Papers by subject area

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My research covers several different areas; what follows is my attempt to tease out the threads. Some of the classifications are a bit arbitrary, but hopefully this still helps with navigating the articles.

1 The dynamical approach to spacetime

1.1 General discussion

- 1. Harvey R. Brown and James Read, "The Dynamical Approach to Spacetime Theories", in E. Knox and A. Wilson (eds.), *The Routledge Companion to Philosophy of Physics*, London: Routledge, 2021.
- James Read, "Explanation, Geometry, and Conspiracy in Relativity Theory", in C. Beisbart, T. Sauer and C. Wüthrich (eds.), *Thinking About* Space and Time: 100 Years of Applying and Interpreting General Relativity, Einstein Studies series, vol. 15, Basel: Birkhäuser, 2020.
- James Read, "Geometrical Constructivism and Modal Relationalism: Further Aspects of the Dynamical/Geometrical Debate", *International Studies in the Philosophy of Science* 33, pp. 23-41, 2020.

1.2 The local validity of special relativity

- James Read, Harvey R. Brown and Dennis Lehmkuhl, "Two Miracles of General Relativity", *Studies in History and Philosophy of Modern Physics* 64, pp. 14-25, 2018.
- Niels Linnemann and James Read, "Miracles Persist: A Reply to Sus", European Journal for Philosophy of Science 12(18), 2022.
- 3. Guy Hetzroni and James Read, "How to Teach General Relativity", submitted to *British Journal for the Philosophy of Science*, 2022.
- 4. Niels Linnemann, James Read and Nicholas J. Teh, "The Local Validity of Special Relativity from an EFT-inspired Perspective", submitted to *British Journal for Philosophy of Science*, 2023.

1.3 In the context of various theories

- James Read, "On Miracles and Spacetime", Studies in History and Philosophy of Modern Physics 65, pp. 103-111, 2019.
- 2. Lu Chen and James Read, "Is the Metric Signature Really Electromagnetic in Origin?", forthcoming in *Philosophy of Physics*, 2023.

1.4 Spacetime functionalism

- James Read and Tushar Menon, "The Limitations of Inertial Frame Spacetime Functionalism", Synthese 199, pp. 229-251, 2021.
- James Read and Bryan Cheng, "Euclidean Spacetime Functionalism", Synthese 200, pp. 1-22, 2022.

1.5 Related material

- James Read, Special Relativity, Cambridge: Cambridge University Press, 2023.
- Harvey R. Brown and James Read, "Clarifying Possible Misconceptions in the Foundations of General Relativity", *American Journal of Physics* 84(5), pp. 327-334, 2016.
- Tushar Menon, Niels Linnemann and James Read, "Clocks and Chronogeometry: Rotating Spacetimes and the Relativistic Null Hypothesis", British Journal for the Philosophy of Science 71, pp. 1287-1317, 2020.
- Carl Hoefer, Nick Huggett and James Read, "Absolute and Relational Space and Motion: Classical Theories", in E. N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy*, 2021.
- 5. Carl Hoefer, Nick Huggett and James Read, "Absolute and Relational Space and Motion: Post-Newtonian Theories", in E. N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy*, 2021.

2 Symmetries and dualities in physics

2.1 Noether's theorems

- 1. James Read and Nicholas J. Teh (eds.), *The Philosophy and Physics of Noether's Theorems*, Cambridge: Cambridge University Press, 2022.
- James Read, "Geometric Objects and Perspectivalism", in J. Read and N. Teh (eds.), *The Philosophy and Physics of Noether's Theorems*, Cambridge: Cambridge University Press, 2022.

2.2 Dualities

- James Read, "The Interpretation of String-Theoretic Dualities", Foundations of Physics 46(2), pp. 209-235, 2016.
- 2. Baptiste Le Bihan and James Read, "Duality and Ontology", *Philosophy Compass* 13, e12555, 2018.
- James Read and Thomas Møller-Nielsen, "Motivating Dualities", Synthese 197, pp. 263-291, 2020.

