

# CURRICULUM VITAE

Theodore Arabatzis

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## **Institutional Address:**

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**Date and Place of Birth:** 5/14/1965, Thessaloniki, Greece

**Military Service:** 29 May 1995 – 29 May 1996

**Current Employment:** Professor of History and Philosophy of Science, Department  
of Philosophy & History of Science, University of Athens

## **Education** (degree, date, Institution):

- B.Sc., 7/18/1988, Dept. of Electrical Engineering, Aristotle University of Thessaloniki, Thessaloniki, Greece
- M.A., 10/19/1990, Program in History of Science, Dept. of History, Princeton University
- Ph.D., 30/5/1995, Program in History of Science, Dept. of History, Princeton University

## **Fellowships / Distinctions / Invitations:**

- Stanley J. Seeger Fellow, Program in Hellenic Studies, Princeton University, Academic Year 1988/1989
- Princeton University Fellow, Program in History of Science, Princeton University, Sept. 1989 - June 1993
- Princeton University Lecturer, Department of History, Princeton University, Spring Semester, 1993 – 1994
- Post-doctoral Fellow, Dibner Institute for the History of Science and Technology, MIT, Sept. 2000 – Aug. 2001
- Visiting Professor, Department of Mathematics, Johannes Gutenberg-Universität Mainz, 20-26 February 2002.
- Visiting Scholar, Max Planck Institute for the History of Science, Berlin, Feb. 2007 – June 2007, June 2010
- Visiting Professor, L'École des hautes études en sciences sociales, Paris, May 2010
- Visiting Professor, Universität Bonn, Institut für Philosophie, November 2011
- Visiting Professor, Centre for Science Studies, Dept. of Physics & Astronomy, Aarhus University, 15 June – 15 August 2013.

## **Selected professional activities**

- Co-editor of the journal *Metascience*
- Member of the editorial board of the series:
  - Boston Studies in the Philosophy and History of Science* (Springer)
  - European Studies in Philosophy of Science* (Springer)
  - Science: Philosophy, History and Education* (Springer)
- Leader of the IKYDA project "The Place of Experimental Practices in Science & Technology Studies" (2009-2010). Funded by the State Scholarships Foundation (IKY) and the German Academic Exchange Service (DAAD).
- Investigator in the Research Program: THALIS –UoA: Aspects and Perspectives of Realism in Philosophy of Science and Mathematics (APRePoSMa)
- Referee for
  - Biological Theory*
  - British Journal for the Philosophy of Science*
  - Erkenntnis*
  - History of Geo- and Space Sciences*
  - International Studies in the Philosophy of Science*
  - Philosophy of Science*
  - Science and Education*
  - Studies in History and Philosophy of Modern Physics*
  - Studies in History and Philosophy of Science*
  - Synthese*
  - Neusis: Journal for the History and Philosophy of Science and Technology*
  - Cambridge University Press*
  - University of Pittsburgh Press*
  - Springer*
  - The Greek Open University*
  - European Philosophy of Science Association*
  - European Research Council*
  - The Danish Research Council*
  - Czech Science Foundation*
  - State Scholarships Foundation (IKY)*
- Member of the *Integrated HPS Committee* (2009 - )
- Member of the steering committee of the *European Philosophy of Science Association* (2009-2011)
- Member of: *History of Science Society*, *Philosophy of Science Association*, *European Philosophy of Science Association*

## **PUBLICATIONS**

### **A. Books and edited volumes:**

- T. Arabatzis, *Representing Electrons: A Biographical Approach to Theoretical Entities* (Chicago: University of Chicago Press, 2006).
  - Reviews have appeared in *Ambix*, *Australian Physics*, *British Journal for the*

*History of Science, Canadian Undergraduate Physics Journal, Chemical Heritage News Magazine, Chemistry World, Contemporary Physics, Historical Studies in the Physical and Biological Sciences, International Studies in the Philosophy of Science, Isis, Journal of Chemical Education, Metascience, NTM, Studies in History and Philosophy of Modern Physics, Nuncius, Physics Education, Science & Education, Science & Public Policy.*

- V. Kindi and T. Arabatzis (eds.), *Kuhn's The Structure of Scientific Revolutions Revisited* (Routledge, 2012).

Reviews have appeared in *Metascience, Notre Dame Philosophical Reviews, Philosophy in Review, Science & Education.*

- J. Schickore and T. Arabatzis (eds.), special issue of *Perspectives on Science* (20:4, 2012) with a selection of papers from the conference &HPS3.
- T. Arabatzis and K. Gavroglu (eds.), *Einstein & Relativity: Historical Studies* (Crete University Press, 2006), (in Greek).
- T. Arabatzis and K. Gavroglu (eds.), *The Cultural History of Quantum Theory* (Crete University Press, 2012), (in Greek).

