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CURRICULUM VITAE

PERSONAL:

Nancy J. Nersessian
Regents' Professor of Cognitive Science (Emerita)
Georgia Institute of Technology

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***EDUCATION**:* Case Western Reserve University: Ph.D., Philosophy 1977; M.A., Philosophy 1974; Boston University: A.B., Physics and Philosophy (with distinction in Logic) 1969

ACADEMIC APPOINTMENTS

Harvard University, Research Associate, Department of Psychology, 2014-present

Boston University, Visiting Researcher, Center for History and Philosophy of Science,, 2016-2021

Georgia Institute of Technology, Regents' Professor of Cognitive Science, 2007-2014

Regents' Professor Emerita, 2014-present

Professor, of Cognitive Science 1993-2007

Professor, School of Interactive Computing and School of Public Policy

Adjunct Professor, College of Architecture

Adjunct Professor, School of Literature, Communication, & Culture

Director, Program in Cognitive Science, 1994-1999, 2003-2005

Member: Program in Philosophy, Science, & Technology
Program in Women, Science, & Technology

Princeton University, Program in History of Science and Department of History, Assistant Professor, 1987-1993

Associate Member, Department of Philosophy, 1987-1993

Member: Program in Cognitive Studies, 1992-1993
Cognitive Studies Committee, 1987-1992

University of Pittsburgh, Learning Research and Development Center, Postdoctoral Research Associate, 1986-1987

Twente University of Technology, The Netherlands, History and Philosophy of Science Unit, Associate Professor, 1982-1985

Towson State University, Department of Philosophy, Assistant Professor, 1977-1982 (resigned)

HONORS and PROFESSIONAL RECOGNITION

Professional

Doctorem Honoris Causa, National and Kapodistrian University of Athens, 2019

Jury, de Carvalho-Heinenken Prize, 2016-2020

Chair (incoming, chair, retiring), AAAS, Section L: History and Philosophy of Science, 2016-2019

Royal Netherlands Academy of Arts and Sciences, Foreign Member, elected 2006

American Association for the Advancement of Science, Distinguished Fellow, elected 2007

Cognitive Science Society, Fellow, elected 2009

William James Book Award, American Psychological Association, Division 1, 2012

Patrick Suppes Prize in Philosophy of Science, American Philosophical Society, 2011

President, Cognitive Science Society, 2003-2004

Distinguished Lectures

Giere Memorial Lecture (Inaugural), University of Minnesota, 2022
Alberto Coffa Memorial Lecture, Indiana University, 2017
Waterbury Lecture, Penn State University, 2013
Fay Sawyer Lecture, Illinois Institute of Technology, 2013
Council of Graduate Schools, Washington, DC, 2012
Agents for Bridging Learning Research and Educational Practice (ABLE), Tamagawa University, Tokyo, Japan, 2012
National Science Foundation, Division of Social, Economic, & Behavioral Sciences,2012
Center for Values in Medicine, Science, and Technology, University of Texas, Dallas, 2010
McGill University, Montreal, The Donald Mossman Lecture in History & Philosophy of Science, 1991

Teaching

Class of 1940 Course Survey Teaching Effectiveness Award, Georgia Institute of Technology, 2013
The E. Roe Stamps IV Excellence in Teaching Award, Ivan Allen College, Georgia Institute of Technology, 1998

Other

Outstanding Faculty Mentor Award, College of Computing, Georgia Institute of Technology, 2012
Gold Star Research Award, Ivan Allen College, Georgia Institute of Technology, 2011
Women, Science, & Technology (WST), Mentor Recognition Award, Georgia Institute of Technology, 2011
Outstanding Professor Award, Minorities@CC, Georgia Institute of Technology, 2007
Outstanding Interdisciplinary Activities Award, Georgia Institute of Technology, 1999
The Aware Winged Wheelchair Award for Support of Disabled Students, Towson State University, 1982

Student Awards

Sherif Morad Abdelmohsen (advisor), Outstanding Dissertation Award, College of Architecture, 2012

Joshua Aurigemma (advisor), Outstanding Undergraduate Research Award, College of Architecture, 2012
Swaroop Vattam (committee), Outstanding Dissertation Award, College of Computing, 2012
7 Presidential Undergraduate Research Awards (PURA), Georgia Institute of Technology

PUBLICATIONS

Books

Nersessian, N.J.: *Interdisciplinarity in the Making: Models and Methods in Frontier Science* (MIT Press, 2022)

Nersessian, N.J.: *Creating Scientific Concepts* (MIT Press 2008; paperback edition 2010) **(*Patrick Suppes Prize in Philosophy of Science, 2011(Inaugural), American Philosophical Society*)**

Osbeck, L., Nersessian, N.J., Malone, K., & Newstetter, W. (co-authors): *Science as Psychology: Sense-making and Identity in Science Practice* (Cambridge University Press 2011; paperback edition 2013) **(*William James Book Prize, 2012, American Psychological Association)***

Nersessian, N.J.: *Faraday to Einstein: Constructing Meaning in Scientific Theories* (Dordrecht: Martinus Nijhoff Publishers, 1984; Kluwer Academic Publishers, reprinted 1990)
Chinese Translation with extended introduction (Beijing: Zhejaing Science & Technology Press, 1995)

Nersessian, N.J.(ed.): *The Process of Science: Contemporary Philosophical Approaches to Understanding Scientific Practice* (Dordrecht: Kluwer Academic Publishers, 1987)

Nersessian, N.J.(ed.): *Selected Works of H. A. Lorentz* (Nieuwekerk a/d Ijssel: Palm Publications, 1987)

Nersessian, N.J. & Cohen, H.F. (translators & eds.): *On the Theory of the Reflection and Refraction of Light* by H.A. Lorentz (Amsterdam: Rodopi, 1997)

Wagenknecht, S., Nersessian, N.J., & Andersen, H. (eds.): *Empirical Philosophy of Science: Introducing Qualitative Methods Into the Philosophy of Science*, Studies in Applied Philosophy, Epistemology, and Rational Ethics Series (NY: Springer, 2015)

Kokinov, B, Karmiloff-Smith, A. & Nersessian, N.J. (eds.): *European Perspectives on Cognitive Science, Proceedings of the European Conference on Cognitive Science: EuroCogsci 2011.* NBU Series in Cognitive Science, Sofia: NBU Press, 2011)

Magnani, L., Nersessian, N.J., & Pizzi, C. (eds.): *Logical and Computational Aspects of Model-Based Reasoning*, Applied Logic Series (Dordrecht: Kluwer, 2002)

Magnani, L. & Nersessian, N.J. (eds.): *Model-Based Reasoning: Science, Technology, Values* (NY: Kluwer/Plenum, 2002)

Magnani, L., Nersessian, N.J., & Thagard, P. (eds.): *Model-Based Reasoning in Scientific Discovery* (NY: Plenum, 1999)
Chinese Translation (Beijing: Beijing Science & Technology Press, 2001)

Edited Journal Issues

Guest Editor (with M. Hoffmann & J. Schmidt) *Synthese*, special issue on Philosophy of Interdisciplinarity, on-line September 2012, 190:11, 2013

Guest Editor (with L. Magnani) *Foundations of Science*, special issue on Scientific Discovery: Visual, Analogical, and Simulative Modeling 10:2, 2005

Guest Editor (with L. Magnani) *Foundations of Science*, special issue on Abduction in Science, 9:3, 2004

Guest Editor (with L. Magnani) *Mind & Society*, special issue on Scientific Discovery: Visual, Analogical, and Simulative Modeling, 5:1, 2002

Guest Editor (with L. Magnani) *Mind & Society*, special issue on *Commonsense and Scientific Reasoning*, 4:2, 2001

Guest Editor (with L. Magnani & P. Thagard), *Foundations of Science*, special issue on Model-based Reasoning: Learning and Science, 5:2, 2000

Guest Editor (with L. Magnani & P. Thagard), *Philosophica*, special issue on Analogy and Mental Modeling in Scientific Discovery, 61:2, 1998

Guest Editor, *Configurations*, special issue on Thomas S. Kuhn, 1998

Guest Editor (with L. Magnani & P. Thagard), *Philosophica*, special issue on Abduction in Scientific Discovery, 61:1, 1998

Guest Editor (with A. Ram & F. Keil), *Journal of the Learning Sciences*, special issue on Conceptual Change, 6:1, 1997

Articles

Nersessian, N.J: "Creating cognitive-cultural scaffolding in interdisciplinary research laboratories," in *Beyond the Meme: Development and Structure in Cultural Evolution*, A. C. Love & W. C. Wimsatt, eds., *Minnesota Studies in the Philosophy of Science* (Minneapolis: University of Minnesota Press, 2019, 64-94)

----------: "Interdisciplinarities in action: Cognitive ethnography of bioengineering sciences research laboratories," *Perspectives on Science*, Special Issue: Methods for Investigating Interdisciplinary Practices, 27:553-581, 2019

----------: "Cognitive science, mental models, and thought experiments," in *The Routledge Companion to Thought Experiments*, M.T. Stuart. V. Fehige, J. R. Brown, eds. (NY: Routledge, 2018, 309-326).

