

Theoretical Physics Division



- Personnel: 10 Academic Staff, 4 PostDocs, 12 PostGraduates.
- Area of research: Theoretical Particle Physics.
 1. [Lattice Gauge Theory](#) [Paul Rakow]
 2. [String Theory and Phenomenology; Formal QFT; BSM and cosmology](#)
(Perturbative heterotic string; black holes; F–theory; Properties of 4D QFT)
[Alon Faraggi, Thomas Mohaupt, Radu Tatar; Ian Jack, Tim Jones]
 3. [Precision QFT](#) (perturbative QCD, beyond Standard Model, collider phenomenology)
[Martin Gorbahn, John Gracey, Andreas Vogt and Thomas Teubner]
- Desirable ‘prerequisites’: Quantum Mechanics (Math325), Relativity (Math326), String Theory (Math423), Modern Particle Physics (Math431), Quantum Field Theory (Math425).
 - Compulsory special PG lecture series during first year (+ Math423/5), seminars, PGPDDG
 - Summer School (BUSSTEPP), (international) conference/workshop/school attendance
- Note: The mathematics of modern theoretical physics includes group theory, Lie groups and algebras, differential geometry, algebraic geometry, numerical methods.

Next year \sim 2 STFC + ? UOL studentships will be available.