

CV Charbel Niño El-Hani

Born January 27th, 1968, in Rio de Janeiro, Brazil.

(Documentation attesting the items in the CV is available on request from the researcher using the email address charbel.elhani@gmail.com)

Full CV in English or Portuguese at: <http://lattes.cnpq.br/8022297490892415>

Education

2000 Ph.D. in Education, University of São Paulo, Brazil.

Thesis title: Níveis da Ciência, Níveis da Realidade: Evitando o Dilema Holismo/Reduccionismo no Ensino de Ciências e Biologia (Levels of Science, Levels of Reality: Avoiding the Holism/Reductionism Dilemma in Science and Biology Teaching).

1996 M.Sc. in Education, Federal University of Bahia, Brazil.

Thesis title: O Insustentável Peso dos Genes: A Persistência do Determinismo Genético na Mídia e na Literatura Científica (The Unbearable Heaviness of the Genes: The Persistence of Genetic Determinism in the Media and Scientific Literature).

1992 B.Sc. in Biological Sciences, Federal University of Bahia, Brazil. (Scientific training in Molecular Biology and Ecology)

Positions

2022-2027 Productivity in Research Grantee Level 1-A, Brazilian National Council for Scientific and Technological Development (CNPq)

2020-2021 Visiting Researcher, Centre for Social Studies (CES), University of Coimbra, Portugal

2018-2022 Productivity in Research Grantee Level 1-B, Brazilian National Council for Scientific and Technological Development (CNPq)

2017- Full Professor, Institute of Biology, Federal University of Bahia, Brazil

2016-2025 Coordinator, National Institute of Science & Technology in Interdisciplinary and Transdisciplinary Studies in Ecology and Evolution (INCT IN-TREE), Brazilian National Council for Scientific and Technological Development (CNPq)

2010-2017 Productivity in Research Grantee Level 1-B, Brazilian National Council for Scientific and Technological Development (CNPq)

2008-2017 Associate Professor, Institute of Biology, Federal University of Bahia

2008 Visiting researcher, University of the Aegean, Greece

2007-2010 Productivity in Research Grantee Level 1-D, Brazilian National Council for Scientific and Technological Development (CNPq)

2005-2007 Productivity in Research Grantee Level 2, Brazilian National Council for Scientific and Technological Development (CNPq)

2005 Visiting researcher, Center for Advanced Research in Information and Communication Technologies & Society, University of Salzburg, Austria

2003-2005 Productivity in Research Grantee Level 2, Brazilian National Council for Scientific and Technological Development (CNPq)

- 2003-2004 Visiting researcher, Center for the Philosophy of Nature and Science Studies (CPNSS), Faculty of Sciences, University of Copenhagen, Denmark
- 2000-2008 Assistant Professor, Institute of Biology, Federal University of Bahia
- 1994-2000 Auxiliary Professor (Lecturer), Institute of Biology, Federal University of Bahia
- 1996-2000 Ph.D. fellowship, Coordination for Improvement of Higher Educational Personnel (CAPES), Brazil
- 1993-1995 Master fellowship, Coordination for Improvement of Higher Educational Personnel (CAPES), Brazil
- 1988-1991 Undergraduate scientific training fellowships in Ecology and Molecular Biology (for 4 years), Brazilian National Council for Scientific and Technological Development (CNPq)

Academic management

Currently member of:

- 2023-2025 Member of the Operations Committee, International Society for the History, Philosophy and Social Studies of Biology (ISHPSSB)
- 2021-2025 Advisory Board Member, A Philosophy of Open Science for Diverse Research Environments, PHIL_OS project
- 2019-2021 Nominating Committee Member, International History, Philosophy and Science Teaching Group (IHPST)
- 2017-2025 Co-Chair of the Education Committee, International Society for the History, Philosophy and Social Studies of Biology (ISHPSSB)
- 2012- Advisory Board, Ibero-American Association of Philosophy of Biology
- 2002- Member of the Research Group INTERCITEC (Interculturality, Science and Technology) and Research Line Science Teaching, Context, Diversity and Cultural Difference, District University Francisco José de Caldas (Colombia)

Previously member of (selection):

- 2017-2020 Member of the Academic Nucleus of Research, Outreach, Creation and Innovation (NUPEX), responsible for the scientific research and outreach policy and management at the Institute of Biology, Federal University of Bahia, Brazil
- 2015-2020 Managing Committee, Professional Master Course in Ecology Applied to Environmental Management, Graduate Studies Program in Ecology, Federal University of Bahia, Brazil
- 2015-2017 Program Co-Chair of the 2017 Meeting, and Member of the Local Arrangements Committee and Executive Committee, International Society for the History, Philosophy and Social Studies of Biology (ISHPSSB)
- 2015-2017 Education Committee, International Society for the History, Philosophy and Social Studies of Biology (ISHPSSB)
- 2014-2016 Advisory Committee for Funding Decisions on Educational Research, Brazilian National Council for Scientific and Technological Development (CNPq)
- 2013-2019 Vice-President, Brazilian Association of History and Philosophy of Biology (ABFHiB)
- 2011-2013 Advisory Board, Brazilian Association of History and Philosophy of Biology (ABFHiB)
- 2011-2012 Advisory Committee for Funding Decisions on Multidisciplinary Studies, State of Bahia Foundation for the Support of Research (FAPESB), Brazil
- 2010-2012 Deputy Chair, International Organization for Science and Technology Education

- (IOSTE)
- 2007-2023 Editorial Board, Federal University of Bahia Press (EDUFBA)
- 2006-2008 Travel Advisory Committee, International Society for the History, Philosophy and Social Studies of Biology (ISHPSSB)
- 2006-2009 Advisory Board, Brazilian Association of History and Philosophy of Biology (ABFHiB)
- 2005-2011 Adjunct Secretary, Brazilian Association for Research in Science Education (ABRAPEC)
- 2004-2008 Chair, Graduate Studies Program in History, Philosophy and Science Teaching, Federal University of Bahia/State University of Feira de Santana, Brazil
- 2004-2008 Education Committee, International Society for the History, Philosophy and Social Studies of Biology (ISHPSSB)
- 2004-2006 Advisory Board, Brazilian Association of Biological Education (SBENBIO)
- 2002-2006 Advisory Committee for Graduate Studies Programs Evaluation – Science and Mathematics Education - Coordination for Improvement of Higher Educational Personnel (CAPES), Brazil
- 2002-2004 Vice-director, Northeast Regional Section, Brazilian Association of Biological Education (SBENBIO)
- 2000-2002 Director, Northeast Regional Section, Brazilian Association of Biological Education (SBENBIO)

Scholarships and grants

- 2025-2027 Brazilian National Council for Scientific and Technological Development (CNPq). Funding for the project “International cooperation in inter- and transdisciplinary studies on intercultural education as dialogue between knowledges”. Process number: 403444/2024-1
- 2024-2027 Brazilian National Council for Scientific and Technological Development (CNPq). Funding for the project “Development and application of a theoretical framework and a research model on intercultural education”. Process number: 403083/2023-0.
- 2022-2027 Brazilian National Council for Scientific and Technological Development (CNPq). Productivity in Research Grant Level 1-A, project “For biological education and inquiry that promote viable values: a purposeful agenda in biological education and investigation in times of bioeconomy”. Process number: 307223/2021-3.
- 2021-2024 John Templeton Foundation/University of Minnesota. Funding for the project “Toward a science of intrinsic purposiveness: organizational account of ecological functions and its implications to ecological research and environmental ethics”. Process number: A009723021
- 2020 Coordination for Improvement of Higher Educational Personnel (CAPES), Senior Visiting Researcher Grant. Process number: 88887.465540/2019-00.
- 2019-2021 Brazilian National Council for Scientific and Technological Development (CNPq). Funding for the project “Intercultural education as dialogue between ways of knowing and between forms of knowledge: Multistrategic and collaborative research in traditional communities”. Process number: 423948/2018-0.
- 2018-2022 Brazilian National Council for Scientific and Technological Development (CNPq). Productivity in Research Grant Level 1-B, project “Conceptual profiles and intercultural education: theoretical and empirical studies”. Process number: 303011/2017-3.

- 2016-2025 Brazilian National Council for Scientific and Technological Development (CNPq, Process number: 465767/2014-1), Coordination for Improvement of Higher Educational Personnel (CAPES, Process number: 23038.000776/2017-54), Foundation for the Support of Research of the State of Bahia (FAPESB, Process number: INC0006/2019). Funding for the National Institute of Science & Technology in Interdisciplinary and Transdisciplinary Studies in Ecology and Evolution (INCT IN-TREE).
- 2014-2015 Brazilian National Council for Scientific and Technological Development (CNPq). Grant for the project “Public understanding and attitudes towards contemporary genetics and new genetic technologies”. Process number: 504435/2013-2.
- 2014-2016 Brazilian National Council for Scientific and Technological Development (CNPq). Grant for the project “Evidence-based teaching: a comparative study of the efficacy of inquiry teaching and transmission teaching”. Process number: 409494/2013-5.
- 2012-2015 Brazilian National Council for Scientific and Technological Development (CNPq). Grant for the project “Integrating organization levels in ecological models: hierarchical modeling, epistemology of complex systems and their contributions to ecological research and implementation”. Process number: 400396/2012-2.
- 2010-2017 Brazilian National Council for Scientific and Technological Development (CNPq). Productivity in Research Grant Level 1-B, project “Conceptual profiles, pragmatism and science teaching and learning: theoretical and empirical studies”. Process number: 301259/2010-0.
- 2009-2011 Foundation for the Support of Research of the State of Bahia (FAPESB). Grant for the project “Development and test of teaching sequences for High School Biology in collaborative networks of teachers and researchers”. Process number: PET0005/2009.
- 2009-2015 Brazilian National Council for Scientific and Technological Development (CNPq), Foundation for the Support of Research of the State of Bahia (FAPESB). “Nucleus of Excellence” (PRONEX) Grant for the project “Integrating levels of organization in predictive ecological models: contributions from epistemology, modeling, and empirical investigation”. Process number: PNX0016/2009.
- 2007-2009 Brazilian National Council for Scientific and Technological Development (CNPq). Grant for the project “Virtual community of practice: investigating a tool for High School Biology teachers’ professional development”. Process number: 474400/2007-7.
- 2007-2010 Brazilian National Council for Scientific and Technological Development (CNPq). Productivity in Research Grant Level 1-D, project “Multicultural science education: investigations from the perspective of epistemological pluralism, pragmatism, and the conceptual profile change model”. Process number: 300652/2007-0.
- 2007-2009 Brazilian National Council for Scientific and Technological Development (CNPq). Grant for the project “Multicultural science education: investigations from the perspective of epistemological pluralism, pragmatism, and the conceptual profile change model”. Process number: 400443/2007-4.
- 2007-2010 Brazilian Funding Authority for Studies and Projects (FINEP). Grant for the project “Development of educational electronic games for evolution and ecology teaching and learning”. Process number: 1638/06.
- 2005-2007 Brazilian National Council for Scientific and Technological Development (CNPq). Productivity in Research Grant Level 2, project “What is a gene? A philosophical

- and empirical study of a central concept in biological thought and biological education”. Process number: 301832/2004-8.
- 2005-2006 Foundation for the Support of Research of the State of Bahia (FAPESB). Grant for the project “Science education in the multicultural context of the state of Bahia: development and evaluation of teaching strategies for scientific literacy with respect for cultural diversity”. Process number: 273/2004.
- 2004-2007 Brazilian National Council for Scientific and Technological Development (CNPq). Grant for the project “Epistemological and educational studies on Gaia theory”. Process number: 501668/2004-7.
- 2003-2005 Brazilian National Council for Scientific and Technological Development (CNPq). Productivity in Research Grant Level 2, project “Development and test of methodological proposal for teaching history and philosophy of science”. Process number: 302495/02-9.
- 2003-2004 Brazilian National Council for Scientific and Technological Development (CNPq). Post-doctoral training grant, project “Biosemiotic and emergentist analysis of the gene concept and its implications for biological education”. Process number: 200402/2003-0.
- 2003-2005 Brazilian National Council for Scientific and Technological Development (CNPq). Grant for the project “What is a gene? A philosophical and empirical study of a central concept in biological thought and biological education”. Process number: 402708/2003-2.
- 2001-2003 Superintendence of Support for Scientific and Technological Development (CADCT). Grant for the project “Property emergence and causality in biological systems”.

Publications

Papers in peer-reviewed journals

Accepted

El-Hani, C. N. & Ludwig, D. Intercultural Education as Dialogue between Knowledge Systems: Elements of a Theoretical Framework. *Science & Education*. <https://doi.org/10.1007/s11191-024-00525-z>

Silva, J. M., Nunes-Neto, N. F. & **El-Hani, C. N.** What is the value of nature? The problem of intrinsic value and the organizational theory of ecological functions. *Environmental Ethics*.

Renck, V., Ludwig, D., Reis-Filho, J. A., Fonseca, J. & **El-Hani, C.** Differentiation of expertise in local communities. Insights from artisanal fishing villages in Brazil. *Journal of Ethnobiology*.

Gonçalves, L. R., Renck, V., Sartorio, L., Machado, I. C., Clauzet, M., **El-Hani, C. N.** & Seixas, C. S. Local Messages for a Global Agenda: Highlighting Territories and Justice at COP30. *Ambiente e Sociedade*.

Peñaloza, G. & **El-Hani, C. N.** Religious and scientific views and forms of human-nature relationship in Colombian Biology teachers. *Cultural Studies of Science Education*.

Paiva, M., Souza, M. M., **El-Hani, C. N.** & Teixeira, S. Museologia e educação no estuário do Itapicuru: Dimensões pedagógicas de um diálogo intercultural. *Museologia & Interdisciplinaridade*.

Submitted

Leite, C. M. P., Carvalho, I. N., Coutinho, J. G. E. & **El-Hani, C. N.** Regulation in ecological systems: an overview. *History and Philosophy of the Life Sciences*.

Silva, A. A., **El-Hani, C. N.**, Vieira, F. P. & Almeida, R. O. Educação intercultural e diálogo de saberes no ensino de ciências da escola básica: uma revisão sistemática da literatura. *Investigações em Ensino de Ciências*.

Sfara, E. & **El-Hani, C. N.** Une approche organisationnelle au concept de santé de l'écosystème. *Ateliers de l'Éthique/The Ethics Forum*.

Turska, J. J., **El-Hani, C. N.**, Oliveira, L. & Ludwig, D. Ontologies as embodied social practices: Caipora in Northeast Brazil and philosophical ethnography as a method of ontological analysis. *Journal of Social Ontology*.

Carvalho, I. N., Nunes-Neto, N. F. & **El-Hani, C. N.** Como tratar do organismo no ensino médio de biologia: Implicações para o currículo. *Investigações em Ensino de Ciências*.

Bollettin, P., Turska, J., Xikrin, B., Xikrin, K., Ludwig, D. & **El-Hani, C.** Kukêire kute piy kre: The agouti plants the Brazil nut tree: Dialogues between Indigenous and academic ecologies in the Amazon. *Human Ecology*.

Félix, R. P., **El-Hani, C. N.**, Vilela, B., Viana, B. F., Igari, A. & Sampaio, S. Social and Environmental Drivers of Birdwatching Activity in Brazil: Implications for Conservation Planning. *Tropical Conservation Science*.

Costa, T. F. S., Souza, I. M. A. & **El-Hani, C. N.** Do assado ao cozido: como as moquecas de *Aratu* transformaram a si e aos manguezais nas comunidades de Poças e Siribinha – Bahia, Brasil. *Mana: Estudos de Antropologia Social*.

2025

Nascimento, L. M. M., Sepulveda, C., **El-Hani, C. N.** & Arteaga, J. S. (2025). Sickle cell anemia as a racialized disease: Design principles of a teaching sequence for education about ethnic-racial relations. *EDeR. Educational Design Research* 9(1): 79.

Demasi-Araújo, B., Prado, N., Lima, F., **El-Hani, C. N.** & Pardini, R. (2025). Describing viewpoints on human-nature relationships to unveil socio-environmental conflicts and support community-based projects. *People and Nature* 7: 475-492. <https://doi.org/10.1002/pan3.10776>

Bollettin, P., Foltram, R., Xikrin, B., Xikrin, K. & **El-Hani, C. N.** (2025). Belo Monte: Histórias de acelerações e inícios (Belo Monte: Histories of accelerations and beginnings). *Revista Zabelê* 5(2): 1-22. <https://periodicos.ufpi.br/index.php/revzab/article/view/6254>.

Reis-Filho, J. A., Cavole, L. M., Renck, V., Eggertsen, L., Loiola, M., Bender, M., Gragnolati, M., Giarrizzo, T. & **El-Hani, C. N.** (2025). Fisherwomen's activities are as complex, salient, and profitable as those performed by fishermen: a study from vulnerable traditional fishery communities. *Fisheries Research* 286: 107380. <https://doi.org/10.1016/j.fishres.2025.107380>

Milberg Muñoz, E., Ludwig, D. & **El-Hani, C. N.** (2025). Research as a mangrove: Emancipatory science and the messy reality of transdisciplinarity. *International Review of Qualitative Research* 18(2): 237-259. <https://doi.org/10.1177/19408447241260446>

Ressiore, A., De Fusco, G., Ludwig, D., **El-Hani, C. N.** & Turnhout, E. (2025). Caring policy-relevant knowledge? The Case of the Brazilian Platform for Biodiversity and Ecosystem Services. *Environmental Science and Policy* 171: 104170. <https://doi.org/10.1016/j.envsci.2025.104170>

De La Rosa, G., Ludwig, D., Nieves, A. & **El-Hani, C. N.** (2025). Between confluence and disenfranchisement: The role of power dynamics in transdisciplinary research. *Current Research in Environmental Sustainability* 10: 100300. <https://doi.org/10.1016/j.crsust.2025.100300>

2024

Ludwig, D., **El-Hani, C. N.**, Gatti, F., Kendig, C., Kramm, M., Neco, L., Delgado, A. N., Renck, V., Ressiore C. A., Galindo, L. R., Rickard, T. L., De La Rosa, G., Turska, J., Vergara-Silva, F. & Wilson, R. A. (2024). Transdisciplinary Philosophy of Science: Meeting the Challenge of Indigenous Expertise. *Philosophy of Science* 91(5): 1221-1231. <https://doi.org/10.1017/psa.2023.127>

Ludwig, D., Banuoku, D. F., Boogaard, B., **El-Hani, C.**, Guri, B. Y., Kramm, M., Renck, V., Ressiore, A., Robles-Piñeros, J. & Turska, J. (2024). Southern ontologies: Reorienting agendas in social ontology. *Journal of Social Ontology* 10(2): 51-79. <https://doi.org/10.25365/jso-2024-7691>

De La Rosa, G., Milberg, E., **El-Hani, C.** & Ludwig, D. (2024). Navigating between promises and realities of transdisciplinarity for environmental conservation. *Human Ecology* 52: 697-708. <https://doi.org/10.1007/s10745-024-00520-6>

Ressiore, A., Ludwig, D. & **El-Hani, C.** (2024). More-Than-Human Care”: A Reflection with an Artisanal Fishing Village in Brazil. *Geo: Geography and Environment* 11(2): e00159. <https://doi.org/10.1002/geo2.159>

Lima, T. M., Sepulveda, C. A. S. S. & **El-Hani, C. N.** (2024). Análise semântica do conceito darwinista de adaptação em livros didáticos de biologia do ensino médio. *Investigações em Ensino de Ciências* 29(1): 60-91. <https://doi.org/10.22600/1518-8795.ienci2024v29n1p60>

2023

Inêz, T. G., Brito, B. P. L. & **El-Hani, C. N.** (2023). A model for teaching about the Nature of Science in the context of biological education. *Science & Education* 32(1): 231-276. <https://doi.org/10.1007/s11191-021-00285-0>

Renck, V., Ludwig, D., Bollettin, P., Reis-Filho, J. A., Polisel, L. & **El-Hani, C. N.** (2023). Taking fishers' knowledge and their implications to fisheries policy seriously. *Ecology & Society* 28(2): 7. <https://doi.org/10.5751/ES-14104-280207>

Sfara, E. & **El-Hani, C. N.** (2023). Ecosystem health and malfunctions: an organizational perspective. *Biology and Philosophy* 38: 37. <https://doi.org/10.1007/s10539-023-09927-9>

Renck V., Ludwig, D., Santos, I. J., Santos, V. C., Conceição, F. A., Araújo, N. A., Santos, C. C., Oliveira, V. J., Bollettin, P., Reis-Filho, J. A., Polisel, L. & **El-Hani, C. N.** (2023). Conhecimento Pesqueiro e o Defeso: preenchendo uma lacuna necessária. *Ethnobiology and Conservation* 12: 04. <https://doi.org/10.15451/ec2023-02-12.04-1-8>

Delgado, A. N., Ludwig, D. & **El-Hani, C.** (2023). Pluralist ethnobiology: Between philosophical reflection and transdisciplinary action. *Journal of Ethnobiology* 43(3): 191-197. <https://doi.org/10.1177/02780771231194774>

Bollettin, P., Ludwig, D. & **El-Hani, C.** (2023). Challenges of symmetrical dialogue: Reflections on collaborative research in Northeast Brazil. *Ethnobiology Letters* 14(2): 47-55. <https://doi.org/10.14237/ebl.14.2.2023.1836>

Hofstatter, L. J. V., Almeida, R. O., **El-Hani, C. N.** & Oliveira, H. T. (2023). A importância da prática e da diversificação dos espaços de aprendizagem: a formação universitária a partir de uma trilha urbana com a temática da biodiversidade à luz da educação ambiental. *Revista de Ensino de Biologia da SBEnBIO (RenBio)* 16(2): 1343-1367. <https://doi.org/10.46667/renbio.v16i2.1059>

Borges, D. G. F., Carvalho, D. S., Bomfim, G. C., Ramos, P. I. P., Brzozowski, J., Goés-Neto, A., Andrade, R. F. S. & **El-Hani, C. N.** (2023). On the origins of mitochondria: a multilayer network approach. *PeerJ* 11: e14571. <https://doi.org/10.7717/peerj.14571>

Gomes, T. P., Ribeiro, P. S., Carvalho, N. B., **El-Hani, C. N.**, Figueira, C. P. & Ristow, P. C. L. von Buettner. (2023). Impact of extracellular DNA on architectural parameters of *Leptospira biflexa* biofilm. *Indian Journal of Microbiology* 63: 373-379. <https://doi.org/10.1007/s12088-023-01085-6>

Bollettin, P. & **El-Hani, C. N.** (2023). O lago Otjikoto e suas diferentes narrativas. *Revista AntHropológicas Visual* 9(1): 1-4.