----------: "Systems biology modeling practices: Reflections of a philosopher-ethnographer," in *Philosophy of Systems Biology: Perspectives from Scientists and Philosophers*, S. Green, ed. (Cham, CH: Springer Nature, 2017, 215-226)

----------: "Hybrid devices: Embodiments of culture in biomedical engineering," in *Cultures without Culturalism*, K. Chemla & E. F. Keller, eds. (Durham, NC: Duke University Press, 2017, 117-144)

----------: "Conceptual innovation on the frontiers of science," in *The Conceptual Mind: New Directions in the Study of Concepts*, E. Margolis & S. Laurence, eds. (Cambridge, MA: MIT Press, 2015, 455-474)

----------: "The cognitive work of metaphor and analogy in scientific practice," *Philosophical Inquires* Special Issue: The Philosophy of Mary Hesse, 3:133-156, 2015

----------: "Getting a grip," in *Modes of Explanation: Affordances for Action and Prediction*, M. Lissack & A. Graber, eds. (New York: Palgrave Macmillan, 2015), pp. 133-142

----------: "Engineering concepts: The interplay between concept formation and modeling practices in bioengineering sciences," *Mind, Culture, & Activity* Special Issue: Concept Formation in the Wild, 19:222-239, 2012

----------: "Modeling practices in conceptual innovation: An ethnographic study of a neural engineering research laboratory," in *Scientific Concepts and Investigative Practice*, U. Feest & F. Steinle, eds. (Berlin: DeGruyter, 2012), pp. 245-269

----------: "Conceptual change: Creativity, cognition, and culture," in *Models of Discovery and Creativity,* J. Meheus and T. Nickles, eds. (NY: Springer, 2010) pp.127-158

----------: "How do engineering scientists think? Model-based simulation in biomedical engineering research laboratories," *TopiCS: Topics in Cognitive Science,* 1:730-757, 2009 (selected for article level publicity by Wiley)

----------: "Mental modeling in conceptual change," in *International Handbook of Conceptual Change*, S. Vosniadou, ed. (London: Routledge, 2008, pp. 391-416)
Reprinted in *The International Journal on Humanistic Ideology*, Special Issue: Knowledge and Cognitive Science, 3:11-48, 2010
Revised and abridged in *International Handbook of Conceptual Change*, Second Edition (2013, pp. 708-742)

----------: "How Science works: Model-based reasoning in scientific practice," in *Teaching Scientific Inquiry: Recommendations for Research and Implementation*, R. A. Duschl & R. E. Grandy, eds. (Rotterdam: Sense Publishers, 2008, pp. 57-79)

----------: "Model-based reasoning in distributed cognitive systems," *Philosophy of Science*, 73:699-709, 2006
Reprinted in *Theoretical Psychology - Contemporary Readings*, ed. H. Stam (Sage Publications, 2011)

----------: "The cognitive-cultural systems of the research laboratory," *Organization Studies*, 27:125-145, 2006

----------: "Interpreting scientific and engineering practices: Integrating the cognitive, social, and cultural dimensions," in *Scientific and Technological Thinking*, M. Gorman, R. Tweney, & D. Gooding, eds. (Hillsdale, N.J.: Lawrence Erlbaum, 2005), pp.17-56

----------: "Kuhn, conceptual change, and cognitive science" in *Thomas Kuhn*, T. Nickles, ed. *Contemporary Philosophy in Focus* Series, (Cambridge University Press, 2002), pp. 178-211

----------: "Maxwell and 'the method of physical analogy': Model-based reasoning, generic abstraction, and conceptual change," in *Reading Natural Philosophy: Essays in the History and Philosophy of Science and Mathematics*, D. Malament ed. (LaSalle, IL: Open Court, 2002), pp. 129-166

----------: "The cognitive basis of model-based reasoning in science," in *The Cognitive Basis of Science*, P. Carruthers, S. Stich, & M. Siegal, eds. (Cambridge: Cambridge University Press, 2002), pp.133-153
Chinese translation in *Cognitive Studies of Science and Reasoning*, L. Ping and X. Chen, eds.

(Jiang Xi People's Press, 2004), pp. 351-378

----------: "Abstraction via generic modeling in concept formation in science," *Mind & Society* 5: 129-154, 2002.
Reprinted in *Correcting the Model: Idealization and Abstraction in the Sciences*, M. Jones and N. Cartwright, eds. (Amsterdam: Rodopi, 2005)

----------: "Inconsistency, generic modeling, and conceptual change in science," in *Inconsistency in Science*, J. Meheus, ed. (Dordrecht: Kluwer, 2002), pp. 197-212

----------: "Conceptual change and commensurability," in *Incommensurability and Related Matters*, H. Sankey & P. Hoyningen-Huene, (Dordrecht: Kluwer, 2001), pp. 275-301

----------: "Model-based reasoning in conceptual change," in *Model-Based Reasoning in Scientific Discovery*, L. Magnani, N. J. Nersessian, and P. Thagard (NY: Plenum, 1999), pp. 5-22

----------: "Kuhn and the cognitive revolution," *Configurations* 6: 87-120, 1998

----------: "Conceptual change," in *A Companion to Cognitive Science*, W. Bechtel & G. Graham, eds. (Oxford: Blackwell, 1998), pp. 157-166
Chinese translation in *Cognitive Studies of Science and Reasoning*, L. Ping and X. Chen, eds. (Jiang Xi People's Press, 2004), pp. 246-263

----------: "Modeling practices in conceptual change in science," in *Cognition and Imagination*, T. Borsche, J. Kreuzer, & C. Strub, eds. (Munich: Fink Verlag, 1998), pp. 149-168

----------: "Child's play," *Philosophy of Science* 63:542-546, 1996

----------: "Opening the black box: Cognitive science and history of science" in *Constructing Knowledge in the History of Science*, A. Thackray, ed., *Osiris* 10: 194-211, 1995.
Revised and abbreviated version of "The cognitive sciences and the history of science," *Conference on Critical Problems and Research Frontiers in History of Science and Technology* (Madison, WI: HSS/SHOT), pp. 92-115
Chinese translation in *Studies in the Dialectics of Nature*, 12:11, 1996

----------: "Should physicists preach what they practice? Constructive modeling in doing and learning physics," *Science & Education* 4:203-226, 1995
Reprinted in *Thinking Science for Teaching*, C. Bernardini, C. Tarsitani, & M. Vincentini, eds.(NY: Plenum, 1996), pp. 77-96

----------: "In the theoretician's laboratory: Thought experimenting as mental modeling," *PSA 1992*, Volume 2, D. Hull, M. Forbes, & K. Okruhlik, eds. (East Lansing, MI: PSA, 1993), pp.

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291-301
Reprinted in *Philosophy and the Many Faces of Science*, D. Anapolitanos, A. Baltas, & S. Tsinorema, eds. (NY: Rowman and Littlefield, 1998), pp. 260-272
Spanish Translation ("En el Laboratorio del Téorico: Experimentos Mentales como Construcciones Mentales")***in*** *Trabajando en el laboratorio de la mente: naturaleza y alcance de los experimentos mentales* (Working on the Laboratory of Mind: Nature and Scope of Thought Experiments, eds. Jorge Ornelas & Armando Cíntora (Mexico City: Universidad de San Luis Potosí, 2017)

----------: "How do scientists think? Capturing the dynamics of conceptual change in science," in *Cognitive Models of Science*, R. Giere, ed., *Minnesota Studies in the Philosophy of Science 15* (Minneapolis: University of Minnesota Press, 1992) pp. 3-45

Chinese translation in (modified version) *Journal of Philosophy of Nature, Science, and Technology* 2, Special Issue: Studies in Dialectics of Nature, 1993

Reprinted in *Diagrammatic Reasoning: Computational and Cognitive Perspectives*, B. Chandrasekaran, J. Glashow, & H. Narayanan, eds. (AAAI/MIT Press,1995), PP. 137-182

----------: "Constructing and instructing: The role of 'abstraction techniques' in developing and teaching scientific theories," in *Philosophy of Science, Cognitive Science, & Educational Theory and Practice*, R. Duschl & R. Hamilton, eds. (Albany, NY: SUNY Press, 1992), pp. 48-68

Greek translation in *Representations of the Natural World: A Cognitive, Epistemological, and Didactical Approach*, V. Koulaidis, ed. (Athens: Gutenberg, 1994)

----------: "Discussion: The method to 'meaning': A reply to Leplin," *Philosophy of Science* 58: 678-687, 1991

----------: "Why do thought experiments work?" *Proceedings of the Cognitive Science Society* 13 (Hillsdale, NJ: Lawrence Erlbaum, 1991), pp. 430-438

----------: "Barriers and Models: Comments on Margolis and Giere," *PSA 1990*, Volume 2, A. Fine, M. Forbes, & L. Wessels, eds. (East Lansing, MI: PSA, 1991) pp. 441-444

----------: "Methods of conceptual change in science: Imagistic and analogical reasoning," *Philosophica*, Special Issue: Scientific Discovery, 45:33-52, 1990

----------: "Hendrik Antoon Lorentz," in *Great Lives from History TwentiethCentury*, F. N. Magill, ed. (Pasadena, CA: Salem Press, 1990) pp. 1355-1359

----------: "Conceptual change in science and in science education," S*ynthese*, Special Issue: Philosophy of Science and Science Education, 80:163-84, 1989.

