalización de un ejemplo típico de la decoherencia cuántica", S. Fortin, *1st Joint Meeting of AFA-SUF*, Buenos Aires, Argentina, September 15th to 19th, 2008.

140. Oral presentation, "Una discusión introductoria en torno a la existencia de un espacio-tiempo absoluto o relacional en el marco teórico de la Relatividad General", C. Bejarano, S. Fortin and F. Holik. *VI Meeting AFHIC*, Montevideo, Uruguay, May 27th to 30th, 2008.

141. Oral presentation, "Sobre un punto de vista heurístico concerniente a la naturaleza del espacio en mecánica cuántica", S. Fortin, M. Narvaja and M. Lastiri en las *XIX Jornadas de Epistemología e Historia de la Ciencia*, La Falda, Argentina, October 29th to November 1st, 2008.

142. Oral presentation, "¿Qué tienen que ver un balde rotante y un campo relativista?", C. Bejarano, S. Fortin and F. Holik, *XVIII Jornadas de Epistemología e Historia de la Ciencia*, La Falda, Argentina, October 25th to 27th, 2007.

143. Participation in the *Fourth Argentine Championship Robot Soccer* representing the team of the University of Buenos Aires, Universidad Abierta Interamericana, Buenos Aires, Argentina. July 2006.

144. Oral presentation, "Colaboración Ítalo-Argentina para el estudio de celdas solares basadas en materiales III-V", J. Pla, M. Barrera, M. Bosi, C. Pelosi, G. Attolini, F. Rubinelli, S. Fortin and M.G. Martinez Bogado, *XXIX Workshop of the Argentine Association for Renewable Energy and Environment (ASADES)*, Buenos Aires, Argentina, October 23rd to 27th, 2006.

145. *IV Campeonato Argentino de Fútbol de Robots* representing the team at the University of Buenos Aires, Universidad Abierta Interamericana, Buenos Aires, Argentina. July 2006.

146. Oral presentation, "Un diseño simple orientado a objetos de un equipo de fútbol de robots", A. Martínez, D. Park, J. Burella, G. Viscuso, F. Holik and S. Fortin, in *III Workshop en Inteligencia Artificial aplicada a Robótica Móvil*, Universidad Abierta Interamericana, Buenos Aires. July 2006.

147. Oral presentation, “Respuesta espectral de celdas solares multijuntura para aplicaciones espaciales: diseño del equipo y primeras mediciones”, S. Fortin, M. G. Bogado Martinez, J. Plá, *XXVIII Workshop of the Argentine Association for Renewable Energy and Environment (ASADES)*, San Martin de los Andes, Argentina, November 2nd to 4th, 2005.

148. Poster presentation, “Medición de la respuesta espectral de celdas solares multijuntura para aplicaciones espaciales”, S. Fortin, M. G. Bogado Martinez, J. Plá, *90th National Meeting of the Asociación Física Argentina (AFA)*, La Plata, Argentina, September 26th to 29th, 2005.

Participation in scientific meetings as organizer

1. Organizer of the congress *IV Jornadas de Fundamentos, Filosofía e Historia de la Física*, in videoconference mode. October 30th to 2nd November, 2023.
   https://www.filoexactas.exactas.uba.ar/jornadasf2023/

2. Organizer of the congress *IV Jornadas de Fundamentos de química*, in videoconference mode. October 2nd to 4th, 2023.
   https://www.filoexactas.exactas.uba.ar/jfq2023/

3. Organizer of the *XII Conference on Quantum Foundations: Contextuality, coherence and quantumness (XIIJFC)*, in the Universidad CAECE, Buenos Aires, Argentina. November 29th to 1st December, 2023.
   https://sites.google.com/fisica.unlp.edu.ar/xiicqf/home

4. Organizer of the *XI Conference on Quantum Foundations: Contextuality, coherence and quantumness (XIJFC)*, in the Universidad Nacional de Córdoba, Córdoba, Argentina. November 28th to 30th, 2022.
   https://sites.google.com/view/xicqf/home

5. Organizer of the congress *IV Jornadas de Historia, Filosofía y Didáctica de la Química del Cono Sur*, in videoconference mode. November 8th to 12th, 2022.
   https://sites.google.com/view/jornadasfhdquimica/

6. Organizer of the congress *III Jornadas de Fundamentos, Filosofía e Historia de la Física*, in videoconference mode. October 11st to 13rd, 2022.
   https://www.filoexactas.exactas.uba.ar/jornadasf2022/

7. Organizer of the congress *III Jornadas de Fundamentos de química,* in videoconference mode, in videoconference mode. October 3rd to 8th, 2022.
   https://www.filoexactas.exactas.uba.ar/jfq2022/

8. Organizer of the *X Conference on Quantum Foundations: Ten Irreversible Years of Quantum Foundations In Argentina (XJFC),* in the Universidad Nacional de Córdoba, Córdoba, Argentina. November 27th to December 3rd, 2021.
   https://sites.google.com/view/xcqf/home

9. Organizer of the congress *II Jornadas de Fundamentos de química,* en modalidad de videoconferencia, in videoconference mode. October 5th to 7th, 2021.
   https://www.filoexactas.exactas.uba.ar/jfq2021/

10. Organizer of the congress *II Jornadas de Fundamentos, Filosofía e Historia de la Física,* in videoconference mode. September 10th to 14th, 2021.
    http://www.filoexactas.exactas.uba.ar/jornadasf2021/

11. Organizer of the congress *24th conference of the International Society for the Philosophy of Chemistry (ISPC 2021),* Universidad de Buenos Aires. July 12st to 21st, 2021.
    https://sites.google.com/site/socphilchem/symposia?authuser=0

12. Organizer of the congress *Seminario de indistinguibilidad cuántica: Fundamentos y Aplicaciones,* in videoconference mode. July 1st, 2021.
    https://sites.google.com/unc.edu.ar/seminariosdeindistcuantica/seminarios-de-indistinguibilidad?authuser=1

13. Organizer of the congress *Seminario de indistinguibilidad cuántica: Fundamentos y Aplicaciones,* in videoconference mode. April 8th, 2021.
    https://sites.google.com/unc.edu.ar/seminariosdeindistcuantica/seminarios-de-indistinguibilidad?authuser=1

14. Organizer of the congress *1º Jornadas de Fundamentos, Filosofía e Historia de la Física,* in videoconference mode. December 17th, 2020.
    http://www.filoexactas.exactas.uba.ar/jornadasf2020/

15. Organizer of the congress *I Jornadas de Fundamentos de Química*, in videoconference mode. December 15th, 2020.
    http://www.filoexactas.exactas.uba.ar/jfq2020/

16. Organizer of the congress *II Jornadas de Historia, Filosofía y Didáctica de la Química del Cono Sur,* in videoconference mode. December 26th to 28th, 2020.

http://www.filoexactas.exactas.uba.ar/jornadasq2020/

17. Organizer of the congress *Seminario de indistinguibilidad cuántica: Fundamentos y Aplicaciones*, in videoconference mode. December 10th, 2020.
https://sites.google.com/unc.edu.ar/seminariosdeindistcuantica/inicio

18. Member of the Organizing Committee of the *IX Jornadas de Fundamentos de Cuántica*, en la Universidad Nacional de Córdoba, Córdoba, Argentina. November 27th to 29th, 2020.
https://sites.google.com/view/ixjfc

19. Organizer of the workshop *Identity in science and philosophy*, Université Paris Diderot, Paris, France. July 29th to 30th, 2019.
http://www.filoexactas.exactas.uba.ar/jornadasq2019/

20. Member of the Organizing Committee of the *1º Jornadas de Historia, Filosofía y Didáctica de la Química del Cono Sur*, Sociedad Argentina de Análisis Filosófico, Buenos Aires, Argentina. May 13rd to 15st, 2019.
http://www.filoexactas.exactas.uba.ar/jornadasq2019/

