

UNIVERSE+ ERC Synergy Grant #101118787

Activities and Papers

(Updated: 10/13/25)

Activities held at IAS

- ~ Amplitudes Conference and Summer School 2024, June 10-21, 2024
- ~ Amplitudes and Combinatorics Synergy Event, October 3-4, 2024
- ~ Combinatorics of Fundamental Physics Workshop, November 18-22, 2024

Papers

Nima Arkani-Hamed, Carolina Figueiredo and Grant N. Remmen, "Open string amplitudes: singularities, asymptotics and new representations," arXiv: 2412.20639 [hep-th], DOI: 10.1007/JHEP04(2025)039, 2025.

Nima Arkani-Hamed, Hadleigh Frost and Giulio Salvatori, "The Cut Equation," arXiv: 2412.21027 [hep-th] 2024.

Nima Arkani-Hamed, Carolina Figueiredo and Francisco Vazão, "Cosmohedra," arXiv: 2412.19881 [hep-th], 2024.

Nima Arkani-Hamed, Qu Cao, Jin Dong, Carolina Figueiredo and Song He, "Surface Kinematics and "The" Yang-Mills Integrand," arXiv: 2408.11891 [hep-th], 2024.

Nima Arkani-Hamed, Mathieu Giroux, Holmfridur Hannesdottir, Sebastian Mizera and Celina Pasiecznik, "Records from the S-Matrix Marathon: Selected Topics on Scattering Amplitudes," <https://link.springer.com/book/10.1007/978-3-031-90352-6>, 2025.

Nick Early, "The CEGM NLSM," DOI: 10.1007/JHEP04(2025)030, arXiv: 2502.08016, 2025.

Nick Early, Alheydis Geiger, Marta Panizzut, Bernd Sturmfels and Claudia He Yun, "Positive del Pezzo Geometry," arXiv: 2306.13604v2, 2025.

Nick Early and Jian-Rong Li, "Classification of prime modules of quantum affine algebras corresponding to 2-column tableaux," arXiv: 2406.16879v2, 2025.

Dario Antolini and Nick Early, "The Chirotopical Grassmannian," arXiv: 2411.07293v2, 2024.

Nick Early, Anaëlle Pfister and Bernd Sturmfels, "Minimal Kinematics on $M_{0,n}$," Published in Moduli, doi:10.1112/mod.2025.10003, (2402.03065), 2024.

Justin Berman, Henriette Elvang and Carolina Figueiredo, "Splitting Regions and Shrinking Islands from Higher Point Constraints," arXiv:2506.22538, 2025.

Carolina Figueiredo and Francisco Vazão, "Correlator Polytopes," arXiv:2506.19907, 2025.

Carolina Figueiredo, Holmfridur Hannesdottir, Giulio Gambuti, "Soft Factorisation and Exponentiation from Schwinger-Space Geometry," arXiv:2506.15603, 2025.

Carolina Figueiredo and Marcos Skowronek, "Cuts and Contours," arXiv:2506.05456, 2025.

Jeffrey Backus and Carolina Figueiredo, "Surface Gauge Invariance, Soft Limits and the Transmutation of Gluons into Scalars," JHEP 09 (2025) 069, 2025.

Giulio Salvatori, "All Loop Scattering As A Sampling Problem," arXiv id: 2503.07707, 2025.

Giulio Salvatori, "The Tropical Geometry of Subtraction Schemes," arXiv id: 2406.14606, 2024.