

SPIN CHAINS AND RANDOM MATRIX THEORY

HUW WELLS SUPERVISED BY JONATHAN KEATING AND NOAH LINDEN

MOTIVATION

The aim is to model n distinguishable spin-half particles in a ring, each only interacting with their neighbours, figure 1.

A **non-unitary invariant** random matrix ensemble with the potential to model Hamiltonians

H
structure

the group $U(n, n)$