Reprinted in *History, Philosophy & Science Teaching: Selected Readings*, M. Matthews, ed. (NY: Columbia Teachers College Press, 1991) pp. 133-148

Reprinted in *The Implications of History of Science for Science Education, Newsletter of the Greek Society for History of Science and Technology, March 1991, pp. 26-46*

----------: "Scientific discovery and commensurability of meaning," in *Imre Lakatos & theories of Scientific Change*, K. Gavroglu, G. Goudaroulis, and P. Nicolacopoulis, eds. (Dordrecht: Kluwer Academic Publishers, 1989), pp. 323-334

----------: "H. A. Lorentz," *The Nobel Prize Winners: Physics* (Pasadena, CA.: Salem Press, 1989), pp. 35-42

----------: "Reasoning from imagery and analogy in scientific concept formation," *PSA 1988*, A. Fine & J. Leplin, eds. (East Lansing, MI: PSA, 1989), pp. 41-47

----------: "*Ad hoc* is not a four-letter word: H.A. Lorentz and the Michelson - Morley experiment," in *The Michelson Era in American Science*, S. Goldberg and R. Stuewer, eds. (New York: AIP, 1988), pp. 71-77

----------: "A cognitive-historical approach to meaning in scientific theories," in *The Process of Science*, pp. 161-179, 1987

----------: "Why wasn't Lorentz Einstein? An examination of the scientific method of H.A. Lorentz," *Centaurus* 29: 205-242, 1986

----------: "Faraday's field concept," in *Faraday Rediscovered: Essays on the Life & Work of Michael Faraday*, D.C. Gooding and F.A.J.L. James, eds. (London: Macmillan,1985), pp.377-406

----------: "Constructing scientific concepts," *Methodology & Science*, 18: 292-306, 1985

Italian translation (revised version) “Construire concetti," *Materiali Filosofici*, Special Issue: Intelligibility and Construction of Science 12: 84-96, 1985

----------: "On meaning in scientific theories," *Proceedings Nederlandse Filosofiedag*, 1984, pp.141-147

----------: "Aether/or: The creation of scientific concepts," *Studies in the History & Philosophy of Science* 15: 175-212, 1984

----------: "How are scientific concepts formed?" *Abstracts of the 7th International Congress of Logic, Methodology & Philosophy of Science* 6: 153-156, 1984

----------: "Why is 'incommensurability' a problem?" *Acta Biotheoretica* 31: 205-218, 1982

----------: "The roots of epistemological 'anarchy'," *Inquiry* 22: 423-440, 1979; re-published on-line August 29, 2008

Co-authored Articles

Nersessian, N.J. & MacLeod, M.: “Rethinking ethnography for philosophy of science,” *Philosophy of Science*, on-line 11/21, in press 2022).

MacLeod, M. & Nersessian, N.J.: “Bounded rationality, distributed cognition, and the computational modeling of complex systems,” *Routledge Handbook on Bounded Rationality*, R. Viale & K. Katzikopoulos eds. (NY: Routledge, 2020), pp. 120-130.

MacLeod, M. & Nersessian, N.J.: “Mesoscopic modeling as a cognitive strategy for handling complex biological systems,” *Studies in the History and Philosophy of the Biological and Biomedical Sciences*, on-line 8/19, 78: 101201, 2019.

Osbeck, L & Nersessian, N.J.: “Groping for trouts in a peculiar river”: Challenges in exploration and application for ethnographic study of interdisciplinary science,” *Psychological Studies of Science and Technology*, K. O' Doherty, L. Osbeck, E. Schraube, & J. Yen eds. (Palgrave Macmillan, 2019), pp. 103-126.

Stuart, M. & Nersessian, N.J.: "Peeking inside the black box: A new kind of scientific visualization," *Minds and Machines,* Special Issue: The epistemological significance of methods in computer simulation, on-line 11/18, 29:87-107, 2019.

MacLeod, M. & Nersessian, N.J.: "Modeling complexity: Cognitive constraints and computational model-building in integrative systems biology," *History and Philosophy of the Life Sciences*, Special Issue: Computational Simulation in the Life Sciences, on-line 1/18; 40:70, 2018.

Chandrasekharan, S. & Nersessian, N.J.: "Rethinking correspondence: How the process of constructing models lead to discoveries and transfer in the bioengineering sciences," *Synthese*, Special Issue: Modeling and Representation, on-line 6/17, in press 2019.

Nersessian, N.J. & MacLeod, M.: "Models and Simulations," *Springer Handbook of Model-Based Science,* L. Magnani & T. Bertolotti eds. (Cham, CH: Springer International, 2017), pp.110-136 (Springer Featured Article).

Kasali, A. & Nersessian, N.J. "Grounding evidence in design: Framing next practices," *Proceedings of EAD12-Rome, The Design Journal* 20:2017, Supplement.

Osbeck, L. & Nersessian, N.J.: "Epistemic identities in interdisciplinary science," *Perspectives on Science* on-line 3/17; 25:226-260, 2017.

MacLeod, M. & Nersessian, NJ: "Interdisciplinary problem solving: emerging modes in integrative systems biology," *European Journal for the Philosophy of Science*, on-line 7/16; 6:401-418, 2016.

Chandrasekharan, S. & Nersessian, N.J.: "Building cognition: The construction of computational representations for scientific discovery," *Cognitive Science*, (extended article) on-line 11/14; 39:1727-1763, 2015.

Bender, A., Beller, S. & Nersessian, N.J.: "Diversity as asset," Concluding commentary on *Exploring cognitive diversity: Anthropological perspectives on cognition*, *Topics in Cognitive Science,* on-line 7/15; 7:677-688, 2015.

MacLeod, M. & Nersessian, N.J.: "Modeling systems-level dynamics: Understanding without mechanistic explanation in integrative systems biology," *Studies in the History and Philosophy of the Biological and Biomedical Sciences*, on-line 12/14; 49:1-11, 2015.

Arabatzis, T. & Nersessian, N.J.: "Concepts out of theoretical contexts, " in *Relocating the History of Science*, T. Arabatzis, J. Renn, & A. Simoes, eds. Boston Studies in the History and Philosophy of Science 312 (Cham, Switzerland: Springer International, 2015), pp. 225-238.

Osbeck, L. & Nersessian, N.J.: " Prolegomena to an Empirical Philosophy of Science," in *Empirical Philosophy of Science: Introducing Qualitative Methods Into the Philosophy of Science,* S. Wagenknecht, N.J. Nersessian, & H. Andersen, eds. (NY: Springer, 2015), pp. 13-36).

Shah, H. & Nersessian, N.J.: "Cultural Models and Their Interplay in Global Software-Engineering Practice," *Proceedings of the International Conference on Global Software Engineering (ICGSE). IEEE, Spain,* July 2015.

Kasali, A. & Nersessian, N.J.: Architects in interdisciplinary contexts: Representational practices in healthcare design, *Design Studies,* 41:205-223, 2015. (Nominated, Design Studies Award for Best Paper 2015)

Kasali, A. & Nersessian, N.J.: "Evidence-based design in practice – a thematic analysis," *Revista De Arquitectura* 44, 2014 (English & Spanish translation).

MacLeod, M. & Nersessian, N.J.: "Strategies for Coordinating Experimentation and Modeling in Integrative Systems Biology," *Journal of Experimental Zoology, Part B: Molecular and Developmental Evolution*, on-line 3/27, 2014, 322:230-239, 2014.

Osbeck, L. & Nersessian, N.J.: "Situating distributed cognition," *Philosophical Psychology*, Special Issue: The Extended Mind Thesis, on-line, 8/13, 27:82-97, 2014.

MacLeod, M. & Nersessian, N.J.: "Building simulations from the ground up: Modeling and theory in systems biology," *Philosophy of Science* 80: 533-556, 2013.

