



## Grassmannian Geometry of Scattering Amplitudes (Hardback)

By Nima Arkani-Hamed, Jacob Bourjaily, Freddy Cachazo

CAMBRIDGE UNIVERSITY PRESS, United Kingdom, 2016.  
 Hardback. Book Condition: New. 253 x 180 mm. Language: English . Brand New Book. Outlining a revolutionary reformulation of the foundations of perturbative quantum field theory, this book is a self-contained and authoritative analysis of the application of this new formulation to the case of planar, maximally supersymmetric Yang-Mills theory. The book begins by deriving connections between scattering amplitudes and Grassmannian geometry from first principles before introducing novel physical and mathematical ideas in a systematic manner accessible to both physicists and mathematicians. The principle players in this process are on-shell functions which are closely related to certain sub-strata of Grassmannian manifolds called positroids - in terms of which the classification of on-shell functions and their relations becomes combinatorially manifest. This is an essential introduction to the geometry and combinatorics of the positroid stratification of the Grassmannian and an ideal text for advanced students and researchers working in the areas of field theory, high energy physics, and the broader fields of mathematical physics.



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### Reviews

*This publication may be really worth a go through, and a lot better than other. It really is written in simple terms and never difficult to understand. Once you begin to read the book, it is extremely difficult to leave it before concluding.*

-- **Natalie Abbott**

*This book will not be simple to get going on reading but extremely exciting to read through. Yes, it can be playful, still an interesting and amazing literature. I am very easily could possibly get a delight of reading a written book.*

-- **Rene Olson**