21. Member of the Organizing Committee of the *VIII Jornadas de Fundamentos de Cuántica*, Universidad CAECE, Buenos Aires, Argentina. November 21st to 23rd, 2018.
https://sites.google.com/view/viiijfc

22. Organizer of the *Workshop on Foundations of Science*, Sociedad Argentina de Análisis Filosofico, Buenos Aires, Argentina. September 3rd to 4th, 2018.
http://www.filoexactas.exactas.uba.ar/workshop2018

23. Organizer of the *International Workshop: Identity, indistinguishability and non-locality in quantum physics*, Academia Nacional de Ciencias Exactas, Físicas y Naturales, Buenos Aires, Argentina. June 26th to 30th, 2017.
http://www.filoexactas.exactas.uba.ar/project-ontology/workshop.html

24. Member of the Organizing Committee of the *VI Jornadas de Fundamentos de Cuántica*, Facultad de Matemática, Astronomía, Física y Computación, Córdoba, Argentina. November 29th to December 1st, 2017.
https://sites.google.com/site/viijornadasfundamentoscuantica

25. Member of the Organizing Committee of the *VI Jornadas de Fundamentos de Cuántica*, Centro Científico Tecnológico del CONICET, La Plata, Argentina. December 12th to 14th, 2016.

http://www.lls-ceilap.com/vi-jornadas---english.html

26. Member of the Organizing Committee of the *V Jornadas de Fundamentos de Cuántica*, Universidad Nacional de La Plata, Buenos Aires, Argentina. December 1th to 4th, 2015. https://sites.google.com/site/vjornadasfundamentoscuantica/

27. Member of the Local Organizing Committee of the *International Workshop: What is Quantum Information?*, Instituto de Astronomía y Física del Espacio (IAFE), Buenos Aires, Argentina. May 18th to 22nd de Mayo de 2015. http://www.filoexactas.exactas.uba.ar/information2015/

28. Member of the Local Organizing Committee of the *IV Jornadas de Fundamentos de Cuántica*, Instituto de Física de Rosario, Santa Fe, Argentina. November 27th to 29th, 2014. https://sites.google.com/site/ivfundamentoscuantica/

29. President of the Local Organizing Committee of the *I Jornadas de Fundamentos de Cuántica*, Instituto de Astronomía y Física del Espacio, Buenos Aires, Argentina. December 7 th, 2011. http://cms.iafe.uba.ar/sfortin/Jornadas-01

30. Member of Local Organizing Committee of the *I Latin American Conference of Comets*, Argentina Association of Friends of Astronomy, Buenos Aires, Argentina. June 7th to 9th, 1996.

Participation in scientific meetings as attendant

1. Participation in the *Mini-Workshop on the Quantum Measurement Problem* realizado en la Harvard University, USA. June 29th 2021.

2. Participation in the *Jornada de Historia de la Ciencia "a 400 años de la publicación de la tercera ley de Kepler"*, Mar del Plata, Argentina. December 6th 2019.

3. Participation in the *CNCS Seminar*, Center For Nonlinear And Complex Systems, Università dell' Insubria, Como, Italy. Frebruary 28th to March 3rd, 2011.

4. Participation in the *CCPP HEP Seminar*, Center for Cosmology and Particle Physics, New York University, New York, USA. October 25th to 29th, 2010.

5. Participation in the workshop *Low Dimensional Condensed Matter*, Department of Physics, University of Buenos Aires, Buenos Aires, Argentina, July 19th to 23rd, 2010.

6. Participation in the *Third workshop on Quantum Chaos: Theory and Applications*, Atomic Center, Buenos Aires, Argentina, December 1st to 4th, 2009.
7. Participation in the workshop *Physics and the computers of the future* at the Department of Physics of the University of Buenos Aires, Buenos Aires, Argentina, 30th July to 3rd August, 2007.
8. Participation in the workshop *Trends in Theoretical Physics IV*, Centre for Physics and Mathematics of South America, Buenos Aires, Argentina, April 30th to May 5th, 2007.
9. Participation in the *Jornadas sobre Estructuras Cuánticas II*, Institute of Astronomy and Space Physics (Instituto de Astronomía y Física del Espacio, IAFE), Buenos Aires, Argentina, June 7 th, 2007.
10. Participation in the *Symposium on Quantum Structures I*, Institute of Astronomy and Space Physics (Instituto de Astronomía y Física del Espacio, IAFE), Buenos Aires, Argentina, April 27 th, 2007.
11. Participation in the workshop *Trends in Theoretical Physics III*, Centre for Physics and Mathematics of South America, Buenos Aires, Argentina, May 1st to 5th, 2010.
12. Participation as an assistant at the "Seminar on Tuesday 2006" of the Quantum Structures group of the Institute of Astronomy and Space Physics (Instituto de Astronomía y Física del Espacio) in 2006.
13. Participation in the *Third Workshop on Artificial Intelligence Applied to Mobile Robotics*, Universidad Abierta Interamericana, Buenos Aires, Argentina, July, 2006.
14. Participation in the Carlos Alchourrón Seminar at the Argentine Scientific Society, 2007.

Supervisor

1. FONCYT's Grant Dirección, Student Name: Juan Pablo Jorge, 2020-2023.
2. Doctoral thesis on philosophy and history of science Supervisor, Student Name: Roberto Pautasso, Title: El estatuto ontológico del objeto en el experimento de las dos rendijas [The ontological status of the object in the two-slit experiment], University of Tres de Febrero. October 13rd, 2015.
3. Doctoral thesis on philosophy Co- Supervisor, Student Name: Cristian López, Title: Condiciones físicas y metafísicas para un enfoque de la causación aplicable en las teorías físicas

del espacio-tiempo [Physical and metaphysical conditions for an approach to causation applicable in physical theories of space-time], University of Buenos Aires. March 31st, 2022.

4. Doctoral thesis on philosophy Co- Supervisor, Student Name: Cristian López, Title: Flecha del tiempo y simetría temporal en mecánica cuántica no relativista: sobre por qué tenemos razones sólidas para creer en una flecha cuántica del tiempo [Time arrow and temporal symmetry in non-relativistic quantum mechanics: on why we have solid reasons to believe in a quantum arrow of time], University of Buenos Aires. November 7th, 2019.
5. Master thesis on philosophy and history of science Co- Supervisor, Student Name: Daniel Vaccaro, Title: Las primeras investigaciones sobre fenómenos electromagnéticos: Ampère y Faraday (1820-1831) [Early research on electromagnetic phenomena: Ampère and Faraday (1820-1831)], University of Tres de Febrero. September 3rd, 2014.
6. Master thesis in physics Co- Supervisor, Student Name: Guido Bellomo, Title: Un Modelo Alternativo para la Evolución al Equilibrio (An Alternative Model for the Evolution to Equilibrium), University of Buenos Aires. March 28th, 2013.
7. CIN UBA's Grant Co-dirección, Student Name: Guido Bellomo, 2012-2013.
8. Doctoral thesis on philosophy Supervisor, Student Name: Jesús Alberto Jaimes Arriaga, University of Buenos Aires. Title: "Un análisis Epistemológico de la Teoría Cuántica de Átomos en Moléculas y su papel en la definición de estructura molecular".
9. Doctoral thesis on philosophy Supervisor, Student Name: Matías Daniel Pasqualini, University of Buenos Aires. Title: "La Interpretación Modal-Hamiltoniana y su Ontología de Propiedades Posibles: nuevas aplicaciones y perspectivas".
10. Doctoral thesis on philosophy Supervisor, Student Name: Ignacio Javier Rojas Herrera, University of Buenos Aires. Title: "Ontología Cuántica: Realismo Estructural Óntico e Interpretación Modal-Hamiltoniana".
11. Doctoral thesis on philosophy Co- Supervisor, Student Name: Hernán Accorinti, University of Buenos Aires. Title: "Los modelos en la ciencia: mediación, autonomía y representación"
12. CONICET's Grant Co-dirección, Student Name: Hernán Accorinti, 2020-2022.
13. Doctoral thesis on philosophy Co- Supervisor, Student Name: Erick Manuel Rubio, University of Buenos Aires. Title: "Teoría de la evolución biológica y complejidad"