#### **B. Textbooks (in Greek):**

- T. Arabatzis, J. Christianidis, D. Dialetis, K. Gavroglu, N. Kanderakis, S. Vernikos, *History of Science and Technology* (Athens, 1999). For a description see T. Arabatzis et al, "History of Science in Greek Schools," *British Society for the History of Science Education Forum*, No. 28 (June 1999), pp. 3-6; and <http://www.iono.noa.gr/hellinomnimon/book%201.htm>
- D. Anapolitanos, T. Arabatzis, V. Karakostas, V. Kindi, *Philosophy of Science* (The Greek Open University, 2003).

#### **C. Articles**

- T. Arabatzis, "The electron's hesitant passage to modernity, 1913-1925." In M. Epple & F. Müller (eds.), *Science as Cultural Practice* (Akademie-Verlag, forthcoming).
- "The Structure of Scientific Revolutions and HPS in historical perspective." In J. Renn et al (eds), *Towards a history of the history of science* (Max Planck Research Library for the History and Development of Knowledge, forthcoming).
- T. Arabatzis and D. Ioannidou, "The role of models and analogies in the Bohr atom." In F. Aaserud and H. Kragh (eds.), *One hundred years of the Bohr atom* (The Royal Danish Academy of Sciences and Letters, forthcoming).
- T. Arabatzis and V. Kindi, "The problem of conceptual change in the philosophy and history of science." In S. Vosniadou (ed.), *International Handbook of Research on Conceptual Change*, 2<sup>nd</sup> ed. (Routledge, 2013), pp. 343-359; a revised and abridged version of Arabatzis & Kindi 2008.
- T. Arabatzis & J. Schickore, "Introduction: Ways of integrating history and philosophy of science." *Perspectives on Science*, 20:4 (2012), 395-408.
- T. Arabatzis, "Experimentation and the meaning of scientific concepts." In U. Feest and F. Steinle (eds.), *Scientific Concepts and Investigative Practice* (de

Gruyter, 2012), pp. 149-166.

- T. Arabatzis, "On the historicity of scientific objects." *Erkenntnis*, 75:3 (2011), pp. 377-390.
- T. Arabatzis, "Hidden entities and experimental practice: renewing the dialogue between history and philosophy of science." In S. Mauskopf and T. M. Schmaltz (eds.), *Integrating History and Philosophy of Science: Problems and Prospects* (Springer, 2011), pp. 125-139.
- T. Arabatzis, "Electron." In *Eine Naturgeschichte für das 21. Jahrhundert: hommage à, zu Ehren von, in honor of Hans-Jörg Rheinberger* (Berlin: Max-Planck-Institut für Wissenschaftsgeschichte, 2011), pp. 231-232.
- T. Arabatzis, "The cognitive permeability of observation," *Noesis* 6 (2010), 91-98 (in Greek).
- T. Arabatzis, "Cathode Rays" & "Electrons". In F. Weinert, K. Hentschel, & D. Greenberger (eds.), *Compendium of Quantum Physics: Concepts, Experiments, History and Philosophy* (Springer, 2009), pp. 89-92, 195-199.
- T. Arabatzis, "Causes and contingencies in the history of science: a plea for a pluralist historiography," *Centaurus* 50 (2008), 32-36.
- T. Arabatzis and V. Kindi, "The problem of conceptual change in the philosophy and history of science." In S. Vosniadou (ed.), *International Handbook of Research on Conceptual Change* (Routledge, 2008), pp. 345-373.
- T. Arabatzis, "Experiment." In S. Psillos and M. Curd (eds.), *The Routledge Companion to the Philosophy of Science* (Routledge, 2008), pp. 159-170.
- T. Arabatzis, "Experimenting on (and with) hidden entities: The inextricability of representation and intervention." In U. Feest, G. Hon, H.-J. Rheinberger, J. Schickore, F. Steinle (eds.), *Generating Experimental Knowledge* (MPIWG preprint 340, 2008), pp. 7-17.
- T. Arabatzis, "Conceptual change and scientific realism: Facing Kuhn's challenge." In S. Vosniadou, A. Baltas, X. Vamvakoussi (eds.), *Reframing the Conceptual Change Approach in Learning and Instruction* (Elsevier 2007), pp. 47-62.
- T. Arabatzis, "On the inextricability of the context of discovery and the context of justification." In J. Schickore and F. Steinle (eds.), *Revisiting Discovery and Justification: Historical and Philosophical Perspectives on the Context Distinction*, *Archimedes* 14 (Springer, 2006), pp. 215-230.
- T. Arabatzis and K. Gavroglu, "Einstein and the Special Theory of Relativity in History and Philosophy of Science," in Arabatzis & Gavroglu (eds.), *Einstein & Relativity: Historical Studies* (Crete University Press, 2006), pp ix-xlix (in Greek).
- T. Arabatzis and K. Gavroglu, "Physical chemistry." In G. Roberts (ed.), *Chemical History: Reviews of the Recent Literature* (Royal Society of Chemistry, 2005), pp. 135-153.
- T. Arabatzis, "Experiment." In M. Horowitz (ed.), *New Dictionary of the History of Ideas*, Vol. 2 (Detroit: Charles Scribner's Sons, 2005), pp. 765-769.
- T. Arabatzis and K. Gavroglu, "Criogenia, superconduttività e superfluidità." In