Ribeiro, D. R., Ribeiro dos Santos, F. A., Caetano, R., Santana, R. C. & **El-Hani, C. N.** (2023). Indicadores do ensino de botânica nos cursos de Ciências Biológicas das universidades públicas baianas: Implicações para a formação inicial docente. *Investigações em Ensino de Ciências* 28(2): 402-420. <https://doi.org/10.22600/1518-8795.ienci2023v28n2p402>

Daza-Pérez, E. & **El-Hani, C. N.** (2023). Educational design research en el desarrollo de una innovacion didáctica de ciencias naturales: reflexiones sobre aspectos procedimentales. *Brazilian Journal of Education, Technology and Society (BRAJETS)* 16(1): 20-27. <https://doi.org/10.14571/brajets.v16.nse1.20-27>

Reis, J., Coutinho, J., Amorim, M. S., **El-Hani, C. N.** & Viana, B. (2023). Mapeando práticas, ações e modelos de comunicação entre os atores sociais envolvidos na cafeicultura do território da Chapada Diamantina, BA: estratégias para promover a transição agrícola sustentável. *Extensão Rural* 30: e70647.

2022

El-Hani, C. N., Poliseli, L. & Ludwig, D. (2022). Beyond the divide between Indigenous and academic knowledge: Causal and mechanistic explanations in a Brazilian fishing community. *Studies in History and Philosophy of Science* 91: 296-306. <https://doi.org/10.1016/j.shpsa.2021.11.001>

Poliseli, L., Coutinho, J. G. E., Viana, B., Russo, F. & **El-Hani, C. N.** (2022). Philosophy of science in practice in ecological model building. *Biology and Philosophy* 37: 21. <https://doi.org/10.1007/s10539-022-09851-4>

Renck, V., Apgaua, D. M. G., Tng, D. Y. P., Bollettin, P., Ludwig, D. & **El-Hani, C. N.** (2022). Cultural consensus and intracultural diversity in ethnotaxonomy: Lessons from a fishing community in northeast Brazil. *Journal of Ethnobiology and Ethnomedicine* 18: 25. <https://doi.org/10.1186/s13002-022-00522-y>

Renck, V., Ludwig, D., Bollettin, P. & **El-Hani, C. N.** (2022). Exploring partial overlaps between knowledge systems in a Brazilian fishing community. *Human Ecology* 50: 633-649. <https://doi.org/10.1007/s10745-022-00335-3>

El-Hani, C. N. (2022). Bases teórico-filosóficas para o design de educação intercultural como diálogo de saberes (Theoretical-philosophical grounds for the design of intercultural education as a dialogue of knowledges). *Investigações em Ensino de Ciências* 27(1): 1-38. <https://doi.org/10.22600/1518-8795.ienci2022v27n1p01>

Lima, D. S. S., Paz, E. M. F., **El-Hani, C. N.** & Japyassú, H. F. (2022). A comparison between affiliative and agonistic behaviours in wild and captive *Sapajus libidinosus* (Spix, 1823) (Mammalia, Primates, Cebidae). *Papéis Avulsos de Zoologia* 62: e202262033. <https://doi.org/10.11606/1807-0205/2022.62.033>

Félix, R., Sampaio, S. & **El-Hani, C. N.** (2022). The Endangered Grey-breasted Parakeet *Pyrrhura griseipectus* occurs in Bahia, Brazil. *Cotinga* 44: 2-8.

Costa, Y., Nunes, J. A. C. C., **El-Hani, C.** & Barros, F. (2022). What is the importance of your research? A framework for clear ecological relevance. *Environmental Smoke* 5(3): 7-12. <https://doi.org/10.32435/envsmoke.2022537-12>

Castro, D. R., **El-Hani, C. N.**, Caetano, R. & Santana, R. C. (2022). O ensino teórico-prático investigativo sobre estômatos de *Lilium* sp. (Lírio) a partir de conceitos estruturantes (Inquiry theoretical-practical teaching about the stoma of *Lilium* sp. (Lily) based on structuring concepts). *Sertão Sustentável* 3: 33-36.

2021

Travassos-Britto, B., Pardini, R., **El-Hani, C. N.**, & Prado, P. I. (2021). Towards a pragmatic view of theories in ecology. *Oikos* 130(6): 821-830. <https://doi.org/10.1111/oik.07314>

Travassos-Britto, B., Pardini, R., **El-Hani, C. N.** & Prado, P. I. (2021). A pragmatic approach to produce theoretical syntheses in ecology. *PLOS One* 16(12): e0261173. <https://doi.org/10.1371/journal.pone.0261173>

Peñaloza, G., **El-Hani, C. N.** & Mosquera-Suárez, C. J. (2021). Between scientific ideas and Christian religious beliefs: How do Colombian biology teachers' views on science-religion relationships influence their evolution teaching? *Science & Education* 30: 931-965. <https://doi.org/10.1007/s11191-021-00218-x>

Albuquerque, U. P. & **El-Hani, C. N.** (2021). In a world in shadows and flames scientists and laypeople need better understanding of how science works. *Ethnobiology and Conservation* 10: 13. <https://doi.org/10.15451/ec2020-12-10.13-1-4>

Tng, D. Y. P., Apgaua, D. M. G., Lisboa, M. S. & **El-Hani, C. N.** (2021). Gender differences in plant use knowledge within a traditional fishing community in northeastern Brazil. *Ethnobotany Research and Applications* 21: 1-36. <http://dx.doi.org/10.32859/era.21.12.1-36>

El-Hani, C. N. & Reis, C. R. M. (2021). Research strategies and value outlooks in scientific practices: For an organicist thinking and a pluralist methodology in the biological sciences. *Philosophy World Democracy*, 27/10/2021. Available in: <https://www.philosophy-world-democracy.org/articles-1/research-strategies-and-value-outlooks-in-scientific-practices>

Castro, D. R., **El-Hani, C. N.**, Santana, R. C. & Silva, R. C. (2021). O ensino investigativo de biologia celular no curso de Engenharia de Pesca da Universidade do Estado da Bahia (UNEB), Campus XXIV – Xique-Xique-BA (Inquiry teaching of cell biology in the fisheries engineering course from the State University of Bahia (UNEB), Campus XXIV, Xique-Xique-BA). *Revista de Ensino de Engenharia* 40: 82-94. <http://dx.doi.org/10.37702/REE2236-0158.v40p82-94.2021>

Monteiro, A. S. S., Lordelo, M. S., Couto, R. D., **El-Hani, C. N.** & Couto, F. D. (2021). Abordagens conceituais sobre a doença falciforme em livros didáticos de biologia do ensino médio (Conceptual approaches on sickle cell disease in Brazilian High School Biology textbooks). *Alexandria: Revista de Educação em Ciência e Tecnologia* 14(2): 113-138. <https://doi.org/10.5007/1982-5153.2021.e74636>

2020

Ludwig, D. & **El-Hani, C. N.** (2020). Philosophy of Ethnobiology: Understanding knowledge integration and its limitations. *Journal of Ethnobiology* 40(1): 3-20. <https://doi.org/10.2993/0278-0771-40.1.3>

Rocha, P. L. B., Pardini, R., Viana, B. F. & **El-Hani, C. N.** (2020). Fostering inter- and transdisciplinarity in discipline-oriented universities to improve sustainability science and practice. *Sustainability Science* 15: 717-728. <https://doi.org/10.1007/s11625-019-00761-1>

Bertuol-Garcia, D., Morsello, C., **El-Hani, C. N.** & Pardini, R. (2020). Shared ways of thinking in Brazil about the science-practice interface in ecology and conservation. *Conservation Biology* 34(2): 449-461. <https://doi.org/10.1111/cobi.13242>

Carvalho, I. N., **El-Hani, C. N.** & Nunes-Neto, N. F. (2020) How should we select conceptual contents for biology high school curriculum? *Science & Education* 29(3): 513-547. <https://doi.org/10.1007/s11191-020-00115-9>

Conrado, D. M., Nunes-Neto, N. F. & **El-Hani, C. N.** (2020). Dimensões dos conteúdos mobilizados por estudantes de biologia na argumentação sobre antibióticos e saúde (Content dimensions used by biology students in argumentation about antibiotics and health). *Educação e Pesquisa* 46: e223593. <https://doi.org/10.1590/S1678-4634202046223593>

El-Hani, C. N. & Machado, V. (2020). COVID-19: The need of an integrated and critical view. *Ethnobiology and Conservation* 9: 18. <https://doi.org/10.15451/ec2020-05-9.18-1-20>

Silva, L. M., Batalha-Filho, H., Japyassú, H. F. & **El-Hani, C. N.** (2020). Population history of a social spider reveals connection between South American tropical forests. *Zoologischer Anzeiger* 285: 139-146. <https://doi.org/10.1016/j.jcz.2020.01.004>

El-Hani, C. N. & Bollettin, P. (2020). Il Progetto Educazione Interculturale come Dialogo tra Modi di Conoscere e Forme della Conoscenza: Sviluppi e sfide. *Thule: Rivista Italiana di Studi Americanistici* 48/49: 173-197.

2019

Joaquim, L. M., Freire Jr., O. & **El-Hani, C. N.** (2019). From Physics to Biology: Physicists in the Search for Systemic Biological Explanations. *European Journal for Philosophy of Science* 9(2): 30. <https://doi.org/10.1007/s13194-019-0254-8>

Conrado, D. M., Nunes-Neto, N. F. & **El-Hani, C. N.** (2019). Como abordar questões sociocientíficas na sala de aula: a estratégia didática de cinco fases para o ensino de ciências (How to approach socioscientific issues in the classroom: a five-phase teaching strategy for science teaching). *Indagatio Didactica* 11(2): 915-928. <https://doi.org/10.34624/id.v11i2.6856>

Daza-Pérez, E. & **El-Hani, C. N.** (2019). Termorregulación en vertebrados terrestres como concepto integrador explícito en la enseñanza de las ciencias naturales (Thermoregulation in terrestrial vertebrates as explicit integrating concept in natural sciences teaching). *Ensaio: Pesquisa em Educação em Ciências* 21: e12026. <https://doi.org/10.1590/1983-21172019210120>

2018

Grodwohl, J.-B., Porto, F. & **El-Hani, C. N.** (2018). Experiments and theory in community ecology: building an experimental culture on the rocky seashores (1950-1985). *History and Philosophy of the Life Sciences (HPLS)* 40(3): 45. <https://doi.org/10.1007/s40656-018-0209-y>

Neco, L. C., Japyassú, H. F., **El-Hani, C. N.** & Chaline, N. C. (2018). From classificatory to quantitative concepts in the study of sociality in animals: an epistemological view. *Biological Theory* 13(3): 180-189. <https://doi.org/10.1007/s13752-018-0300-3>

Bertuol-Garcia, D.; Morsello, C.; **El-Hani, C. N.** & Pardini, R. (2018). A conceptual framework for understanding the perspectives on the causes of the science-practice gap in ecology and conservation. *Biological Reviews* 93(2): 1032-1055. <https://doi.org/10.1111/brv.12385>

Aguiar, O., Sevian, H. & **El-Hani, C. N.** (2018). Teaching about Energy: Application of the Conceptual Profile Theory to Overcome the Encapsulation of School Science Knowledge. *Science & Education* 27(9-10): 863-893. <https://doi.org/10.1007/s11191-018-0010-z>

Goés-Neto, A., Diniz, M. C. V., Carvalho, D. S., Bomfim, G. C., Duarte, A. A., Brzozowski, J. A., Lobão, T. C. P., Pinho, S. T. R., **El-Hani, C. N.** & Andrade, R. F. S. (2018). Comparison of complex networks and tree-based methods of phylogenetic analysis and proposal of a bootstrap method based on random rewiring of the neighborhood matrix: a case study with chitin synthases of Basidiomycota (Fungi). *PeerJ* 6: e4349. <https://doi.org/10.7717/peerj.4349>

Oliveira, C. G., Miranda, J. G. V., Japyassú, H. F. & **El-Hani, C. N.** (2018). Using Zipf-Mandelbrot's law and graph theory to evaluate animal welfare. *Physica A* 492: 285-295. <https://doi.org/10.1016/j.physa.2017.08.127>

Barros-Júnior, A. M., Lobão, T. P., Pinho, S. T. R., **El-Hani, C. N.**, Andrade, R. F. S., Goés-Neto, A. & Duarte, A. A. (2018). SCANNET: um software para identificação de comunidades em redes (SCANNET: a software to identify communities in networks). *IEEE Latin America Transactions* 16(6): 1787-1794.

2017

Carver, R. B.; Castéra, J.; Gericke, N.; Evangelista, N. A. M. & **El-Hani, C. N.** (2017). Young adults' belief in genetic determinism, and knowledge and attitudes towards modern genetics and genomics: The PUGGS questionnaire. *PLOS One* 12(1): e0169808. <https://doi.org/10.1371/journal.pone.0169808>

Gericke, N. M., Carver, R. B., Castéra, J., Evangelista, N. A. M., Marre, C. C. & **El-Hani, C. N.** (2017). Exploring belief in genetic determinism as related to genetic knowledge and social factors. *Science & Education* 26: 1223-1259. <https://doi.org/10.1007/s11191-017-9950-y>

Moreira-dos-Santos, F. & **El-Hani, C. N.** (2017). Belief, knowledge and understanding: How to deal with the relations between different cultural perspectives in classrooms. *Science & Education* 26(3): 215-245. <https://doi.org/10.1007/s11191-017-9891-5>

Daza-Pérez, E. P., **El-Hani, C. N.** & Loula, A. (2017). Consideraciones didácticas para el desarrollo de actividades de modelización sobre termorregulación en animales apoyadas en el videojuego Calangos. *Enseñanza de las Ciencias* vol. extra: 5157-5163.

2016

Ferreira, T. A. S., **El-Hani, C. N.** & Silva-Filho, W. J. (2016). Knowledge, belief, and science education: a contribution from the epistemology of testimony. *Science & Education* 25(7): 775-794. <https://doi.org/10.1007/s11191-016-9834-6>

Nunes-Neto, N. F., Saborido, C., **El-Hani, C. N.**, Viana, B. F. & Moreno, A. (2016). Function and normativity in social-ecological systems. *Filosofia e História da Biologia* 11(2): 259-287.

Nunes-Neto, N. F., Carmo, R. S. & **El-Hani, C. N.** (2016). Biodiversity and Ecosystem Functioning: an analysis of the functional discourse in contemporary ecology. *Filosofia e História da Biologia* 11(2): 289-321.

Arteaga, J. M. S., Almeida, R. J. T. & **El-Hani, C. N.** (2016). A questão racial na obra de Domingos Guedes Cabral (1852-1883) [The racial question in the work of Domingos Guedes Cabral (1852-1883)]. *História, Ciências, Saúde – Manguinhos* 23: 33-50. <https://doi.org/10.1590/S0104-59702016000500003>

Lyra, C. E. S., Mograbi, G. J. & **El-Hani, C. N.** (2016). O naturalismo biológico de Searle e a relação mente-cérebro (Searle's biological naturalism and the mind-brain relation). *Psicologia: Teoria e Pesquisa* 32(1): 7-15. <https://doi.org/10.1590/0102-37722016012465007015>

Queiroz, J., Emmeche, C. & **El-Hani, C. N.** (2016). Bases para una teoría semántico/pragmática de la información genética. *Metatheoria* 7(1): 31-48.

Conrado, D. M., **El-Hani, C. N.**, Viana, B. F., Schnadelbach, A. S. & Nunes-Neto, N. F. (2016). Ensino de biologia a partir de questões sociocientíficas: uma experiência com ingressantes em curso de licenciatura (Teaching biology with socioscientific issues: an experience with preservice freshmen teachers). *Indagatio Didactica* 8(1): 1132-1147. <https://doi.org/10.34624/id.v8i1.14254>

Conrado, D. M., Nunes-Neto, N. F. & **El-Hani, C. N.** (2016). Análise de argumentos em uma questão sociocientífica no ensino de Biologia (Analysis of arguments in a socioscientific issue in biological education). *Revista de Ensino de Biologia – SBEnBio (REnBio)* 9: 5522-5535.

Carmo, R. S., Nunes-Neto, N. F. & **El-Hani, C. N.** (2016). Teleologia, função e ensino de biologia (Teleology, function and biological education). *Acta Scientiae (Ulbra)* 18(3): 820-839.

Martins, L., Dionor, G. A., Carvalho, G. S. & **El-Hani, C. N.** (2016). Abordagens de saúde nos livros didáticos de Biologia: Análise das coleções aprovadas no PNLD/2012. (Health approaches in Biology textbooks: analysis of the textbooks approved by the National Textbook Program - PNLD/2012). *Revista de Ensino de Biologia – SBEnBio (REnBio)* 9: 3050-3061.

