



SECTION DE PHYSIQUE

# COLLOQUE DE PHYSIQUE

24, QUAI ERNEST-ANSERMET, CH-1211 GENÈVE 4

**Lundi 2 octobre 2017, 12h30**  
Ecole de Physique, Auditoire Stueckelberg

**«Topological Matter and Why You Should be Interested»**

**Prof. Steve Simon**

*University of Oxford, Department of Physics, UK*

**Abstract:**

In two dimensional topological phases of matter, processes depend on gross topology rather than detailed geometry. Thinking in 2+1 dimensions, particle world lines can be interpreted as knots or links, and the amplitude for certain processes becomes a topological invariant of that link. While sounding rather exotic, we believe that such phases of matter not only exist, but have actually been observed in quantum Hall experiments, and could provide a uniquely practical route to building a quantum computer. Possibilities have also been proposed for creating similar physics in systems ranging from superfluid helium to strontium ruthenate to semiconductor-superconductor junctions to quantum wires to spin systems to graphene to cold atoms.

Une collation en compagnie du conférencier sera offerte après le colloque.

Prof. Dmitry Abanin

Genève, le 25 septembre 2017/nc

Secrétariat de la Section de Physique - N. Chaduiron – 022 379.63.83