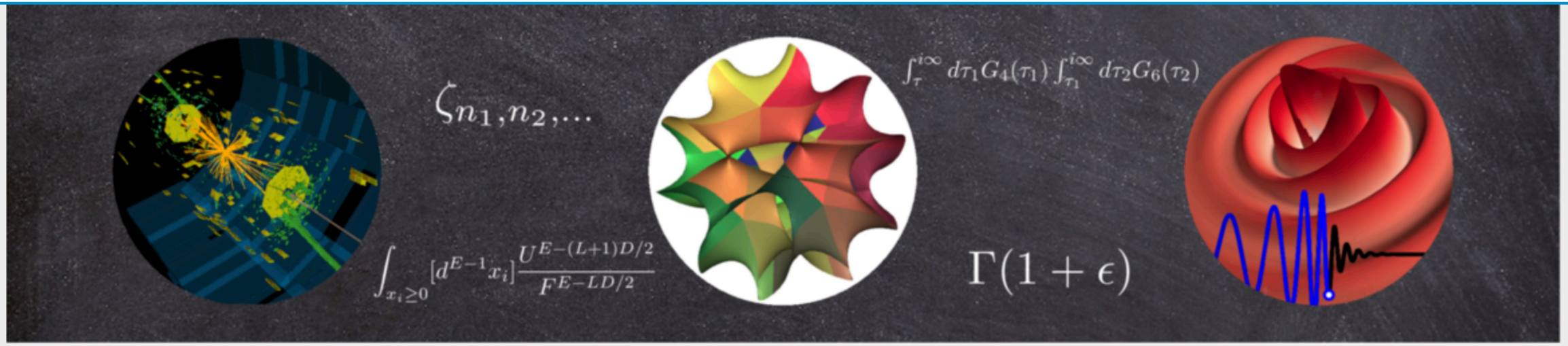

Image credits: Wikipedia commons/ATLAS and LHC collaborations

SPECIAL FUNCTIONS: FROM GEOMETRY TO FUNDAMENTAL INTERACTIONS

5 - 30 August 2024

Lorenzo Tancredi, Ruth Britto, Henrik Johansson, Oliver Schlotterer, Matthias Wilhelm

SPECIAL FUNCTIONS: FROM GEOMETRY TO FUNDAMENTAL INTERACTIONS

Overview

Participants

Schedule

Fertile common ground has emerged for the mathematical structures that control perturbative calculations in different domains of fundamental physics – quantum field theory, general relativity, and their extension to string theory. This program brings together experts in these various domains of physics, as well as mathematicians with expertise in higher-genus surfaces and Calabi-Yau periods. Through an in-depth exchange among these communities, we aim to:

- trigger technology transfer for advancing the precision frontier in perturbative quantum field theory and string theory, leading to insights that will impact both phenomenology, such as collider and gravitational-wave physics, and formal theory, such as string dualities and holography;
- chart a course towards new understanding of the role of special functions in high energy physics, opening

Main Topics

- Particle Physics
- String Theory
- Gravitational Waves
- Pure Mathematics

“ Amplitudes meets Elliptics ”

5 - 30 August 2024

Deadline on December 3rd 2023

More detailed info soon !