MacLeod, M. & Nersessian, N.J.: "Coupling simulation and experiment: The bimodal strategy in

integrative systems biology," *Studies in the History and Philosophy of the Biological and Biomedical Sciences* (on-line 9/13) 44: 572-584, 2013. ***Top 5 cited papers 1/2014-6/2016***

MacLeod, M. & Nersessian, N.J.: "The creative industry of integrative systems biology," *Mind & Society*, Special Issue: Cultural and Cognitive Dimensions of Innovation 12: 35-48, 2013

Aurigemma, J., Chandrasekharan, S., Nersessian, N.J., & Newstetter, W.: "Turning experiments into objects: The cognitive processes involved in the design of a lab-on-a-chip device," *Journal of Engineering Education*, Special Issue: Representations 102: 117-140, 2013.

JEE Selects Essay, *Prism Magazine*, ASEE, March 2013.

Roessner, D., Porter, A.L., Nersessian, N.J., & Carley, S.: "Validating indicators of interdisciplinarity: Linking bibliometric measures to studies of engineering research labs," *Scientometrics* (on-line 10/12; 34:439-468, 2013).

Osbeck, L, & Nersessian, N.J.: "Beyond motivation and metaphor: "Scientific passions and anthropomorphism," In V. Karakostas & D. Dieks eds., *EPSA 11: Perspectives and Foundational Problems in Philosophy of Science* (Dordrecht: Springer, 2013)

Nersessian, N.J. & Newstetter, W.: "Interdisciplinarity in engineering research and practice." In A. Johri & B. M. Olds, eds. *Cambridge Handbook of Engineering Education Research* (Cambridge University Press, pp. 713-730, 2013). ***Awarded 2015 AERA Outstanding Book Publication***.

Chandrasekharan, S., Nersessian, N.J., & Subramanian, V.: "Computational modeling: Is this the end of thought experiments in science?" in *Thought Experiments in Philosophy, Science and the Arts*, J. Brown, M. Frappier, & L. Meynell, eds. (London: Routledge, 2013), pp. 239-260

Kasali, A., Nersessian, N. J., & Zimring, C. M.: "Making Evidence Visible: Using Mock-ups in Healthcare Design." In C. Jarrett, K.-H. Kim & N. Senske (Eds.), ARCC 2013: Visibility of Research (pp. 128-135, 2013)

Dogan, F. & Nersessian, N.J.: "Conceptual diagrams in creative architectural practice: the case of Daniel Libeskind's Jewish Museum," *Architectural Research Quarterly* 16:14-28, 2012.

Shah, H., Nersessian, N.J., & Harrold, M.J.: "Studying the influence of culture in global software engineering: Thinking in terms of cultural models," *Proceedings of the 4th ACM International Conference on Intercultural Collaboration* (New York: ACM, Inc. 2012).

Osbeck, L. & Nersessian, N.J.: "The acting person in science studies." In *Psychology of science: Implicit and explicit processes*, Proctor and J. Capaldi eds. (NY: Oxford University Press, 2012), pp.89-111.

Osbeck, L. & Nersessian, N.J.: "Beyond motivation and metaphor: 'Scientific passions' and anthropomorphism." In V. Karakostas & D. Dieks, eds. *Recent Progress in Philosophy of Science and Foundational Problems. The 3rd European Philosophy of Science Association Proceedings (EPSA11)*. (Dordrecht: Springer, 2012)

Chandrasekharan, S. & Nersessian, N.J.: "Building cognition: The construction of external representations for discovery." *Proceedings of the Cognitive Science Society 33*, 264-273, 2011

Wu, A., Caspary, E., Yim, J., Mazalek, A., Chandrasekharan, S. & Nersessian, N.J.: "Kinesthetic Pathways: A tabletop visualization to support discovery in systems biology," *Proceedings of the 8th ACM Conference on : Creativity & Cognition* (New York: ACM, Inc. 2011).

Newstetter, W. & Nersessian, N.J.: "Unpacking the interdisciplinary mind: Implications for teaching and learning." *Proceedings of 41st ASEE/IEEE Frontiers in Education Conference*, 2011

Osbeck, L. & Nersessian, N.J.: "Forms of positioning in interdisciplinary science practice and their epistemic effects," *The Journal for the Theory of Social Behaviour*, 40:136-161, 2010.

Osbeck, L. & Nersessian, N.J.: "Affective problem solving: Emotion in research practice," *Mind & Society*, 10:57-78, 2011.

Shah, H., Harrold, M.J., & Nersessian, N.J.: "Studying the Influence of Culture on Outsourced, Offshored Software-Testing Practice: An Ethnographic Approach." *Proceedings of the 6th IEEE International Conference on Global Software Engineering*, ICGSE,105-107, 2011.

Newstetter, W., Behravesh, E., Nersessian, N.J., & Fasse, B.: "Design principles for problem-driven laboratories in biomedical engineering education," *Annals of Biomedical Engineering,* 38:3257-3267, 2010.

Dogan, F. & Nersessian, N.J.: "Generic abstraction in design creativity: the case of the Staatsgalerie by James Stirling," *Design Studies* 31:207-236, 2010.

Nersessian, N.J. & Chandrasekharan, S.: "Hybrid analogies in conceptual innovation in science," *Cognitive Systems Research*, Special issue: Analogies - Integrating Cognitive Abilities, 10:178-188, 2009.

Nersessian, N.J. & Patton, C.: "Model-based reasoning in interdisciplinary engineering" in *Handbook of the Philosophy of Technology and Engineering Sciences*, A. Meijers, ed. (Amsterdam: Elsevier, 2009), pp. 687-718.

Dogan, F. & Nersessian, N.J.: "Generic abstraction in design creativity," *Proceedings of the Cognitive Science Society 31*, 2009

Davies, J., Goel, A., & Nersessian, N.J.: "A computational model of visual analogies in design," *Cognitive Systems Research*, Special issue: Analogies - Integrating Cognitive Abilities, 10:204-215, 2009.

Liu, Z., Nersessian N.J., & Stasko, J.: "Distributed cognition as a theoretical framework for information visualization," *IEEE Transactions*, Special Issue: Visualization and Computer Graphics, 14: 1173-1180, 2008.

Harmon, E. & Nersessian, N.J.: "Cognitive partnerships on the bench top: designing to support scientific researchers," *Proceedings of the 7th ACM Conference on : Designing Interactive Systems* (New York: ACM, Inc., pp. 119-128, 2008).

Newstetter, W. & Nersessian N.J.: "Crossing the science/engineering divide: Design principles for interdisciplinary learning environments," *Proceedings of the first International Conference on Research in Engineering Education*, 2007.

Osbeck, L., Malone, K., & Nersessian, N.J.: "Dissenters in the sanctuary: Evolving frameworks in 'mainstream' cognitive science," *Theory and Psychology* Special Issue: Reflections on Critical Engagement with Mainstream Psychology 17:243-264, 2007

Osbeck, L. & Nersessian, N.J.: "The distribution of representation," *The Journal for the Theory of Social Behaviour* 36:141-160, 2006

Catrambone, R., Craig, D.L., & Nersessian, N.J.: "The role of perceptually represented structure in analogical problem solving," *Memory and Cognition* 34:1126-1132, 2006

Sun, Y, Newstetter W., & Nersessian, N.J.: "Promoting model-based reasoning in problem-based learning," *Proceedings of the Cognitive Science Society 28*, 2006

Malone, K., Nersessian, N.J., & Newstetter, W.: "Gender writ small: Gender enactments in organization and knowledge transmission in a biomedical engineering laboratory," *Journal of Women and Minorities in Science and Engineering* 11: 61-82, 2005

Dogan, F. & Nersessian, N.J.: "Design problem solving with conceptual diagrams," *Proceedings of the Cognitive Science Society* 27:600-605, 2005

Davies, J., Nersessian, N.J., & Goel, A. K.: "Visual models in analogical problem solving," *Foundations of Science*, 10:133-152, 2005

Nersessian, N.J., Kurz-Milcke, E., & Davies, J.: "Ubiquitous computing in science and engineering research laboratories: A case study from biomedical engineering," in *In-Use Knowledge*, G. Kouzelis, M. Pournari, M. Stšppler and V. Tselfes.G. Kuzoulis, eds. (Berlin: Peter Lang AK, 2005, pp. 167-195).