2.3 Symmetries

- James Read and Thomas Møller-Nielsen, "Redundant Epistemic Symmetries", Studies in History and Philosophy of Modern Physics 70, pp. 88-97, 2020.
- Niels C. M. Martens and James Read, "Sophistry About Symmetries?", Synthese 199, pp. 315-344, 2021.

3 Shift arguments, including the hole argument

- 1. Oliver Pooley and James Read, "On the Mathematics and Metaphysics of the Hole Argument", forthcoming in *British Journal for the Philosophy of Science*, 2021.
- Bryan Cheng and James Read, "Shifts and Reference", in A. Vassallo (ed.), *The Foundations of Spacetime Physics: Philosophical Perspectives*, London: Routledge, 2022.
- John Norton, Oliver Pooley and James Read, "The Hole Argument", in E. N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy*, 2023.
- 4. Tushar Menon and James Read, "Some Remarks on Recent Formalist Responses to the Hole Argument", submitted to *Foundations of Physics*, 2023.

4 Background independence

 James Read, Background Independence in Classical and Quantum Gravity, Oxford: Oxford University Press, 2023.

5 Teleparallel gravity and non-relativistic limits

5.1 Mathematical results

 James Read and Nicholas J. Teh, "The Teleparallel Equivalent of Newton-Cartan Gravity", *Classical and Quantum Gravity* 35, 18LT01, 2018.

- Neil Dewar and James Read, "Conformal Invariance of the Newtonian Weyl Tensor", *Foundations of Physics* 50, pp. 1418-1425, 2020.
- William J. Wolf, James Read and Nicholas J. Teh, "Edge Modes and Dressing Fields for the Newton-Cartan Quantum Hall Effect", *Foundations of Physics* 53(3), 2023.
- 4. William J. Wolf and James Read, "The Non-Relativistic Geometric Trinity of Gravity", submitted to *Classical and Quantum Gravity*, 2023.
- Eleanor March, William J. Wolf and James Read, "On the Geometric Trinity of Gravity, Non-Relativistic Limits, and Maxwell Gravitation", submitted to *Philosophy of Physics*, 2023.
- Eleanor March, James Read, Nicholas J. Teh and William J. Wolf, "The Meskhidze-Weatherall Theory in Context", submitted to *Philosophy of Science*, 2023.

5.2 Philosophical discussion

- 1. James Read and Nicholas J. Teh, "Newtonian Equivalence Principles", forthcoming in *Erkenntnis*, 2022.
- William J. Wolf and James Read, "Respecting Boundaries: Theoretical Equivalence and Structure Beyond Dynamics", forthcoming in *European Journal for Philosophy of Science*, 2023.
- 3. William J. Wolf, Marco Sanchioni and James Read, "Underdetermination in Classic and Modern Tests of General Relativity", submitted to *European Journal for Philosophy of Science*, 2023.
- Johannes Fankhauser and James Read, "Gravitational Redshift Revisited: Inertia, Geometry, and Charge", submitted to Studies in History and Philosophy of Science, 2023.
- 5. Ruward Mulder and James Read, "Is Spacetime Curved? Assessing the Underdetermination of General Relativity and Teleparallel Gravity", submitted to *Synthese*, 2023.

6 Gravitational energy

- Patrick Dürr and James Read, "Gravitational Energy in Newtonian Gravity— A Response to Dewar and Weatherall", *Foundations of Physics* 49, pp. 1086-1110, 2019.
- James Read, "Functional Gravitational Energy", British Journal for the Philosophy of Science 71, pp. 205-232, 2020.

