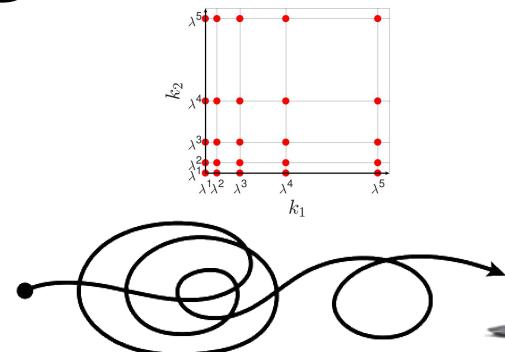


# Homogeneous Rayleigh-Bénard convection on logarithmic lattices



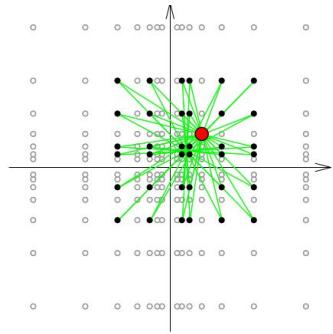
A. Barral, B. Dubrulle  
CEA/SPEC/SphynX - RNL2022



# Les shell models, mais en mieux

$$k_n \in (\pm 1, \pm \lambda, \pm \lambda^2, \dots, \pm \lambda^N)$$

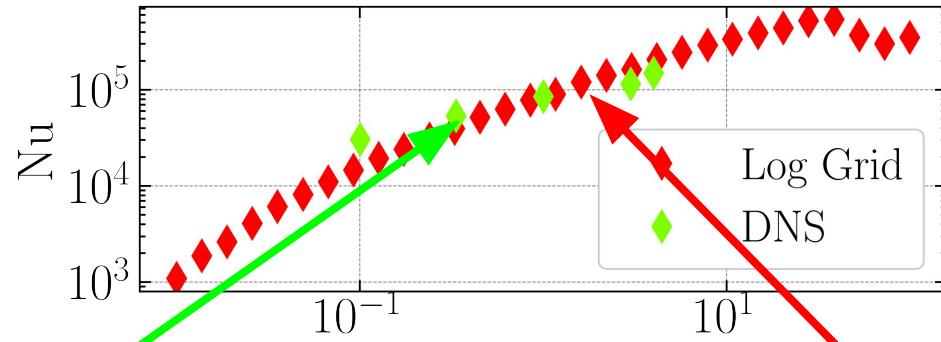
- Pas limité à 1D



- Structure mathématique  
“plus physique”<sup>1</sup>

$$(f * g)(k) = \sum_{p_j + q_j = 1} c_j f(p_j k) g(q_j k)$$

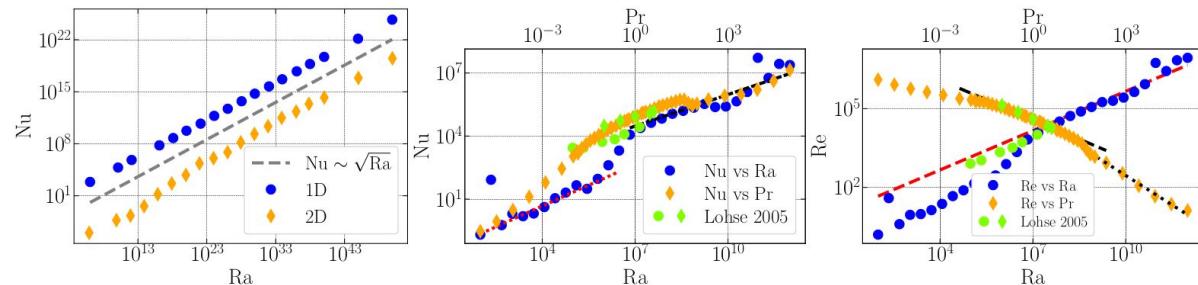
## Résultats



450 heures CPU / point  
~100Mb / Snapshot  
C@Supercalculateur

Pr

8h CPU / point  
~50Mb RAM, ~2Mb/Snapshot  
Cython@Mon ordi portable



“Régime Ultime”  $\text{Nu} \sim \sqrt{\text{Ra} \text{Pr}}$

<sup>1</sup>Pas clair ? Venez en discuter à la pause :)