Greek Translation in *Topika* 10:203-237, 2005

Davies, J., Goel, A. K. & Nersessian, N. J.: "Transfer of problem-solving strategy using Cognitive Visual Language," *Proceedings of the Workshop on Visual Languages and Computing (VLC05)*, 2005

Davies, J., Goel, A. K., & Nersessian, N. J.: "A cognitive model of visual analogical problem-solving transfer," *Proceedings of the Nineteenth Annual International Joint Conference on Artificial Intelligence* (short paper), 2005

Davies, J., Goel, A. K. & Nersessian, N. J.: "Transfer in visual case-based problem-solving. In H. Munoz-Avila & F. Ricci (Eds.), *Proceedings of the 6th International Conference on Case-Based Reasoning* (Berlin: Springer-Verlag, 2005, pp. 163-176)

Kurz-Milcke, E., Nersessian, N.J., & Newstetter, W.: "What has history to do with cognition? Interactive methods for studying research laboratories," *Journal of Cognition and Culture*, Special issue: Cognitive Anthropology of Science 4:663-700, 2004

Newstetter, W., Kurz-Milcke, E, & Nersessian, N.J., "Agentive learning in engineering research labs," *Proceedings 34th ASEE/IEEE Frontiers in Education Conference*, 2004

Newstetter, W., Kurz-Milcke, E., & Nersessian, N.J., "Cognitive partnerships on the bench tops," *Proceedings of the International Conference on Learning Sciences*, (Hillsdale, N.J.: Lawrence Erlbaum, 2004), pp. 372-379

Nersessian, N.J., Kurz-Milcke, E., Newstetter, W., & Davies, J.: "Research laboratories as evolving distributed cognitive systems," *Proceedings of the Cognitive Science Society 25*, (Hillsdale, N.J.: Lawrence Erlbaum, 2003), pp. 857-862

Davies, J., Goel, A., & Nersessian, N.J.: "Visual re-representation in creative analogies," *IJCAI Proceedings of the Third Workshop on Creative Systems,* 2003

Nersessian, N.J., Newstetter, W., Kurz-Milcke, E., & Davies, J.: "A mixed-method approach to studying distributed cognition in evolving environments," *Proceedings of the International Conference on Learning Sciences*, (Hillsdale, N.J.: Lawrence Erlbaum, 2002), pp. 307-314

Newstetter, W., Nersessian, N.J., Kurz-Milcke, E., & Malone, K.: "Laboratory learning, classroom learning: Looking for convergence/divergence in biomedical engineering," *Proceedings of the International Conference on Learning Sciences* (Hillsdale, N.J.: Lawrence Erlbaum, 2002), pp. 315-321

Craig, D.L., Nersessian, N.J., & Catrambone, R.: "The role of diagrams and diagrammatic affordances in analogy," *Proceedings of the Cognitive Science Society* 24 (Hillsdale, N.J.: Lawrence Erlbaum, 2002), pp.250-255

Craig, D.L., Nersessian, N.J., & Catrambone, R.: "Perceptual simulation in analogical problem solving," in *Model-Based Reasoning: Science, Technology, Values*, L. Magnani & N.J. Nersessian, eds. (NY: Kluwer/Plenum, 2002), pp. 167-189

Dogan, F. & Nersessian, N.J.: "Conceptual diagrams: Representing ideas in design," *Proceedings of the 2nd International Conference on Diagrammatic Representation and Inference* (extended abstract), 2002

Andersen, H. & Nersessian, N.J.: "Nomic concepts, frames, and conceptual change," *Philosophy of Science* 67: 224-241, 2000

Griffith, T., Nersessian, N. J. & Goel A.: "Function-follows-form transformations in scientific problem solving," *Proceedings of the Cognitive Science Society* 22 (Hillsdale, NJ: Lawrence Erlbaum, 2000), pp. 196-201

Nersessian, N. J. & Andersen, H.: "Conceptual change and incommensurability: A cognitive-historical view," *Danish Yearbook of Philosophy* 32: 111-151, 1997

Griffith, T., Nersessian, N. J. & Goel, A.: "The role of generic models in conceptual change," *Proceedings of the Cognitive Science Society* 18 (Hillsdale, NJ: Lawrence Erlbaum, 1996), pp. 312-317

Nersessian, N. J. & Greeno, J.: "Multiple abstracted representations in problem solving and Discovery in physics," *Proceedings of the Cognitive Science Society,* 12 (Hillsdale, NJ: Lawrence Erlbaum, 1990), pp.77-84

Nersessian, N. J. & Resnick, L. B.: "Comparing historical and intuitive explanations of motion: Does "naive physics" have a structure?" *Proceedings of the Cognitive Science Society* 11 (Hillsdale, NJ: Lawrence Erlbaum, 1989), pp. 412-420

Book Commentaries

Chandrasekharan, S. & Nersessian, N.J.: "Counterfactuals in science and engineering," *Behavioral & Brain Sciences* 30:454-455, 2008

Dogan, F. & Nersessian, N.J.: "How DOORKNOB gets its meaning: Fodor and Bowker and Star on Concepts and Categories" *Journal of the Learning Sciences* 14: 127-137, 2005

Minnen, D. & Nersessian, N.J.: "Searching for solutions: Exploring the validity of laboratory studies and search-based problem solving," *Contemporary Psychology* 48:360-363, 2003

Ram, A., Wills, L., Domesck, E., Nersessian, N. J., & Kolodner, J.: "Understanding the creative mind: a review of Margaret Boden's *Creative Mind*" *AI Journal* 79: 111-118, 1995

Ram, A., Wills, L., Domesck, E., Nersessian, N. J., & Kolodner, J: "Creativity is in the mind of the creator," *Behavioral and Brain Sciences* 17: 549, 1995

Book Reviews

Philosophy of Science, British Journal for the History of Science, Journal for Interdisciplinary History, Physics Today, Isis, Philosophy and Psychology

Doctoral Dissertation

Scientific Evolutions: On Changing Conceptual Structures in Science (Ann Arbor, Michigan: University Microfilms, 1977)**.** Howard Stein and Raymond J. Nelson, supervisors.

RESEARCH SUPERVISION

14 Postdoctoral Researchers

18 PhD Dissertations

42 PhD Dissertation Committees, including international (Italy, Denmark, Bulgaria, the Netherlands)

25 Undergraduate Research Assistants

RESEARCH GRANTS AND AWARDS

Carlsburg Foundation (Denmark), Semper Ardens Grant, "What Social Robots Can and Should Do-Towards Integrative Social Robotics," Lead Researcher: "Methodological integration;"
PI: Johanna Seibt, University of Aarhus, 2016-2121, $2,400,000

Pittsburgh Center for Philosophy of Science, Senior Visiting Fellow, 2015-2016

Institute for Advanced Study on Media Cultures of Computer Simulation (MECS), Leuphana University of Lüneburg, Germany, Senior Fellow, 2014

US National Science Foundation, REESE, "Becoming a 21st Century Scientist: Cognitive practices, identity formation, and learning in integrative systems biology," Project Director (co-PI Wendy Newstetter), 2009-2013, $1,019,240

[The problem-driven learning program this and the NSF ROLE grants provided the research basis for in the Georgia Institute of Technology and Emory University Biomedical Engineering Department received the 2019 Bernard M. Gordon Innovation in Engineering and Technology Education Award from the National Academy of Engineering]

US National Endowment for the Humanities, Research Fellowship, 2005-2006

Radcliffe Institute for Advanced Study, Harvard University, Benjamin White Whitney Fellowship, 2005-2006

Netherlands Institute for Advanced Study (NIAS), Fellowship, 2005-2006 (declined award)

US National Science Foundation, ROLE, "Laboratory learning: Model-based reasoning in biomedical engineering research and instructional laboratories," Project Director (co-PI: Wendy Newstetter), 2004-2009, $1,350,000

US National Science Foundation, ROLE, "Biomedical engineering cognition and learning: integrating systems and analytical thinking," Project Director (co-PI: Wendy Newstetter), 2001-2004, $642,000

Dibner Institute for the History of Science and Technology, Massachusetts Institute of Technology, Senior Fellowship, 1999-2000

US National Science Foundation, Scholar's Award, Science & Technology Studies 1998-2000, $92,216

Consiglio Nazionale Delle Ricerche, Conference and Research Travel Grant, 1998-2000 (co-PI with Lorenzo Magnani, University of Pavia)

US National Science Foundation, Cognitive Science Education Workshop Grant, Computer and Information Science and Engineering Program, 1994 (co-PI with Janet Kolodner, Georgia Tech)

US National Science Foundation, Scholar's Award, History and Philosophy of Science and Technology, 1991-1992, $40,000

US National Science Foundation, Scholar's Award, History and Philosophy of Science and Technology, 1989-1990, $50,101

Princeton University, Humanities Council Research Grant, 1990, 1992

Learning Research and Development Center, University of Pittsburgh, Postdoctoral Research Fellowship, Cognitive Psychology, 1986-1987

Center for Philosophy of Science, University of Pittsburgh, Senior Postdoctoral Fellowship, 1985-1986

Netherlands Institute for Advanced Study (NIAS), Fellow, 1983-1984

US National Endowment for the Humanities Summer Seminar, Princeton University, 1982

Fulbright Research Scholarship, The Netherlands, 1981-1982

Maryland Committee for the Humanities Project Grant, 1980

N.J. Nersessian

US National Endowment for the Humanities Summer Seminar, Yale University, 1979

VISITING APPOINTMENTS

Harvard University, Department of History of Science, Visiting Research Scholar, Spring 2000

University of Aarhus, Denmark, Department of History of Science & Department of History of Ideas, Visiting Professor, 1999

