

Publication List

Philipp Alexander Kreer

Particle Physics & Gravitational Wave Physics

- [1] P. A. Kreer and S. Weinzierl. “H graph with unequal masses in quantum field theory”. In: *Physical Review D* 110.7 (2024). Impact Factor **4.6**, **Ranked under top 10 journals**, p. 076018. DOI: [10.1103/PhysRevD.110.076018](https://doi.org/10.1103/PhysRevD.110.076018). arXiv: [2408.10778](https://arxiv.org/abs/2408.10778) [hep-ph].
- [2] F. Buccioni, P. A. Kreer, X. Liu, and L. Tancredi. “One loop QCD corrections to $gg \rightarrow t\bar{t}H$ at $\mathcal{O}(\epsilon^2)$ ”. In: *Journal of High Energy Physics* 03 (2024). Impact Factor **5**, **Ranked under top 5 journals**, p. 093. DOI: [10.1007/JHEP03\(2024\)093](https://doi.org/10.1007/JHEP03(2024)093). arXiv: [2312.10015](https://arxiv.org/abs/2312.10015) [hep-ph].
- [3] P. A. Kreer, R. Runkel, and S. Weinzierl. “Feynman integrals for binary systems of black holes”. In: *SciPost Phys. Proc.* 7 (2022), p. 023. DOI: [10.21468/SciPostPhysProc.7.023](https://doi.org/10.21468/SciPostPhysProc.7.023). arXiv: [2110.15654](https://arxiv.org/abs/2110.15654) [hep-th].
- [4] P. A. Kreer and S. Weinzierl. “The H-graph with equal masses in terms of multiple polylogarithms”. In: *Physical Letters B* 819 (2021). Impact Factor **4.6**, **Ranked under top 10 journals**, p. 136405. DOI: [10.1016/j.physletb.2021.136405](https://doi.org/10.1016/j.physletb.2021.136405). arXiv: [2104.07488](https://arxiv.org/abs/2104.07488) [hep-ph].

Note:

Authors in alphabetic order (particle physics convention); I am the first author of [1–4]. Last author: [1, 3, 4] Stefan Weinzierl, [2] Lorenzo Tancredi

Science of Deep Learning

- [5] C. Tice*, P. A. Kreer*, N. Helm-Burger, P. S. Shahani, F. Ryzhenkov, J. Haimes, F. Hofstätter, and T. van der Weij. “Noise Injection Reveals Hidden Capabilities of Sandbagging Language Models”. In: *Neural Information Processing Systems (NeurIPS), SATA and SoLaR workshop.* (Dec. 2024). Impact Factor **23.27**, **Ranked under top 3 journals**. arXiv: [2412.01784](https://arxiv.org/abs/2412.01784) [cs.AI].

Note:

The star denotes equal contributions.

Preprint

- [6] M. Becchetti, M. Delto, S. Ditsch, P. A. Kreer, M. Pozzoli, and L. Tancredi. “One-Loop QCD Corrections to $\bar{u}d \rightarrow t\bar{t}W$ at $\mathcal{O}(\epsilon^2)$ ”. In: (). Prepared for publication in JHEP, expected publication: 10. February 2025.
- [7] C. Tice, P. A. Kreer, F. Ryzhenkov, N. Helm-Burger, and P. S. Shahani. “Sandbag Detection through Model Degradation”. In: *Apart Research* (July 2024). [Research submission to the Deception Detection Hackathon: Preventing AI deception.](#)

Thesis

- [8] P. A. Kreer. “Calculation of Feynman Integrals for Black Holes”. Masters Thesis. Johannes Gutenberg Universität in Mainz, 2021.
- [9] P. A. Kreer. “Maximal Cuts in Baikov Representation”. Bachelors Thesis. Johannes Gutenberg Universität in Mainz, 2019.