

# Publications

Thomas Müller, Universität Konstanz, July 23, 2024

## A. Books

2. Belnap, N., Müller, T., and Placek, T. (2022). *Branching Space-Times. Theory and Applications*. Oxford Studies in Philosophy of Science. Oxford University Press, Oxford
1. Müller, T. (2002a). *Arthur Priors Zeitlogik Eine problemorientierte Darstellung*. Paderborn: mentis  
Review by N. Strobach in *Journal for General Philosophy of Science* **35** (2004), p. 403-411.

## B. Edited volumes and special issues

11. Mulder, J., Ometto, D., van Miltenburg, N., and Müller, T., editors (2022). *Causality and Determination, Powers and Agency: Anscombian Perspectives*. Topical Collection of *Synthese*.
10. Müller, T., Rumberg, A., and Wagner, V., editors (2019). *Real possibilities, indeterminism and free will*. Special issue of *Synthese* 196(1).
9. Ju, S., Löwe, B., Müller, T., and Xie, Y., editors (2016). *Cultures of mathematics and logic. Selected papers from the conference in Guangzhou, China, November 9-12, 2012*. Trends in the history of science. Birkhäuser, Basel
8. Müller, T., editor (2014b). *Nuel Belnap on Indeterminism and Free Action*, volume 2 of *Outstanding Contributions to Logic*. Springer, Cham
7. François, K., Löwe, B., Müller, T., and Van Kerkhove, B., editors (2011). *Foundations of the Formal Sciences VII. Bringing together Philosophy and Sociology of Science*, volume 32 of *Studies in Logic*. London: College Publications
6. Löwe, B. and Müller, T., editors (2010a). *PhiMSAMP. Philosophy of Mathematics: Sociological Aspects and Mathematical Practice*, volume 11 of *Texts in Philosophy*. London: College Publications
5. Frege, G. (2009). *Grundgesetze der Arithmetik. Begriffsschriftlich abgeleitet. Band I und II*. Paderborn: mentis. Edited by T. Müller, B. Schröder and R. Stuhlmann-Laeisz
4. Buldt, B., Löwe, B., and Müller, T., editors (2008). *Towards a new epistemology of mathematics*. Special issue of *Erkenntnis* 68(3).
3. Müller, T. and Placek, T., editors (2007). Special corner: *Branching space-times*. In *Studies on the History and Philosophy of Modern Physics* 38(3).
2. Müller, T., editor (2007c). *Philosophie der Zeit. Neue analytische Ansätze*, volume 24 of *Klostermann Rote Reihe*. Frankfurt a.M.: Klostermann
1. Müller, T. and Newen, A., editors (2007). *Logik, Begriffe, Prinzipien des Handelns. Logic, Concepts, Principles of Action*. Paderborn: mentis

## C. Refereed journal papers and conference contributions

60. Flamini, F., Krumm, M., Fiderer, L. J., Müller, T., and Briegel, H. J. (2024). Towards interpretable quantum machine learning via single-photon quantum walks. *Quantum Science and Technology*, 9:045011
59. Müller, T. and Placek, T. (2023). On the condition of Setting Independence. *European Journal for the Philosophy of Science*, 13:53
58. Müller, T. (2023a). Taming Pereboom's wild coincidences. *Mind*, 132(527):789–802
57. Müller, T. (2023b). The weight of Wittgenstein's standard metre. *Philosophical Investigations*, 46(2):164–179

