



Positivity

November 7-9, 2022

Organizers: Amir Ali Ahmadi; Minjae Cho; Scott Collier; Silviu Pufu

Free but required registration is now open on the PCTS website.
<https://forms.gle/Gm7EdAScCKmtXrp87>



Systematic verification of inequalities (or equivalently, positivity of functions) underlies mathematical sciences in a universal way. With the advent of efficient and accessible numerical approaches such as semidefinite programming that can automate this task, the list of applications is broad in scope and ever-growing, encompassing classical mechanics, engineering, operations research, geometry, quantum information theory, and theoretical high energy physics. This workshop aims to bring together researchers from the theoretical high energy physics community working on the bootstrap program for conformal field theory and quantum field theory, researchers from the optimization community working on semidefinite optimization and convex algebraic geometry, as well as researchers studying positivity in various interesting problems in mathematics and related sciences. The attendees will share insights into the nature of both the physical problems and approaches to harnessing positivity.

Speakers

Greg Blekherman
Hamza Fawzi
David Goluskin
Pravesh Kothari
Martin Kruczenski

Monique Laurent
Dalimil Mazac
David Mazziotti
Pablo Parrilo

David Poland
Victor Rodriguez
Balt van Rees
Amit Singer

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