University of Cambridge, Wolfson College, Visiting Scholar, Fall 1990

University of Pittsburgh, Department of Philosophy, Visiting Scholar, 1986-1987

University of Pittsburgh, Center for Philosophy of Science, Associate Member, 1986-1987

Leiden University, The Netherlands, Visiting Fulbright Scholar, 1981-1982

NON-ACADEMIC PROFESSIONAL EMPLOYMENT

Abt Associates, Inc., Cambridge, MA

Consultant on:

evaluation of NIH Interdisciplinary Roadmap	2006-2007
evaluation of NIH Pioneer Awards Program	2006-2007
evaluation of NSF IGERT Program	2011-2012

Harvard Medical School, Beth Israel Deaconess Medical Center, Department of Surgery, Surgical Learning Sciences Consultant, 2010-2011

Educational Testing Service, Princeton NJ, Consultant in Science Education Assessment, 1990-1991

Massachusetts Institute of Technology, Instrumentation Laboratories (Draper), Miniature Components and Apollo 11 Displays and Human Factors Group; Computer Programmer, Mathematical Analyst, 1965-1969

CONFERENCE & WORKSHOP PAPERS AND SYMPOSIA

Keynotes:

Workshop: International Workshop on Interdisciplinarity and Philosophy of Science, Taipei, Taiwan, 2021 (zoom)

Principia 2021, Florianopolis, Brazil (zoom)

Workshop: Learning from Empirical Approaches in History & Philosophy of Science (LEAHPS), Pittsburgh Center for Philosophy of Science, 2018

Workshop: Re-conceiving and Explaining the Success of Science, Basel, Switzerland, 2016

Society for the Philosophy of Science in Practice, Aarhus, Denmark, 2015

Workshop: Investigating Interdisciplinary Practice: Methodological Challenges, Helsinki, Finland, 2015

SiGraDi 2014, Valparaiso, Chile

QR'13: 27th Workshop on Qualitative Reasoning, Bremen, Germany, 2013

Workshop: Creativity & Innovation in the Biomedical Sciences, University of Buffalo, 2013

International Workshop: Modes of Explanation, Paris, 2013

CogSci 2012, 34th Annual Conference of the Cognitive Science Society, Sappro, Japan

NWO Program on Cognition Conference, Utrecht, the Netherlands 2010

International Conference on Logic, Rationality, and Reasoning, Gent, Belgium, 2010

1st International Conference on Computational Creativity, Lisbon, Portugal, 2010

Integrating Services, Integrating Research for Co-Occurring Conditions, NIH/NIDA, 2009

Open Learning Interplay, Hewlett Foundation, Carnegie Mellon University, 2008

2nd International Conference of the Society for Psychology of Science and Technology, Berlin, Germany, 2008

EuroCogsci '07, Delphi, Greece, 2007

International Conference on Telling the Past Now: Historiographies for the 21st Century, Aarhus, Denmark, 2007

Southern Society for Philosophy and Psychology 2007

National Science Foundation: Science of Learning Centers PI Annual Meeting, 2006

2nd Biennial International Conference of the Russian Cognitive Science Society, St Petersburg, 2006

European Association of Research on Learning and Instruction (EARLI), SIG Conceptual Change, Delphi, Greece, 2004

International Conference on Thought Experiments Re-thought, Gent, Belgium, 2004

International Conference on Incommensurability and Other Matters, University of Hannover, Germany, 1999

International Congress on Model Based Reasoning in Scientific Discovery, University of Pavia, Italy, 1998

International Congress on Creativity and Discovery, University of Gent, Belgium, 1998

1st World Congress on Paraconsistency, University of Gent, Belgium, 1997

International Conference on Scientific Thought from the Age of Galileo to Quantum Mechanics, Universidad Peruana Cayetano Heredia, Lima, Peru, 1995

Conference on Contemporary Trends in the Historiography of Science, Corfu, Greece 1991

Invited and Submitted:

Bioengineering Sciences Collaboratory, 2022 (zoom)

Philosophy of Science Association, 1988, 1990, 1992, 1994, 1998, 2002, 2004

Frontiers in Systems & Synthetic Biology, Invited Plenary Symposium, Atlanta, 2013

American Association for the Advancement of Science, 2012, 2018, 2019 (submitted symposium)

Society for the Philosophy of Science in Practice, 2018 (submitted paper)

European Philosophy of Science Association, 2011 (submitted paper)

Cognitive Science Society, Submitted Papers or Symposia: 1989, 1990, 1991, 1994, 1995, 1996, 1998, 1999, 2000, 2001, 2003, 2005, 2006, 2008, 2009, 2011

Cognitive Science Society, Invited Plenary Symposia: 1994, 1997

American Psychological Association, Invited Symposium, 2013

Japanese Cognitive Science Society, Invited Plenary Symposium, 2012

Workshop, Models and Simulations 6, Notre Dame, Indiana, 2014 (submitted papeer)

Society for the Philosophy of Science in Practice, Toronto, Canada, 2013 (submitted paper)

AMC: Creativity & Cognition 2011, Atlanta, GA (submitted paper)

Atlanta Conference on Science & Technology Policy, 2011 (submitted paper)

Workshop, Teaching Philosophy of Science to Science Students, Aarhus, Denmark, 2015 (invited paper)

Workshop, Empirical Philosophy of Science, Aarhus, Denmark, 2012 (invited paper)

Workshops, Interdisciplinarity; Philosophy of Systems Biology, Aarhus, Denmark, 2011 (invited paper)

Book Workshop, Cultures and Styles of Scientific Practice, Fondation des Treilles, Provence, France, 2011 (invited paper)

Book workshop, Scientific Concepts and Investigative Practice, Berlin, Germany, 2011 (invited paper)

Workshop, Science without Data? The Role of Thought Experiments in Empirical Investigations, Dalhousie University, Halifax, Nova Scotia, 2010 (invited paper)

Symposium, Cognitive Theories of Science & Religion, Johns Hopkins University, 2009 (invited paper)

Workshop, Scientific Concepts and Investigative Practice, Berlin, Germany, 2009 (invited paper)

American Education Researchers Association Conference, 2009 (submitted symposium)

InfoVis, 2008 (submitted paper)

Workshop, Cultures and Styles of Scientific Practice, Fondation des Treilles, Provence, France, 2008 (invited paper)

Society for Theoretical and Philosophical Psychology, 2008 (submitted symposium)

American Philosophical Association, 2007 (invited symposium)

Workshop, Open Learning Initiative, Carnegie Mellon University, 2007 (invited paper)

International Conference of the Learning Sciences, submitted papers & symposia 2002, 2004, 2008

Society for Research in Child Development, 1999, 2001 (2 submitted symposia)

Society for Psychological Anthropology, 2001 (invited Presidential symposium)

History of Science Society, 1991 (invited plenary symposium), 1994 (invited "critical problems" paper), 2006 (submitted symposium)

International Congress on the History and Philosophy of Science in Science Teaching, 1997, 2001; invited plenary symposia: 1995, 1989

Workshop, Scientific Inquiry: Developing a Consensus Research Agenda for Science Education, Rutgers University, 2005, sponsored by NSF (invited paper)

Mitteleuropa Foundation, Bolzano, Italy, Invited 2-day Seminar on my research "Creativity in Conceptual Change," 2003 (4 invited papers)

Workshop, Cognitive Studies of Science, Copenhagen, Denmark 2003 (invited paper)

10th Topika Workshop: In Use Knowledge, Mesta, Greece, 2002 (invited paper)

Workshop, Cognitive Studies of Science, University of Virginia, 2001, co-sponsored by NSF and the Boston Consulting Group (invited paper)

Conference, The Cognitive Basis of Science, Rutgers University, 1999 (invited paper)

Workshop, Cognition, Conceptualization, & Community, Royal Danish Graduate School of Education, 1998 (invited paper)

American Association of Physics Teachers, 1997 (invited plenary symposium)

Conference, Thinking Science for Teaching: The Case of Physics, Rome, Italy 1994 (submitted paper)

Conference, Imagination, & Cognition, Acadamie du Midi, Tuchan, France, 1993 (invited paper)

Institute for Research on Learning, Palo Alto, Carnegie Consortium Workshop, 1992 (invited paper)

American Association for Artificial Intelligence, Spring Symposium, 1992 (invited discussant)

Conference, Perspectives on Mind, Washington University, 1992 (invited paper)

University of Pittsburgh Center for Philosophy of Science, International Fellows Conference, 1992 (Athens, Greece), 1996 (Castilioncello, Italy) (submitted papers)

Southeast Cognitive Science Conference, 1992 (invited plenary address)

Workshop, Women in Cognitive Science, Ohio State University, 1991, sponsored by NSF (invited paper)

Faraday Centenary Conference, Bowling Green State University, 1991 (invited paper)

Workshop, The Implications of the Cognitive Sciences for the Philosophy of Science, University of Minnesota, 1990 (invited paper)

American Education Researchers Association Conference, 1990 (submitted symposium)