56. Eva, B., Ried, K., Müller, T., and Briegel, H. J. (2023). How a Minimal Learning Agent can Infer the Existence of Unobserved Variables in a Complex Environment. *Minds and Machines*, 33:185–219
55. Müller, T. (2022). "Let's build an Anscombe box": assessing Anscombe's rebuttal of the statistics objection against indeterminism-based free agency. *Synthese*, 200:74
54. López-Incera, A., Nouvian, M., Ried, K., Müller, T., and Briegel, H. J. (2021). Honeybee communication during collective defence is shaped by predation. *BMC Biology*, 19:106
53. Belnap, N., Müller, T., and Placek, T. (2021). New Foundations for Branching Space-Times. *Studia Logica*, 109:239–284
52. López-Incera, A., Ried, K., Müller, T., and Briegel, H. J. (2020). Development of swarm behavior in artificial learning agents that adapt to different foraging environments. *PLoS One*, 15(12):e0243628
51. Müller, T. (2020). Defining a Relativity-Proof Notion of the Present via Spatio-temporal Indeterminism. *Foundations of Physics*, 50:644–664
50. Müller, T. (2019). The reversibility objection against the Second Law of thermodynamics viewed, and avoided, from a logical point of view. *Studies in History and Philosophy of Modern Physics*, 66:55–61
49. Ried, K., Müller, T., and Briegel, H. J. (2019). Modelling collective motion based on the principle of agency: General framework and the case of marching locusts. *PLoS One*, 14(2):e0212044
48. Müller, T. and Briegel, H. J. (2018). A Stochastic Process Model for Free Agency under Indeterminism. *dialectica*, 72(2):219–252
47. Müller, T. and Placek, T. (2018). Defining Determinism. *British Journal for the Philosophy of Science*, 69:215–252
46. Müller, T. (2015). Time and Determinism. *Journal of Philosophical Logic*, 44(6):729–740
45. Briegel, H. J. and Müller, T. (2015). A chance for attributable agency. *Minds and Machines*, 25(3):261–279
44. Müller, T. (2014c). Things in possible experiments: Case-intensional logic as a framework for tracing things from case to case. In Galavotti, M. C., Dieks, D., Gonzales, W. J., Hartmann, S., Uebel, T., and Weber, M., editors, *New directions in the philosophy of science*, volume 5 of *The Philosophy of Science in a European Perspective*, pages 3–14. Berlin: Springer
43. Belnap, N. and Müller, T. (2014a). BH-CIFOL: Case-Intensional First Order Logic. (II) Branching histories. *Journal of Philosophical Logic*, 43(5):835–866
42. Belnap, N. and Müller, T. (2014b). CIFOL: Case-Intensional First Order Logic. (I) Toward a Theory of Sorts. *Journal of Philosophical Logic*, 43(2):393–437
41. Müller, T. (2014a). Alternatives to Histories? Employing a Local Notion of Modal Consistency in Branching Theories. *Erkenntnis*, 79(3):343–364
40. Müller, T. (2013). A generalized manifold topology for branching space-times. *Philosophy of Science*, 80:1089–1100
39. Müller, T. (2012b). Indeterminism and Persistence. *Philosophia Naturalis*, 49(1):113–136
38. Müller, T. (2012a). Branching in the landscape of possibilities. *Synthese*, 188(1):41–65
37. Müller, T. and Strobach, N. (2012). A letter on the present state of affairs. Prior, indeterminism and relativity 40 years later. *Synthese*, 188(3):469–485
36. Löwe, B. and Müller, T. (2011). Data and phenomena in conceptual modelling. *Synthese*, 182(1):131–14
35. Müller, T. (2011b). Probabilities in branching structures. In Dieks, D., Gonzales, W. J., Hartmann, S., Uebel, T., and Weber, M., editors, *Explanation, prediction and confirmation*, volume 2 of *The Philosophy of Science in a European Perspective*, pages 109–121. Berlin: Springer