Evaluation activities

Refereeing

1. Referee in the selection of works of *XII Encuentro de la Asociación de Filosofía e Historia de la Ciencia del Cono Sur* (AFHIC). Año 2023.
2. Referee in the journal *Philosophical Transactions A*, Royal Society, 2023.
3. Referee in the journal *Philosophical Transactions A*, Royal Society, 2022.
4. Referee in the journal *TRANSFORMAÇÃO Revista de Filosofia*, UNESP, 2022.
5. Referee in the journal *Indian Journal of Physics*, Springer, 2022.
6. Referee in the journal *Foundation of Physics*, Springer, 2022.
7. Referee in the journal *Foundation of Physics*, Springer, 2021.
8. Referee in the journal *Quantum Reports*, Springer, 2021.
9. Referee in the journal *Quanta*, Springer, 2021.
10. Referee in the journal *Foundation of Physics*, Springer, 2020.
11. Referí in the journal *Soft Computing*, 2019.
12. Referí in the journal *Manuscrito – Revista internacional de filosofía*, 2018.
13. Referí in the journal *Metatheoria – Revista de Filosofía e Historia de la Ciencia*, 2017.
14. Referee in the journal *Foundations of Science*, Springer, 2016.
15. Referee in the journal *Annals of Physics*, Elsevier, 2016.
16. Referee in the selection of works of *VII Encuentro de la Asociación de Filosofía e Historia de la Ciencia del Cono Sur* (AFHIC). Año 2015.
17. Referee in the journal *Foundation of Physics*, Springer, 2015.
18. Referee in the journal *Annals of Physics*, Elsevier, 2014.
19. Referee in the journal *Foundation of Physics*, Springer, 2013.
20. Referee in the journal *Annals of Physics*, Elsevier, 2013.
21. Referee in the journal *Theoria, Revista de Teoría, Historia y Fundamentos de la Ciencia*, Editorial de la Universidad del País Vasco, San Sebastián, Spain, 2013.
22. Referee in the journal *Physics Essays, an International Journal dedicated to Fundamental Questions in Physics*, American Institute of Physics, 2013

23. Referí in the journal *Revista Multiciencias*, Universidad del Zulia, Venezuela, 2013.
24. Referí in the journal *Metatheoria – Revista de Filosofía e Historia de la Ciencia*, 2012.
25. Referí in the journal *Revista Colombiana de Filosofía de la Ciencia – Revista de Filosofía de la Ciencia*, 2012.

Thesis jury member

1. MSc thesis jury member on philosophy and history of science, University of Tres de Febrero, Fiorela Alassia, april 12th, 2019.
2. PhD thesis jury member on philosophy, University of La Plata, Rolando Nuñez Pradenas, july 5th, 2018.
3. PhD thesis jury substitute member on philosophy, University of La Plata, Miguel Fuentes, July 2018.
4. PhD thesis jury substitute member on physics, University of Granada, Mariano Guillermo Caruso, october 4th, 2017.
5. PhD thesis jury member on on philosophy and history of science, University of Tres de Febrero, Juan Camilo Martinez Gonzalez, may 23rd, 2016.
6. Master thesis jury member on on philosophy and history of science, University of Tres de Febrero, Camilo Gonzalez, april 26th, 2014.

Evaluation of research projects

1. Evaluation of research proyect 2022 for the Universidad Nacional de Mar del Plata, Argentina.
2. Evaluation of research proyect 2022 for the Universidad Nacional del Nordeste, Argentina.
3. Evaluation of research proyect PICT-2017 for the Agencia Nacional de Promoción Científica y Técnica (ANPCyT), Argentina.
4. Evaluation of research proyect PICT-2016 for the Agencia Nacional de Promoción Científica y Técnica (ANPCyT), Argentina.
5. Evaluation of research proyect PICT-2015 for the Agencia Nacional de Promoción Científica y Técnica (ANPCyT), Argentina.

Evaluation of grants

1. Evaluatión of applications to Becas de Estímulo a las Vocaciones Científicas (EVC), of the 2017 call for Centro Interuniversitario Nacional (CIN).

Invitations

1. Invited lecture in the *2nd Leuven - Buenos Aires workshop on Philosophy of Physics and Chemistry* organized by KU Leuven, Leuven, Belgium. Where I dictate the conference "The whole and the parts in quantum mechanics: chapter phonons", July 22nd, 2018.

2. Invited lecture in the *First Chilean Conference on the Philosophy of Physics, Santiago, Chile*. Where I dictate the conference "Phonons and the Particular Change of Coordinates in Quantum Mechanics", July 29 th, 2018.

3. Invited lecture in the *Leuven-Buenos Aires workshop on Philosophy of Physics* organized by KU Leuven, Leuven, Belgium. Where I dictate the conference "Invariances in the interpretation of quantum mechanics", July 26 th, 2016.

4. Invitation to talk in the *13th Annual New Directions in the Foundations of Physics Conference*, organized by the Foundations of Physics Group de la University of Maryland, la Johns Hopkins University y la Georgetown University, Washington DC, April 18th to 20th, 2014.

5. Invitation to participate in the *International Workshop for Quantum Physics with Non-Hermitian Operators* in the *Max Planck Institute for the Physics of Complex Systems* where I dictate the conference "Non-Hermitian Hamiltonians in decoherence and equilibrium theory". Dresden, Germany. June 14th to 20th, 2011.

6. Invitation for academic exchange in the *Laboratorio Nacional de Investigación y Servicios de Resonancia Magnética en Sólidos (LaNAIS), Facultad de Matemática, Astronomía y Física Universidad Nacional de Córdoba (FaMAF)*, Córdoba, Argentina. In the group of Dr. Horacio M. Pastawski. April 6th to 9th, 2011.

7. Invited lecture in the *Seminario de Física* of the Facultad de Matemática, Astronomía y Física Universidad Nacional de Córdoba (FaMAF). Where I dictate the conference "Una propuesta de solución a los problemas del enfoque ortodoxo de la decoherencia: El esquema general", April 4 th, 2011.

8. Invitation to participate in the *Workshop on New Trends in Quantum Dynamics and Quantum Entanglement, Abdus Salam International Centre for Theoretical Physics* where I present the work "Defining the moving preferred basis". Miramare, Trieste, Italy. February 20th to 26th, 2011.

Participation in research projects

1. Director of the two-year research project "Irreversible phenomena in quantum mechanics from a holistic perspective" (PICT-2020-SERIEA-00782), funded by Agency Science and Technology Promotion, Fund for Scientific and Technological Research (FONCyT). Project Director: Dr. Sebastian Fortin. Amount awarded: AR$812,700. Period: 2022-2023.

2. Director of the three-year research project "Three philosophical problems in the foundation of physics: Interpretation of quantum mechanics, irreversibility and interdisciplinary relationships" (PIP 11220200100483CO), funded by the National Council for Scientific and Technical Research (CONICET). Project Director: Dr. Sebastian Fortin. Amount awarded: AR$927,360. Period: 2021-2023.

3. Director of the two-year research project "Quantum Mechanics: Interpretation and Inter-theoretical Relationships" (UBACyT 20020190200097BA), funded by the Ministry of Science and Technology, University of Buenos Aires. Project Director: Dr. Sebastian Fortin. Amount awarded: AR$25,600. Period: 2020-2021.

4. Co-Director of the three-year research project "The Cosmological Origin of the Arrow of Time", funded by the John Templeton Foundation. Project Director: Dra. Olimpia Lombardi, Project Co-director: Sebastian Fortin, Amount awarded: USD 162.065. Period: 2020-2023.

