

Last updated September 2009

CURRICULUM VITAE

PERSONAL:

Nancy J. Nersessian
Regents' Professor &
Professor of Cognitive Science
College of Computing
School of Interactive Computing
Georgia Institute of Technology, 30332-0280
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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:

Georgia Institute of Technology, Professor of Cognitive Science, 1993-present

Regents' Professor, 2007-present

Professor, School of Interactive Computing and School of Public Policy

Adjunct Professor, School of Literature, Communication, & Culture

Adjunct Professor, College of Architecture

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

N.J. Nersessian

University of Pittsburgh, Learning Research and Development Center, 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, 1977-1983

PUBLICATIONS:

Books:

Nersessian, N.J.: *Creating Scientific Concepts* (MIT Press 2008)

Osbeck, L., Nersessian, N.J., Malone, K., & Newstetter, W.: *Science as Psychology: Sense-making and Social Identity in Science Practice* (co-authored, projected 2009 completion, contracted with Cambridge University Press)

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

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

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)

N.J. Nersessian

Edited Journal Issues:

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

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

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) *Mind and Society*, special issue on *Commonsense and Scientific Reasoning*, 4:2, 2001

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

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

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

Articles:

Nersessian, N.J.: "How do engineering scientists think? Model-based simulation in biomedical engineering research laboratories," *TopiCS: Topics in Cognitive Science*, in press, 1:3, 2009

-----: "Mental modeling in conceptual change," in *International Handbook of Conceptual Change*, S. Vosniadou, ed. (London: Routledge, 2008, pp. 391-416)

-----: "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*,

N.J. Nersessian

73:699-709, 2006

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

-----: "Conceptual change: Creativity, cognition, and culture," in *Models of Discovery and Creativity*, J. Meheus and T. Nickles, eds. (Dordrecht: Kluwer Academic Publishers, 2006) pp.1-39

-----: "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 and 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

N.J. Nersessian

-----: "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. 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

-----: "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)

N.J. Nersessian

-----: "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 Twentieth Century*, F. N. Magill, ed. (Pasadena, CA: Salem Press, 1990) pp. 1355-1359

-----: "Conceptual change in science and in science education," *Synthese*, 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. Nicolacopoulos, 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

N.J. Nersessian

-----: "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

Co-authored Articles:

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, in press, 2009), pp. 687-718.

Dogan, F. and 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.

N.J. Nersessian

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 - DIS 2008* (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-

N.J. Nersessian

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)

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

N.J. Nersessian

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

N.J. Nersessian

Book Reviews in:

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.

HONORS:

Professional:

Royal Netherlands Academy of Arts and Sciences, Foreign Member, Science Division

Cognitive Science Society, Fellow

American Association for the Advancement of Science, Fellow

Teaching:

The E. Roe Stamps IV Excellence in Teaching Award, Georgia Institute of Technology, 1998

Other:

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

RESEARCH GRANTS AND AWARDS:

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), 2009-2012, \$989,240

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

N.J. Nersessian

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

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

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

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

National Science Foundation, Scholar's Award, Science & Technology Studies 1998-2000

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

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

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

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

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

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

N.J. Nersessian

Fulbright Research Scholarship, The Netherlands, 1981-1982

Maryland Committee for the Humanities Project Grant, 1980

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, 2006-2007

Consultant on:

evaluation of NIH Interdisciplinary Roadmap

evaluation of NIH Pioneer Awards Program

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 (Invited and Submitted):

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

Cognitive Science Society, Submitted Papers or Symposia: 1989, 1990, 1991, 1994, 1995, 1996, 1998, 1999, 2000, 2001, 2003, 2005, 2006, 2008, 2009; Invited Plenary Symposia: 1994, 1997

N.J. Nersessian

American Education Researchers Association Conference, 2009 (submitted symposium)

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

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

Integrating Services, Integrating Research for Co-Occurring Conditions, NIDA, 2009 (keynote)

Open Learning Interplay, Hewlett Foundation, Carnegie Mellon University, 2008 (invited plenary)

InfoVis, 2008 (submitted paper)

2nd International Conference of the Society for Psychology of Science and Technology, Berlin, 2008 (keynote)

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

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

EuroCogsci '07, Delphi, Greece, 2007 (keynote)

American Philosophical Association, 2007 (invited symposium)