34. Belnap, N. and Müller, T. (2010). Branching with Uncertain Semantics. Discussion Note on Saunders and Wallace, ‘Branching and Uncertainty’. *British Journal for the Philosophy of Science*, 61(3):681–696
33. Löwe, B., Müller, T., and Müller-Hill, E. (2010). Mathematical knowledge as a case study in empirical philosophy of mathematics. In Bart Van Kerkhove, Jonas De Vuyst, J. P. V. B., editor, *Philosophical Perspectives on Mathematical Practice*, volume 12 of *Texts in Philosophy*, chapter 8, pages 185–203. London: College Publications
32. Müller, T. (2010c). Towards a Theory of Limited Indeterminism in Branching Space-times. *Journal of Philosophical Logic*, 39(4):395–423
31. Löwe, B. and Müller, T. (2010b). Skills and mathematical knowledge. In Löwe, B. and Müller, T., editors, *PhiMSAMP, Philosophy of Mathematics: Sociological Aspects and Mathematical Practice*, volume 11 of *Texts in Philosophy*, pages 265–280. London: College Publications
30. Müller, T., Belnap, N., and Kishida, K. (2008). Funny business in branching space-times: infinite modal correlations. *Synthese*, 164(1):141–159
29. Buldt, B., Löwe, B., and Müller, T. (2008). Towards a new epistemology of mathematics. *Erkenntnis*, 68(3):309–329
28. Löwe, B. and Müller, T. (2008). Mathematical Knowledge is Context Dependent. *Grazer Philosophische Studien*, 76(1):91–107
27. Müller, T. (2008b). On the fine structure of promising. In Bohse, H. and Walter, S., editors, *Ausgewählte Beiträge zu den Sektionen der GAP.6*, pages 995–1007. Paderborn: mentis
26. Müller, T. (2008a). Living up to One’s Commitments: Agency, Strategies and Trust. *Journal of Applied Logic*, 6(2):251–266
25. Neth, H. and Müller, T. (2008). Thinking by Doing and Doing by Thinking: A Taxonomy of Actions. In Love, B. C., McRae, K., and Sloutsky, V. M., editors, *Proceedings of the thirtieth annual meeting of the Cognitive Science Society*, pages 993–998. Austin, TX: Cognitive Science Society
24. Müller, T. (2007d). Prior’s tense-logical universalism. *Logique et Analyse*, 199:223–252
23. Müller, T. (2007b). A branching space-times view on quantum error correction. *Studies In History and Philosophy of Modern Physics*, 38(3):635–652
22. Müller, T. (2007a). Branch Dependence in the “Consistent Histories” Approach to Quantum Mechanics. *Foundations of Physics*, 37(2):253–276
21. Placek, T. and Müller, T. (2007). Counterfactuals and historical possibility. *Synthese*, 154(2):173–197
20. Hötte, T. and Müller, T. (2006). Towards an Epistemic Logic of Concepts. In H. Schärfe, P. H. u. P. Ø., editor, *Conceptual Structures: Inspiration and Application*, number 4068/2006 in *Lecture Notes in Computer Science*, pages 274–285. Berlin: Springer
19. Müller, T. (2006c). A Question of Trust: Assessing the Fulfillment of Commitments in Terms of Strategies. In Goble, L. and Meyer, J. J., editors, *Deontic Logic and Artificial Normative Systems*, volume 4048/2006 of *Lecture Notes in Computer Science*, pages 210–221. Berlin: Springer
18. Müller, T. (2005c). Probability theory and causation: a Branching Space-Times analysis. *The British Journal for the Philosophy of Science*, 56(3):487–520
17. Müller, T. (2005b). On the formal structure of continuous action. In Schmidt, R., Pratt-Hartmann, I., Reynolds, M., and Wansing, H., editors, *Advances in Modal Logic. Volume 5*, pages 191–209. London: King’s College Publications
16. Müller, T. (2005a). Modeling Modal Talk in Quantum Mechanics. *International Journal of Theoretical Physics*, 44(4):375–383