5. Responsible member of the three-year research project "The interpretation of quantum mechanics and its relations with other theoretical and disciplinary domains" (PICT-2018-04519), funded by Agency Science and Technology Promotion, Fund for Scientific and Technological Research (FONCyT). Project Director: Dra. Olimpia Lombardi. Amount awarded: AR$630,000. Period: 2019-2022.

6. Director of the two-year research project "The problem of inter-theoretical relations between quantum mechanics and other theoretical domains" (UBACyT 20020170200026BA), funded by the Ministry of Science and Technology, University of Buenos Aires. Project Director: Dr. Sebastian Fortin. Amount awarded: AR$27,500. Period: 2018-2019.

7. Co-Researcher of the three-year research project “Inter-theoretical relations between quantum mechanics and other theoretical domains”, funded by Austral University. Project Director: Dra. Claudia Vanney. Amount awarded: AR$180,000. Period: 2019-2021.

8. Responsible member of the three-year research project “Applying a pluralistic realism to the problems of particular philosophies of sciences: physics, chemistry, biology” (PICT-2014-2812), funded by Agency Science and Technology Promotion, Fund for Scientific and Technological Research (FONCyT). Project Director: Dra. Olimpia Lombardi. Amount awarded: AR$300,000. Period: 2015-2018.

9. Co-Director of the three-year research project “A modal interpretation for the quantum ontology”, funded by the John Templeton Foundation. Project Director: Dra. Olimpia Lombardi, Project Co-director: Sebastian Fortin, Amount awarded: USD 198.934. Period: 2015-2018.

10. Co-Director of the three-year research project “Towards a better understanding of the foundations of quantum mechanics: Chaos, Stories and Interpretation” (UBACyT 20020100100080), funded by the Ministry of Science and Technology, University of Buenos Aires. Project Director: Dr. Mario Castagnino. Amount awarded: AR$38,400. Period: 2014-2017.

11. Member of the two-year research project “The nature of information for an informational reformulation of the modal-Hamiltonian interpretation of quantum mechanics funded by the *Foundational Questions Institute* (FQXi). Project Director: Dra. Olimpia Lombardi. Amount awarded: USD 120.843. Period: 2013-2016.

12. Member of the three-year research project “The application of a pluralistic realism problems philosophies of the special sciences” (PIP 112-201 101 - 00303), funded by the National Council for Scientific and Technical Research (CONICET). Project Director: Dra. Olimpia Lombardi. Amount awarded: AR$90,000. Period: 2012-2014.

13. Member of the three-year research project “Intertheoretical and Interdisciplinary Relations from the Perspective of a Plural Realism” (PIP 11220080100597), funded by the National Council for Scientific and Technical Research (CONICET). Project Director: Dra. Olimpia Lombardi. Amount awarded: AR$70,200. Period: 2010-2012.

14. Member of the three-year research project “Philosophical Problems in the interpretation of quantum mechanics and its relation to molecular chemistry” (PICT 1432), funded by Agency Science and Technology Promotion, Fund for Scientific and Technological Research

(FONCyT). Project Director: Dr. Mario Castagnino. Amount awarded: AR$200,000. Period: 2011-2013

15. Member of the three-year research project “Towards a better understanding of decoherence and a new interpretation of quantum mechanics and quantum field theory” (UBACyT 20020100100080), funded by the Ministry of Science and Technology, University of Buenos Aires. Project Director: Dr. Mario Castagnino. Amount awarded: AR$40,500. Period: 2011-2014.

16. Member of the three-year research project “Foundations of Relativistic Quantum Theory and Gravitation” (PIP 11220090100594), funded by the National Council for Scientific and Technical Research (CONICET). Project Director: Dr. Mario Castagnino. Amount awarded: AR$36,000. Period: 2010-2012.

17. Member of the three-year research project “Two Problems in the Foundations of Theoretical Physics: Irreversibility and Interpretation of Quantum Mechanics” (UBACyT X-041), funded by the Ministry of Science and Technology, University of Buenos Aires. Project Director: Dr. Mario Castagnino. Amount awarded: AR$27,000. Período: 2008-2010.

18. Member of the three-year research project “Philosophical Issues in the Foundations of Theoretical Physics” (PICT 549), funded by Agency Science and Technology Promotion, Fund for Scientific and Technological Research (FONCyT). Project Director: Dr. Mario Castagnino. Amount awarded: AR$209,998. Period: 2008-2010.

19. Member of the three-year research project “Logic and Ontological Problems of Foundations of Theoretical Physics” (PICT 17687), funded by Agency Science and Technology Promotion, Fund for Scientific and Technological Research (FONCyT). Project Director: Dr. Mario Castagnino. Amount awarded: AR$163,125. Period: 2005-2007.

Other funding

Financing of scientific events

1. FONCyT RC 2021: Grant to hold the congress "III Jornadas de Fundamentos, Filosofía e Historia de la Física", funding by the Agencia de Promoción Científica y Tecnológica, Fondo para la Investigación Científica y Tecnológica (FONCyT). Project manager: Dr. Sebastian Fortin. Project code: RC-2021-00036. Amount awarded: $ 79.200. Congress period: october 2022.

2. FONCyT RC 2021: Grant to hold the congress "III Jornadas de Fundamentos de Química", funding by the Agencia de Promoción Científica y Tecnológica, Fondo para la Investigación Científica y Tecnológica (FONCyT). Project manager: Dr. Martin Labarca, Sub-head of the project: Sebastian Fortin. Project code: RC-2021-00046. Amount awarded: $ 74.400. Congress period: october 2022.

3. FONCyT RC 2020: Grant to hold the congress "II Jornadas de Fundamentos de Química", funding by the Agencia de Promoción Científica y Tecnológica, Fondo para la Investigación Científica y Tecnológica (FONCyT). Project manager: Dr. Martin Labarca, Sub-head of the project: Sebastian Fortin. Project code: RC-TW-2020-00043. Amount awarded: $ 15.000. Congress period: october 2021.

Financing for travel

1. Travel Grant, *Universite Paris D. Diderot - Paris 7,* for travel to France to present the work "Identity in science and philosophy", July 2019.
2. Travel Grant, "*2011 CLMPS Travel Grants*", *National Science Foundation,* for travel to France to present the work "The conceptual meaning of reduced states: decoherence and interpretation", July 2011.
3. Travel Grant, "*Max Planck Institute invitation*", *Max Planck Institute for the Physics of Complex Systems* for travel to Germany to present the work "Non-unitary evolutions and non-hermitian hamiltonians in decoherence and equilibrium tehory", June 2011.
4. Travel Grant, "*ICTP invitation*", *Abdus Salam International Centre for Theoretical Physics* for travel to Italy to present the work "Defining the moving preferred basis", February 2011.
5. Travel Grant, "*HSS/PSA Travel Grant*", *National Science Foundation* for travel to Italy to present the work "Compatibility between environment-induced decoherence and the modal-Hamiltonian interpretation of quantum mechanics", November 2010.

Financing for travel

1. Postdoctoral Grant, CONICET, 4/1/2012 - 4/31/2013. Supervisor: Dr. Mario Castagnino.
2. Doctoral Grant II, CONICET, 4/1/2011 - 3/31/2012. Supervisor: Dr. Mario Castagnino.
3. Doctoral Grant I, CONICET, 4/1/2008 - 3/31/2011. Supervisor: Dr. Mario Castagnino.
4. Doctoral Grant, UNTREF, 3/1/2010 - 12/31/2010.
5. Doctoral Grant, UNTREF, 3/1/2009 - 12/31/2009.

