

**Excercises for the session on June 17**

The numbers of the problems refer to the lecture notes. Please do as much as you can **before** coming to the exercise session.

**Exercise 1:** Solve Problem 9.3.

**Exercise 2:** Solve Problem A.9.1.

**Exercise 3:** Show that the map  $C = U^* J^* V$  defined at the end of page 56 is conjugate Hermitian for bosons and conjugate anti-Hermitian for fermions.

**Exercise 4:** Establish the relations (52)–(58) (including Theorem 9.2) at the beginning of Section 9.

Sergey Morozov