1st International Congress on the History and Philosophy of Science in Science Teaching, 1989 (invited plenary symposium)

Social Studies of Science Yearbook Conference: The Role of Cognitive Psychology in Science Studies, University of Colorado, Boulder, 1988 (invited discussant)

Workshop, Cognition & Education, Bolt, Beranek & Newman, Inc, 1988 (invited paper)

Conference, Michelson - Morley Centennial, Case Western Reserve University, 1987 (invited paper)

Conference, Criticism & the Growth of Knowledge: 20 Years Later, An International Conference in Honor of Imre Lakatos Aristotle University, Greece, 1986 (invited paper)

Workshop, Faraday Rediscovered, The Royal Institution, London, England, 1984 (invited paper)

1st Annual Graduate Student Conference in Philosophy, American University, Washington DC, 1974

PROFESSIONAL ACTIVITIES

Workshop: "Putting history and philosophy of science to work," McDonnell Foundation and Marine Biological Laboratory, Woods Hole, 2016

American Association for the Advancement of Science

- Member of Council, 2022
- Chair, Section L: History and Philosophy of Science, 2017 (elected term 2016-2019)
- Electorate Nominating Committee, 2009-2012

Cognitive Science Society

- Co-Chair, EuroCogsci '11, Sofia, Bulgaria, 2010-2011
- Fellows Selection Committee, 2010-2012; 2015-2017
- Associate Editor, *Cognitive Science*, 2008-2011
- Chair, Cognitive Science Society, 2003-4
- Executive Board, 2002-2005
- Governing Board, 2001-2006
- Search Committee, Editor of *Cognitive Science*, 2006
- Search Committee, Editor of *TopiCS* (new journal), 2007
- CSS Liaison & Program Committee, EuroCogsci '07, Delphi, Greece, 2006-2007
- Chair, Events Committee 2004-5; Member, 2006-7
- Representative to American Federation of Behavioral & Cognitive Sciences, 2002-2004
- Chair, Fellows Selection Committee, 2002-2003
- David Marr Prize Committee, 2002
- Program Committee, 2001-2006
- Chair, Membership Committee, 2001-2003
- Chair, Cognitive Science Fellows Inaugural Committee, 2001-2002
- Program Steering Committee, 1993-1994
- Annual Conference Referee, 1991-2007

Philosophy of Science Association

- Coordinator, Cognate Societies Program, PSA 2020/2021
- Mentor, Underrepresented Philosophy of Science Scholars, 2020-present

- Governing Board, 2008-2012 (elected 2 terms)
- Steering Committee, Women's Caucus, 2006
- Editorial Board, *Philosophy of Science*, 1999-2004
- Program Committee, *PSA 2002*
- Search Committee for Editor-in-Chief of *Philosophy of Science*, 1998
- Governing Board, 1993-1997 (elected 2 terms)

International Union of History & Philosophy of Science, DLMPS

- Commission on the Philosophy of Technology and Engineering Sciences, Scientific Adviser, 2018-present
- Elected to Council, Assessor, 2012-2015

Society for the Philosophy of Science in Practice

- Advisory Committee 2008-present
- Organizing Committee 2006-2008

National Science Foundation

- Invited Chair & Panelist: The Nature of Interdisciplinary Research, 2010
- Invited Panelist: Forum on the Nature of Science and Scientific Investigation, 2007
- Invited Participant: Workshop on The Scientific Basis of Individual and Team Innovation and Discovery, 2006
- Invited Participant: Workshop on Cognitive Implications of Virtual or Web-enabled Environments, 2004 (Co-sponsored by the CRA and the ICLS)
- Site Visitor: Sciences of Learning Centers, 2004
- Invited Participant, Workshop: Cognitive Studies of Science and Technology, 2001(Co-sponsored by the Boston Consulting Group and the NCIIA)
- Review Committee of Visitors: Social, Behavioral, & Economic Sciences Division, Methods, Cross Directorate, & Science and Society Cluster, 2000
- National Review Panel: Science & Technology Studies Program, 1995-1998

- Invited Participant, Workshop & Report: Human Performance in the Complex Workplace: Implications for Basic Research in Cognitive Science, 1992

National Academies of Science

- Committee on K-8 Science Education, Invited Presentation, 2005
- United States National Committee of the International Union of History and Philosophy of Science (appointed by NAS/NRC), 2000-2005
- USNC/IUHPS Workshop, Science and Indigenous Knowledge, East-West Center, University of Hawaii, written report to ICSU, 2001

Advisory Boards and Review Panels

- Assessor, Research Centre for the Humanities, Athens, Greece, 2015-present
- External Review Committee, Chair, Program in Science Studies, University of California, San Diego, 2015
- Expert Advisor on NSF REAL Grant to School of Public Policy, GA Tech: Connections: STEM Educational Research Communities, Knowledge Transfer, and Contributions to Innovation Pathways, 2014-2017
- International Collaborator on Swiss National Science Foundation Grant to Marcel Weber, University of Geneva: Biological Knowledge Through Modeling and Engineering, 2013-2016
- Expert Advisor on NSF HCC Grant to School of Literature, Media, and Communication, GA Tech: Getting a Grip on the Numerical World: Kinestheic Interaction with Simulations to Support Collaborative Discovery in Systems Biology, 2013-2016
- External Review Committee, Rutgers Center for Cognitive Science, 2012
- International Advisory Board, Center for Values in Medicine, Science, and Technology, University of Texas, Dallas, 2010-present
- Expert Advisor on NSF REESE Grant to Department of Biomedical Engineering, Georgia Institute of Technology: Transforming Text to Diagram: Investigating and Helping Students Develop Key Cognitive Strategies for Solving Engineering Problems, 2011-2014
- Expert Advisor on NSF STS Grant to University of California, San Diego: Diagrammatic Representations of Biological Mechanisms, 2011-2013
- International Review Committee, Cognition Program, Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO), Utrecht, the Netherlands, 2010

- International Promotion Review Committee, Department of Philosophy, University of Cyprus, 2010
- Expert Advisor on NIH Grant to University of South Florida: Toward an Integrative Behavioral Health Services Research Platform, 2008-2010
- Expert Advisor on NSF REESE Grant to UC Santa Barbara and University of Maryland: Visuo-spatial Analogy, Strategy Use, and Scientific Achievement, 2007-2011
- Expert Advisor on NSF Science of Learning Center Catalyst Grant to Auburn University: Learning About Causal Systems in Complex Domains: A Multidisciplinary Synthesis of State of the Art and Research Challenges, 2004-2005
- International External Review Committee, Danish Inter-University Graduate Program in Philosophy and History of Science, 2002-present
- National Advisory Board for FIPSE Grant to the Philosophy, Neuroscience, & Psychology Program, Washington University, A Modular Interdisciplinary Methods Course for Cognitive Science Majors, 2001-2004
- Review Committee, Department of History and Philosophy of Science and Cognitive Science, University of Athens, 1994-2004
- Expert Advisor on NSF Grant to the University of Pittsburgh: Portfolio Culture, A Model for Interactive Science Instruction & Assessment, 1990-1993 International External

Co-Chair, International Congresses, Model-Based Reasoning, University of Pavia, Italy

MBR '98: Model-based Reasoning in Scientific Discovery

MBR '01: Model-based Reasoning in Science, Technology, & Values

MBR '04: Model-based Reasoning in Science & Engineering

Other Conference Organization

Chair, (Re)engineering Biology: The Emerging Engineering Paradigm in Biomedical Engineering, Systems Biology, and Synthetic Biology, Center for Philosophy of Science University of Pittsburgh, 2016

Program Committee, Diagrams as Vehicles for Scientific Reasoning, Center for Philosophy of Science, University of Pittsburgh, 2015

Program Committee, European Philosophy of Science Association Conference, EPSA13, Helsinki, Finland

Program Committee, Association for Educational & Communication Technology, AECT-ICFER 2013, Taiwan

Co-Chair, EuroCogsci 2011, Sofia, Bulgaria

Chair, Senior Advisory Committee, AMC: Creativity & Cognition 2011, Atlanta, GA

Program Committee, Diagrams 2010: International Conference on the Theory & Application of Diagrams, Portland, OR

Program Committee, AAAI-10, Workshop on Visual Representation & Reasoning. Atlanta, GA

Program Committee, Society 2nd biennial meeting of the Society for Philosophy of Science in Practice, Minneapolis, MN, 2009

Program Committee, 2nd International Conference on Analogies, Sofia, Bulgaria, 2009

Program Committee, Society for Philosophy of Science in Practice, 1st biennial meeting, Twente, The Netherlands, 2007

Program Committee, Philosophical Perspectives on Scientific Understanding, Amsterdam, The Netherlands, 2005

Program Committee: International Conference on Cognitive Science, Center for Behavioral and Cognitive Sciences, Allahabad, India, 2004

Program Committee, E-CAPS 2004, International European Conference on Computing and Philosophy, Pavia, Italy 2004