Scientific courses

Specialization courses

1. "General and Inorganic Chemistry II", Department of Inorganic Chemistry, Analytical and Physical Chemistry of the Faculty of Exact and Natural Sciences, University of Buenos Aires, Buenos Aires, Argentina, 2017.
2. "General and Inorganic Chemistry I", Department of Inorganic Chemistry, Analytical and Physical Chemistry of the Faculty of Exact and Natural Sciences, University of Buenos Aires, Buenos Aires, Argentina, 2016.
3. "UNILOG 2013: 4th School on Universal Logic" organized by *Association for Symbolic Logic (ASL)* in Río de Janeiro, Brazil. March 29th to April 02nd, 2013.
4. *School on New Trends in Quantum Dynamics and Quantum Entanglement*, Abdus Salam Internacional Centre for Theoretical Physics, Miramare, Trieste, Italy. Frebruary 14th to 18th, 2011.
5. "XII Giambiagi Winter School", Department of Physics, University of Buenos Aires, Buenos Aires, Argentina, July 19th to 23rd, 2010.
6. "Topics in quantum mechanics" taught by Dr. Mario Castagnino at the University of Buenos Aires, Buenos Aires, Argentina, August 21st to December 7th, 2007.
7. "Ninth J. J. Giambiagi Winter School", Department of Physics, University of Buenos Aires, Buenos Aires, Argentina, July 30th to August 3rd, 2007.
8. "Theory of quasi-sets and indistinguishable particles" taught by Dr. Decio Krause of the University of Santa Catarina, Brazil, in the Scientific Society Argentina, Buenos Aires, Argentina, May 30th, 31st, June 1st, 4th and 5th, 2007.

9. "Gauge Field Theory" taught by Dr. Diego Mazzitelli at the University of Buenos Aires, Buenos Aires, Argentina, April 1st to July 6th, 2007.
10. "General Relativity" taught by Dr. Diego Mazzitelli at the University of Buenos Aires, Buenos Aires, Argentina, April 1st to July 6th, 2005.
11. "Special Mathematical Physics", taught by Dr. Graciela Gnavi at the University of Buenos Aires, Buenos Aires, Argentina, August 21st to December 7th, 2004.

The courses I took for the PhD in physics are:

1. "Cosmology" taught by Dr. Esteban Calzetta at the University of Buenos Aires, Buenos Aires, Argentina, March 16th to July 4th, 2009. Approved final test.
2. "Advanced Topics in Thermodynamics and Statistical Mechanics" taught by Dr. Esteban Calzetta at the University of Buenos Aires, Buenos Aires, March 16th to July 4th, 2010. Approved final test.
3. "Introduction to Field Theory" taught by Dr. Gustavo Lozano at the University of Buenos Aires, Buenos Aires, Argentina, August 21st to December 7th, 2005. Approved final test.
4. "Nonlinear Dynamics" taught by Dr. Bernardo Mindlin at the University of Buenos Aires, Buenos Aires, Argentina, March 16th to July 14th, 2009. Approved final test.

The courses I took for the PhD on philosophy and history of science are:

1. "General Epistemology III" taught by Dr. Antonio Castorina in the Department of Social Sciences University National University of Tres de Febrero, Buenos Aires, Argentina, 2010. Approved final test.
2. "History of Science III" taught by Dr. Cesar Lorenzano in the Department of Social Sciences University National University of Tres de Febrero, Buenos Aires, Argentina, 2010. Approved final test.
3. "Semantic Conceptions of Science" taught by Dr. Pablo Lorenzano in the Department of Social Sciences University National University of Tres de Febrero, Buenos Aires, Argentina, 2010. Approved final test.
4. "History of Science II" taught by Dr. Pablo Lorenzano in the Department of Social Sciences University National University of Tres de Febrero, Buenos Aires, Argentina, 2010. Approved final test.

5. "Epistemology of the Social Sciences" taught by Dr. Félix Schuster in the Department of Social Sciences University National University of Tres de Febrero, Buenos Aires, Argentina, 2010. Approved final test.
6. "Thesis Seminar" taught by Dr. Cesar Lorenzano in the Department of Social Sciences University National University of Tres de Febrero, Buenos Aires, Argentina, 2010.
7. "General Epistemology II" taught by Dr. Eduardo Scarano in the Department of Social Sciences University National University of Tres de Febrero, Buenos Aires, Argentina, 2009. Approved final test.
8. "History of Science I" taught by Dr. Daniel Di Liscia in the Department of Social Sciences University National University of Tres de Febrero, Buenos Aires, Argentina, 2009. Approved final test.
9. "General Epistemology I" taught by Dr. Cesar Lorenzano in the Department of Social Sciences University National University of Tres de Febrero, Buenos Aires, Argentina, 2009. Approved final test.
10. "Science and Society" taught by Dr. Ricardo Gómez in the Department of Social Sciences University National University of Tres de Febrero, Buenos Aires, Argentina, 2009. Approved final test.
11. "Introduction to historical research" taught by Dr. Gustavo Castagnola in the Department of Social Sciences University National University of Tres de Febrero, Buenos Aires, Argentina, 2009. Approved final test.
12. "Elements of logic, informal logic and set theory" taught by Dr. Gladis Palau in the Department of Social Sciences University National University of Tres de Febrero, Buenos Aires, Argentina, 2009. Approved final test.

Teaching selections won

- Selection of "Head of Teaching Assistants 2019", Department of Physics, Faculty of Natural Sciences, University of Buenos Aires, June 27th 2019. Position 4 of 35.
- Selection of "*1st* class Teaching Assistant 2017", Department of Physics, Faculty of Natural Sciences, University of Buenos Aires, November 12nd 2017. Position 3 of 77.

- Selection of "Head of Teaching Assistants 2014", Department of Physics, Faculty of Natural Sciences, University of Buenos Aires, October 23dr 2014. Position 3 of 24.

- Selection of "*1st* class Teaching Assistant 2014", Department of Physics, Faculty of Natural Sciences, University of Buenos Aires, November 10th 2011. Position 2 of 54.

- Selection of "Head of Teaching Assistants 2011", Department of Physics, Faculty of Natural Sciences, University of Buenos Aires, December 5th 2011. Position 4 of 48.

- Selection of "*1st* class Teaching Assistant 2011", Department of Physics, Faculty of Natural Sciences, University of Buenos Aires, November 7th 2011. Position 2 of 79.

- Selection of "*1st* class Lab. Teaching Assistant 2011", Department of Physics, Faculty of Natural Sciences, University of Buenos Aires, November 11th 2011. Position 3 of 18.

- Selection of "*1st* class Teaching Assistant 2008", Department of Physics, Faculty of Natural Sciences, University of Buenos Aires, November 28th 2008. Position 3 of 15.

- Selection of "2*nd* class Teaching Assistant 2007", Department of Physics, Faculty of Natural Sciences, University of Buenos Aires, December 07th 2007. Position 19 of 146.

- Selection of "2*nd* class Teaching Assistant 2006", Department of Physics, Faculty of Natural Sciences, University of Buenos Aires, November 30th 2006. Position 43 of 138.

Teaching activities

- Head of Teaching Assistants in the Faculty of Natural Sciences, University of Buenos Aires, March 1st 2020 to February 28th 2023.

- Professor (Asociated of level 1) in Austral University.

- Professor of the postgraduate course "Conceptos y Problemas de Filosofía de las Ciencias", National University of Quilmes. September 2021.

- Professor of the postgraduate course "Conceptos y Problemas de Filosofía de las Ciencias", National University of Quilmes. April 2021.

- *1st* class Teaching Assistant in the Faculty of Natural Sciences, University of Buenos Aires, March 1st 2018 to February 28th 2021.