El-Hani, C. N. (2016). O Mendel mítico sob um olhar crítico: o papel de Mendel na história da genética (The mythical Mendel under a critical lens: the role of Mendel in the history of Genetics). *Genética na Escola* 11(2): 272-285. <https://doi.org/10.55838/1980-3540.ge.2016.252>

2015

El-Hani, C. N. (2015). Mendel in genetics teaching: some contributions from history of science and articles for teachers. *Science & Education* 24: 173-204. <https://doi.org/10.1007/s11191-014-9685-y>

Joaquim, L. M., Freire Jr., O. & **El-Hani, C. N.** (2015). Quantum explorers: Bohr, Jordan and Delbrück venturing into Biology. *Physics in Perspective* 17: 236-250. <https://doi.org/10.1007/s00016-015-0167-7>

Carvalho, D. S., Andrade, R. F. S., Pinho, S. T. R., Góes-Neto, A., Lobão, T. C. P., Bomfim, G. C. & **El-Hani, C. N.** (2015). What are the evolutionary origins of mitochondria? A complex network approach. *PLOS One* 10(9): e0134988. <https://doi.org/10.1371/journal.pone.0134988>

Arteaga, J. M. S.; Garcia, L. V.; Rasella, D. & **El-Hani, C. N.** (2015). Alterização, biologia humana e biomedicina (Othering, human biology and biomedicine). *Scientiae Studia* 13(3): 615-641. <https://doi.org/10.1590/S1678-31662015000300007>

Lyra, C. E. S.; Mograbi, G. J. & **El-Hani, C. N.** (2015). Fundamentos neurobiológicos da consciência e a teoria do campo unificado: uma análise filosófica (Neurobiological foundations of consciousness and the unified field theory: a philosophical analysis). *Veritas* 60(2): 287-312. <https://doi.org/10.15448/1984-6746.2015.2.21512>

El-Hani, C. N., Amaral, E. M. R.; Sepulveda, C. & Mortimer, E. F. (2015). Conceptual profiles: theoretical-methodological grounds and empirical studies. *Procedia: Social and Behavioral Sciences* 167: 15-22. <https://doi.org/10.1016/j.sbspro.2014.12.636>

Valderrama-Pérez, D. F.; Molina-Andrade, A. & **El-Hani, C. N.** (2015). Dialogue between scientific and traditional knowledge in the science classroom: development study of a teaching sequence in a school in Taganga (Magdalena, Colombia). *Procedia: Social and Behavioral Sciences* 167: 217-222. <https://doi.org/10.1016/j.sbspro.2014.12.665>

Sá, T. S.; Amarante, A. L. A. P. C.; Sarmiento, A. C. H.; Muniz, C. R.; Silva, N. R.; Pereira, V. A.; Sepulveda, C. & **El-Hani, C. N.** (2015). Energetic metabolism in biology classrooms: a developmental study of a teaching sequence. *Procedia: Social and Behavioral Sciences* 167: 50-55. <https://doi.org/10.1016/j.sbspro.2014.12.641>

Conrado, D. M.; Nunes-Neto, N. F. & **El-Hani, C. N.** (2015). Argumentação sobre problemas socioambientais no ensino de biologia (Argumentation about socioenvironmental issues in biological education). *Educação em Revista* 31(1): 329-357. <https://doi.org/10.1590/0102-4698125846>

Greca, I. M. & **El-Hani, C. N.** (2015). Docentes e investigadores en comunidades virtuales de práctica para el desarrollo profesional docente y la mejoría de la enseñanza de las ciencias (Teachers and researchers in virtual communities of practice for teacher professional development and science teaching improvement). *Revista de Enseñanza de la Física (APFA)* 27(1): 7-18.

2014

Nunes-Neto, N. F., Moreno, A. & **El-Hani, C. N.** (2014). Function in ecology: an organizational approach. *Biology and Philosophy* 29: 123-141. <https://doi.org/10.1007/s10539-013-9398-7>

Gericke, N.; Hagberg, M.; Santos, V. C.; Joaquim, L. M. & **El-Hani, C. N.** (2014). Conceptual variation or incoherence? Textbook discourse on genes in six countries. *Science & Education* 23: 381-416. <https://doi.org/10.1007/s11191-012-9499-8>

Loula, A.; Castro, L. N.; Apolinário, A.; Rocha, P. L. B., Carneiro, M. C. L., Reis, V. P. G. S., Machado, R. F., Sepulveda, C. & **El-Hani, C. N.** (2014). Modeling a virtual world for the educational game Calangos. *International Journal of Computer Games Technology* 14: a382396. <https://doi.org/10.1155/2014/382396>

Conrado, D. M.; Nunes-Neto, N. F. & **El-Hani, C. N.** (2014). A aprendizagem baseada em problemas (ABP) como estratégia de formação do cidadão socioambientalmente responsável (Problem-based learning (PBL) as strategy for educating the socioenvironmentally responsible citizen). *Revista Brasileira de Pesquisa em Educação em Ciências* 14(2): 77-87.

Silva, S. N. & **El-Hani, C. N.** (2014). A abordagem do tema Ambiente e a formação do cidadão socioambientalmente responsável (The treatment of the theme Environment and the education of the socioenvironmentally responsible citizen). *Revista Brasileira de Pesquisa em Educação em Ciências* 14(2): 225-234.

Sepulveda, C. & **El-Hani, C. N.** (2014). Obstáculos epistemológicos e sementes conceituais para a aprendizagem sobre adaptação: uma interpretação epistemológica e sociocultural dos desafios no ensino de evolução (Epistemological obstacles and conceptual seeds for learning about adaptation: an epistemological and sociocultural interpretation of the challenges in evolution education). *Acta Scientiae (Ulbra)* 16(2): 237-263.

Rivas, M. P.; Moreira, L. M. A.; Santo, L. D. E.; Marques, A. C. S. S.; **El-Hani, C. N.** & Toralles, M. B. P. (2014). New studies of 2nd and 4th digit ratio as a morphogenetic trait in subjects with congenital adrenal hyperplasia. *American Journal of Human Biology* 26: 559-561. <https://doi.org/10.1002/ajhb.22545>

Dias, T.; **El-Hani, C. N.**; Sánchez Arteaga, J. M.; Barzano, M. & Sepulveda, C. (2014). As contribuições da exposição Ciência, Raça e Literatura para a educação das relações étnico-raciais (The contributions of the exposition Science, Race and Literature to the education of the ethnic-racial relations). *Revista de Ensino de Biologia – SBEnBio (REnBio)* 7: 7226-7238.

2013

Meyer, L. M. N.; Bomfim, G. C. & **El-Hani, C. N.** (2013). How to understand the gene in the 21st century. *Science & Education* 22(2):345-374. <https://doi.org/10.1007/s11191-011-9390-z>

El-Hani, C. N. & Meyer, D. (2013). The concept of gene in the twenty-first century: What are the open avenues? *Contrastes: Revista Internacional de Filosofia*, Suppl. XVIII: 55-68.

El-Hani, C. N. & Greca, I. M. (2013). ComPratica: A virtual community of practice for promoting biology teachers' professional development in Brazil. *Research in Science Education* 43: 1327-1359. <https://doi.org/10.1007/s11165-012-9306-1>

Nunes-Neto, N. F.; Carmo, R. S. & **El-Hani, C. N.** (2013). O conceito de função na ecologia contemporânea (The concept of function in current ecology). *Revista de Filosofia Aurora* 25(36): 43-73. <https://doi.org/10.7213/revistadefilosofiaaurora.7765>

Conrado, D. M.; **El-Hani, C. N.** & Nunes-Neto, N. F. (2013). Sobre a ética ambiental na formação do biólogo (On the environmental ethics in the education of the biologist). *REMEA - Revista Eletrônica do Mestrado de Educação Ambiental* 30(1): 120-139. <https://doi.org/10.14295/remea.v30i1.3576>

Prado, P. I. & **El-Hani, C. N.** (2013). Blaming the words “population” and “community” has outlived its usefulness in ecology – A reply to Magnusson (2013). *Natureza e Conservação* 11(1): 99-102. <http://dx.doi.org/10.4322/natcon.2013.017>

Meyer, D. & **El-Hani, C. N.** (2013). O que está em jogo no confronto entre criacionismo e evolução (What is at play in the creationism-evolution conflict). *Filosofia e História da Biologia* 8(3): 211-222.

Santos, F. M. & **El-Hani, C. N.** (2013). Criacionismos, naturalismos e a prática da ciência (Creationisms, naturalisms, and the practice of science). *Filosofia e História da Biologia* 8(3): 223-252.

Conrado, D. M.; Souza, M. M. O. R.; Cruz, L. M. S.; Nunes-Neto, N. F. & **El-Hani, C. N.** (2013). Evolução e ética na tomada de decisão em questões sociocientíficas (Evolution and ethics in decision making about socioscientific issues). *Enseñanza de las Ciencias, número extra (IX Congreso Internacional sobre Investigación en Didáctica de las Ciencias)*: 803-807.

Bittencourt-dos-Santos, W. & **El-Hani, C. N.** (2013). A abordagem do pluralismo de processos e da evo-devo em livros didáticos de biologia evolutiva e zoologia de vertebrados (The treatment of process pluralism and evo-devo in Evolutionary Biology and Vertebrate Zoology textbooks). *Ensaio: Pesquisa em Educação em Ciências* 15(3): 199-216. <https://doi.org/10.1590/1983-21172013150312>

Sarmiento, A. C. H.; Muniz, C. R. R.; Silva, N. R.; Pereira, V. A.; Santana, M. A.; Sá, T. S. & **El-Hani, C. N.** (2013). Investigando princípios de design de uma sequência didática sobre metabolismo

energético (Investigating design principles of a teaching sequence on energetic metabolism). *Ciência & Educação* 19: 573-598. <https://doi.org/10.1590/S1516-73132013000300006>

Nery, E. R. A.; Saraiva, C. S.; Cruz, L. M. S.; Souza, M. M. O. R.; Gomes, F. S.; **El-Hani, C. N.** & Mariano-Neto, E. (2013). O conceito de restauração na literatura científica e na legislação brasileira (The concept of restoration in scientific literature and Brazilian laws]. *Revista Caititu* 1(1): 43-56. <https://doi.org/10.7724/caititu.v1i1.5202>

Arteaga, J. M. S.; Sepulveda, C. & **El-Hani, C. N.** (2013). Racismo científico, procesos de alterización y enseñanza de ciencias (Scientific racism, othering processes and science education). *Magis: Revista Internacional de Investigación en Educación* (Editorial Pontificia Universidad Javeriana) 6(12):55-67.

Sepulveda, C.; Mortimer, E. F. & **El-Hani, C. N.** (2013). Construção de um perfil conceitual de adaptação: implicações metodológicas para o programa de pesquisa sobre perfis conceituais e o ensino de evolução (Construction of a conceptual profile of adaptation: methodological implications to the conceptual profile research program and to evolution education). *Investigações em Ensino de Ciências* 18(2): 439-479.

Reis, V. P. G. S.; Carneiro, M. C. L.; Amarante, A. L. A. C. P.; Almeida, M. A.; Sepulveda, C. A. S. & **El-Hani, C. N.** (2013). O jogo dos clipsitacédeos: uma simulação do processo de seleção natural como estratégia didática para o ensino de evolução (The clipbirds game: a simulation of the process of natural selection as teaching strategy for evolution education). *Ciência em Tela* 6(2): sa01.

2012

Arteaga, J. M. S. & **El-Hani, C. N.** (2012). Othering Processes and STS Curricula: from 19th Century Scientific Discourse on Interracial Competition and Racial Extinction to Othering in Biomedical Technosciences. *Science & Education* 21: 607-629. <https://doi.org/10.1007/s11191-011-9384-x>

Santos, V. C.; Joaquim, L. M. & **El-Hani, C. N.** (2012). Hybrid deterministic views about genes in biology textbooks: a key problem in genetics teaching. *Science & Education* 21: 543-578. <https://doi.org/10.1007/s11191-011-9348-1>

Muñoz, Y. J. & **El-Hani, C. N.** (2012). The student with a thousand faces: from the ethics in video games to becoming a citizen. *Cultural Studies of Science Education* 7: 909-943. <https://doi.org/10.1007/s11422-012-9444-9>

El-Hani, C. N.; Borges, V. M.; Wanderley, J. L. M. & Barcinski, M. A. (2012) Apoptosis and apoptotic mimicry in *Leishmania*: an evolutionary perspective. *Frontiers in Cellular and Infection Microbiology* 2: a96. <https://doi.org/10.3389/fcimb.2012.00096>

Arnellos, A.; Bruni, L. E.; **El-Hani, C. N.** & Collier, J. (2012). Anticipatory functions, digital-analog forms and biosemiotics: integrating the tools to model information and normativity in autonomous biological agents. *Biosemiotics* 5(3):331-367. <https://doi.org/10.1007/s12304-012-9146-4>

Queiroz, J. & **El-Hani, C. N.** (2012). Downward determination in semiotic multi-level systems. *Cybernetics and Human Knowing* 19: 123-136.

Sepulveda, C. A. S.; Muniz, C. R.; Reis, V. P. G. S.; Teles-Junior, J. B.; Carneiro, M. C. L.; Pereira, V. A.; Caldas, T. C.; Almeida, M. A.; Sá, T. S.; Amarante, A. L. A. C. P.; Costa, V. J. B.; Silva, N. R.; Santana, M. A. S.; Sarmiento, A. C. H. & **El-Hani, C. N.** (2012). Inovando o ensino de biologia através do trabalho colaborativo de pesquisadores educacionais e professores-investigadores (Innovating biological education through educational researchers and teachers-researchers' collaborative work). *Estudos IAT* 2(1): 119-137.

Conrado, D. M., Leal, F. B., Carvalho, I. N., Cruz, L. M. S., Souza, M. M. O. R., Almeida, T. P., Moura, U. O., Sepulveda, C. & **El-Hani, C. N.** (2012). Uso do conhecimento evolutivo na tomada de decisão de estudantes do ensino médio sobre questões socioambientais (Use of evolutionary knowledge in decision-making about socioenvironmental issues by High School students). *Revista Contemporânea de Educação* 7(14): 345-368. <https://doi.org/10.20500/rce.v7i14.1675>

Martins, L., Santos, G. S. & **El-Hani, C. N.** (2012). Abordagens de saúde em um livro didático de biologia largamente utilizado no ensino médio brasileiro (Approaches to health in a biology textbook widely used in Brazilian High Schools). *Investigações em Ensino de Ciências* 17(1): 249-283.

Sarmiento, A. C. H.; Muniz, C. R. R.; Teles-Junior, J. B.; Pereira, V. A.; Caldas, T. C.; Sá, T. S.; Amarante, A. L. A. C. P.; Costa, V. J. B. & **El-Hani, C. N.** (2012). Ensino de Biologia e Química numa perspectiva interdisciplinar: seqüências didáticas sobre metabolismo energético e reações químicas (Biology and Chemistry teaching from an interdisciplinary perspective: teaching sequences on energetic metabolism and chemical reactions). *Estudos IAT* 2(2): 89-102.

Nunes-Neto, N. F. & **El-Hani, C. N.** (2012). A teoria das hierarquias e seus fundamentos epistemológicos (Hierarchy theory and its epistemological foundations). *Revista da Biologia/USP* 9: 20-27.

Carmo, R. S.; Nunes-Neto, N. F. & **El-Hani, C. N.** (2012). É legítimo explicar em termos teleológicos na biologia? (Is it legitimate to explain in teleological terms in Biology?). *Revista da Biologia/USP* 9: 28-34.

Meglhioratti, F. A.; **El-Hani, C. N.** & Caldeira, A. M. A. (2012). O conceito de organismo em uma abordagem hierárquica e sistêmica da Biologia (The concept of organism in a hierarchical and systemic approach to Biology). *Revista da Biologia/USP* 9: 7-11.

2011

Andrade, R. F. S.; Rocha-Neto, I. C.; Santos, L. B. L.; de Santana, C. N.; Diniz, M. V. C.; Lobão, T. P.; Goés-Neto, A.; Pinho, S. T. R. & **El-Hani, C. N.** (2011). Detecting network communities: an application to phylogenetic analysis. *PLoS Computational Biology* 7(5): e1001131.

El-Hani, C. N. & Greca, I. M. (2011). Participação em uma comunidade virtual de prática desenhada como meio de diminuir a lacuna pesquisa-prática na educação em biologia (Participation in a virtual community of practice designed as a way of diminishing the research-practice gap in biological education). *Ciência e Educação* 17(3): 579-601.

Mortimer, E. F., Scott, P. & **El-Hani, C. N.** (2011). Bases teóricas e epistemológicas da abordagem dos perfis conceituais (Theoretical and epistemological bases of the conceptual profile approach). *Tecné, episteme y didaxis: revista de la Facultad de Ciencia y Tecnología* 30: 111-125.

Carvalho, I. N.; Nunes-Neto, N. F. & **El-Hani, C. N.** (2011). Como selecionar conteúdos de biologia para o ensino médio? (How to select Biology contents for High School?) *Revista de Educação, Ciências e Matemática* 1(1): 67-100.

Vargens, M. M. F. & **El-Hani, C. N.** (2011). Análise dos efeitos do jogo clipsitacídeos (clipbirds) sobre a aprendizagem de estudantes do ensino médio acerca da evolução (Analysis of the effect of the game clipbirds on High School students' learning about evolution). *Revista Brasileira de Pesquisa em Educação em Ciências* 11(1): 143-168.

El-Hani, C. N.; Roque, N. & Rocha, P. L. B. (2011). Livros didáticos de Biologia do Ensino Médio: resultados do PNLEM/2007 (High School Biology textbooks: results from PNLEM/2007). *Educação em Revista* 27(1): 211-240.

Pagan, A.; **El-Hani, C. N.** & Bizzo, N. (2011). A identidade humana e o alter vivo: concepções de alguns alunos de Ciências Biológicas (Human identity and the living other: some Biological Sciences students' conceptions). *Revista de Educação Pública/UFMT* 20(44): 445-461.

2010

Arteaga, J. M. S. & **El-Hani, C. N.** (2010). Physical anthropology and the description of the "Savage" in the Brazilian Anthropological exhibition of 1882. *História, Ciências, Saúde – Manguinhos* 17(2): 399-414.

El-Hani, C. N. & Sepulveda, C. (2010). The relationship between science and religion in the education of protestant biology preservice teachers in a Brazilian university. *Cultural Studies of Science Education* 5(1): 103-125.

Loula, A.; Gudwin, R.; **El-Hani, C. N.** & Queiroz, J. (2010). Emergence of self-organized symbol-based communication in artificial creatures. *Cognitive Systems Research* 11: 131-147.

El-Hani, C. N.; Queiroz, J. & Stjernfelt, F. (2010). Firefly femmes fatales: a case study in the semiotics of deception. *Biosemiotics* 3(1): 33-55.

Góes-Neto, A.; Diniz, M. V. C.; Santos, L. B. L.; Pinho, S. T. R.; Miranda, J. G. V.; Lobão, T. P.; Borges, E. P.; **El-Hani, C. N.** & Andrade, R. F. S. (2010). Comparative protein analysis of the chitin metabolic pathway in extant organisms: a complex network approach. *Biosystems* 101:59-66.

Freitas, J. N. S.; Carvalho, L. A. S.; **El-Hani, C. N.** & Rocha, P. L. B. (2010). Affiliation in females and sexual differences in the social interactions in captivity of the torch tail rat, *Trinomys yonenagae* (Rodentia: Echimyidae): evolutionary Implications. *Journal of Ethology* 28: 105-112.

Joaquim, L. M. & **El-Hani, C. N.** (2010). A Genética em transformação: crise e revisão do conceito de gene (Genetics in transformation: crisis and review of the gene concept). *Scientiae Studia* 8(1): 93-128.

Almeida, A. M. R. & **El-Hani, C. N.** (2010). Um exame histórico-filosófico da biologia evolutiva do desenvolvimento (A historical-philosophical examination of the evolutionary biology of development). *Scientiae Studia* 8(1): 9-40.

Queiroz, J. & **El-Hani, C. N.** (2010). Sobre a forma do signo e da semiose (On the form of sign and semiosis). *Cognitio* 11(1): 122-138.

Almeida, R. J. T. & **El-Hani, C. N.** (2010). Por que a tese de Domingos Guedes Cabral foi recusada pela Faculdade de Medicina da Bahia em 1875? (Why was Domingos Guedes Cabral's thesis rejected by the Faculty of Medicine of Bahia in 1875?) *Revista Brasileira de História da Ciência* 3(1): 44-67.

2009

Abrantes, P. & **El-Hani, C. N.** (2009). Gould, Hull, and the individuation of scientific theories. *Foundations of Science* 14(4): 295-313.

El-Hani, C. N. & Nunes-Neto, N. F. (2009). Function in biology: etiological and organizational perspectives. *Acta Biologica Colombiana* 14S: 111-132.

Baptista, G. C. & **El-Hani, C. N.** (2009). The contribution of ethnobiology to the construction of a dialogue between ways of knowing: a case study in a Brazilian public high school. *Science & Education* 18(3-4): 503-520.

Carmo, R. S., Nunes-Neto, N. F. & **El-Hani, C. N.** (2009). Gaia theory in Brazilian high school biology textbooks. *Science & Education* 18(3-4): 469-501.

Bizzo, N. & **El-Hani, C. N.** (2009). Darwin and Mendel: Evolution and Genetics. *Journal of Biological Education* 43(3): 108-114.

Bizzo, N. & **El-Hani, C. N.** (2009). O arranjo curricular do ensino de evolução e as relações entre os trabalhos de Charles Darwin e Gregor Mendel (The curricular arrangement of evolution education and the relations between Charles Darwin's and Gregor Mendel's Works). *Filosofia e História da Biologia* 4(1): 235-257.

Santos, V. C. & **El-Hani, C. N.** (2009). Ideias sobre genes em livros didáticos de biologia do ensino médio publicados no Brasil (Ideas about genes in Brazilian High School Biology textbooks). *Revista Brasileira de Pesquisa em Educação em Ciências* 9(1): a6.