*Storia della scienza*, 10 vols., editor-in-chief Sandro Petruccioli (Roma: Istituto della Enciclopedia Italiana, 2001-2004), vol. VIII, 2004, pp. 423-430.

- T. Arabatzis, "Towards a historical ontology?" *Studies in History and Philosophy of Science* **34** (2003), 431-442.
- T. Arabatzis, "Thermodynamics and statistical mechanics." In J. L. Heilbron (ed.), *The Oxford Companion to the History of Modern Science* (Oxford University Press, 2003), pp. 798-799.
- T. Arabatzis and K. Gavroglu, "Entropy." In J. L. Heilbron (ed.), *The Oxford Companion to the History of Modern Science* (Oxford University Press, 2003), pp. 268-269.
- T. Arabatzis, "The Zeeman effect and the discovery of the electron." In J. Z. Buchwald and A. Warwick (eds.), *Histories of the Electron: the Birth of Microphysics* (Cambridge, Mass.: MIT Press, 2001), pp. 171-194.
- T. Arabatzis, "Can a historian of science be a scientific realist?" *Philosophy of Science* **68**, suppl. (2001), S531-S541.
- T. Arabatzis, "History of science and relativism," *Neusis* **9** (2000), 75-93 (in Greek).
- T. Arabatzis, "How the electrons spend their leisure time: Philosophical reflections on a controversy between chemists and physicists." In P. Janich and N. Psarros (eds.), *The Autonomy of Chemistry: 3rd Erlenmeyer-Colloquy for the Philosophy of Chemistry* (Würzburg: Königshausen & Neumann, 1998), pp. 149-159.
- T. Arabatzis and K. Gavroglu, "The chemists' electron," *European Journal of Physics* **18** (1997), 150-163.
- T. Arabatzis, "Rethinking the 'discovery' of the electron," *Studies in History and Philosophy of Modern Physics* **27** (1996), 405-435.
- T. Arabatzis, "Remarks on the historiography of scientific discovery: The case of the electron," *Neusis* **5** (1996), 33-53 (in Greek).
- T. Arabatzis, "Rational versus sociological reductionism: Imre Lakatos and the Edinburgh school." In K. Gavroglu et al. (eds.), *Trends in the Historiography of Science*, Boston Studies in the Philosophy of Science 151 (Dordrecht: Kluwer, 1994), pp. 177-192.
- T. Arabatzis, "The discovery of the Zeeman effect: A case study of the interplay between theory and experiment," *Studies in History and Philosophy of Science* **23** (1992), 365-388.

### **Invited lectures**

- "Integrated HPS in historical perspective," International Summer School in Social and Historical Epistemology, University of Pécs (Hungary), 30 June – 8 July 2014.
- "That the Michelson-Morley experiment paved the way for the special theory of relativity: The Myth that Isn't," Conference: Newton's apple and other historical

myths about science," Washington & Lee University, Lexington, Virginia, 9-10 May 2014.