- Professor of the postgraduate course "Problemas filosóficos de las ciencias particulares: física, química, biología y ciencias formales", National University of Quilmes. June 2019.
- Head of Teaching Assistants in the Faculty of Natural Sciences, University of Buenos Aires, March 1st 2015 to February 29th 2018.
- Professor of the postgraduate course "Realismo y reduccionismo en la filosofía general de la ciencia y los desafíos de las filosofías especiales", National of Buenos Aires. April 2019.
- Professor of the postgraduate course "Problemas filosóficos de las ciencias particulares: física, química, biología y ciencias formales", National University of Quilmes. September 2017.
- Professor of the postgraduate course "Aspectos fundamentales de la Física Cuántica", National University of La Plata. December 2016.
- Professor of the postgraduate course "Seminar on philosophy of science", National University of La Plata. September 2015.
- Professor of the postgraduate course "Philosophical issues in the interpretation of quantum mechanics", National University of La Plata. March 2013.
- Professor of the postgraduate course "The time in psychoanalysis, between repetition and surprise", José M. Penna Hospital. April 10th, 2013.
- Professor of the postgraduate course "Introducción a la Filosofía de las Ciencias", National University of La Plata. May - June 2012.
- Head of Teaching Assistants in the Faculty of Natural Sciences, University of Buenos Aires, March 1st 2012 to February 29th 2015.
- *1st* class Teaching Assistant in the Faculty of Natural Sciences, University of Buenos Aires, March 1st 2012 to February 29th 2015.
- Head of Teaching Assistants in the Faculty of Natural Sciences, University of Buenos Aires, August 23rd 2011 to February 29th 2012.
- *1st* class Lab. Teaching Assistant in the Faculty of Natural Sciences, University of Buenos Aires, March 1st 2009 to February 29th 2012.

- 2*nd* class Teaching Assistant in the Faculty of Natural Sciences, University of Buenos Aires, March 1st 2008 to February 29th 2009.
- 2*nd* class Teaching Assistant in the Faculty of Natural Sciences, University of Buenos Aires, March 1st 2007 to February 29th 2008.
- 2*nd* class Teaching Assistant in the Faculty of Natural Sciences, University of Buenos Aires, February 1st 2006 to April 29th 2006.
- Instructor of telephone exchanges courses in ERICNET SA and Enterprise Solutions in 2000 and 2004.

Scientific talks

- "One proposed solution to the problems of the orthodox approach to decoherence: The general framework", colloquium presentation at University of Córdoba, April 4th, 2011.
- "The role of the poles in the decoherence", colloquium presentation, Group of Foundations of Physics Institute of Astronomy and Space Physics (IAFE, Instituto de Astronomía y Física del Espacio), 2010.
- "Modal interpretations of quantum mechanics", symposium presentation, September 2nd, 3rd and 4th, 2009, Argentine Society of Philosophical Analysis (SADAF).
- "The relative nature of decoherence", colloquium presentation, Group of Foundations of Physics Institute of Astronomy and Space Physics (IAFE, Instituto de Astronomía y Física del Espacio), 2009.
- "A generalization for the spin-bath model", colloquium presentation, Group of Foundations of Physics Institute of Astronomy and Space Physics (IAFE, Instituto de Astronomía y Física del Espacio), 2008.
- "Topology and differential geometry applied to physics", symposium presentation, Institute of Astronomy and Space Physics (IAFE, Instituto de Astronomía y Física del Espacio), 2007.

- "David Bohm Theories", colloquium presentation at the "Seminar of Tuesdays 2007", Group of Quantum Structures, Institute of Astronomy and Space Physics (IAFE, Instituto de Astronomía y Física del Espacio), 2007.

Talks for general public

1. "Un esquema general para entender la decoherencia en el contexto de la medición cuántica", S. Fortin, published in the website of physics for general public *Casanchi, Sitio de divulgación de Física*, 2011.
   http://casanchi.org/fis/decoherenciacuantica01.htm

2. Organization of the group CUANTICA PARA TODOS, which promotes scientific results in the area of quantum mechanics in a manner accessible to the general public.
   https://sites.google.com/site/cuanticaparatodxs/

3. Participation at the seminar "La Noche de los Museos 2018" with the talk "Diario íntimo de Flash y Antman: el mundo de lo rápido y chiquitito", S. Fortin y M. Saenz, performed at the Museo Argentino de Ciencias Naturales Bernardino Rivadavia. November 10th 2018.
4. Participation at the seminar "Noche cuántica en La Ronda" with a all public talk about quantum mechanics, performed at the Centro cultural La Ronda. September 15th 2018.
5. Participation at the seminar "QPT en la Facultad de Ciencias Económicas" with the talk "Problemas ontológicos de la mecánica cuántica", S. Fortin, performed at the Facultad de Ciencias Económicas, Universidad de Buenos Aires. May 18th 2018.
6. Participation at the seminar "QPT en la Facultad de Ciencias Económicas" with the talk "Problemas ontológicos de la mecánica cuántica", S. Fortin, performed at the Facultad de Ciencias Económicas, Universidad de Buenos Aires. April 28th 2017.
7. Participation at the seminar "Fiesta Cuántica II" with the talk "El experiment de la doble rendija", S. Fortin, performed at the Cultural Center La Ronda. April 15th 2017.
   https://sites.google.com/site/cuanticaparatodxs/Actividades/charlas-la-ronda---abril---2017
8. "Quantum Mechanics for psychologists", S. Fortin and C. López, participation at the seminar of Lic. Luis Herrera. Aphril 15th 2016.
9. Participation at the seminar "Fiesta Cuántica" with the talk "Indistinguibilidad cuántica", S. Fortin, performed at the Cultural Center La Ronda. June 13rd 2015.
   https://sites.google.com/site/cuanticaparatodxs/Actividades/13-06-2015

10. “Entropy for psychologists”, S. Fortin and C. López, participation at the seminar of Lic. Daniel Rubinsztejn. May 9th 2015.
11. “The contact between two incompatible worlds: Quantum Mechanics and Classical Mechanics”, S. Fortin, article published in the newsletter of the CONICET (Con Voz Propia). March 26th 2013.
    http://www.conicet.gov.ar/el-contacto-entre-dos-mundos-incompatibles-mecanica-cuantica-y-mecanica-clasica/
12. Artistic Presentation: Audiovisual installation themed quantum mechanics in the event “abre maza 2012” performed in Arquitecturas Imaginarias art gallery. December 14th 2012.
    http://cms.iafe.uba.ar/sfortin/qpt/det-08.htm
13. Participation at the seminar “The truth lives in the depths: Seminar on the foundations of quantum mechanics” performed in Meridion art gallery. December 4th to 18 th 2012.
    http://cms.iafe.uba.ar/sfortin/qpt/det-07.htm
    http://cms.iafe.uba.ar/sfortin/qpt/det-09.htm
14. Organization of activity “Quantum Mechanics: Revolution and art”, National University of Quilmes. November 30th 2012.
    http://cms.iafe.uba.ar/sfortin/qpt/det-06.htm
15. Organization of activity “QUANTUM FOR EVERYBODY: the art is gaining ground in the natural sciences” performed in Meridión art gallery. May 26th 2012.
    http://cms.iafe.uba.ar/sfortin/qpt/det-05.htm
16. Organization of activity “QUANTUM FOR EVERYBODY: Fundamental problems of quantum mechanics”, University of Buenos Aires. December 21st 2011
    http://cms.iafe.uba.ar/sfortin/qpt/det-04.htm
17. “Análisis del comportamiento de la resistividad en función de la temperatura”, S. Fortin, published in the website of physics for general public *Casanchi, Sitio de divulgación de Física*, 2011.
    http://casanchi.com/fis/resistividad01.htm
18. “Efecto fotoeléctrico”, S. Fortin, published in the website of physics for general public *La web de Física*, 2011.
    http://www.lawebdefisica.com/files/practicas/cuantica/efecto_fotoelectrico.pdf

19. Participation in collaborative character and poster presentation on *Feria de Estudiantes Avanzados*, IAFE, where we explain to students the different activities and research developed at the institute. November 4th 2011.