Nunes Neto, N. F.; Carmo, R. S. & **El-Hani, C. N.** (2009). Uma conexão entre algas e nuvens: fundamentos teóricos da hipótese CLAW e suas implicações para as mudanças climáticas (A connection between algae and clouds: theoretical foundations of the CLAW hypothesis and its implications to climate change). *Oecologia Brasiliensis* 13: 596-608.

Nunes-Neto, N. F. & **El-Hani, C. N.** (2009). O que é função? Debates na Filosofia da Biologia contemporânea (What is function? Debates in current Philosophy of Biology). *Scientiae Studia* 7(3): 353-401.

Teixeira, E. S.; Freire Jr., O. & **El-Hani, C. N.** (2009). A influência de uma abordagem contextual sobre as concepções acerca da Natureza da Ciência de estudantes de Física (The influence of a contextual approach on Physics students' conceptions about the Nature of Science). *Ciência & Educação* 15(3):529-556.

2008

El-Hani, C. N. & Bandeira, F. P. S. F. (2008). Valuing indigenous knowledge: to call it "science" will not help. *Cultural Studies of Science Education* 3(3): 751-779.

El-Hani, C. N. (2008). Theory-based approaches to the concept of life. *Journal of Biological Education* 42(4): 147-149.

Queiroz, J.; Emmeche, C. & **El-Hani, C. N.** (2008). A Peircean approach to information and its relationship with Bateson's and Jablonka's Ideas. *The American Journal of Semiotics* 24(1-3): 75-94.

Vieira, F. S. & **El-Hani, C. N.** (2008). Emergence and downward determination in the natural sciences. *Cybernetics & Human Knowing* 15(3-4): 101-134.

Vieira, F. S. & **El-Hani, C. N.** (2008). Downward determination: a philosophical step in the way to a dynamical account of emergence. *Cybernetics & Human Knowing* 15(3-4): 145-148.

Castro, L. N.; Muñoz, Y. J.; Freitas, L. R. & **El-Hani, C. N.** (2008). A virtual laboratory on natural computing: a learning experiment. *International Journal of Distance Education Technologies* 6:55-73.

Freitas, J. N.; **El-Hani, C.** & Rocha, P. L. (2008). Affiliation in four echimyid rodent species based in intrasexual dyadic encounters: evolutionary implications. *Ethology* 114: 389-397.

Pitombo, M. A., Almeida, A. M. R. & **El-Hani, C. N.** (2008). Gene concepts in higher education cell and molecular biology textbooks. *Science Education International* 19(2): 219-234.

Pitombo, M. A., Almeida, A. M. R. & **El-Hani, C. N.** (2008). Conceitos de gene e ideias sobre função gênica em livros didáticos de biologia celular e molecular do ensino superior (Gene concepts and ideas about gene function in Higher Education Cell and Molecular Biology textbooks). *Contexto & Educação* 77: 81-110.

Goldbach, T. & **El-Hani, C. N.** (2008). Entre receitas, programas e códigos: metáforas e ideias sobre genes na divulgação científica e no contexto escolar (Among recipes, programs and codes: metaphors and ideas about genes in popular science and school). *Alexandria: Revista de Educação em Ciência e Tecnologia* 1(1): 153-189.

Sepulveda, C. & **El-Hani, C. N.** (2008). Adaptacionismo versus exaptacionismo: o que este debate tem a dizer ao ensino de evolução? (Adaptationism versus exaptationism: what does this debate have to say to evolution education?) *Ciência e Ambiente* 36:93-124.

Guimarães, M. D. M.; Lima-Tavares, M.; Nunes-Neto, N. F.; Carmo, R. S. & **El-Hani, C. N.** (2008). A Teoria Gaia é um conteúdo legítimo no Ensino Médio de Ciências? (Is Gaia theory a legitimate content in High School science education?) *Pesquisa em Educação Ambiental* 3(1): 75-108.

2007

El-Hani, C. N. & Mortimer, E. F. (2007). Multicultural education, pragmatism, and the goals of science teaching. *Cultural Studies of Science Education* 2(3): 657-687.

El-Hani, C. N. & Mortimer, E. F. (2007). Understanding typically yields belief: a neglected point in Hoffmann's reaction to our idea of 'culturally-sensitive science education'. *Cultural Studies of Science Education* 2(3): 695-702.

El-Hani, C. N. (2007). Between the cross and the sword: the crisis of the gene concept. *Genetics and Molecular Biology* 30(2): 297-307.

El-Hani, C. N. (2007). Comments on R. C. Guimarães' 'The Systemic Concept of the Gene at Age Fifteen' (Letter). *Genetics and Molecular Biology* 30(3):711.

Gomes, A.; **El-Hani, C. N.**; Gudwin, R. & Queiroz, J. (2007). Towards the emergence of meaning processes in computers from Peircean semiotics. *Mind & Society - Cognitive Studies in Economics and Social Sciences* 6(2): 173-187.

El-Hani, C. N.; Arnellos, A. & Queiroz, J. (2007). Modeling a semiotic process in the immune system: signal transduction in B-cell activation. *TripleC – Cognition, Communication, Co-operation* 5(2): 24-36.

Queiroz, J. & **El-Hani, C. N.** (2007). On Peirce's notion of information: remarks on De Tienne's paper "Information in formation". *Cognitio* 8(2): 289-298.

Almeida, R. J. T. & **El-Hani, C. N.** (2007). A medicina como "philosophia social": Domingos Guedes Cabral e a tese inaugural "Funções do cérebro" (1875) [Medicine as "social philosophy": Domingos Guedes Cabral and the thesis "Functions of the brain" (1875)]. *Revista da Sociedade Brasileira de História da Ciência* 5(1): 6-33.

Cruz, L.; Rocha, P. & **El-Hani, C.** 2007. A prática científica na ecologia de comunidades: diálogos entre empirismo e teoria na literatura científica (Scientific practice in community ecology: dialogues between empiricism and theory in the scientific literature). *Filosofia e História da Biologia* 2: 257-278.

Coutinho, F. A.; Mortimer, E. F. & **El-Hani, C. N.** (2007). Construção de um perfil para o conceito biológico de vida (Construction of a profile for the biological concept of life). *Investigações em Ensino de Ciências* 12(1): 115-137.

Rocha, P. L. B.; Viana, B. F.; **El-Hani, C. N.**; da Silva, E. M.; Barros Junior, F. C. R.; Ramalho, M.; Mafalda Junior, P. O. & Silva, S. A. H. (2007). Pós-Graduação em Ecologia no Instituto de Biologia da UFBA: um currículo em evolução (Graduate studies in Ecology in the Institute of Biology of Federal University of Bahia: an evolving curriculum). *Revista Brasileira de Pós-Graduação* 4(8): 227-244.

Queiroz, J. & **El-Hani, C.** (2007). La emergencia del significado en sistemas semióticos (The emergence of meaning in semiotic systems). *Revista de Filosofía – Centro de Estudios Filosóficos Adolfo García Díaz* 56: 47-65.

2006

El-Hani, C. N.; Queiroz, J. & Emmeche, C. (2006). A semiotic analysis of the genetic information system. *Semiotica* 160(1/4): 1-68. (Mouton d'Or Prize 2006, for the best paper published in *Semiotica* in the year).

Queiroz, J. & **El-Hani, C. N.** (2006). Towards a multi-level approach to the emergence of meaning processes in living systems. *Acta Biotheoretica* 54(3):174-206.

Queiroz, J. & **El-Hani, C. N.** (2006). Semiosis as an emergent process. *Transactions of the Charles Sanders Peirce Society: A Quarterly Journal in American Philosophy* 42(1): 78-116.

Sepulveda, C. & **El-Hani, C. N.** (2006). Apropriação do discurso científico por alunos protestantes de Biologia: uma análise à luz da teoria da linguagem de Bakhtin (Appropriation of scientific discourse by protestant Biology students: an analysis under the light of Bakhtin's theory of language). *Investigações em Ensino de Ciências* 11(1): 29-51.

El-Hani, C. N. (2006). Generalizações ecológicas (Ecological generalizations). *Oecologia Brasiliensis* 10(1): 17-68.

Almeida, A. M. R. & **El-Hani, C. N.** (2006). Atribuição de função à biodiversidade segundo a visão do papel causal: uma análise epistemológica do discurso ecológico das últimas duas décadas (Function ascription to biodiversity according to the causal role view: an epistemological analysis of the ecological discourse in the last two decades). *Filosofia e História da Biologia* 1: 21-39.

Nunes-Neto, N.F. & **El-Hani, C.N.** (2006). Gaia, teleologia e função (Gaia, teleology and function). *Episteme* 23: 15-48.

Almeida, A. M. R. & **El-Hani, C. N.** (2006). Darwinismo neural: uma extensão metafórica da teoria da seleção natural (Neural Darwinism: a metaphorical extension of the theory of natural selection). *Episteme* 24: 335-356.

2005

Queiroz, J.; Emmeche, C. & **El-Hani, C. N.** (2005). Information and semiosis in living systems: a biosemiotic approach. *S.E.E.D. Journal: Semiotics, Evolution, Energy, and Development* 5(1): 60-90. Reprinted in: Favareau, D. (Ed.) (2010). *Essential Readings in Biosemiotics*, vol. 3, pp. 629–656. Dordrecht: Springer.

El-Hani, C. N. & Queiroz, J. (2005). Downward determination. *Abstracta* 1(2): 162-192.

El-Hani, C. N. & Queiroz, J. (2005). Modos de irreducibilidade das propriedades emergentes (Modes of irreducibility of emergent properties). *Scientiae Studia* 3(1): 9-41.

El-Hani, C. N. & Queiroz, J. (2005). Semiose e emergência (Semiosis and emergence). *Galáxia – Revista Transdisciplinar de Comunicação, Semiótica e Cultura* 9:113-140.

Queiroz, J. & **El-Hani, C. N. (2005).** Definindo semiose como processo emergente (Defining semiosis as an emergent process). *Cognitio – Estudos* 2(1): 22-32.

2004

Sepulveda, C. & **El-Hani, C. N. (2004).** Quando visões de mundo se encontram: religião e ciência na trajetória de formação de alunos protestantes de uma Licenciatura em Ciências Biológicas (When worldviews meet: religion and science in the educational trajectory of protestant students from a preservice Biology teacher program). *Investigações em Ensino de Ciências* 9(2): 137-175.

El-Hani, C. N.; Tavares, E. J. M. & Rocha, P. L. B. (2004). Concepções epistemológicas de estudantes de Biologia e sua transformação por uma proposta explícita de ensino sobre história e filosofia das ciências (Biology students' epistemological conceptions and their transformation through an explicit proposal for teaching about history and philosophy of science). *Investigações em Ensino de Ciências* 9(3): 265-313.

2003

Freitas, J. N. S.; **El-Hani, C. N. & Rocha, P. L. B. (2003).** Affiliation in the torch tail rat, *Trinomys Yonenagae* (Rodentia: Echimyidae), a sand-dwelling rodent from Brazilian semiarid Caatinga: evolutionary implications. *Revista de Etologia* 5(2): 61-73.

2002

El-Hani, C. N. & Pihlström, S. (2002). Emergence theories and pragmatic realism. *Essays in Philosophy* 3(2): 143-176. Available at: <https://doi.org/10.5840/eip2002325>

El-Hani, C. N. & Pihlström, S. (2002). A pragmatic realist view of emergence. *Manuscrito* XXV(Sp. number):105-154.

El-Hani, C. N. (2002). On the reality of emergents. *Principia – An International Journal of Epistemology* 6(1):51-87.

Forastieri, V.; Andrade, C. P.; Souza, A. L. V.; Silva, M. S.; **El-Hani, C. N.**; Moreira, L. M. A.; Mott, L.R.B. & Flores, R.Z. (2002). Evidence against a relationship between dermatoglyphic asymmetry and male sexual orientation. *Human Biology* 74(6):861-870.

El-Hani, C. N. & Bizzo, N. (2002). Formas de construtivismo: construtivismo contextual e mudança conceitual (Forms of constructivism: contextual constructivism and conceptual change). *Ensaio: Pesquisa em Educação em Ciências* 4(1): 1-25.

2001

El-Hani, C. N. & Videira, A. A. P. (2001). Causação descendente, emergência de propriedades e modos causais aristotélicos (Downward causation, property emergence and Aristotelian causal modes). *Theoria* 16(2): 301-329.

Teixeira, E. S.; **El-Hani, C. N. & Freire Jr., O. (2001).** Concepções de estudantes de física sobre a Natureza da Ciência e sua transformação por uma abordagem contextual do Ensino de Ciências (Physics students' conceptions about the Nature of Science and their transformation through a

contextual approach to science teaching). *Revista Brasileira de Pesquisa em Educação em Ciências* 1(3):111-123.

Lima-Tavares, M. & **El-Hani, C.N.** (2001). Um olhar epistemológico sobre a transposição didática da teoria Gaia (An epistemological look at the didactic transposition of Gaia theory). *Investigações em Ensino de Ciências* 6(3): 299-336.

El-Hani, C. N. & Pereira, A. M. (2001). Notas sobre percepção e interpretação em ciência (Notes on perception and interpretation in science). *Revista da USP* 49:148-159.

2000

El-Hani, C.N. & Emmeche, C. (2000). On some theoretical grounds for an organism-centered biology: property emergence, supervenience, and downward causation. *Theory in Biosciences* 119:234-275.

Moreira, L. M. A.; **El-Hani, C. N.** & Gusmão, F. A. F. (2000). A Síndrome de Down e sua patogênese: considerações sobre o determinismo genético (Down Syndrome and its pathogenesis: considerations on genetic determinism). *Revista Brasileira de Psiquiatria* 22(2):96-99.

1999

El-Hani, C. N. & Pereira, A. M. (1999). Reduccionismo ou holismo? Desperguntando a questão (Reductionism or holism? Unasking the question). *Ideação (UEFS)* 3: 69-100.

Bizzo, N. & **El-Hani, C. N.** Paradoxo social-eugênico e genética: uma perspectiva histórica (Social-eugenic paradox and genetics: a historical perspective). *Médicos* 6: 66-73.

1997

El-Hani, C. N. (1997). Explicações causais do desenvolvimento: são os genes suficientes? (Causal explanations of development: are genes sufficient?). *Cadernos de História e Filosofia da Ciência (UNICAMP)* 7(1): 123-168.

El-Hani, C. N.; Souza, A. L. M.; Forastieri, V.; Moreira, L. M. A.; Andrade, C. P.; Mott, L. R. B.; Silva, M. S. & Pereira, A. M. (1997). Conflitos e perspectivas nas relações entre biologia e cultura (Conflicts and prospects in the relations between biology and culture). *Interfaces - Revista de Psicologia* 1: 10-16.

1996

Rocha, P. L. B. & **El-Hani, C. N.** (1996). The description of the evolutionary process as a metaphor of Phylogenetic Systematics. *Journal of Comparative Biology* 1: 17-28.

El-Hani, C. N. (1996). Diferença entre homens e mulheres: biologia ou cultura?! (Differences between men and women: biology or culture?!). *Revista da USP* 29: 149-160.

Bizzo, N.; Morais, C.; **El-Hani, C. N.**; Gioppo, C.; Oliveira, D. L.; Carrijo, I. L. M.; Almeida, M. A.; Maestrelli, S. R. & Rosa, V. L. da & Pedrosa, T. (1996). Graves erros de conceito em livros didáticos de Ciências (Serious conceptual mistakes in science textbooks). *Ciência Hoje* 21(121): 26-35.

1995

Meyer, D. & **El-Hani, C. N.** (1995). O papel da ética na pesquisa básica (The role of ethics in basic research). *Revista da USP* 24: 10-19.

1992

El-Hani, C. N.; Serpa, L. F. P.; Bandeira, F. P. S. F. & Mattedi, A. L. (1992). Tempos de ruptura e a essência humana (Turning points and the human essence). *Textos de Cultura e Comunicação* 28: 65-78.

Books

2025

Ludwig, D. & **El-Hani, C. N.** *Transformative transdisciplinarity: An introduction to community-based philosophy*. Oxford: Oxford University Press.

2024

Sorrentino, M., Silva, M. C. P. & **El-Hani, C. N.** (Orgs.). (2024). *Crise Ambiental e Educação: Por uma nova cultura da Terra, corpos e territórios!* Rio de Janeiro-RJ: Bambual Editora.

2020

El-Hani, C. N., Pietrocola, M., Mortimer, E. F. & Otero, M. R. (Eds.). (2020). *Science Education Research in Latin America*. Leiden: Brill/Sense.

Bollettin, P. & **El-Hani, C. N.** (Orgs.). *Teorias da Natureza: Etnografias da Bahia* (Theories of Nature. Ethnographies from Bahia). Padova: Cooperativa Libreria Editrice Università di Padova (CLEUP).

El-Hani, C. N. & Machado, C. (2020). *Construindo o Novo Ensino Médio: Projetos Interdisciplinares – Biologia* (Building the New Secondary Education: Interdisciplinary Projects – Biology). São Paulo: Editora do Brasil.

2014

Mortimer, E. F. & **El-Hani, C. N.** (Eds.). (2014). *Conceptual Profiles: A Theory of Teaching and Learning Scientific Concepts*. Dordrecht: Springer.

Freire Jr., O.; Greca, I. & **El-Hani, C. N.** (Eds.). (2014). *Ciências na Transição dos Séculos: Conceitos, Práticas e Historicidade* (Sciences at the turn of the centuries: concepts, practices and historicity). Salvador: EDUFBA.

2009

El-Hani, C. N.; Queiroz, J. & Emmeche, C. (2009). *Genes, Information, and Semiosis*. Tartu: Tartu University Press, Tartu Semiotics Library.

2005

Meyer, D. & **El-Hani, C. N.** (2005). *Evolução: O Sentido da Biologia* (Evolution: the meaning of Biology). São Paulo: Editora UNESP.

2000

El-Hani, C. N. & Videira, A. A. P. (2000). *O Que é Vida? Para Entender a Biologia do Século XXI* (What is life? To understand 21st century Biology). Rio de Janeiro: Relume Dumará.

1997

Dias, A. L. M.; **El-Hani, C. N.**; Santana, J. C. B. & Freire Jr., O. (Orgs.) (1997). *Perspectivas em Epistemologia e História das Ciências* (Perspectives in epistemology and history of sciences). Feira de Santana-BA: UEFS.

Journal special issues

2023

Ludwig, D., **El-Hani, C.** & Delgado, A. N. (Eds.). (2023). Special Issue on Philosophy and Ethnobiology, *Journal of Ethnobiology* 43(3).

2016

Brando, F. R. & **El-Hani, C.N.** (2016). *Filosofia e História da Biologia*, v. 11, n. 2, Special issue on History and Philosophy of Ecology and their interfaces with ecological theory and ecology teaching.

2008

Vieira, A. A. P.; **El-Hani, C. N.** & Loreto, E. (Orgs.). (2008). *Pensando a Evolução* (Thinking evolution) - Volume 36, Ciência e Ambiente (UFESM).

El-Hani, C. N. (Ed.) (2008). Thematic section on “Emergence and downward determination”. *Cybernetics & Human Knowing* 15(3-4).

2006

Vieira, A. A. P. & **El-Hani, C. N.** (2006). Special issue of *Episteme* (vol. 11, n. 24) gathering historical and philosophical studies about evolution.

2002

El-Hani, C. N. (Org.). (2002). *Principia – An International Journal of Epistemology* 6(1), Special number on Emergence and Downward Causation.

Book chapters

Accepted

Saborido, C., **El-Hani, C. N.** & Moreno, A. Revisiting the organizational approach to biological functions. In: Brzović, Z., Šustar, S. & Garson, J. (Eds.). *The Philosophy of Biological Functions*. New York, NY: Routledge.

Renck, V., Ludwig, D., Gonçalves, L. R., Vivacqua, M., Pardini, R., de Paula, M. L. L. & **El-Hani, C. N.** Global Challenges and Local Communities: Connecting Brazilian Fishing Communities Through Transdisciplinary Research. In: Massimi, M., Brown, A. & Jaspars, M. (Eds.). *Ways of World Knowing*. Oxford: Oxford University Press.

El-Hani, C. N. & Ludwig, D. Value overlaps in transdisciplinary and intercultural collaboration. In: Elliott, K. C. & Richards, T. (Eds.). *The Routledge Handbook of Values and Science*. New York, NY: Routledge.

