Publications

Scott A. Walter

PEER-REVIEWED ARTICLES

1. Henri Poincaré's life, science, and life in science. *Historia Mathematica*, 2017; doi 10.1016/j.hm.2017.05.001.

2. Poincaré on clocks in motion. *Studies in History and Philosophy of Modern Physics* 47(1), 2014, 131–141; doi 10.1016/j.shpsb.2014.01.003.

3. Hermann Minkowski's approach to physics. *Mathematische Semesterberichte* 55(2), 2008, 213-235; doi 10.1007/s00591-008-0044-4.

4. La vérité en géométrie : sur le rejet mathématique de la doctrine conventionnaliste. *Philosophia Scientiæ* 2(3), 1997, 103–135.

5. Henri Poincaré's student notebooks, 1870–1878. *Philosophia Scientiæ* 1(4), 1996, 1–17.

EDITED BOOKS

1. With David Rowe and Tilman Sauer. *Beyond Einstein*. Basel: Birkhäuser, to appear in 2017.

2. *La Correspondance entre Henri Poincaré, les astronomes, et les géodésiens*. Basel: Birkhäuser, 391 p., 2016; doi 10.1007/978-3-7643-8293-3.

3. *La Correspondance entre Henri Poincaré et les physiciens, chimistes et ingénieurs*. Basel: Birkhäuser, 515 p., 2007. ISBN: 978-3-7643-7136-4; doi 10.1007/978-3-7643-8303-9.

4. With Jeremy Gray. *Henri Poincaré :* Trois suppléments sur la découverte des fonctions fuchsiennes. Berlin: Akademie-Verlag, 1997. *Mathematical Reviews* 1998m:01018.

BOOK CHAPTERS

1. Poincaré-Week in Göttingen in light of the Hilbert-Poincaré correspondence of 1908–1909. Forthcoming in Maria Teresa Borgato & Irène Passeron, eds, *Scientific Correspondences*. Berlin: Springer.

2. Figures of light in the history of relativity (1905–1914). In D. Rowe, T. Sauer, and S. Walter (eds.), *Beyond Einstein* (Einstein Studies), Basel: Birkhäuser, forthcoming (2017).

3. The historical origins of spacetime. In A. Ashtekar and V. Petkov (eds.), *Springer Handbook of Spacetime*. Berlin: Springer, 2014, 27–38.

4. Henri Poincaré, theoretical physics and relativity theory in Paris. In K.-H. Schlote and M. Schneider (eds.), *Mathematics Meets Physics*. Frankfurt am Main: Harri Deutsch, 2011, 213–239.

5. Moritz Schlick's reading of Poincaré's theory of relativity. In F. O. Engler and M. Iven (eds.), *Moritz Schlick: Ursprünge und Entwicklungen seines Denkens,* Schlickiana 5. Berlin: Parerga Verlag, 2010, 191–203.

6. L'hypothèse naturelle, ou quatre jours dans la vie de Gerhard Heinzmann. In P. E. Bour, M. Rebuschi and L. Rollet (eds.), *Construction: Festschrift for Gerhard Heinzmann*. London: College Publications, 2010, 129–135.

7. Minkowski's modern world. In V. Petkov (ed.), *Minkowski Spacetime: A Hundred Years Later*. Berlin: Springer, 2010, 43–61.

8. Hypothesis and convention in Poincaré's defense of Galilei spacetime. In M. Heidelberger et G. Schiemann (eds.), *The Significance of the Hypothetical in the Natural Sciences*. Berlin: Walter de Gruyter, 2009, 193–219.

9. Henri Poincaré et l'espace-temps conventionnel. *Cahiers de philosophie de l'université de Cæn*

10. Breaking in the 4-vectors: the four-dimensional movement in gravitation, 1905–1910. In Jürgen Renn and Matthias Schemmel (eds.), *The Genesis of General Relativity, 4 vols. (Boston Studies in the Philosophy of Science 250), Volume 3, Gravitation in the Twilight of Classical Physics: Between Mechanics, Field Theory, and Astronomy*, 193–252. Berlin: Springer, 2007.

11. Minkowski, mathematicians, and the mathematical theory of relativity. In Hubert Goenner, Jürgen Renn, Jim Ritter and Tilman Sauer (eds.), *The Expanding Worlds of General Relativity* (Einstein Studies 7), 45–86. Boston: Birkhäuser, 1999. *General Relativity and Gravitation* 32, 2000, 2099–2104; doi 10.1023/A:1001910922071.

12. The non-Euclidean style of Minkowskian relativity. In Jeremy Gray (ed.), *The Symbolic Universe: Geometry and Physics, 1890–1930*, 91–127. Oxford: Oxford University Press, 1999. *Mathematical Reviews* 2001g:01032.

ARTICLES IN CONGRESS PROCEEDINGS

1. Mathematical Milky Way models from Kelvin and Kapteyn to Poincaré, Jeans and Einstein. *Oberwolfach Reports* 12(4), 2015, 2081–2082.