Program Committee, Sixth International Conference on Discovery Science, Tokyo, Japan 2003

Program Committee, Second International Conference on the Theory and Application of Diagrams, Atlanta, GA 2002

Workshop on Science and Indigenous Knowledge, East-West Center, University of Hawaii, 2001 (submitted written report to ICSU)

Program Committee, International Congress on Creativity and Discovery, University of Gent, Belgium, 1998

Co-organizer Princeton, Rutgers, & Columbia Cognitive Mini-conferences 1988-1993

Book Series

Series Editor, ***Science and Philosophy***, Springer (Kluwer) Academic Publishers, 1984-2007

Editorial Board, ***Perspectives on Cognitive Science***, Elsevier Publishers, 2003-present

Journals

Editorial Board, ***Interdisciplinary Science Reviews***, 2017-present

Associate Editor, ***Cognitive Science*****,** 2008-2012

Editorial Board, ***Journal of Psychology of Science and Technology***, 2007-2010

International Advisory Council, ***Mind & Society***, 2002-present

Editorial Board, ***Brain and Mind***, 1999-2003

Editorial Board, ***Philosophy of Science***, 1999-2004

Editorial Board, ***Science and Education***, 1999-2005

Editorial Associate, ***Behavioral and Brain Sciences*****,** 1995-present

Foreign Advisory Council, ***Tractrix*****,** 1989-1993

Research Proposal Reviewer

- The National Science Foundation
- The National Endowment for the Humanities
- Alfred P. Sloan Foundation
- Radcliffe Institute for Advanced Study
- Konrad Lorenz Institute, Austria
- Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO), the Netherlands
- Consiglio Nazionale Delle Ricerche (CINCENA), Italy
- Killian Program, Canada Council
- Social Sciences Research Council, Canada
- Fonds voor Wetenschappelijk Onderzoek - Vlannderen (FWO), Belgium
- Estonian Research Council

International Education

Participated as instructor in an international summer school in cognitive science, New Bulgarian University, Sofia, 2005

Participated as instructor in an international graduate course on "The Relations between the History of Science & the Philosophy of Science," University of Aarhus, Roskilde University, and University of Copenhagen, Denmark, July 1996

Participated as instructor in an international course on "History & Philosophy of Science," Universidad Peruana Cayetano Heredia, Peru, August 1995

Research supervisor (with Thomas Kuhn, Peter Barker, Paul Hoyningen-Huene) on Deutscher Akademischer Austauschdienst & ACLS grant to the University of Konstanz: Incommensurability, 1994-1996

Other

Radcliffe Institute for Advanced Study, Fellowship Reviewer

Woodrow Wilson Foundation, Prize Reviewer

Manuscript referee for numerous publishers, journals, and societies

Consultant for NEH Summer Seminar Program

Consultant for Netherlands-America Commission for Educational Exchange

INVITED ACADEMIC PRESENTATIONS

- Vanderbilt University, Peabody College of Education, Department of Teaching & Learning, 2017
- University of Pittsburgh, School of Medicine, Department of Computational & Systems Biology, 2016
- University of California, Berkeley, Berkeley Institute for Data Science, 2015
- Vanderbilt University, Peabody College of Education, Department of Teaching & Learning, 2015
- Boston Colloquium for the Philosophy of Science, 2014
- University of California, San Diego, Science Studies Program, 2013
- Vanderbilt University, Peabody College of Education, Department of Teaching & Learning, 2013
- Center for Philosophy of Science, University of Pittsburgh, Annual Lecture Series, 2012
- Rice University, Cultural Studies of Science Workshop, 2012
- University of California, San Diego, Cognitive Science Program, 2012
- University of Helskini, Center for Research on Activity, Development, and Learning, 2011
- Emory University, Center for Mind, Brain, and Culture, 2011
- Georgia State University, Neurophilosophy Forum, 2009
- University of Toronto, Ontario, Canada, Department of Philosophy, 2009
- Georgia State University, Neurophilosophy Forum, 2009
- Harvard University, Graduate School of Education, 2009

- Vanderbilt University, Peabody College of Education, Department of Teaching & Learning 2009
- Connecticut College, Department of Philosophy, 2006
- Harvard University, Department of History of Science, 2005
- University of Torino, Italy, Cognitive Science Department, 2004
- University of Athens, Greece, Department of History & Philosophy of Science & Cognitive Science, 2004
- Emory University, Cognitive Development Seminar, Department of Psychology, 2004
- University of Rovereto, Italy, Department of Cognitive & Decision Sciences, 2003
- Washington University, Department of Philosophy & Program in Philosophy, Psychology, & Neuroscience, 2001
- University of California, San Diego, Science Studies Program, 2000
- MIT, Dibner Institute for the History of Science and Technology, 2000
- Niels Bohr Institute, Copenhagen, Denmark, 2000
- University of Aarhus, Denmark, Institute for History of Science, 1999
- University of Athens, Denmark, Department of History & Philosophy of Science & Department of Cognitive Science (5-lecture series), 1999
- Connecticut College, Department of Philosophy, 1999
- University of Roskilde, Denmark, Department of Philosophy, 1998
- University of Pavia, Italy, Department of Philosophy & Institute for Cognitive Science, 1994
- McGill University, Montreal, Canada, The Donald Mossman Lecture in History & Philosophy of Science, 1992
- University of Waterloo, Ontario, Canada, Department of Philosophy, 1991
- Louisiana State University: Workshop on The Liberal Arts & The School Subjects, 1991
- Georgia Institute of Technology, Cognitive Science, 1991
- Aristotle University, Thesoloniki, Greece, School of Pedagogy & Department of Physics, 1991
- University of California, Berkeley, Graduate Group in Science & Mathematics Education, 1990
- University of Cambridge, England, History & Philosophy of Science Colloquium, 1989
- Columbia University Faculty Seminar in History and Philosophy of Science, 1989
- Rutgers University, Cognitive Studies, 1989

- Educational Testing Service, Princeton, 1989
- University of California, Davis, Philosophy & History of Science Colloquium, 1989
- University of Pennsylvania, Department of History & Sociology of Science, 1989
- American Philosophical Association: SWIP session honoring Marjorie Grene, 1989
- University of California, San Diego, Science Studies Program, 1988
- University of Maryland, Committee on the History & Philosophy of Science, 1988
- Princeton University, Cognitive Science Series, 1987
- University of Pittsburgh, Department of Physics, 1987
- Cornell University, History & Philosophy of Science & Technology Program, 1986
- Virginia Polytechnic Institute: organized discussion of my 1984 book, 1985
- University of Padua, Italy, Department of Mathematics and Mechanics, 1984
- University of Groningen, The Netherlands, Department of Philosophy, 1984
- University of Utrecht, The Netherlands, History of Science Seminar, 1984
- Medical Debating Club "Lorentz", Leiden, The Netherlands, 1984
- Museum Boerhaave for the History of the Natural Sciences & Medicine, Leiden, 1984
- Leiden University, The Netherlands, Department of Philosophy, 1984

MEDIA

The Philosopher's Zone: The Value of Thought Experiments, January 28, 2018

http://www.abc.net.au/radionational/programs/philosopherszone/the-value-of-thought-experiments/9350106

Aeon: Armchair Science, December 20, 2017

https://aeon.co/essays/do-thought-experiments-really-uncover-new-scientific-truths

Waterbury Lecture interview, WPSU, 2013

http://waterbury.psu.edu/lectures/professor-nancy-j.-nersessian/

Buzzwords interview, The Art of Innovation," June 2013

http://gtalumnimag.com/2013/05/the-art-of-invention/

Science (Science Careers), Why Science Needs Applied Philosophy of Science, February 21, 2012

Live Science interview, Examining How Scientists Think, February 9, 2011
www.livescience.com

Interview & Audience Discussion, **THINK** with Krys Boyd (NPR Dallas affiliate) on "creativity in a technological world," January 28, 2010

Psychology Today, Creating in Flow blog, Susan K. Perry, PhD, Are Engineers Creative Like We Are? January, 18, 2010

Science Digest (*Science*), How Scientists Think: Fostering Creativity in Problem Solving, September 22, 2009

PsychCentral, Researching Creativity and Problem Solving, September 22, 2009

Favorite Poem Project Video, PBS Newshour feature, June 6, 2000
http://www.favoritepoem.org/videos.html

Advisor to the film "***THE SCIENTIST***" for the PBS series: ***THE RENAISSANCE***, 1990

PROFESSIONAL ASSOCIATIONS

Cognitive Science Society; Philosophy of Science Association; American Philosophical Association; History of Science Society; American Association for the Advancement of Science; American Psychological Association/Division 24; Fulbright Association; Society for the Philosophy of Science in Practice

OTHER ACTIVITIES

Vocal study at The Cleveland Institute of Music and The Peabody Institute; Performed with opera companies and in recital in The United States and in The Netherlands