Submitted

Leite, C. M. P., Prado, P. I., Carvalho, I. N. & **El-Hani, C. N.** Organizational functions, in: Odenbaugh, J. & Linquist, S. (Eds.). *Routledge Handbook of the Philosophy of Ecology*. New York, NY: Routledge.

2025

El-Hani, C. N., Coutinho, J. G. E. & Leite, C. M. P. (2025). Closure of Constraints and the Individuation of Causal Systems in Biology. In: Illaris, P. & Russo, F. (Eds.). *Routledge Handbook of Philosophy of Causality and Causal Methods* (pp. 215-229). New York, NY: Routledge.

Ludwig, D., Barros, J. S. H., Bollettin, P., Costa, T. F. S., De La Rosa, G. V., Fonseca, J. O., Menezes-de-Jesus, T. V., Milberg Muñiz, E., Polisel, L., Ressorio C., A., Renck, V., Santos, I. S., Almeida-Silva, A., Stifelman, J., Turska, J. J. & **El-Hani, C. N.** (2025). Transdisciplinary methods in philosophy of science: The Conde Project. In: Veigl, S. J. & Currie, A. (Eds.). *Methods in the Philosophy of Science: A User's Guide* (pp. 13-35). Cambridge-MA: The MIT Press.

2024

El-Hani, C. N., Lima, F. R. G. & Nunes-Neto, N. F. (2024). From the organizational theory of ecological functions to a new notion of sustainability. In: Mossio, M. (Ed.). *Organization in Biology* (pp. 285-328). Cham: Springer.

El-Hani, C. N. (2024). Pensando sobre nossas relações com a natureza e aprendendo com o pensamento ameríndio. In: Sorrentino, M., Silva, M. C. P. & **El-Hani, C. N.** (Orgs.). *Crise Ambiental e Educação: Por uma nova cultura da Terra, corpos e territórios!* (pp. 281-290). Rio de Janeiro-RJ: Bambual Editora.

2022

El-Hani, C. N., Amaral, E. M. R. & Mortimer, E. F. (2022). Heterogeneity and pluralism in science education from the perspective of conceptual profiles. In: Bélanger, M., Potvin, P., Horst, S., Shtulman, A. & Mortimer, E. F. (Eds.). *Multidisciplinary Perspectives on Representational Pluralism in Human Cognition: Tracing Points of Convergence in Psychology, Science Education, and Philosophy of Science* (pp. 181-200). New York, NY: Routledge.

El-Hani, C. N. & Almeida, R. O. (2022). Spaces of encounter and misencounter between researchers and local people in interdisciplinary and transdisciplinary studies in fishing villages. In: Guilherme, M. (Ed.). *A Framework for Critical Transnational Research: Advancing Plurilingual, Intercultural, and Inter-epistemic Collaboration in the Academy* (pp. 101-122). New York, NY: Routledge.

El-Hani, C. N. (2022). Genes. In: Galindo, J. & Martínez, M. (Org.). (2023). *Diccionario de biología evolutiva para las ciencias sociales y las humanidades* (pp. 260-272). México, DF: Universidad Autónoma Metropolitana-Cuajimalpa (UAM-C).

Paixão, J. F., Silva, P. P. & **El-Hani, C. N.** (2022). Sistemas agroflorestais: uma proposta de ensino por investigação. In: Paixão, J. F. & Silva, P. P. (Orgs.). *Estratégias Participativas e Colaborativas para o Ensino e a Aprendizagem em Meio Ambiente* (pp. 19-50). EDUFBA.

Daza-Pérez, E. & **El-Hani, C. N.** (2022). Aciertos y desaciertos en la implementación del design research para el desarrollo de una innovación educativa en biología. In: Castro, P. A., Sá, S., Carvalho, J. L. & González-Sanmamed, M. (Eds.). *Investigação Qualitativa em Educação: Avanços e Desafios, New Trends in Qualitative Research 12*: e729. Oliveira de Azeméis: Ludomedia.

2021

Gericke, N., **El-Hani, C. N.**, Sbeglia, G. C., Nehm, R. H. & Evangelista, N. A. M. (2021). Is belief in genetic determinism similar across countries? In: Haskel-Ittah, M. & Yarden, A. (Eds.). *Genetics Education: Contributions from Biology Education Research* (pp. 107-125). Cham: Springer.

El-Hani, C. N., Smania-Marques, R. & Reis, C. R. M. (2021). Using socio-scientific issues and problem-based learning to teach about the Nature of Science: A COVID-based case. McCloughlin, T. J. J. (Ed.). *The Nature of Science in Biology: A Resource for Educators* (pp. 33-91). Dublin: Graphikon Teo.

2020

El-Hani, C. N., Nunes-Neto, N. F. & Rocha, P. L. B. (2020). Using a participatory problem-based methodology to teach about NOS. In: McComas, W. F. (Ed.). *The Nature of Science in Science Instruction: Rationales and Strategies* (pp. 451-483). Cham: Springer.

Poliseli, L. & **El-Hani, C. N.** (2020). Imagination in science. In Tateo, L. (Ed.). *A theory of imagining, knowing and understanding* (pp. 65-84). Cham: Springer. SpringerBriefs in Psychology.

Sepulveda, C., Mortimer, E. F. & **El-Hani, C. N.** (2020). Analyzing discursive interactions in the context of evolution teaching with a conceptual profile of adaptation. In: El-Hani, C. N., Pietrocola, M., Mortimer, E. F. & Otero, M. R. (Eds.). *Science Education Research in Latin America* (pp. 277-306). Leiden: Brill/Sense.

El-Hani, C. N. & Nunes-Neto, N. F. (2020). Life on Earth is not a Passenger, but a Driver: Explaining the transition from a physicochemical to a life-constrained world from an organizational perspective. In: Zaterka, L. & Baravalle, L. (Eds.). *Life and Evolution - Latin American Essays on the History and Philosophy of Biology* (pp. 69-84). Cham: Springer.

Valderrama-Pérez, D. F., El-Hani, C. N. & Molina, A. (2020). Diálogos entre distintas formas de conocimiento en el aula de ciencias: reflexiones teóricas y metodológicas (Dialogue between distinct forms of knowledge in the science classroom). In: Molina, A. (Ed.). *Investigación y Formación de Profesores de Ciencias: Diálogos de Perspectivas Latinoamericanas* (Research and Science Teacher Education: Dialogue between Latin-American Perspectives) (pp. 191-220). Bogotá: Editorial Universidad Distrital Francisco José de Caldas.

2019

Daza-Pérez, E., **El-Hani, C. N.** & Loula, A. C. (2019). Análisis de la Motivación asociada al Videojuego Calangos y al Aprendizaje de las Ciencias en Actividades de Modelización (Analysis of the Motivation Associated with the Videogame Calangos and Science Learning in Modelling Activities). In: Díaz Villa, M.; Villota Enríquez, J. A.; Gómez Vásquez, M. V. (Orgs.). *Tecnología, Sociedad y Educación: Desafíos de las TIC en el Desarrollo Social y Sus Implicaciones en la Práctica Educativa* (Technology, Society and Education: Challenges of the ICT in Social Development and their Implications to Educational Practice) (pp. 201-221). Cali: Universidad Santiago de Cali.

2018

Arnellos, A. & **El-Hani, C. N.** (2018). Emergence, downward causation, and no brute facts in biological systems. In: Vintiadis, E. & Mekios, C. (Eds.). *Brute Facts* (pp. 248-269). Oxford: Oxford University Press.

Gericke, N. & **El-Hani, C. N.** (2018). Genetics. In: Kampourakis, K. & Reiss, M. (Eds.). *Teaching Biology in Schools: Global Research, Issues and Trends* (pp. 111-123). New York, NY: Routledge.

Sarmiento, A. C. H., Sepulveda, C. & **El-Hani, C. N.** (2018). Historical reconstruction of membrane theoretical models: an educative curriculum material. In: Prestes, M. E. B. & Silva, C. C. (Eds.). *Teaching Science with Context: Historical, Philosophical, Sociological Approaches* (pp. 191-219). Dordrecht: Springer.

Conrado, D. M., Nunes-Neto, N. F., Viana, B. F. & **El-Hani, C. N.** (2018). Declínio de polinizadores como uma questão sociocientífica para o ensino de biologia (Pollination decline as a socioscientific issue for biology teaching). In: Conrado, D. M. & Nunes-Neto, N. F. (Orgs.). *Questões Sociocientíficas: Fundamentos, Propostas de Ensino e Perspectivas* (Socioscientific Issues: Foundations, Teaching Proposals and Perspectives) (pp. 145-172). Salvador: EDUFBA.

Carvalho, I. N., Conrado, D. M., **El-Hani, C. N.** & Nunes-Neto, N. F. (2018). Transgênicos, leis e a ciência: trazendo a legislação para a sala de aula de biologia (Transgenics, laws and science: bringing legislation to the biology classroom). In: Conrado, D. M. & Nunes-Neto, N. F. (Orgs.). *Questões Sociocientíficas: Fundamentos, Propostas de Ensino e Perspectivas* (Socioscientific Issues: Foundations, Teaching Proposals and Perspectives) (pp. 277-302). Salvador: EDUFBA.

Guimarães, A. P. M., Sarmiento, A. C.; Muniz, C. R. R. & **El-Hani, C. N.** (2018). Grupos colaborativos para a construção e aplicação de questões sociocientíficas na educação básica: possibilidades e desafios (Collaborative groups for building and applying socioscientific issues in basic education: prospects and challenges). In: Conrado, D. M. & Nunes-Neto, N. F. (Orgs.). *Questões Sociocientíficas: Fundamentos, Propostas de Ensino e Perspectivas* (Socioscientific Issues: Foundations, Teaching Proposals and Perspectives) (pp. 397-426). Salvador: EDUFBA.

Almeida, R. O., Amantes, A. & **El-Hani, C. N.** (2018). Questões sociocientíficas em projetos estudantis no ensino médio: construindo inovações educacionais no Programa Ciência na Escola (Socioscientific issues in High School student projects: building educational innovations in the Science in School Program). In: Conrado, D. M. & Nunes-Neto, N. F. (Orgs.). *Questões Sociocientíficas: Fundamentos, Propostas de Ensino e Perspectivas* (Socioscientific Issues: Foundations, Teaching Proposals and Perspectives) (pp. 473-490). Salvador: EDUFBA.

2017

d'Ávila, C. M. & **El-Hani, C. N.** (2017). Ensino e aprendizagem por investigação no âmbito de Comunidades de Prática – propostas para uma prática pedagógica inovadora (Inquiry teaching and learning within communities of practice – proposal for an innovative pedagogical practice). In: Veiga, I. P. A. (Org.). *Metodologia Participativa e as Técnicas de Ensino e Aprendizagem* (Participatory methodology and Teaching and Learning Techniques). Curitiba-PR: Editora CRV, pp. 203-220.

Daza-Pérez, E., Loula, A. & **El-Hani, C. N.** (2017). Propuesta de secuencia didáctica para el aprendizaje de termorregulación en animales mediante actividades de modelización apoyadas en el videojuego Calangos (Proposal of teaching sequence for learning on thermal regulation in animals through modeling activities supported by the videogame Calangos). In: Cebreiros, M. I., Membiela, P., Casado, N. & Vidal, M. (Eds.). *La Práctica Docente en la Enseñanza de las Ciencias* (Teaching Practice in Science Education) (pp. 99-103). Ourense: Educación Editora.

2016

Cooper, G. J., **El-Hani, C. N.** & Nunes-Neto, N. F. (2016). Three approaches to the teleological and normative aspects of ecological functions. In: Eldredge, N., Pievani, T., Serrelli, E. & Temkin, I. (Eds.). *Evolutionary Theory: A Hierarchical Perspective* (pp. 103-125). Chicago, IL: University of Chicago Press.

Almeida, M. A., Barbosa, L. A. R. S., **El-Hani, C. N.** & Sepulveda, C. (2016). Pesquisa colaborativa: um caminho para superação da lacuna pesquisa-prática e promoção de desenvolvimento profissional docente (Collaborative research: a way of overcoming the research-practice gap and promoting teachers' professional development). In: Sepulveda, C. & Almeida, M. A. (Orgs.). *Pesquisa Colaborativa e Inovações Educacionais em Ensino de Biologia* (Collaborative Research and Educational Innovations in Biological Education) (pp. 17-47). Feira de Santana: UEFS Editora.

Sepulveda, C., Sarmiento, A. C. H., Guimarães, A. P. M., Muniz, C. R., Almeida, M. A. & **El-Hani, C. N.** (2016). A prática social de pesquisa colaborativa e a controvérsia sobre estatuto epistemológico da pesquisa docente (The social practice of collaborative research and the controversy over the epistemological status of teacher research). In: Sepulveda, C. & Almeida, M. A. (Orgs.). *Pesquisa*

Colaborativa e Inovações Educacionais em Ensino de Biologia (Collaborative Research and Educational Innovations in Biological Education) (pp. 49-95). Feira de Santana: UEFS Editora.

Reis, V. P. G. S., Carneiro, M. C. L., Amarante, A. L. A. P. C., Almeida, M. A., Machado, R. F., Figueiredo, P. S., **El-Hani, C. N.** & Sepulveda, C. (2016). Percurso de investigação de uma sequência didática para ensino de evolução segundo a abordagem metodológica da Design Research (Investigating a teaching sequence for evolution education using the methodological approach of design research). In: Sepulveda, C. & Almeida, M. A. (Orgs.). *Pesquisa Colaborativa e Inovações Educacionais em Ensino de Biologia* (Collaborative Research and Educational Innovations in Biological Education) (pp. 211-247). Feira de Santana: UEFS Editora.

Machado, R. F., Reis, V. P. G. S., Amarante, A. L. A. P. C., Carneiro, M. C. L., **El-Hani, C. N.** & Sepulveda, C. (2016). O potencial de jogos como ferramentas didáticas promotoras de motivação e aprendizagem conceitual no Ensino de Biologia (The potential of games as pedagogical tools to foster motivation and conceptual learning in biological education). In: Sepulveda, C. & Almeida, M. A. (Orgs.). *Pesquisa Colaborativa e Inovações Educacionais em Ensino de Biologia* (Collaborative Research and Educational Innovations in Biological Education) (pp. 249-275). Feira de Santana: UEFS Editora.

Martins, L., **El-Hani, C. N.** & Carvalho, G. S. (2016). A saúde nos livros didáticos de biologia brasileiros: que ensino estamos propondo? (Health in Brazilian Biology textbooks: what teaching are we proposing?) In: Boff, E. T. O.; Pansera-de-Araújo, M. C. & Carvalho, G. S. (Orgs.). *Interações entre Conhecimentos, Valores e Práticas na Educação em Saúde* (Interactions among knowledge, values and practices in health education) (pp. 133-156). Ijuí: Ed. Unijuí.

2015

Mortimer, E. F. & **El-Hani, C. N.** (2015). Heterogeneity of thinking and speaking. In: Gunstone, R. (Ed.). *Encyclopedia of Science Education* (pp. 451-455). Dordrecht: Springer.

2014

Mortimer, E. F.; Scott, P.; Amaral, E. M. R. & **El-Hani, C. N.** (2014). Conceptual profiles: theoretical-methodological bases of a research program. In: Mortimer, E. F. & El-Hani, C. N. (Eds.). *Conceptual Profiles: A Theory of Teaching and Learning Scientific Concepts* (pp. 3-33). Dordrecht: Springer.

El-Hani, C. N.; Silva-Filho, W. J. & Mortimer, E. F. (2014). The epistemological grounds of the conceptual profile theory. Mortimer, E. F. & El-Hani, C. N. (Eds.). *Conceptual Profiles: A Theory of Teaching and Learning Scientific Concepts* (pp. 35-65). Dordrecht: Springer.

Mortimer, E. F.; **El-Hani, C. N.**; Sepulveda, C.; Amaral, E. M. R.; Coutinho, F. A. & Silva, F. A. R. Methodological grounds of the conceptual profile research program. (2014). Mortimer, E. F. & El-Hani, C. N. (Eds.). *Conceptual Profiles: A Theory of Teaching and Learning Scientific Concepts* (pp. 67-100). Dordrecht: Springer.

Coutinho, F. A.; **El-Hani, C. N.** & Mortimer, E. F. (2014). Building a profile for the biological concept of life. Mortimer, E. F. & El-Hani, C. N. (Eds.). *Conceptual Profiles: A Theory of Teaching and Learning Scientific Concepts* (pp. 115-142). Dordrecht: Springer.

Sepulveda, C.; Mortimer, E. F. & **El-Hani, C. N.** (2014). Conceptual profile of adaptation: a tool to investigate evolution learning in biology classrooms. Mortimer, E. F. & El-Hani, C. N. (Eds.). *Conceptual Profiles: A Theory of Teaching and Learning Scientific Concepts* (pp. 163-200). Dordrecht: Springer.

El-Hani, C. N.; Almeida, A. M. R.; Bomfim, G. C.; Joaquim, L. M.; Magalhães, J. C. M.; Meyer, L. M. N.; Pitombo, M. A. & Santos, V. C. (2014). The contribution of history and philosophy to the problem of hybrid views about genes in Genetics teaching. In: Matthews, M. R. (Ed.). *International Handbook of Research in History, Philosophy and Science Teaching* (vol. 3, pp. 469-520). Dordrecht: Springer.

Queiroz, J.; Stjernfelt, F. & **El-Hani, C. N.** (2014). Dicot symbols and proto-propositions in biological mimicry. In: Romanini, V. (Ed.). *Peirce and Biosemiotics: A Guess at the Riddle of Life*. Biosemiotics, Springer Book Series, vol. 11: 199-213.

El-Hani, C. N. (2014). O gene na virada do século XX para o XXI (The gene in the turn from the 20th to the 21st century). In: Freire Jr., O.; Greca, I. & El-Hani, C. N. (Eds.). *Ciências na Transição dos Séculos: Conceitos, Práticas e Historicidade* (Sciences in the turn of the centuries: concepts, practices and historicity) (pp. 57-104). Salvador: EDUFBA.

Molina Andrade, A., **El-Hani, C. N.** & Arteaga, J. M. S. (2014). Enseñanza de las ciencias y cultura: múltiples aproximaciones (Science teaching and culture: multiple approximations). In: Molina Andrade, A. (Org.). *Enseñanza de las Ciencias y Cultura: Múltiples Aproximaciones* (pp. 19-37). Colombia: Universidad Distrital Francisco José Caldas.

Sepulveda, C.; Sarmiento, A. C.; Greca, I. M. & **El-Hani, C. N.** (2014). Formação de professores em comunidades de prática e pesquisa colaborativa: um caminho para superação de limites do paradigma da formação reflexiva (Teacher education in communities of practice and collaborative research: a way of overcoming the limits of the paradigm of reflective education). In: Barzano, M. A. L., Fernandes, J. A. B., Fonseca, L. C. S. & Shuvartz, M. (Eds.). *Ensino de Biologia: Experiências e Contextos Formativos* (Biological education: experiences and educational contexts) (pp. 51-68). Goiânia: Índice Editora.

Silva, S. N. & **El-Hani, C. N.** (2014). O discurso sobre ambiente no livro didático de biologia: uma abordagem da perspectiva da teoria sociológica de Basil Bernstein (The discourse about environment in the Biology textbook: a treatment from the perspective of Basil Bernstein's sociological theory). In: Nascimento, T. G. & Giraldo, P. M. (Eds.). *Linguagens e Discursos na Educação em Ciências* (Language and discourses in science education) (pp. 556-572). Rio de Janeiro-RJ: Multifoco.

2013

Pardini, R.; Rocha, P. L. B.; **El-Hani, C. N.** & Pardini, F. (2013). Challenges and opportunities for bridging the research-implementation gap in ecological science and management in Brazil. In: Raven, P.; Sodhi, N. S. & Gibson, L. (Eds.). *Conservation Biology: Voices from the Tropics* (pp. 75-85). Oxford, UK: John Wiley & Sons.

Arteaga, J. M. S. & **El-Hani, C. N.** (2013). Aprendiendo de la historia del racismo científico: conceptos de “competición interracial” y “extinción de razas” en el discurso sobre evolución humana (1859-1900) [Learning from the history of scientific racism: concepts of “interracial competition” and “race extinction” in the discourse on human evolution (1859-1900)]. In: Silva, C. C. & Prestes, M. E. B. (Eds.). *Aprendendo Ciência e sobre sua Natureza: Abordagens Históricas e Filosóficas* (Learning science and about its nature: historical and philosophical approaches) (pp. 71-81). São Carlos-SP: Tipographia Editora Expressa.