- "Telling (and evaluating) philosophical tales about the scientific past," International Workshop: The Philosophy of Historical Case Studies, Bern, 21-22 November 2013.
- "The prospects of integrated HPS: Historical philosophy of science and philosophical history of science," Science and Reality Conference, Rotman Institute of Philosophy, Western University, London, Ontario, Canada, 5-6 October 2013.
- "What is wrong with the received view of the discovery of the electron?" Institute of Physics and Astronomy, University of Aarhus, 26 June 2013.
- "Philosophical history of science," Hungarian Academy of Sciences, Budapest, 15 May 2013.
- "*The Structure of Scientific Revolutions* and the prospects of philosophical history of science," Conference: Towards a history of the history of science: 50 years since "Structure", Max Planck Institute for the History of Science, Berlin, 17-20 October 2012.
- "Scientific realism and the history of experimentation," Conference: Scientific realism in light of the history of science, Dept. of Philosophy, Durham University, 7-8 September 2012.
- "Theoretical concepts and experimental practice," Institut für Philosophie, Universität Bonn, 10 November 2011.
- "The prospects of integrating history and philosophy of science," Centre for the History of Science, Universitat Autònoma de Barcelona, 26 June 2011.
- "Forming a concept vs discovering an entity: the case of the electron," Conference: Concepts, Induction, and the Growth of Knowledge, Dept. of History and Philosophy of Science, Univ. of Pittsburgh, 17-19 Sept. 2010.
- "Analogies in Bohr's atomic model," Historisches Institut, Abt. für Geschichte der Naturwissenschaften und Technik, Universität Stuttgart, 22 June 2010.
- "The historicity of scientific objects," Institut d'histoire et de philosophie des sciences et des techniques, Université Paris-1, 19 May 2010.
- "Experimentation and the meaning of scientific concepts," L'École des hautes études en sciences sociales, Paris, 17 May 2010.
- "Hidden entities and experimental practice: renewing the dialogue between history and philosophy of science," Equipe REHSEIS - Université Paris 7, 11 May 2010.
- "The memory of concepts: a subject for historical epistemology," Conference: Historical Epistemology, Institute of Philosophy of the University of Leuven, Leuven, 10-12 December 2009.
- "Biographies of theoretical entities vs. scientific biographies," Conference: The Sciences in Historical and Philosophical Context, Universität Wien, 27th-28th November 2009.

- "Experimentation and the meaning of scientific concepts," Workshop: Scientific Concepts and Investigative Practice, Technische Universität, Berlin, 22-23 May 2009.
- "Hidden entities and experimental practice: towards a two-way traffic between history and philosophy of science," The Vienna Circle Institute, Universität Wien, 15 October 2008.
- "The historicity of scientific objects: from cathode rays to electrons," Conference: What (Good) Is Historical Epistemology? Max Planck Institute for the History of Science, Berlin, 24-26 July 2008.
- "Experimenting on (and with) hidden Entities: the inextricability of representation and intervention," Workshop: Generating Experimental Knowledge, Bergische Universität Wuppertal, Wuppertal, 14-16 June 2007.
- "The electron's hesitant passage to modernity, 1913-1925," Conference: Modernism in the Sciences, ca. 1900-1940, Universität Frankfurt am Main, Frankfurt, 22-24 March 2006.
- "Conceptual change and scientific realism: Facing Kuhn's challenge," European Association for Research on Learning and Instruction, 4<sup>th</sup> European Symposium, Conceptual Change, Delphi, 19-23 May 2004.
- "Hypothetical demonstration or 'conceptual construction backwards: Comments on Jim Lennox and Roger Ariew," Proof and Demonstration in Philosophy and Science: The 4th Athens-Pittsburgh Symposium in the History and Philosophy of Science and Technology, Delphi, 1-6 June 2003.
- "On the inextricability of the context of discovery and the context of justification," Conference: "Revisiting Discovery and Justification", Max Planck Institute for the History of Science, Berlin, 28 February-3 March 2002.
- "Revisiting the discovery of the electron: what is wrong with the received view?" Johannes Gutenberg-Universität Mainz, 21 February 2002.
- "The 'discovery' of the electron and the atomism debate," Dibner Institute, MIT, 1 May 2001.
- "Fashioning a quantum identity: a chapter from the life of the electron," Conference: The Electron and the Birth of Microphysics, Dibner Institute, MIT, Boston, 9-10 May 1997.
- "The electron and the construction of the 'old' quantum theory: a chapter from the biography of a theoretical entity," Conference of the British Society for the History of Science: The Electron, 100 Years of Physics and History, Science Museum, London, 18-19 April 1997.
- "How the electrons spend their leisure time: methodological reflections on a controversy between chemists and physicists," The 3rd Erlenmeyer-Colloquy for the Philosophy of Chemistry at the University of Marburg, Marburg, 16-17 September 1996.
- "Rational or sociological reconstruction of science?" Conference: Contemporary Trends in the Historiography of Science, Corfu, 27 May -1 June 1991.