20. "Análisis del comportamiento de la resistividad en función de la temperatura", S. Fortin, published in the website of physics for general public *Casanchi, Sitio de divulgación de Física*, 2010.

21. "Efecto fotoeléctrico", S. Fortin, published in the website of physics for general public *La web de Física*, 2011.
    http://www.lawebdefisica.com/files/practicas/cuantica/efecto_fotoelectrico.pdf

22. Creating the project *Cuántica para Todos (Quantum for everybody)* designed to spread through conferences, seminars and other research results in the field of quantum mechanics.
    http://cms.iafe.uba.ar/sfortin/qpt

23. "Los problemas del estatus del mundo clásico en mecánica cuántica y una posible solución", S. Fortin, divulgative talk at University of Buenos Aires, Buenos Aires, Argentina. December 6th, 2010.

24. "Un modelo termodinámico para describir las estrellas mediante la aplicación de mecánica estadística", S. Fortin, published in the website of physics for general public *Casanchi, Sitio de divulgación de Física*, 2010.
    http://casanchi.com/ast/mestrellas02.htm

25. Participation in collaborative character at *La Semana de la Física 2010*, University of Buenos Aires, 2010.

26. Participation in collaborative character at *ExpoUBA Bicentenario*, University of Buenos Aires, 2010.

27. "Un modelo termodinámico para describir las estrellas mediante la aplicación de mecánica estadística", S. Fortin, published in the website of physics for general public *Casanchi, Sitio de divulgación de Física*, 2010.
    http://casanchi.com/ast/mestrellas01.htm

28. "Medición de la respuesta espectral de Celdas Solares Multijunturas para aplicaciones espaciales", S. Fortin, published in the website of physics for general public *Casanchi, Sitio de divulgación de Física*, 2010.

http://casanchi.com/fis/cmultijuntura01.htm

29. "Decoherencia en sistemas abiertos y cerrados", S. Fortin, talk given in the cycle *Charlas de tesistas* at the Instituto de Astronomía y Física del Espacio (Institute of Astronomy and Space Physics), Buenos Aires, Argentina. October 27th, 2009.

30. "Estimación de la incertidumbre en una medición", S. Fortin, published in the website of physics for general public *La web de Física,* 2009.
http://www.lawebdefisica.com/files/varios_trabajos/incertidumbre_experimental.pdf

31. "Modelización termodinámica de las estrellas mediante la aplicación de mecánica estadística", S. Fortin, published in the website of physics for general public *La web de Física,* 2007.
http://www.lawebdefisica.com/files/varios_trabajos/estrellas.rar

32. "Respuesta espectral de celdas solares multijunturas para aplicaciones espaciales", S. Fortin, published in the website of physics for general public *La web de Física,* 2006.
http://www.lawebdefisica.com/files/varios_trabajos/celdas_multijuntura.pdf

33. "Resonancias Acústicas en una Caja", A. Garbar and S. Fortin, published in the website of physics for general public *Física re-Creativa,* 2005.
http://www.fisicarecreativa.com/informes/infor_especial/Caja_cuadrada2k5a.pdf

34. "Band Gap en la transmisión por cables a radiofrecuencias", A. Garbar and S. Fortin, published in the website of physics for general public *Física re-Creativa,* 2005.
http://www.fisicarecreativa.com/informes/infor_especial/Bandgap_cable2k5.pdf

Memberships

1. East European Network for Philosophy of Science (EENPS). From 2018.
2. International Society for the Philosophy of Chemistry. From 2012.
3. Asociación Filosófica Argentina (Philosophical Association Argentina). From 2010.
4. Asociación de Filosofía e Historia de la Ciencia del Cono Sur (AFHIC). From 2008.
5. Asociación Física Argentina (Physical Association Argentina). From 2005.

Awards

6. First place in Junior category of the *IV Argentine Championship Robot Soccer* representing the University of Buenos Aires team, Universidad Abierta Interamericana, July 2006.
7. First place in Senior category of the *IV Argentine Championship Robot Soccer* representing the University of Buenos Aires team, Universidad Abierta Interamericana, July 2006.
8. Sixth place in the *National Olympic competition of Electronics and Telecommunications,* 1997.
9. Fourth place in the *National Olympic Competition of Electronics and Telecommunications,* 1996.

Technological courses

1. "Introduction to Telecommunications", given at the training center of Ericsson company SACI.
2. "Introduction to AXE", given at the training center of Ericsson company SACI.
3. "Introduction to CMS8800", given at the training center of Ericsson company SACI.
4. "MD110, Operation and Maintenance", given at the training center of Ericsson company SACI.
5. "BP250, Operation and Maintenance", given at the training center of Ericsson company SACI.
6. "BP250 Upgrade R12", given at the training center of Ericsson company SACI.
7. "Radio Frequency Engineering 1", given at the training center of Ericnet S.A. company.
8. "Telecomunication Network Solutions", given at the training center of Ericnet S.A. company.
9. "CCNA 1: Networking Basics", given at the Fundación Proydesa.
10. "CCNA 2: Routing Basics", given at the Fundación Proydesa.
11. "An Introduction to Astronomy" given at the Argentina Association Friends of Astronomy.
12. "Introduction to Management Telescopes" given at the Argentina Association Friends of Astronomy.
13. "Building Telescopes" given at the Argentina Association Friends of Astronomy.
14. "Advanced Management Telescope" given at the Argentina Association Friends of Astronomy.

Experience in scientific management

- Elected member of the departmental council (CODEP) of the Department of Physics, Faculty of Natural Sciences, University of Buenos Aires. Elected with 54% of votes, 2013-2015.
- Administration of the grant UBACyT 20020100100080
- Administration of the grant UBACyT X041

Experience in business management

- Head of technical service Ericnet S.A.
- Customer service manager in Ericnet S.A.
- Executive Director in Ericnet S.A.

Experience in technology

- Welding, assembly and repair of electromedical equipment.
- Repair of electronic equipment.
- Advanced programming of telephone exchanges.
- Engineering support for digital networks.
- Laboratory testing and development of communications equipment.
- Service of Ericsson MD110 PBX.
- Engineering support for Ericsson PBX.
- Communications Support the Ministry of Health.
- Support Volksvagen communications.
- Communications Support HSBC.
- Head of service in Ericnet S.A.
- Customer service management in Ericnet S.A.
- Executive Director Ericnet S.A.
- Armed and PC repair, installation of Hardware and Soft, network configuration.
- Management of PC, office software, mathematics and communications.
- Program Private and cellular radio bases.

- Management of telephone networks and links EIM, PCM fiber, coax and satellite, creation and database management.
- Advanced Search in internet.
- Operation and maintenance of photocopiers and printers.

Languages

- Knowledge of English and technical English.
- Basic knowledge of German and Arabic.

References

- Mario Castagnino, Institute of Astronomy and Space Physics (CONICET - Instituto de Astronomía y Física del Espacio, IAFE).
- Olimpia Lombardi, CONICET – UBA.
- Roberto Laura, UNR.
- Daniel Sudarsky, UNAM.
- Juan Plá, Constituyentes Atomic Center.
- José Merlo, Ericnet S.A.
- José Giuffrida, Redmond S.A.
- Pablo Arroyo, Sony Argentina S.A.
- Claudio D'alessio, Damovo Argentina S.A.
- Rodrigo Loran, Ericsson Argentina.

Extracurricular Activities

- Astronomical Observations in Argentine Association Friends of Astronomy..
- Member of robot soccer team from the University of Buenos Aires.
- Member of the group of runners (marathoners) "I want to believe".
- Sports activity: Marathon, swimming and weight training.

Cites in internacionales journals

"A new chapter in the problem of the reduction of chemistry to physics: The Quantum Theory of Atoms in Molecules", J. A. Jaimes Arriaga, S. Fortin y O. Lombardi, *Foundations of Chemistry*, Volume 21, Issue 1, pp 125–136, 2019.