Pagan, A.; **El-Hani, C.** & Bizzo, N. (2013). Teorias evolutivas na formação do professor de biologia: um estudo de caso (Evolutionary theories in biology teacher education: a case study). In: Hermel, E. E. S. & Güllich, R. I. C. (Orgs.). *Ensino de Biologia: Construindo Caminhos Formativos* (Biology teaching: building educational ways) (pp. 280-305). Curitiba: Editora Appris.

2012

Mortimer, E. F., Scott, P. & **El-Hani, C. N.** (2012). The heterogeneity of discourse in science classrooms: the conceptual profile approach. In: Fraser, B., Tobin, K. & McRobbie, C. (Eds.). *Second International Handbook of Science Education* (vol. 1, pp. 231-246). Dordrecht: Springer.

Queiroz, J.; Stjernfelt, F. & **El-Hani, C. N.** (2012). Dicot symbols in mimicry. In: Maran, T.; Lindström, K.; Magnus, R. & Tønnessen, M. (Eds.). *Semiotics in the Wild: Essays in Honour of Kalevi Kull on the Occasion of his 60th Birthday* (pp. 79-85). Tartu: University of Tartu Press.

Carmo, R. S. do; Nunes-Neto, N. F. & **El-Hani, C. N.** (2012). Gaia é a teoria de um planeta vivo? (Is Gaia the theory of a living planet?) In: Veiga, J. E. (Org.). *Gaia: De Mito à Ciência* (Gaia: from myth to science) (pp. 21-98). São Paulo: SENAC.

Carmo, R. S.; Nunes-Neto, N. F. & **El-Hani, C. N.** (2012). Equivalentes funcionais e generalizações na biologia (Functional equivalents and generalizations in Biology). In: Silva, C. C. & Salvatico, L. (Eds.). *Filosofia e História da Ciência no Cone Sul* (Philosophy and history of science in the Southern Cone), Seleção de Trabalhos do 7º Encontro (AFHIC) (pp. 466-481). Porto Alegre: Entrementes Editorial.

Sepulveda, C. & **El-Hani, C. N.** (2012). Obstáculos epistemológicos y ontológicos en la comprensión del concepto darwinista de adaptación: implicaciones en la enseñanza de evolución (Epistemological and ontological obstacles to the understanding of the Darwinist concept of adaptation: implications for evolution education). In: Molina Andrade, A. (Org.). *Algunas aproximaciones a la investigación en educación en enseñanza de las Ciencias Naturales en América Latina* (Some approximations to research on natural sciences education in Latin America) (pp. 89-113). Bogotá, Colômbia: Universidad Distrital Francisco José Caldas, Bogotá.

2011

Nunes-Neto, N. F. & **El-Hani, C. N.** (2011). Functional explanations in biology, ecology, and Earth system science: Contributions from philosophy of biology. In: D. Krause & A.A.P. Videira (eds.), *Brazilian Studies in History and Philosophy of Science*, Boston Studies in Philosophy of Science, volume 290, pp. 185-200. Springer Verlag, Dordrecht.

Queiroz, J.; Emmeche, C.; Kull, K. & **El-Hani, C.** (2011). The biosemiotic approach in biology: theoretical bases and applied models. In: Terzis, G. & Arp, R. (Eds.). *Information and Living Systems: Philosophical and Scientific Perspectives* (pp. 91-129). Cambridge-MA: The MIT Press.

Sepulveda, C.; Meyer, D. & **El-Hani, C. N.** (2011). Adaptacionismo (Adaptationism). In: Abrantes, P. (Org.). *Filosofia da Biologia* (Philosophy of biology) (pp. 162-192). Porto Alegre: ARTMED.

2010

Mortimer, E. F., Scott, P., Amaral, E. R., & **El-Hani, C. N.** (2010). Modeling modes of thinking and speaking with conceptual profiles. In: S.D.J. Pena (Ed.). *Themes in transdisciplinary research* (pp. 105-139). Belo Horizonte, MG: UFMG.

El-Hani, C. N. & Mortimer, E. F. (2010). O valor pragmático da linguagem cotidiana (The pragmatic value of everyday language). In: Cunha, A. M.; Mortimer, E. F.; Aguiar Jr., O. G.; Nascimento, S. S.; Fonseca, M. C. F. (Orgs.). *Convergências e Tensões no Campo da Formação e do Trabalho Docente: Educação Ambiental, Educação em Ciências, Educação em Espaços Não-Escolares, Educação Matemática* (Convergences and tensions in the field of teacher education and practice:

environmental education, science education, education in non-school spaces, mathematical education) (pp. 327-350). Belo Horizonte: Autêntica.

Reis, V. P. G. S.; **El-Hani, C. N.** & Sepulveda, C. (2010). Aplicação e teste de uma sequência didática sobre evolução no ensino médio de biologia (Application and test of a teaching sequence about evolution in Biology High School teaching). In: Jófili, Z. & Almeida, A. V. (Orgs.). *Ensino de Biologia, Meio Ambiente e Cidadania: Olhares que se Cruzam* (2nd Ed.) (Biological education, environment and citizenship: intercrossing perspectives) (pp. 131-167). Recife-PE: UFRPE.

2009

Nunes-Neto, N. F.; Carmo, R. S. & **El-Hani, C. N.** (2009). The relationships between marine phytoplankton, dimethylsulphide, and the global climate: the CLAW hypothesis as a Lakatosian progressive problemshift. In: Kersey, W. & Munger, S. P. (Eds.). *Marine Phytoplankton* (pp. 169-185). Hauppauge-NY: Nova Scientific Publishers.

Sepulveda, C. & **El-Hani, C. N.** (2009). Ensino de evolução: uma experiência na formação inicial de professores de biologia (Evolution teaching: an experience in Biology preservice teacher education). in: Teixeira, P. M. M. & Razera, J. (Orgs.). *Ensino de Ciências: Pesquisas e Pontos em Discussão* (Science teaching: research and issues to discuss). Campinas: Komedi, pp. 21-45.

Meglhioratti, F. A.; **El-Hani, C. N.** & Caldeira, A. M. A. (2009). A centralidade do conceito de organismo no conhecimento biológico e no ensino de Biologia (The centrality of the concept of organism in biological knowledge and teaching). In: Caldeira, A. M. A. (Org.). *Ensino de Ciências e Matemática II: Temas sobre Formação de Conceitos* (Science and Mathematics Teaching II: themes on concept formation) (pp. 33-52). São Paulo: Cultura Acadêmica/Editora da UNESP.

2008

Nunes-Neto, N. F. & **El-Hani, C. N.** (2008). Teleologia na teoria Gaia (Teleology in Gaia theory). In: Martins, R. A.; Silva, C. C.; Ferreira, J. M. H. & Martins, L. A. C. P. (Eds.). *Filosofia e História da Ciência no Cone Sul, Seleção de Trabalhos do 5º Encontro* (Philosophy and History of Science in the Southern Cone) (pp. 331-339). Campinas: Associação de Filosofia e História da Ciência do Cone Sul (AFHIC).

2007

El-Hani, C. N. (2007). Notas sobre o ensino de história e filosofia da biologia na educação superior (Notes on teaching history and philosophy of biology in Higher Education). In: Nardi, R. (Org.). *A Pesquisa em Ensino de Ciências no Brasil* (Research in science education in Brazil) (pp. 293-315). São Paulo: Escrituras Editora.

Coutinho, F. A.; **El-Hani, C. N.** & Mortimer, E. F. (2007). Construcción de un perfil conceptual de vida (Construction of a conceptual profile of life). In: Pozo, J. I. & Flores, F. (Orgs.). *Cambio Conceptual y Representacional en el Aprendizaje y la Enseñanza de la Ciencia* (Conceptual and representational change in science teaching and learning) (pp. 139-153). Madri: Antonio Machado Libros.

El-Hani, C. N. & Queiroz, J. (2007). Estruturalismo hierárquico, semiose e emergência (Hierarchical structuralism, semiosis and emergence). In: João Queiroz; Ângelo Loula; Ricardo Gudwin. (Org.). *Computação, Cognição, Semiose* (Computation, cognition, semiosis) (pp. 93-128). Salvador-BA: EDUFBA.

El-Hani, C. N. (2007). Uma das coisas boas de estar no tempo é poder olhar para trás (One of the good things of being in time is being able to look back). in: Borges, R. M. R. (Org.). *Filosofia e*

História da Ciência no Contexto da Educação em Ciências: Vivências e Teorias (Philosophy and History of Science in the context of Science Education: experiences and theories) (pp. 168-194). Porto Alegre (Brasil): EDIPUCRS.

2006

El-Hani, C. N. (2006). Notas sobre o ensino de história e filosofia das ciências na educação científica de nível superior (Notes on the teaching of history and philosophy of science in university science education). in: Silva, C. C. (Org.). *História e Filosofia da Ciência no Ensino de Ciências: Da Teoria à Sala de Aula* (History and Philosophy of Science in Science Education: from theory to the classroom). (pp. 3-21). São Paulo: Editora Livraria da Física.

El-Hani, C. N. & Sepulveda, C. (2006). Referenciais teóricos e subsídios metodológicos para a pesquisa sobre as relações entre educação científica e cultura (Theoretical and methodological grounds for research on the relations between science education and culture). In: Santos, F. M. T. & Greca, I. M. R. (Orgs.). *A Pesquisa em Ensino de Ciências no Brasil e suas Metodologias* (Research in science education in Brazil and its methodologies) (pp. 161-212). Ijuí/Petrópolis: UNIJUI/Vozes.

Baptista, G. S. C. & **El-Hani, C. N.** (2006). Investigação etnobiológica e ensino de Biologia: uma experiência de inclusão do conhecimento de alunos agricultores na sala de aula de Biologia (Ethnobiological investigation and biology teaching: an experience of including farmer students' knowledge in the biology classroom). in: Teixeira, P. M. M. (Org.). *Ensino de Ciências: Pesquisas e Reflexões* (Science teaching: investigations and reflections) (pp. 84-96). Ribeirão Preto-SP: Holos.

2005

El-Hani, C. N. & Pihlström, S. (2005). Realismo, pragmatismo e emergência (Realism, pragmatism and emergence). In: Smith, P. & Silva Filho, W. J. (Eds.). *Significado, Verdade e Interpretação: Davidson e a Filosofia* (Meaning, truth and interpretation: Davidson and philosophy) (pp. 199-238). São Paulo: Loyola.

El-Hani, C. N. & Sepulveda, C. (2005). Pueden los profesores de ciencias evitar el fisicalismo? (Can science teachers avoid physicalism?) in: Molina, A. *Enfoques Culturales en la Educación en Ciencias: Caso de la Evolución de la Vida* (Cultural approaches to science education: the case of the evolution of life) (pp. 34-50). Bogotá: Universidad Distrital Francisco José de Caldas.

2004

El-Hani, C. N. (2004). Emergência de propriedades (Property emergence). in: Chediak, K. & Videira, A. A. P. (Orgs.). *Temas de Filosofia da Natureza* (Themes in philosophy of nature) (pp. 247-277). Rio de Janeiro: UERJ.

El-Hani, C. N. (2004). Os debates sobre a emergência de propriedades: onde estamos atualmente? (The debates on property emergence: where are we now?). In: Rabossi, E. (Org.). *La Mente y sus Problemas: Temas Actuales de Filosofía de la Psicología* (The mind and its problems: current themes in the philosophy of psychology) (pp. 249-300). Buenos Aires: Catálogos.

2003

Emmeche, C. & **El-Hani, C. N.** (2003). Definindo vida, explicando emergência (Defining life, explaining emergence). In: Major, J. C; Dinis, A.; Teixeira, F. & Alves, J. A. (Orgs.). *O Que é Ser Humano? (What is human being?)* (pp. 1-20). Braga: Faculdade de Filosofia, Universidade Católica Portuguesa.

2002

El-Hani, C. N. (2002). Uma ciência da organização viva: organicismo, emergentismo e ensino de biologia (A science of living organization: organicism, emergentism, and biological education). In: Silva Filho, W. J. (Org.). *Epistemologia e Ensino de Ciências* (Epistemology and Science Education). (pp. 199-244). Salvador: Arcadia/UCSal.

2001

El-Hani, C. N. & Lima-Tavares, M. (2001). A Terra é viva? Hipótese Gaia e definições de vida (Is Earth living? Gaia hypothesis and definitions of life). In: Oliveira, E. C. (Org.). *Epistemologia, Lógica e Filosofia da Linguagem* (Epistemology, Logic and Philosophy of Language) (pp. 61-94). Feira de Santana: UEFS.

2000

El-Hani, C. N. & Pereira, A. M. (2000). Higher-level descriptions: why should we preserve them? In: Andersen, P. B.; Emmeche, C.; Finnemann, N. O.; Christiansen, P. V. (Eds.). *Downward Causation: Minds, Bodies and Matter* (pp. 118-142). Aarhus: Aarhus University Press.

Emmeche, C. & **El-Hani, C. N.** (2000). Definindo vida (Defining life). In: El-Hani, C. N. & Videira, A. A. P. *O Que é Vida? Para Entender a Biologia do Século XXI* (What is life? To understand 21st century Biology) (pp. 31-56.). Rio de Janeiro: Relume Dumará.

Meyer, D. & **El-Hani, C. N.** (2000). Evolução (Evolution). In: El-Hani, C. N. & Videira, A. A. P. *O Que é Vida? Para Entender a Biologia do Século XXI* (What is life? To understand 21st century Biology) (pp. 153-185). Rio de Janeiro: Relume Dumará.

1999

El-Hani, C. N. & Pereira, A. M. (1999). Understanding biological causation. In: Hardcastle, V.G. (Org.). *Where Biology Meets Psychology: Philosophical Essays* (p. 333-356). Cambridge, MA: The MIT Press.

1997

El-Hani, C. N. (1997). O problema da explicação causal em Biologia: um ensaio à luz dos conceitos de superveniência, redução e emergência (The problem of causal explanation in Biology: an essay under the light of the concepts of supervenience, reduction and emergence). In: Dias, A. L. M.; El-Hani, C. N.; Santana, J. C. B. & Freire Jr., O. (Orgs.) (1997). *Perspectivas em Epistemologia e História das Ciências* (Perspectives in epistemology and history of sciences) (p. 151-167). Feira de Santana-BA: UEFS.

Book reviews and editorials**2015**

Kampourakis, K., Nehm, R., Wong, A. S. L. & **El-Hani, C. N.** (2015). Peer review and Darwinian selection, editorial to *Science & Education*. *Science & Education* 24:1055-1057.

2014

El-Hani, C. N. Kampourakis, K. (ed.): The Philosophy of Biology: A Companion for Educators. *Science & Education* 23: 1381-1402.

2013

Rocha, P. L. B., **El-Hani, C. N.** & Pardini, R. (2013). Extensão como ferramenta de preenchimento da lacuna pesquisa-aplicação na Universidade (Outreach as a tool for filling the research-implementation gap in the university). *Revista Caititu* 1(1): 7-16.

2012

El-Hani, C. N. & Nunes-Neto, N. F. (2012). Book review de “Panagiotis V. Kokkotas, Katerina S. Malamitsa and Aikaterini A. Rizaki (2011) Adapting Historical Knowledge Production to the Classroom”. *Science & Education* 21(9): 1357-1373.

2002

El-Hani, C. N. (2002). Emergence and downward causation: an introduction to a special number of Principia. *Principia – An International Journal of Epistemology* 6(1):1-3.

Translations

2013

Lanna, E. & **El-Hani, C. N.** (2013). Richard Goldschmidt e sua ambivalência diante da síntese evolutiva/Tradução de “Alguns aspectos da evolução”, de Richard Goldschmidt (Richard Goldschmidt and his ambivalence towards the evolutionary synthesis/Translation of “Some aspects of evolution”). *Filosofia e História da Biologia* 8(3): 429-452.

2002

El-Hani, C. N. (2002). Revision of the translation into Portuguese of *The Triple Helix: Gene, Organism and Environment*, by Richard Lewontin. Translation made by José Viegas Filho. São Paulo, Brazil, Companhia das Letras.

Encyclopedia entries

2004

El-Hani, C. N. & Meyer, D. (2004). Evolução (Evolution). In: Silva, F. C. T.; Vianna, A. M.; Agostino, C. G. W.; Silva, C. L. B.; Coelho, F. O.; Santos, R. P.; Aquino, R. S. L. & Munhoz, S. (Orgs.). *Enciclopédia de Guerras e Revoluções do Século XX - As Grandes Transformações do Mundo Contemporâneo* (Encyclopedia of 20th century wars and revolutions – the big transformations of the contemporary world) (p. 285-286). Rio de Janeiro-RJ: Elsevier/Campus.

El-Hani, C. N. & Meyer, D. (2004). Teoria sintética da evolução (Synthetic theory of evolution). In: Silva, F. C. T.; Vianna, A. M.; Agostino, C. G. W.; Silva, C. L. B.; Coelho, F. O.; Santos, R. P.; Aquino, R. S. L. & Munhoz, S. (Orgs.). *Enciclopédia de Guerras e Revoluções do Século XX - As Grandes Transformações do Mundo Contemporâneo* (Encyclopedia of 20th century wars and revolutions – the big transformations of the contemporary world) (p. 286-287). Rio de Janeiro-RJ: Elsevier/Campus.

El-Hani, C. N. & Meyer, D. (2004). Seleção natural (Natural selection). In: Silva, F. C. T.; Vianna, A. M.; Agostino, C. G. W.; Silva, C. L. B.; Coelho, F. O.; Santos, R. P.; Aquino, R. S. L. & Munhoz, S. (Orgs.). *Enciclopédia de Guerras e Revoluções do Século XX - As Grandes Transformações do Mundo Contemporâneo* (Encyclopedia of 20th century wars and revolutions – the big transformations of the contemporary world) (p. 818-820). Rio de Janeiro-RJ: Elsevier/Campus.

Newspaper and other media articles

El-Hani, C. N.; Sá, T. S. ; Sánchez-Arteaga, J. M.; Guimarães, M. D. M.; Santana, M. A. G.; Almeida, R. O.; Cruz, I. S.; Sepúlveda, C.; Almeida, M. C.; Muniz, C. R. R.; Pereira, V. A.; Silva, N. R.; Sarmiento, A. C. H.; Reis, V. P. G. S.; Carneiro, M. C. L.; Teles Junior, J. B.; Caldas, T. C.; Costa, V. J. B.; Amarante, A. L. A. P. C.; Guimarães, A. P. M.; Sousa, A. E. A. & Cunha, A. S. C. (2012). Propostas para a melhoria da Educação Científica no estado da Bahia (Proposals for improving science education in the state of Bahia). *Jornal da Ciência (Brazilian Association for the Progress of Science, SBPC)*, Rio de Janeiro, Brazil, p. a7, May 22 2012.

El-Hani, C. N. & Sepúlveda, C. (2012). Comunidades de prática, pesquisa colaborativa e núcleos de pesquisa em ensino de ciências nas escolas: inovação educacional e democratização da produção de conhecimento (Communities of practice, collaborative research and research on science education units in the schools: educational innovation and democratization of knowledge production). *Jornal da Ciência (Brazilian Association for the Progress of Science, SBPC)*, Rio de Janeiro, Brazil, p. a16, April 18 2012.

El-Hani, C. N. (2008). Educação e discurso científico (Education and scientific discourse). Folha de S. Paulo, São Paulo, Brazil, p. A3, December 06 2008.

El-Hani, C. N. & Rios, V. P. (2008). Vida sintética: uma nova revolução? (Synthetic life: a new revolution?). *ComCiência: Revista Eletrônica de Jornalismo Científico*, Campinas, Brazil, p. a1, October 10 2008. Available at: http://comciencia.scielo.br/scielo.php?script=sci_arttext&pid=S1519-76542008000500007&lng=pt&nrm=iso

El-Hani, C. N.; Silva, J. C. S. P. & Freire Jr., O. (2008). Para avaliar a qualidade da pesquisa, basta usar indexação, índices de impacto, índices de citação? (To evaluate research quality, is it enough to use indexing, impact factors, citation indexes?). *Jornal da Ciência (Brazilian Association for the Progress of Science, SBPC)*, Rio de Janeiro, Brazil, p. 7, August 15 2008.

El-Hani, C. N. & Meyer, D. (2007). A evolução da teoria darwiniana (The evolution of Darwinian theory). *Scientific American (History)*, São Paulo, Brazil, p. 76 - 85, June 14 2007.