2. Discipline and style in relativity theory, 1905–1915. *Oberwolfach Reports* 7(1), 2010.

3. It's only a model: spacetime geometry in the transition from Galilean to relativistic kinematics. *Oberwolfach Reports* 5(2), 2008.

4. Who's a conventionalist? Henri Poincaré's correspondence with physicists. *Oberwolfach Reports* 4(2), 2005.

5. La solution de Kaluza au paradoxe d'Ehrenfest. In Dominique Flament (ed.), *Dimension, dimensions*. Paris: Éditions de la Maison des sciences de l'homme, 1999.

6. Truth in geometry : metrical conventions and Minkowskian relativity. In Dominique Flament (ed.), *Histoires de géométries : textes du séminaire de l'année 1996*, 61–76. Paris: Éditions de la Maison des sciences de l'homme, 1998.

7. The Sonar Ring: obstacle detection for a mobile robot. *Proceedings 1987 IEEE International Conference on Robotics and Automation,* Volume 3, IEEE Robotics and Automation Council (ed.), Washington: Computer Society Press, 1987, 1574–1579; doi 10.1109/ROBOT.1987.1087902.

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1. Revisiting the Foundations of Relativistic Physics. Edited by Abhay Ashtekar et al. *American Journal of Physics* 72(7), 2004, 974–975; doi 10.1119/1.1761068.

2. Beyond the Einstein Addition Law and the Gyroscopic Thomas Precession, by Abraham A. Ungar. *Foundations of Physics* 32(2), 2002, 327–330.

3. How Maxwell made his mark: Electrodynamics from Ampère to Einstein, by Olivier Darrigol. *Nature* 409, 2001-01-18, 283–284; doi 10.1038/35053149.

4. The Collected Papers of Albert Einstein, vol. 6. Edited by Anne J. Kox et al. *Revue d'histoire des sciences* 52, 1999, 163–164.

NON-SPECIALIST PUBLICATIONS AND TRANSLATIONS

1. L'histoire des sciences pour les robots : les humanités numériques aux Archives Henri Poincaré. *La lettre de l'INSHS*, N° 29, mai 2014.

2. Hermann Minkowski and the scandal of spacetime. *ESI News* (Vienna) 3(1), 2008, 6–8.

3. On the dynamics of the electron, by Henri Poincaré (1906). Translated from the French by Scott A. Walter. In Jürgen Renn and Matthias Schemmel (eds.), *The Genesis of General Relativity, Volume 3, Gravitation in the Twilight of Classical Physics: Between Mechanics, Field Theory, and Astronomy,* 253–271. Berlin: Springer, 2007.

4. Poincaré, Henri. In Noretta Koertge (ed.), *New Dictionary of Scientific Biography*, 8 vols, vol. 6, 121–125. New York: Scribner's Sons, 2007.

5. Poincaré, Henri. In John Merriman and Jay Winter (eds.), *Europe 1789–1914, Encyclopedia of the Age of Industry and Empire, Volume 4: 1805–1806.* New York: Scribner's Sons, 2006.

6. Henri Poincaré and the theory of relativity. In Jürgen Renn (ed.), *Albert Einstein, Chief Engineer of the Universe: 100 Authors for Einstein,* 162–165. Berlin: Wiley-VCH, 2005.

7. Henri Poincaré und die Relativitätstheorie. In Jürgen Renn (ed.), *Albert Einstein, Ingenieur des Universums: 100 Autoren für Einstein,* 162–165. Berlin: Wiley-VCH, 2005.

8. Éther. In Dominique Lecourt (ed.), *Dictionnaire d'histoire et philosophie des sciences*, 381–384. Paris: Presses universitaires de France, 1999.

DOCUMENTARIES

1. *A la recherche de Henri Poincaré.* Web documentaire de 12 minutes produit par Vidéoscop, réalisé par Philippe Thomine en 2011.

2. With Gerhard Heinzmann. *Le monde est-il mathématique ?* Documentaire de 52 minutes produit par Vidéoscop, réalisé par Philippe Thomine en 2004. N° 4 de la série Sciences et philosophie. Les Amphis de France 5 : Philosophie.

MEDIA

1. *La Bibliographie d'Henri Poincaré*. Publication électronique de la bibliographie de Henri Poincaré (2002) : henripoincarepapers.univ-nantes.fr/bibliohp/

2. *La Correspondance d'Henri Poincaré*. Publication en ligne de la correspondance et des manuscrits divers d'Henri Poincaré, sous forme d'images numérisées, et de transcriptions annotées (2002) : henripoincarepapers.univ-nantes.fr/corresphp/

3. *Henri Poincaré : Les cahiers de jeunesse 1870–1878*. Édition sur microfilm de dix-sept cahiers de jeunesse d'Henri Poincaré avec une notice de synthèse et une table des matières, 1993. Institutions dépositaires : REHSEIS (UMR 7596), Paris; Archives Henri Poincaré (UMR 7117), Nancy; American Institute of Physics Niels Bohr Library, College Park, Maryland.

THESIS

Hermann Minkowski et la mathématisation de la théorie de la relativité restreinte, 1905–1915. Université Denis Diderot (Paris 7), 1996.