15. Müller, T. (2004b). The language of special relativity. In Bluhm, R. and Nimtz, C., editors, *Selected Papers Contributed to the Sections of GAP.5*, pages 1–9. Paderborn: mentis
14. Reinhard, M., Roth, M., Müller, T., Guschlbauer, B., Timmer, J., Czosnyka, M., and Hetzel, A. (2004). Effect of carotid endarterectomy or stenting on impairment of dynamic cerebral autoregulation. *Stroke*, 35(6):1381–7
13. Müller, T. (2003). Setzt die Lügner-Antinomie Grenzen für die Ausdrückbarkeit der Semantik natürlicher Sprachen? Priors Widerlegung von Tarskis Argument. In Högrefe, W., editor, *Grenzen und Grenzüberschreitungen. XIX. Deutscher Kongreß für Philosophie, Sektionsbeiträge*, pages 705–713. Bonn: Sinclair Press
12. Müller, T., Lauk, M., Reinhard, M., Hetzel, A., Lücking, C. H., and Timmer, J. (2003a). Estimation of delay times in biological systems. *Ann Biomed Eng*, 31(11):1423–1439
11. Müller, T., Reinhard, M., Oehm, E., Hetzel, A., and Timmer, J. (2003b). Detection of very low-frequency oscillations of cerebral haemodynamics is influenced by data detrending. *Med Biol Eng Comput*, 41(1):69–74
10. Reinhard, M., Müller, T., Guschlbauer, B., Timmer, J., and Hetzel, A. (2003b). Transfer function analysis for clinical evaluation of dynamic cerebral autoregulation—a comparison between spontaneous and respiratory-induced oscillations. *Physiol Meas*, 24(1):27–43
9. Reinhard, M., Roth, M., Müller, T., Czosnyka, M., Timmer, J., and Hetzel, A. (2003d). Cerebral autoregulation in carotid artery occlusive disease assessed from spontaneous blood pressure fluctuations by the correlation coefficient index. *Stroke*, 34(9):2138–44
8. Reinhard, M., Müller, T., Guschlbauer, B., Timmer, J., and Hetzel, A. (2003a). Dynamic cerebral autoregulation and collateral flow patterns in patients with severe carotid stenosis or occlusion. *Ultrasound Med Biol*, 29(8):1105–1113
7. Reinhard, M., Müller, T., Roth, M., Guschlbauer, B., Timmer, J., and Hetzel, A. (2003c). Bilateral severe carotid artery stenosis or occlusion - cerebral autoregulation dynamics and collateral flow patterns. *Acta Neurochir (Wien)*, 145(12):1053–9; discussion 1059–60
6. Müller, T. (2002b). Branching space-time, modal logic and the counterfactual conditional. In Placek, T. and Butterfield, J., editors, *Modality and Non-locality*, pages 273–291. Dordrecht: Kluwer
5. Müller, T. and Placek, T. (2001). Against a minimalist reading of Bell’s theorem: Lessons from Fine. *Synthese*, 128(3):343–379
4. Müller, T. and Placek, T. (1999). Bell’s theorem in branching space-time (CLMPS XI conference presentation and abstract)
3. Müller, T. (1998). Arthur Prior’s no-property theory of tense. In Johnson, D., Philpott, M., Pincock, C., and Zach, R., editors, *Proceedings of the 1998 Stanford-Berkeley Graduate Student Philosophy Conference*. Department of Philosophy, University of California at Berkeley
2. Timmer, J., Müller, T., and Melzer, W. (1998). Numerical methods to determine calcium release flux from calcium transients in muscle cells. *Biophys J*, 74(4):1694–1707
1. Müller, T. (1996). Analyse der Calciumfreisetzung aus dem Sarkoplasmatischen Reticulum von Skelettmuskelzellen. *Biomedizinische Technik*, 41(Ergänzungsband 1):590–591

#### **D. Position papers and papers in edited volumes and handbooks**

10. Schneider, T., Behera, S., Boccaletti, G., Deser, C., Emanuel, K., Ferrari, R., Leung, L. R., Lin, N., Müller, T., Navarra, A., Ndiaye, O., Stuart, A., Tribbia, J., and Yamagata, T. (2023). Harnessing AI and computing to advance climate modeling and prediction. *Nature Climate Change*, 13:887–889