Baptista, G. C. S. & **El-Hani, C. N.** (2005). Pluralismo epistemológico e ensino de Biologia: contribuições da Etnobiologia (Epistemological pluralism and biological education: contributions of ethnobiology). *Boletim da Sociedade Brasileira de Etnoecologia e Etnobiologia*, vol. 11, Florianópolis, Brasil. December 13 2005.

Nunes-Neto, N. F.; Lima-Tavares, M. & **El-Hani, C. N.** (2005). Gaia: de ideia pseudocientífica a teoria respeitável (Gaia: from pseudoscientific idea to respectable theory). *ComCiência - Revista Eletrônica de Jornalismo Científico*, Campinas, Brazil, v. 71, p. 1 - 6, November 10 2005. Available at: http://www.comciencia.br/dossies-1-72/reportagens/2005/11/08_impr.shtml

Baptista, G. C. S. & **El-Hani, C. N.** (2005). Visões da natureza, diálogo entre saberes e Ensino de Ciências no Brasil: contribuições da etnobiologia (views about nature, dialogue between forms of knowledge and science education in Brazil: contributions from ethnobiology). *ComCiência - Revista Eletrônica de Jornalismo Científico*, Campinas, Brazil, April 22 2005.

El-Hani, C. N. & Meyer, D. (2000). A receita do organismo está no material genético? (Is the recipe of the organism in genetic material?). Zero Hora, Caderno de Cultura (Special issue on the genome project), Porto Alegre, Brazil, p. 5, July 8 2000.

Blog postings

List of texts written in the Blog *Darwinianas: Science in Movement* (<https://darwinianas.com/>), outreach initiative of the National Institute of Science & Technology of Interdisciplinary and Transdisciplinary Studies in Ecology and Evolution (INCT IN-TREE), coordinated by C. N. El-Hani, aiming at the dissemination of scientific knowledge on genetics, evolution, developmental biology, behavioral biology, ecology, conservation, science education, history and philosophy of science and other fields:

2023 - Pensando sobre nossas relações com a natureza e aprendendo com o pensamento ameríndio (Thinking about our relations with nature and learning from Amerindian thinking)

2022 - Seguem os prejuízos da politização dos debates sobre tratamento e prevenção da COVID-19 (The harms from the politization of debates about COVID-19 treatment and prevention are still with us)

2021 - Vacinação de crianças contra COVID-19: A importância de superar a hesitação (Children's vaccination Against COVID-19: the importance of overcoming hesitation)

2021 - Por que algumas pessoas são mais suscetíveis a casos graves de COVID-19? (Why are some people more susceptible to severe cases of COVID-19?)

2021 - Como dizer sem medo frases como 'a insulina é liberada pelo pâncreas para diminuir a glicemia no sangue' (How to say without fear statements like 'insulin is released by the pancreas to diminish blood sugar levels')

2021 - O que é ciência, afinal? (What is science, after all?) (w/ Tiago Guimarães Inêz)

2020 - A ciência no centro das atenções (Science at the focus of attention) (w/ Diogo Meyer)

2020 - Covid-19: A necessidade de um olhar transdisciplinar (Covid-19: The need of a transdisciplinary look) (w/ Virgílio Machado)

2020 - Mais além do dilema entre aprender e fazer no tratamento da COVID-19, fica a necessidade de aprender fazendo (Beyond the dilemma between learning and doing in COVID-19 treatment, there is the need of learning by doing)

2020 - Os microorganismos que nos habitam e seu impacto sobre a evolução da socialidade humana (The microorganisms that dwell in us and their impact on the evolution of human sociality)

2019 - Inovação responsável como desafio das democracias contemporâneas (Responsible Innovation as challenge to contemporary democracies)

2019 - Ciência é atividade imaginativa, não "receita de método científico" (Science is imaginative activity, not "recipe of scientific method")

2019 - Quanto custa evitar a catástrofe ambiental? (How much does it cost to avoid environmental catastrophe?)

2019 - Animais não-humanos cometem suicídio? (Do nonhuman animals commit suicide?)

2019 - Filósofo muçulmano descobriu teoria de Darwin mil anos antes do naturalista inglês?! (Did muslim philosopher discover Darwin's theory a thousand years before the British naturalist?!)

2019 - Retornando à verdade, superando um mundo pós-factual (Returning to the truth, overcoming a post-factual world)

2019 - Num mundo sem fatos, corremos riscos (In a world without facts, we take risks)

2018 - Empatia e diálogo intercultural (Empathy and intercultural dialogue)

2018 - Integrando conhecimentos científicos e tradicionais na conservação (Integrating scientific and traditional knowledge in conservation)

2018 - Colocando em diálogo distintas formas de ver e conhecer o mundo (Putting distinct forms of seeing and knowing the world in dialogue)

2018 - A necessária morte da mística do DNA (The needed death of the DNA mystique)

- 2018 - Pistas genômicas sobre a evolução de nossos cérebros plásticos (Genomic clues about the evolution of our plastic brains)
- 2018 – O darwinismo e a transformação da medicina (Darwinism and the transformation of medicine)
- 2018 - A estética do lugar e a pesquisa científica (The aesthetics of place and scientific research)
- 2017 - Modelos invisíveis: receita para problemas no ensino de genética (Invisible models: recipe for problems in genetics teaching)
- 2017 - Por que devemos compreender evolução? (Why should we understand evolution?)
- 2017 - Para entendermos os celacantos precisamos da evolução (To understand coelacanths we need evolution) (w/ Diogo Meyer)
- 2017 - Simulando a seleção natural na sala de aula (Simulating natural selection in the classroom)
- 2017 - Repensando o espaço entre pesquisa e implementação (Rethinking the space between research and implementation)
- 2017 - Sinais com significados dependentes do contexto são símbolos usados por macacos (Signals with context-dependent meaning are symbols used by macaques)
- 2017 - A evolução da linguagem e a continuidade mental entre animais não-humanos e humanos (The evolution of language and the mental continuity between human and non-human animals)
- 2017 – De onde vieram os animais? (Where did animals come from?)
- 2017 - Quando o sexo se torna morte (When sex becomes death)
- 2016 - Indicadores precoces de mudanças críticas são importantes para gestão de sistemas socioecológicos (Early indicators of critical changes are important for the management of socioecological systems)
- 2016 - Um olhar histórico sobre a ciência da resiliência (A historical look at resilience science)
- 2016 - Para conservar a natureza, é preciso confiança (To conserve nature we need trust) (w/ Gustave Gilles Lopez)
- 2016 - Dois significados de “gene” e o determinismo genético (Two meanings of “gene” and genetic determinism)
- 2016 - As roupas novas do gene (The new clothes of the gene)
- 2016 - Explorando a matéria escura do genoma (Exploring the dark matter of the genome)
- 2016 - Primatas não-humanos poderiam ter comunicação simbólica? (Could non-human primates have symbolic communication?)
- 2016 - Eucarioto sem mitocôndrias não refuta mas apoia teoria endossimbiótica (Eukaryote without mitochondria does not refute but supports endosymbiotic theory)

Besides the postings in *Darwinianas*, I have authored other blog postings:

- 2024 – The continental hydrological cycle from the perspective of the organizational theory of ecological functions, in: *Dialectical Systems: A forum for biology, ecology and cognitive science* (<https://www.dialecticalsystems.eu/contributions/the-continental-hydrological-cycle-from-the-perspective-of-the-organizational-theory-of-ecological-functions/>) – w/ Clarissa Leite and Jeferson Coutinho
- 2024 - Do Forests Play a Role in the Continental Hydrological Cycle in Tropical Regions?, in: *Dialectical Systems: A Forum for Biology, Ecology and Cognitive Science* (<https://www.dialecticalsystems.eu/contributions/do-forests-play-a-role-in-the-continental-hydrological-cycle-in-tropical-regions/>), w/ Clarissa Machado Pinto Leite e Jeferson Gabriel da Encarnação Coutinho.
- 2021 - Navigating intercultural relations in transdisciplinary practice: The partial overlaps framework, in: *Integration and Implementation Insights: A community blog providing research resources for understanding and acting on complex real-world problems* (<https://i2insights.org/2021/07/06/partial-overlaps-framework/>) – w/ David Ludwig and Vitor Renck.

2020 - Relational empathy and the participation in each other's experience, In: ISHPSSB blog (<https://www.ishpssb.org/blog/218-relational-empathy-and-the-participation-in-each-other-s-experience>).

Online magazines

El-Hani, C. N. & Reis, C. R. M. Research strategies and value outlooks in scientific practices: For an organicist thinking and a pluralist methodology in the biological sciences. *Philosophy World Democracy*, 27/10/2021, disponível em: https://www.google.com/url?q=https://www.philosophy-world-democracy.org/articles-1/research-strategies-and-value-outlooks-in-scientific-practices&source=gmail&ust=1637416135678000&usg=AOvVaw33_SHDmD0z7oHnkCQptmWG

Podcasts

I have given several contributions to the Podcast of the National Institute of Science & Technology of Interdisciplinary and Transdisciplinary Studies in Ecology and Evolution (INCT IN-TREE) (https://open.spotify.com/show/4cjZa0DyoTbFymVVcZ1etF?si=1WluW0YVSVcT9jXG1MPF5g&dl_branch=1 or https://www.youtube.com/channel/UCVw3yeC_jKqW4eZjzvfMdA):

2022 – Ciência pluralista parte II: Pesquisas em Siribinha-BA (Pluralist science part II: Researches in Siribinha-BA)

2022 – Por que a ciência deveria ser mais pluralista? (Why should science be more pluralist?)

2021 – Comunidades de prática (Communities of practice)

2021 – Ética no trabalho de campo (Ethics in fieldwork)

2021 - Projetos em Poças e Siribinha (Projects in Poças and Siribinha)

2020 – Valorização da ciência (Valuing science)

2020 – Pós-verdade e divulgação científica (Post-truth and science popularization)

2020 – Meio ambiente e pandemia (Environment and pandemic)

2020 - INCT IN-TREE - Quem somos? (INCT IN-TREE – Who are we?) (w/ Blandina Felipe Viana)

Other podcast participations include:

2024 – Thinking the Unthinkable with the Mebêngôkre, Purpose Podcast, w/ Siddhant Pusdekar, part of the Agency, Directionality and Function Cohort Program, coordinated by Alan Love (University of Minnesota) and funded by John Templeton Foundation - <https://rss.com/podcasts/purposepodcast/1531340/>

2022 – Final Fantasy 7 e a luta por justiça ambiental (Final Fantasy 7 and the struggle for environmental justice), Farnei Podcast - <https://open.spotify.com/episode/4CXcFSvXRyNjr4nhvls6UI>

Publications and citation information

Papers in peer-reviewed journals

Published: 213

Accepted: 3

Submitted: 9

Books

Published: 11

Journal special issues

Published: 6

Book chapters

Published: 82

In press: 2

Citation information

Google Scholar:

h-index: 49

439 documents.

8,840 citations.

Keywords for search: El-Hani, CN

(<https://scholar.google.com.br/citations?user=e5aekOQAAAAJ&hl=pt-BR>)

Search date: August 4th 2025

Scopus:

h-index: 19

120 documents.

1,297 citations.

Keywords for search: El-Hani, C. (excluding self-citations of all authors)

Search date: August 4th 2025

Web of Science:

h-index: 20

118 documents.

1,115 citations.

Keywords for search: El-Hani, C (excluding self-citations)

ResearcherID: Q-1364-2019

Search date: August 4th 2025

Teaching experiences (only part of the courses I teach are included here, based on their relevance for my teaching career and the frequency of teaching)

Period

Course

Methods

2023-	<p><i>Dewey's Logic of Inquiry</i></p> <p>Elective course for Master and Ph.D. students of the History, Philosophy and Science Teaching Graduate Studies Program, jointly offered by Federal University of Bahia and State University of Feira de Santana, Brazil. It is based on a close reading of texts from Dewey's naturalist phase, such as <i>Experience and Nature</i> (1925) and <i>Logic: The Theory of Inquiry</i> (1938). It aims at explicating the central ideas in Dewey's naturalistic pragmatic realism and how it relates to current debates on pluralism.</p>	Close reading of the original text, discussions
2019-	<p><i>Introduction to Ecological Theory, Application and Values</i></p> <p>Prescribed course for Master and Ph.D. students of the Ecology Graduate Studies Program, Federal University of Bahia, Brazil. The course addresses notions of history, philosophy and sociology of science, as well as notions of ecological theory.</p>	Lectures, student seminars
2016-2019	<p><i>Curricular Activity in Community: Ethnobiology and Education – Local Ethnoecological Knowledge as Basis for Educational Innovations for Intercultural Science Education</i></p> <p>Federal University of Bahia includes since 1997 a type of elective course in which the students engage with research and outreach activities performed by lecturers and professors in local communities. These courses should be interdisciplinary in nature and promote the interaction between university and community in understanding and tackling situated problems. This Curricular Activity in Community engages students in fieldwork within the project “Building knowledge bases integrating scientific, practitioner and indigenous knowledge for tackling socioecological and educational issues in communities in Brazil and Namibia”, in particular, in fishing villages in the north shore of the state of Bahia, Brazil. The students are required to produce teaching proposals for integrating traditional knowledge into classroom teaching in the local communities, which are provided for the teachers as a springboard for transdisciplinary planning of teaching initiatives.</p>	Lecture-, student seminar-, and fieldwork/community-based
2014-2015	<p><i>Introduction to Scientific Knowledge</i></p> <p>Prescribed course for Professional Master students of the Ecology Graduate Studies Program, Federal</p>	Participatory problem-based learning (PBL) approach

	University of Bahia, Brazil. It covers introductory issues in philosophy and sociology of science and, more specifically, ecology and conservation, as they relate to decision-making in the environmental sector.	
2009-2015	<i>Biological Systems and Levels of Organization</i> Prescribed course for Professional Master students of the Ecology Graduate Studies Program, Federal University of Bahia, Brazil. It covers issues in biological and ecological sciences from the perspective of a systemic and hierarchical approach, as related to decision-making in the environmental sector, as the professional master students are engaged in environmental management and decision-making.	Participatory problem-based learning (PBL) approach
2009-	<i>Themes in Philosophy of Biology</i> Elective course for Biological Sciences Bachelor Undergraduate and Preservice Biology Teacher Education students, Federal University of Bahia, Brazil. It covers topics in philosophy of biology, integrated with historical and STS case studies.	Lecture- and student seminar-based, including also inquiry activities.
2009-2013	<i>Scientific Communication</i> Prescribed course for Master students of the Ecology Graduate Studies Program, Federal University of Bahia, Brazil. It is a practical course for developing students' skills to effectively communicate within science and between science and society (considering different kinds of stakeholders).	Practical activities for effective communication, with teachers' supervision
2002-	<i>Foundations of Biology</i> Elective course for Master and Ph.D. students of the History, Philosophy and Science Teaching Graduate Studies Program, jointly offered by Federal University of Bahia and State University of Feira de Santana, Brazil. It covers topics in philosophy of biology, integrated with historical and STS case studies.	Lecture- and student seminar-based
2001-	<i>History and Philosophy of Science Applied to Ecology</i> Prescribed course for Ph.D. students and elective course for Master students of the Ecology Graduate Studies Program, Federal University of Bahia, Brazil. It covers historical and philosophical issues related to ecology and conservation.	Student seminar-based, also including inquiry activities
2000-2019	<i>Contributions of History and Philosophy to Science Education</i>	Student seminar-based, also including inquiry activities

Prescribed course for Master and Ph.D. students of the History, Philosophy and Science Teaching Graduate Studies Program, jointly offered by Federal University of Bahia and State University of Feira de Santana, Brazil. It covers implications of historical and philosophical accounts of science to the planning and practice of science education, also considering STS relationships.

- 1994- *Evolution of Scientific Thought*
Prescribed course for Biological Sciences Bachelor Undergraduate students, and elective course for Preservice Biology Teacher Education, Oceanography and Interdisciplinary Bachelor Undergraduate students, Federal University of Bahia, Brazil. It covers general topics in history, philosophy, and sociology of science, and more specific topics on history, philosophy, and sociology of biology.
- 1994- *Biology*
2005 Prescribed course for Biological Sciences Undergraduate freshmen students, Federal University of Bahia, Brazil. It covers introductory topics in the nature of science, and central conceptual areas in biology at an introductory level (definition and origins of life, cell and molecular biology, physiology, genetics, ecology, evolution).
- Along the years, different methods have been used, ranging from lecture- and student seminar-based, to the use of historical case studies to elicit philosophical and sociological issues, to (currently) the use of socioscientific issues in a participatory problem-based learning (PBL) approach
- Lecture- and student seminar-based course, including also inquiry activities.

Editorial work (selection)

- 2013-2019 Book Review Editor, *Science & Education* (IHPST Group, Springer)
- 2021- Editorial board member, *Journal of Biological Education*
- 2019- Editorial board member, Springer Book Series “*Contributions from Biology Education Research*”.
- 2019- Editorial board member, *Acta Biotheoretica*.
- 2018- Editorial board member, Springer Book Series *Interdisciplinary Evolution Research*.
- 2017- Editorial board member, *Biological Theory* (Springer).
- 2011- Associate Editor, Theories of behavior, *Revista de Etologia* (Sociedade Brasileira de Etologia-Brazilian Ethological Society).
- 2010- Editorial board member, *Cultural Studies of Science Education* (Springer).
- 2025- Editorial board member, *Science & Education*

Peer review for the following journals and academic book publishers: PLOS One; Trends in Neuroscience and Education; Progress in Biophysics & Molecular Biology; BioScience; The British Journal for the Philosophy of Science; Philosophy of Science; Studies in History and Philosophy of Biological and Biomedical Sciences; Erkenntnis; European Journal for Philosophy of Science; Journal for General Philosophy; International Studies in the Philosophy of Science; Biology &

Philosophy; Biological Theory: Integrating Development, Evolution & Cognition; Philosophia; Science Education; Science & Education; International Journal of Science Education; Research in Science Education; Conservation Biology; Journal of Ethnobiology; Human Arenas; Journal of Global Ethics; Semiotica (Berlin); Biosemiotics; Cybernetics and Human Knowing; Journal of Applied Systems Studies (JASS); Sign Systems Studies; Educação em Revista (UFMG); Investigações em Ensino de Ciências; Revista Brasileira de Pesquisa em Educação em Ciências; Ciência e Educação (UNESP); Química Nova na Escola; História, Ciências, Saúde-Manguinhos; Revista Brasileira de Ensino de Biologia (RENBIO); Análisis Filosófico; Scientiae Studia (USP); Revista da Sociedade Brasileira de História da Ciência; Filosofia e História da Biologia; Anais da Academia Brasileira de Ciências; Genetics and Molecular Biology; Rever (PUC-SP); Biotemas (UFSC); Springer; Companhia das Letras; Fundação Editora da UNESP; Centro de Lógica, Epistemologia e História da Ciência-UNICAMP; Theoria.

Honors and Awards

- 2017 Honorable Mention in the Coordination for Improvement of Higher Educational Personnel (CAPES) Prize for Best Doctoral Thesis about Teaching Studies defended in Brazil in 2017, for Diego Fernando Valderrama Pérez's thesis, entitled *Dialogue between school scientific and traditional knowledge in the science classroom: Intervention and research in Taganga (Magdalena, Colombia)*, supervised by Charbel Niño El-Hani and Adela Molina (District University Francisco José de Caldas, Colombia), for the Graduate Studies Program in History, Philosophy, and Science Teaching, Federal University of Bahia/State University of Feira de Santana, Brazil.
- 2011 PUBLIC UFBA/FAPEX Prize, granted by Federal University of Bahia to the best papers resulting from undergraduate scientific training fellowships, to Ricardo Santos do Carmo, supervised by Charbel Niño El-Hani.
- 2009 PUBLIC UFBA/FAPEX Prize, granted by Federal University of Bahia to the best papers resulting from undergraduate scientific training fellowships, to Nei de Freitas Nunes Neto, supervised by Charbel Niño El-Hani.
- 2006 Mouton d'Or Prize, for best paper published in the journal *Semiotica* (Mouton de Gruyter) in the year, for the paper *A Semiotic Analysis of the Genetic Information System*, *Semiotica* 160: 1-68.

Outreach Activities 1 – Engagement with policy-making and multi-stakeholder processes

- Evaluation of Primary Education Science Textbooks and Secondary Education Biology Textbooks for the National Textbook Program, Ministry of Education, Brazil (1996-2007).
- Multi-stakeholder, participatory processes for intercultural education and ecomuseum initiatives, and community-based conservation projects in Conde, Bahia, Brazil (2016-).