- Niels Linnemann and James Read, "On the Status of Newtonian Gravitational Radiation", Foundations of Physics 51(53), 2021.
- Sebastián Murgueitio Ramírez, James Read and Andrés Páez, "Causation and the Conservation of Energy in General Relativity", forthcoming in British Journal for the Philosophy of Science, 2023.
- 5. Caspar Jacobs and James Read, "Absolute Representations and Modern Physics", submitted to *Philosophical Studies*, 2023.

7 Analogue gravity

- Bryan Cheng and James Read, "Why Not a Sound Postulate?", Foundations of Physics 51(72), 2021.
- Sundance O. Bilson-Thompson, Scott L. Todd, James Read, Valentia Baccetti and Nicolas C. Menicucci, "Tachyonic Media in Analogue Models of Special Relativity", forthcoming in *Physical Review D*, 2023.

8 Light in curved spacetimes

- Niels Linnemann and James Read, "Comment on 'Do Electromagnetic Waves Always Propagate Along Null Geodesics?", Classical and Quantum Gravity 38, 238001, 2021.
- 2. Felipe A. Asenjo, Sergio A. Hojman, Niels Linnemann and James Read, "Abnormal Light Propagation and the Underdetermination of Theory by Evidence in Astrophysics", submitted to *Annals of Physics*, 2023.

9 The epistemology of spacetime

- 1. Emily Adlam, Niels Linnemann and James Read, *Constructive Axiomatics in Spacetime Physics*, Oxford: Oxford University Press, 2024. (Under contract.)
- Neil Dewar, Niels Linnemann and James Read, "The Epistemology of Spacetime", *Philosophy Compass* 17, e12821, 2022.
- 3. Patrick Dürr and James Read, "Reconsidering Conventionalism: An Invitation to a Sophisticated Philosophy for Modern (Space-)Times", submitted to *Synthese*, 2023.
- Marta Bielińska and James Read, "Testing Spacetime Orientability", Foundations of Physics 53(8), 2023.

10 Time and tense

1. James Read and Emily Qureshi-Hurst, "Getting Tense About Relativity", *Synthese* 198, pp. 8103-8125, 2021.

11 Philosophy of quantum gravity

1. James Read and Baptiste Le Bihan, "The Landscape and the Multiverse: What's the Problem?", *Synthese* 199, pp. 7749-7771, 2021.

12 Foundations of quantum mechanics

- James Read, "In Defence of Everettian Decision Theory", Studies in History and Philosophy of Modern Physics 63, pp. 136-140, 2018.
- 2. James Read, "Review of *The World in the Wave Function*, by Alyssa Ney", forthcoming in *Mind*, 2022.

13 Mathematics of QFT and number theory

- Yang-Hui He, John McKay and James Read, "Modular Subgroups, Dessins d'Enfants and Elliptic K3 Surfaces", LMS Journal of Computation and Mathematics 16, pp. 271-318, 2013.
- 2. Yang-Hui He and James Read, "Dessins d'Enfants in $\mathcal{N} = 2$ Generalised Quiver Theories", Journal of High Energy Physics 85(8), 2015.
- 3. Yang-Hui He and James Read, "Hecke Groups, Dessins d'Enfants and the Archimedean Solids", *Frontiers in Physics* 3(91), 2015.
- Yang-Hui He, Zhi Hu, Malte Probst and James Read, "Yang-Mills Theory and the ABC Conjecture", *International Journal of Modern Physics A* 33(13), 2018.
- Jiakang Bao, Omar Foda, Yang-Hui He, Edward Hirst, James Read, Yan Xiao and Futoshi Yagi, "Dessins d'Enfants, Seiberg-Witten Curves and Conformal Blocks", *Journal of High Energy Physics* 65, 2021.

14 Philosophy of science

1. Sam Baron, Baptiste Le Bihan and James Read, "Science and Possibility", submitted to *Philosophical Studies*, 2023.

15 Philosophy of biology

1. James Read and Sumana Sharma, "Hypothesis-driven Science in Largescale Studies: The Case of GWAS", *Biology & Philosophy* 36(46), 2021.