

**ESI - SIMONS JUNIOR PROFESSOR
SEMINAR
Winter Term 2016/17**

The Erwin Schrödinger International Institute of Mathematics and Physics (ESI) of the University of Vienna is pleased to offer the following Seminar held by Simons Junior Professor Nils Carqueville and Professor Stefan Fredenhagen during the Winter Term of 2016/17:

From Classical Physics to Factorisation Algebras

Nils Carqueville (U Vienna) and **Stefan Fredenhagen** (U Vienna)

Seminar (250084 SE): Monday, 15:15 - 16:45

Begin: October 3, 2016

Venue: ESI, Schrödinger Lecture Hall

Abstract: This seminar, intended for theoretical physicists and mathematicians alike, aims to motivate one of the modern rigorous approaches to quantum field theory: factorisation algebras. In the first half of the term, we will concisely introduce a number of classical physical theories in the Lagrangian formalism, including the point particle in curved space, electromagnetism, Yang-Mills theory, and Chern-Simons theory. In a shorter, second part, we shall discuss the path integral in QFT as well as its functorial axiomatisation. Finally, in the third part we will motivate and introduce (pre-)factorisation algebras, and discuss several examples.

The seminar does not assume a special background in physics, geometry, algebra, or category theory, though some familiarity with some of these subjects will be helpful.

For more information please visit:

<https://ufind.univie.ac.at/en/course.html?lv=250084&semester=2016W>

Joachim Schwermer
Director