Outreach activities 2 – Popular science and collaborative work with basic education teachers

- 2024- Community of practice with primary and high school teachers for developing and testing educational proposals based on a non-paternalist, Freirean, intercultural and

- dialogical approach for promoting critical scientific literacy.
- 2016- *Darwinianas: Science in Movement*, blog for dissemination of scientific knowledge on genetics, evolution, developmental biology, behavioral biology, ecology, conservation, science education, history and philosophy of science and other fields (<https://darwinianas.com/>).
- 2009-2015 Group “Collaboration in Research and Practice in Science Education” (*CoPPEC*), for collaboration between educational researchers and basic education teachers in developing and testing educational innovations, using educational design research.
- 2007-2015 Virtual community of practice gathering educational researchers and basic education teachers (*ComPratica*).
- 2006-2020 *Café Científico Salvador*, popular science event linked to the *Café Scientifique* initiative, currently the oldest activity for dissemination of scientific knowledge in the history of the state of Bahia (Events can be seen in https://www.youtube.com/channel/UC35M_a1NP8fgsiXLiOL96yg).

Registered softwares

El-Hani, C. N.; Loula, A.; Castro, L. N.; Apolinário, A.; Sarinho, V. T.; Rocha, P. L. B.; Silva, J. L. P. B.; Vargens, M.; Muñoz, Y.; Oliveira, E.; Lima, T. C.; Souza, F. A.; Calmon, J. H.; Bezerra, C. & Gonçalves Filho, P. C. (2010). *Calangos – Electronic educational game for evolution and ecology teaching* (freeware, open source). Available at: <http://calangos.sourceforge.net/>

This electronic educational game is currently referenced in 4 Biology High School textbooks in Brazil, several teachers have been using it in their classrooms, and was subject of investigation in one Masters dissertation supervised by Claudia Sepulveda (State University of Feira de Santana, Brazil) and co-supervised by me, focusing on teaching about ecological niche, and one Ph.D. thesis supervised by me, focusing on teaching about thermal regulation as related to homeostasis as a structuring concept in the biological curriculum.

Documentaries/Films

El-Hani, C. N. & Valderrama-Pérez, D. F. (2020). *Fishing Arts: The Living Culture in Siribinha*. Available at: <https://www.youtube.com/watch?v=bYDReP9roIo>

Britto, C.; Dourado, D.; Silva, A. M.; Tatu, J.; Alzueta, R.; Rocha, P. L. B. & El-Hani, C. N. (2010). *The Electronic Educational Game Calangos and the São Francisco Sand Dunes*. Available at: <https://www.youtube.com/watch?v=8bbv-OfSWa4>

International conference and workshop presentations (selection)

Throughout my career, I presented 94 works in scientific meetings with full papers, 15 with expanded abstracts, and 150 with abstracts published in the proceedings. I also made 108 invited seminars or plenary talks. A selection of these works can be seen below.

- 2023 **El-Hani, C. N., Nunes-Neto, N. & Lima, F. R. G.** Ecosystem individuation and functional ascription to abiotic items: developing the organizational theory of ecological functions. International Society for the History, Philosophy and Social Studies of Biology (ISHPSSB) Biennial Meeting. <https://conferences.uwo.ca/pdfs/Final-Programme-ISHPSSB-2023-Dates-and-Times.pdf> **Communicated abstract**

- 2022 **El-Hani, C. N.** Reasoning from consequences: from nature of science (NOS) to pragmatics of knowledge (POK). 16th Biennial International History, Philosophy, and Science Teaching (IHPST) Group Conference. **Communicated abstract**
- 2022 Inês, T. G., Brito, B. P. L. & **El-Hani, C. N.** Teaching the Nature of Science from the history of cell theory: An application of the IM-NOSBIO model. 16th Biennial International History, Philosophy, and Science Teaching (IHPST) Group Conference. **Communicated abstract**
- 2021 **El-Hani, C. N.** Knowledge coproduction or integration for conservation: Can we go beyond overlaps? International Society for the History, Philosophy and Social Studies of Biology (ISHPSSB) Biennial Meeting.
- 2021 **El-Hani, C. N.** Learning from dialoguing with and integrating Indigenous/peasant and academic knowledge systems. 2021 Virtual Conference of the Society of Ethnobiology. Available at. <https://ethnobiology.org/conference/sessions/42/philosophy-ethnobiology>
- 2020 **El-Hani, C. N.** & Reis, C. R. M. Using Socio-scientific Issues and Problem-Based Learning to Teach about the Nature of Science to University Natural Science Students: Developing a COVID-based Case. ISHPSSB off-year workshop: History, Philosophy and Sociology of School Biology.
- 2019 **El-Hani, C. N.** & Ludwig, D. Knowledge integration in conservation under the light of a methodology of partial overlaps. 56th Annual Meeting of the Association for Tropical Biology and Conservation, Antananarivo, Madagascar. p. 170. Disponible a: <https://www.xcdsystem.com/atbc/program/MLpmKXQ/index.cfm?pgid=758#E>
Communicated abstract
- 2019 Rocha, P. L. B., Pardini, R., **El-Hani, C. N.** & Viana, B. F. Fostering inter and transdisciplinarity in discipline-oriented universities to improve conservation science and practice. 56th Annual Meeting of the Association for Tropical Biology and Conservation, Antananarivo, Madagascar. p. 432. Disponible a: <https://www.xcdsystem.com/atbc/program/MLpmKXQ/index.cfm?pgid=758#E>
Communicated abstract
- 2019 Evangelista, N. M., Gericke, N., **El-Hani, C. N.**, Carver, R. B., Cástera, J. & Marre, C. C. Students' attitudes towards new genetic technologies: Is there a relationship with students' knowledge of modern genetics and genomics? International Society for the History, Philosophy and Social Studies of Biology (ISHPSSB) 2019 Meeting, Oslo, Norvege. pp. 451-453. Disponible a: https://ishpssb2019.teknismuseum.no/images/pdf/ISHPSSB2019_Book_of_abstracts.pdf
Communicated abstract
- 2019 **El-Hani, C. N.** Inter-ontological dialogue in conservation and intercultural education. International Society for the History, Philosophy and Social Studies of Biology (ISHPSSB) 2019 Meeting, Oslo, Norvege. pp. 245-246. Disponible a: https://ishpssb2019.teknismuseum.no/images/pdf/ISHPSSB2019_Book_of_abstracts.pdf
Communicated abstract
- 2019 Lefèvre, V., Nunes-Neto, N. F. & **El-Hani, C. N.** Ecological finalism without panglossism: The organizational account facing the challenge of the broad scope of ecological functions. International Society for the History, Philosophy and Social Studies of Biology (ISHPSSB) 2019 Meeting, Oslo, Norvege. p. 317. Disponible a: https://ishpssb2019.teknismuseum.no/images/pdf/ISHPSSB2019_Book_of_abstracts.pdf
Communicated abstract
- 2018 El-Hani, C. N. Investigación multiestrategica em educación científica (Multistrategic inquiry in science education). III Encuentro de Ciencias Básicas (III Meeting of Basic

Sciences), promoted by departments of basic sciences of 7 private Colombian universities, Universidad Católica de Colombia (Colombia Catholic University), November 8 2018.

Invited plenary speech

- 2018 El-Hani, C. N. Conceptos de gen y el determinismo genético como problemas de la enseñanza de la genética (Gene concepts and genetic determinism as problems of genetics education). Seminar in University La Salle, Bogotá, Colombia, November 7 2018.

Invited seminar

- 2017 El-Hani, C. N. Ethnobiological and ethnoecological research as key contributors to culturally responsive science education: Epistemological grounds and educational studies. In: International History, Philosophy, and Social Studies of Biology (ISHPSSB) 2017 Meeting, São Paulo, Brazil, p. 317. Available at: <http://ishpssb2017.abfhib.org/livros-online/Book-abstracts-ISHPSSB-2017.pdf>

Communicated abstract

- 2017 El-Hani, C. N. Recent developments in the debates about the gene concept: The dynamic, systemic gene. In: International History, Philosophy, and Social Studies of Biology (ISHPSSB) 2017 Meeting, São Paulo, Brazil, p. 389. Available at: <http://ishpssb2017.abfhib.org/livros-online/Book-abstracts-ISHPSSB-2017.pdf>

Communicated abstract

- 2017 El-Hani, C. N. Epistemological commitments and methodological approaches for developing innovations for intercultural education through ethnoecological research. Symposium "Researchers' Science Diplomacy: North-South reciprocal intercultural responsibility", Center of Social Studies, University of Coimbra, Portugal, September 18-19 2017.

Invited seminar

- 2017 El-Hani, C. N. Some ideas about genes in the postgenomic era. Séminaire Philosophie de la Biologie, Institut d'Histoire et de Philosophie des Sciences et des Techniques (IHPST), CNRS, Université de Paris 1 (Pantheon-Sorbonne), Paris, France, September 26 2017.

Invited seminar

- 2017 Santos, V. C. & El-Hani, C. N. Fazer ciência, abordar questões sociocientíficas: Diferentes objetivos demandam diferentes participações discursivas (To do science, to address socioscientific issues: Different goals demand different discursive participations). In: Atas do XI Encontro Nacional de Pesquisa em Educação em Ciências (Proceedings of XI National Meeting of Research in Science Education), 2017, Florianópolis, Brazil. Available at: <http://www.abrapecnet.org.br/enpec/xi-enpec/anais/resumos/R2027-1.pdf>

Communicated full paper

- 2017 Valderrama-Perez, D. F.; Andrade, A. M. & El-Hani, C.N. Contribuições teóricas e metodológicas para o estudo do diálogo entre conhecimentos tradicionais e conhecimentos científicos escolares (Theoretical and methodological contributions to the study of the dialogue between school science and traditional knowledge). In: Atas do XI Encontro Nacional de Pesquisa em Educação em Ciências (Proceedings of XI National Meeting of Research in Science Education), 2017, Florianópolis, Brazil. Available at: <http://www.abrapecnet.org.br/enpec/xi-enpec/anais/resumos/R1742-1.pdf>.

Communicated full paper

- 2017 Conrado, D. M.; Nunes-Neto, N. F. & El-Hani, C. N. Uma análise de arcabouços teóricos sobre questões sociocientíficas no ensino de ciências (An analysis of the theoretical frameworks on socioscientific issues in science teaching). In: Atas do XI Encontro Nacional de Pesquisa em Educação em Ciências (Proceedings of XI National Meeting of Research in Science Education), 2017, Florianópolis, Brazil. Available at:

<http://www.abrapecnet.org.br/enpec/xi-enpec/anais/resumos/R1879-1.pdf>

Communicated full paper

- 2016 El-Hani, C. N. Gene: The evasive concept. Eleventh Conference of European Researchers in Didactics of Biology, University of Karlstad, Karlstad, Sweden September 5-9 2016.

Invited plenary speech

- 2016 El-Hani, C. N. Historical, philosophical, and educational issues related to the gene concept. Seminars in Science, Environment and Society, Faculty of Education and Society, Malmö University, Malmö, Sweden, September 16 2016.

Invited seminar

- 2016 El-Hani, C. N. History and Philosophy of Science and Genetics teaching. International Course on History, Philosophy and Science Teaching, Dept. of Science Education, University of Copenhagen. Org: Ricardo Karam, September 19 2016.

Invited seminar

- 2015 Cruz, L. C.; Estavillo, C.; Leite, C. M. & El-Hani, C.N. Resilience: Meaning, model, and metaphor. In: International History, Philosophy, and Social Studies of Biology (ISHPSSB) 2015 Meeting, Montreal, Canada, p. 325. Available at:

<https://www.ishpssb.org/images/downloads/events/2015/ISHPSSB2015-Abstracts.pdf>

Communicated abstract

- 2015 Conrado, D. M.; Nunes-Neto, N. F.; Viana, B. F. & El-Hani, C. N. Socioscientific issues about bees, pollination and food production in biology teaching. In: 11th Biannual Conference of the European Science Education Research Association (ESERA), 2015, Helsinki.

Communicated extended abstract

- 2015 Marques, R. S.; Nunes-Neto, N. F.; Conrado, D. M.; El-Hani & Santos, S. What is competence? An analysis with implications to science education. In: 11th Biannual Conference of the European Science Education Research Association (ESERA), 2015, Helsinki.

Communicated extended abstract

- 2015 El-Hani, C. N.; Brito, B. P.; Carvalho, I. N.; Costa, V. S.; Assunção, L. M. S.; Rocha, P. L. B. & Nunes-Neto, N. F. A PBL approach in higher education HPS teaching: Design principles and exploratory analysis of students' views. In: 13th Biennial Conference of the International History, Philosophy, and Science Teaching Group (IHPST), 2015, Rio de Janeiro, Brazil, p. 29.

Communicated abstract

- 2015 El-Hani, C. N. Promoting the dialogue between scientific and traditional knowledge in the science classroom: Development studies of educational innovations. Seminars of the School of Education, University of Kwazulu-Natal, South Africa.

Invited Seminar

- 2015 Santos, F. M. & El-Hani, C. N. Crença, entendimento e conflitos culturais no ensino de ciências: uma perspectiva deweyana (Belief, understanding and cultural conflicts in science education: A Deweyan perspective). In: Atas do X Encontro Nacional de Pesquisa em Educação em Ciências (Proceedings of X National Meeting of Research in Science Education), 2015, Águas de Lindóia, Brazil. Available at:

<http://www.abrapecnet.org.br/enpec/x-enpec/anais2015/resumos/R2004-1.PDF>

Communicated full paper

- 2014 Machado, R. F.; El-Hani, C. N.; Loula, A.; Carneiro, M. C. L.; Reis, V. P. G. S. & Sepulveda, C. Aplicação do jogo eletrônico Calangos no ensino do conceito de nicho ecológico (Application of the videogame Calangos in teaching about ecological niche). In:

Atas do V Encontro Nacional de Ensino de Biologia (Proceedings of V National Meeting on Biological Education).

Communicated full paper

- 2013 El-Hani, C. N. Downward determination as a non-causal probability raising relation. In: International History, Philosophy, and Social Studies of Biology (ISHPSSB) 2013 Meeting, Montpellier, France. Available at: <https://ishpssb2013.sciencesconf.org/13319>

Communicated abstract

- 2013 El-Hani, C. N. Communities of practice, collaborative research groups, and the effort to bridge the research-practice gap in science education and ecology. World Conference on Science and Technology Education (WorldSTE2013), International Council of Associations for Science Education (ICASE), University of Malaysia, Kuching, Sarawak, September 28-October 3 2013.

Invited plenary speech

- 2013 Almeida, M. C.; Sepulveda, C. & El-Hani, C. N. Colaboração entre professores de ciências e pesquisadores universitários: Organização social e tensões na dinâmica de um grupo colaborativo de pesquisa (Collaboration between science teachers and university researchers: Social organization and tensions in the dynamics of a collaborative research group). In: Atas do IX Encontro Nacional de Pesquisa em Educação em Ciências (Proceedings of IX National Meeting of Research in Science Education), 2013, Águas de Lindóia, Brazil. Available at: <http://www.nutes.ufrj.br/abrapec/ixenpec/atas/resumos/R1415-1.pdf>

Communicated full paper

- 2013 Mortimer, E. F. & El-Hani, C. N. Uma visão sócio-interacionista e situada dos conceitos e a internalização em Vygotsky (A socio-interactionist and situated view about concepts and internalization in Vygotsky). In: Atas do IX Encontro Nacional de Pesquisa em Educação em Ciências (Proceedings of IX National Meeting of Research in Science Education), 2013, Águas de Lindóia, Brazil. Available at: <http://www.nutes.ufrj.br/abrapec/ixenpec/atas/resumos/R0761-1.pdf>

Communicated full paper

- 2012 Nunes-Neto, N. F.; Moreno, A. & El-Hani, C. N. An epistemological framework for the functional explanations in contemporary Ecology. In: Actas del I Congreso de la Asociación Iberoamericana de Filosofía de la Biología (AIFIBI) (Proceedings of the I Meeting of the Ibero-American Association for the Philosophy of Biology), p. 273-279. 2012, Valencia, Spain: Publicacions de la Universitat de València. Available at: <https://www.uv.es/fce/aifbi/ACTAS2.pdf>

Communicated full paper

- 2012 El-Hani, C. N. The concept of gene in the twenty-first century: What are the open avenues? I Meeting of the Ibero-American Association for the Philosophy of Biology, Valencia, Spain, November 28-30 2012.

Invited plenary speech

- 2012 El-Hani, C. N. Conceptual profiles: A socio-interactionist approach to learning. Seminars of the SMEER Research Center (Science, Mathematics and Engineering Education Research), University of Karlstad, Sweden.

Invited seminar

- 2011 El-Hani, C. N.; Arnellos, A. & El-Hani, C. N. Etiological and organizational perspectives on function. In: International History, Philosophy, and Social Studies of Biology (ISHPSSB) 2011 Meeting, Salt Lake City, U.S., pp. 132-133.

Communicated abstract

- 2011 Conrado, D. M.; Sepulveda, C.; Leal, F. B.; Carvalho, I. N.; Cruz, L. M. S.; Almeida, T. P.; Moura, U. & El-Hani, C. N. Construção e validação de ferramenta para investigação das relações entre conhecimento sobre evolução e tomada de decisão socialmente responsável em questões sociocientíficas (Construction and validation of a tool for investigating the relations between knowledge about evolution and socially responsible decision-making in socioscientific issues). In: Atas do VIII Encontro Nacional de Pesquisa em Educação em Ciências (Proceedings of VIII National Meeting of Research in Science Education), 2013, Campinas, Brazil. Available at: <http://www.nutes.ufrj.br/abrapec/viiienpec/resumos/R1409-1.pdf>
Communicated full paper
- 2010 El-Hani, C. N. & Greca, I. Bridging the research-practice gap in science education with a virtual community of practice. In: Proceedings of the XIV IOSTE Symposium - Socio-cultural and Human Values in Science and Technology Education, 2010, Bled. Ljubljana: Institute for Innovation and Development of University, v. 1. p. 408-420.
Communicated full paper

Academic organizational activities

- 2024 Philosophy of Science Association (PSA) Biennial Meeting (Coordination of the Poster Evaluation Committee)
- 2022 IOSTE 2022 International Symposium, July 25-29, Recife, Brazil (Member of the Scientific Committee)
- 2017 2017 Meeting of the International Society for the History, Philosophy and Social Studies of Biology (ISHPSSB), July 16-21, University of São Paulo, Brazil (Program co-chair, in collaboration with Jessica Bolker, University of New Hampshire, U.S. Member of the Executive Committee and of the Local Organizing Committee)
- 2007 VI Encontro Nacional de Pesquisa em Educação em Ciências (VI National Meeting of Research in Science Education), November 28 to December 1, Federal University of Santa Catarina, Florianópolis, Brazil (Member of the Organizing Committee).
- 2006 II Encontro Regional de Ensino de Biologia do Nordeste (II Regional Meeting on Biological Education of Northeast Brazil), Federal University of Paraíba, Brazil (Member of the Scientific Committee)
- 2005 Ph.D. Course in History, Philosophy and Science Teaching, Federal University of Bahia and State University of Feira de Santana (Coordination of the creation of the course, when submitted and approved by the Coordination for Improvement of Higher Educational Personnel (CAPES), Brazil.

Research assessment

- 2014-2016 Member of the Advisory Committee for Funding Decisions on Educational Research, Brazilian National Council for Scientific and Technological Development (CNPq).
- 2008-2010 Member of the Advisory Committee for Funding Decisions on Multidisciplinary Studies, State of Bahia Foundation for the Support of Research of the State of Bahia (FAPESB), Brazil.

Peer review for São Paulo Research Foundation (FAPESP, Brazil), Konrad Lorenz Institute (KLI, Austria), Federal University of Rio de Janeiro (UFRJ, Brazil), University of São Paulo (USP, Brazil), State University of Feira de Santana (UEFS, Brazil), Ministry of Education (Brazil).

Ph.D. and Master supervisions

I supervised 71 Master students, 42 doctoral students and 21 post-doctoral researchers along the career. I currently supervise 5 Master students, 16 doctoral students and 3 post-doctoral researchers.

Ph.D. and Master assessment committees

I have been member of 60 Ph.D. assessment committees and 106 assessment committees of Master dissertations along the career.

Exhibitions

2011- Itinerant Exposition *Science, Race and Literature*, on scientific racism and its relations to literature, exhibited in High Schools and Universities for the last seven years, and still ongoing.

Language skills

I am fluent in English. I can speak, read and understand Spanish. My mother tongue is Portuguese.