[1] V. Havlík (2019), "Physicalism and the Status of Special Science Laws", *Theory of Science* **41** (2): 201-228.

"Why molecular structure cannot be strictly reduced to quantum mechanics", J. C. Martinez Gonzalez, S. Fortin y O. Lombardi, Foundations of Chemistry, Volume 21, Issue 1, pp 31–45, 2019. Cited in:

[2] J. Price (2019), "Model transfer and conceptual progress: tales from chemistry and biology", *Foundations of Chemistry*. https://doi.org/10.1007/s10698-019-09344-5

[3] E. Ghibaudi, L. Cerruti and G. Villani (2019), "Structure, shape, topology: entangled concepts in molecular chemistry", *Foundations of Chemistry*. https://doi.org/10.1007/s10698-019-09333-8

"Understanding decoherence as an irreversible process", S. Fortin and O. Lombardi, International Journal of Quantum Foundations, Volume 4, Issue 4, pages 247-267, 2018. Cited in:

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[5] Lombardi, O., Cordero, A. and Pérez Ransanz, A. R., "Philosophy of Science in Latin America", The Stanford Encyclopedia of Philosophy (Spring 2020 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/spr2020/entries/phil-science-latin-america/>.

[6] B. Drummond (2019), "Understanding quantum mechanics: a review and synthesis in precise language", *Open Physics* **17**, 390–43.

"Classical limit and quantum logic", M. Losada, S. Fortin and F. Holik, *International Journal of Theoretical Physics*, Volume 57, Issue 2, pp 465–475, 2018. Cited in:

[7] A. Bolotin (2018), "Truth Values of Quantum Phenomena", *International Journal of Theoretical Physics* **57**: 2124–2132.

[8] A. Bolotin (2018), "Classical limit of quantum propositions", arXiv:1810.09606.

"Dynamics of algebras in quantum unstable systems", M. Losada, S. Fortin, M. Gadella y F. Holik, International Journal of Modern Physics A, Vol. 33, Nos. 18 & 19 (2018) 1850109. Cited in:

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"Interpretation and Decoherence: A Contribution to the Debate Vassallo & Esfeld Versus Crull", S. Fortin and O. Lombardi, *Foundations of Physics*, Volume 47, Issue 11, pp 1423-1427, 2017. Cited in:

[11] E. M. Crull (2017), "Yes, More Decoherence: A Reply to Critics", *Foundations of Physics* **47**: 1428–1463.

"The relationship between chemistry and physics from the perspective of Bohmian mechanics", S. Fortin, O. Lombardi y J. C. Martinez Gonzalez, *Foundations of Chemistry*, Volume 19, Issue 1, pp 43-59, 2017. Cited in:

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[13] C. Callender (2019), "Can We Quarantine the Quantum Blight?", http://philsci-archive.pitt.edu/15450.

[14] E. Ghibaudi, L. Cerruti and G. Villani (2019), "Structure, shape, topology: entangled concepts in molecular chemistry", *Foundations of Chemistry*. https://doi.org/10.1007/s10698-019-09333-8

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"A new application of the modal-Hamiltonian interpretation of quantum mechanics: the problem of optical isomerism", S. Fortin, O. Lombardi and J. C. Martínez González, *Studies in History and Philosophy of Science Part B: Studies in History and Philosophy of Modern Physics*, DOI: 10.1016/j.shpsb.2017.06.008, 2017. Cited in:

[17] B. Drummond (2019), "Understanding quantum mechanics: a review and synthesis in precise language", *Open Physics* **17**, 390–43.

[18] M. Pagliaro (2019), "Look Better: Single Atoms in Chemistry and Single Atoms in Physics", *ChemPhysChem*, https://doi.org/10.1002/cphc.201900311

[19] O. Lombardi and D. Dieks, "Modal Interpretations of Quantum Mechanics", *The Stanford Encyclopedia of Philosophy (Spring 2017 Edition)*, Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/spr2017/entries/qm-modal/>.

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"Interpretations of Quantum Theory in the Light of Modern Cosmology", M. Castagnino, S. Fortin, R. Laura y D. Sudarsky, *Foundations of Physics* 47: 1387–1422, 2017. Cited in:

[21] B. Drummond (2019), "Understanding quantum mechanics: a review and synthesis in precise language", *Open Physics* **17**, 390–43.

[22] M. Losada and R. Laura (2018), "Quantum histories and correlations in quantum measurements", *Quantum Information Processing* **17**: 281.

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[24] B. Drossel and G. Ellis (2018), "Contextual Wavefunction Collapse: An integrated theory of quantum measurement", *New Journal of Physics* **20**: 113025.

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[28] T. P. Singh (2015), "Possible role of gravity in collapse of the wave-function: a brief survey of some ideas", *Journal of Physics Conference Series* **626**: 012009.

"On the interpretation of probabilities in generalized probabilistic models", F. Holik, S. Fortin, G. Bosyk and A. Plastino, *Lecture Notes in Computer Science*, Volume 10106, pp 194-205, 2017. Cited in:

[29] G. Jaeger (2018), "Developments in Quantum Probability and the Copenhagen Approach", *Entropy* **20**(6):420.

[30] S. Sozzo (2019), "Explaining versus describing human decisions: Hilbert space structures in decision theory", *Soft Computing*. https://doi.org/10.1007/s00500-019-04140-x

[31] S. Sozzo (2019), "Quantum Structures in Human Decision-Making: Towards Quantum Expected Utility", *International Journal of Theoretical Physics*. https://doi.org/10.1007/s10773-019-04022-w

"About the Concept of Information", S. Fortin y O. Lombardi, en O. Lombardi, S. Fortin, F. Holik y C. Lopez (eds.), What is Quantum Information? ISBN: 978-1-10714-211-4, Cambridge University Press, Cambridge, 2017, pp. 9-34. Cited in:

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"On the ontological status of molecular structure: is it possible to reconcile molecular chemistry with quantum mechanics?", S. Fortin, M. Labarca and O. Lombardi, enviado a Foundations of Chemistry, 2017. Cited in:

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"Isomerism and decoherence", S. Fortin, O. Lombardi and J. C. Martínez González, *Foundations of Chemistry* **18**: 225–240, 2016. Cited in:

[35] J. C. M. González (2019), "The problem of optical isomerism and the interpretation of quantum mechanics", *Foundations of Chemistry* **21**: 97–107.

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[37] J. I. Seeman (2018), "Moving beyond insularity in the history, philosophy, and sociology of chemistry", *Foundations of Chemistry* 20(1): 75-86.

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[39] J. Maziero, "Computing partial traces and reduced density matrices", *International Journal of Modern Physics C* **28**: 1750005 (2017).

[40] M. Córdoba and A. Zambón (2017), "How to handle nanomaterials? The re-entry of individuals into the philosophy of chemistry", *Foundations of Chemistry* 19(3): 185-196.

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[42] O. Lombardi and D. Dieks, "Modal Interpretations of Quantum Mechanics", *The Stanford Encyclopedia of Philosophy (Spring 2017 Edition)*, Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/spr2017/entries/qm-modal/>.

"A top-down view of the classical limit of quantum mechanics", S. Fortin and O. Lombardi, in R. E. Kastner, J. Jeknic-Dugic and G. Jaroszkiewicz (eds.), *Quantum Structural Studies: Classical Emergence from the Quantum Level*, World Scientific Europe: London, 2016, pp. 435-468. Cited in:

[43] B. Drummond (2019), "Understanding quantum mechanics: a review and synthesis in precise language", *Open Physics* **17**, 390–43.

[44] L. P. G. De Assis (2019), "Quanta and Mind", *Bridges Between Classical and Quantum*, In: de Barros J., Montemayor C. (eds) Quanta and Mind. Synthese Library (Studies in Epistemology, Logic, Methodology, and Philosophy of Science), vol 414. Springer.

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