9. Müller, T. (2016). Sleeping beauty in branching time. In Freitag, W., Rott, H., Sturm, H., and Zinke, A., editors, *Von Rang und Namen. Philosophical essays in honour of Wolfgang Spohn*, pages 307–325. Mentis, Münster
8. Ziche, P. and Müller, T. (2013). Paul Oppenheim on Order. The Career of a Logico-Philosophical Concept. In Milkov, N. and Peckhaus, V., editors, *The Berlin Group and the Philosophy of Logical Empiricism*, volume 273 of *Boston Studies in the Philosophy and History of Science*, pages 265–291. Springer
7. Müller, T., Van Miltenburg, N., and Evers, D. (2013). Experimentieren mit freier Willkür. In Oomen, P., editor, *Vrije wil - een hersenkronkel? Wetenschappers en filosofen over een fascinerende vraag*, pages 141–153. Zoetermeer: Klement
6. Müller, T. (2011a). Persistenz und Indeterminismus. In Schmechtig, Pedro und Schönrich, G., editor, *Persistenz - Indexikalität - Zeiterfahrung*, volume 39 of *Philosophische Analyse*, pages 21–36. Frankfurt a.M.: Ontos
5. Müller, T. (2011c). Tense or temporal logic. In Horsten, L. and Pettigrew, R., editors, *The Continuum Companion to Philosophical Logic*, pages 324–350. London: Continuum
4. Müller, T. (2010b). Formal Methods in the Philosophy of Natural Science. In Stadler, F., editor, *The Present Situation in the Philosophy of Science, The Philosophy of Science in a European Perspective*, pages 111–123. Berlin: Springer
3. Müller, T. (2010a). Formal Methods in Philosophy of Science. In Czarnecki, T., Kijania-Placek, K., Poller, O., and Woleński, J., editors, *The Analytic Way. Proceedings of the 6th European Congress of Analytic Philosophy*, volume 25 of *Studies in Logic*, pages 203–217. London: College Publications
2. Müller, T. (2009). Eliminating modality from the determinism debate? Models vs. equations of physical theories. In Hieke, A. and Leitgeb, H., editors, *Reduction, Abstraction, Analysis. Proceedings of the 31st International Ludwig Wittgenstein-Symposium in Kirchberg, 2008*, volume 11 of *Publications of the Austrian Ludwig Wittgenstein-Society. New Series*, pages 47–62. Frankfurt a.M.: Ontos Verlag
1. Müller, T. (2006b). On the problem of defining the present in special relativity: a challenge for tense logic. In Stadler, F. and Stöltzner, M., editors, *Time and History. Proceedings of the 28. International Ludwig Wittgenstein Symposium, Kirchberg am Wechsel, Austria 2005*, pages 441–458. Frankfurt a.M.: Ontos Verlag

## E. Book reviews

2. Müller, T. (2006a). Book Review: The Proper Treatment of Events, by Michiel van Lambalgen und Fritz Hamm, Oxford: Blackwell 2005. *Erkenntnis*, 65:441–447
1. Müller, T. (2004a). Book review: What is Truth?, ed. Richard Schantz, Berlin: de Gruyter 2002. *Philosophisches Jahrbuch*, 111:455–457

## F. Translations

2. Barwise, J. and Etchemendy, J. (2006). *Sprache, Beweis und Logik II: Anwendungen und Metatheorie*. Paderborn: mentis
1. Barwise, J. and Etchemendy, J. (2005). *Sprache, Beweis und Logik I: Aussagen- und Prädikatenlogik*. Paderborn: mentis

## G. Theses

3. Müller, T. (2007e). Versprechen. Zur Struktur einer moralischen Praxis. Habilitationsschrift, Universität Bonn
2. Müller, T. (2001). *Arthur Priors Zeitlogik Eine problemorientierte Darstellung*. PhD thesis, Universität Freiburg
1. Müller, T. (1997). Analyse der Calcium-Freisetzung in Skelettmuskelzellen. Master's thesis, Universität Freiburg