Conference, Telling the Past Now: Historiographies for the 21st Century, Aarhus, DK, 2007 (keynote)

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

Southern Society for Philosophy and Psychology, 2007 (invited plenary)

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

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

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

Society for Psychological Anthropology, 2001 (invited Presidential symposium)

N.J. Nersessian

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

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

Conference, Thought Experiments Re-thought, Gent, Belgium, 2004 (keynote)

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

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

Workshop, Cognitive Studies of Science, Copenhagen, DK 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, Incommensurability and Other Matters, University of Hannover, Germany, 1999 (keynote)

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

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

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

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

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

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

Conference, Scientific Thought from the Age of Galileo to Quantum Mechanics, Universidad

N.J. Nersessian

Peruana Cayetano Heredia, Lima, Peru, 1995 (keynote)

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

Conference, Imagination, & Cognition, Academie 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)

Conference, Contemporary Trends in the Historiography of Science Corfu, Greece, 1991 (invited paper)

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)

N.J. Nersessian

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, 1984 (invited paper)

PROFESSIONAL ACTIVITIES:

Cognitive Science Society

- Co-Chair, EuroCogsci '11
- Associate Editor, *Cognitive Science*, 2008-present
- 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, 2005-2007
- 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, 2002, 2003, 2004, 2005, 2006
- Chair, Membership Committee, 2001-2003
- Chair, Cognitive Science Fellows Inaugural Committee, 2001-2
- Program Steering Committee, 1993-1994
- Annual Conference Referee, 1991-2007

Philosophy of Science Association

- Governing Board, 2008-present
- 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 (elected 2 terms), 1993-1996

Society for the Philosophy of Science in Practice

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

National Science Foundation

N.J. Nersessian

- Invited panelist: Forum on the Nature of Science and Scientific Investigation, 2007
- Invited Plenary Address: Science of Learning Centers PI Annual Meeting, 2006
- 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

American Association for the Advancement of Science

- Electorate Nominating Committee, 2009-2012

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 National Academies of Science and National Research Council, 2000-2005

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

Spencer Foundation Dissertation Fellows Fall Forum, Invited Scholar, 2003

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

Co-Chair, EuroCogsci '11, Sofia, Bulgaria

Program Committee, Diagrams 2010: International Conference on the Theory and

N.J. Nersessian

Application of Diagrams, Portland, OR

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 1st biennial meeting of the Society for Philosophy of Science in Practice, 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

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

Book Series

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

Editorial Board, ***Perspectives on Cognitive Science***, Elsevier Publishers, 2003-2005

Journals:

Associate Editor, *Cognitive Science*, 2008-present

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

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

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

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

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

N.J. Nersessian

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

Foreign Advisory Council, *Tractrix*, 1989-1993

Research Proposal Reviewer for:

- The National Science Foundation
- The National Endowment for the Humanities
- Alfred P. Sloan Foundation
- Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO), the Netherlands
- Consiglio Nazionale Delle Ricerche (CINCENA), Italy
- Killian Program, Canada Council
- Fonds voor Wetenschappelijk Onderzoek - Vlaanderen (FWO), Belgium

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, 2007-2010

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

National Advisory Board for FIPSE Grant to the Philosophy, Neuroscience, & Psychology Program, Washington University, 2001-2004

Consultant on NSF Grant to the University of Pittsburgh: Portfolio Culture, A Model for Interactive Science Instruction & Assessment, 1990-1993

External Review Committee, Danish Inter-University Graduate Program in Philosophy and History of Science, 2002-present

External Review Committee, Department of History and Philosophy of Science and Cognitive Science, University of Athens, 1994-present (written evaluation, 2004)

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

N.J. Nersessian

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

Prize reviewer for the Woodrow Wilson Foundation, 1991

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

Manuscript referee for numerous publishers, journals, and societies

Consultant for NEH Summer Seminar Program

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

Consultant for Netherlands-America Commission for Educational Exchange 1981-1984

SELECTED INVITED ACADEMIC PRESENTATIONS:

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, 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, 2000

University of Aarhus, Institute for History of Science, 1999

University of Athens, Department of History & Philosophy of Science and 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, The Donald Mossman Lecture in History & Philosophy of Science,

N.J. Nersessian

1992

University of Waterloo, Ontario, 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, 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

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; International Society for the Psychology of Science and Technology; American Association of University Women

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