

ESI SENIOR RESEARCH FELLOW LECTURE COURSE Summer Term 2014

The Erwin Schrödinger International Institute of Mathematical Physics (ESI) of the University of Vienna offers the following Lecture Course held by a Senior Research Fellow in residence during the Summer Term 2014:

Many-body quantum Physics

Prof. Jan Philip Solovej (U Copenhagen)

Lecture Course (260172 VO): March to May 2014

Introduction: March 5, 2014 at 16:00 hrs

Lectures: Tuesday, 16:15 - 18:15 hrs

Exercise classes: Thursday 13:00 - 14:00 hrs

Changes to the schedule are announced on the course website, see

<http://www.esi.ac.at/activities/events/2014/many-body-quantum-physics-1>

Venue: ESI, Schrödinger Lecture Hall

Content:

Tensor products and the formulation of many-body quantum mechanics,

Identical particles and statistics,

Fock spaces and second quantization,

Bogolubov transformations,

Quasi-free states,

Quadratic Hamiltonians,

The Bogolubov variational principle,

The Bogolubov approximation for bosonic systems,

Fermionic systems and the BCS, and

Hartree-Fock-Bogolubov models

Joachim Schwermer

Director