

Division of space using first Laplacian eigenvalues

$$\Delta p_i + \lambda_i^1 p_i = 0$$

$$\sum_i \lambda_i^1 = \text{minimum}$$

We found solution of this problem using the Fleming Viot process
Phys.Rev.Lett. 95, 088304 (2005)

Solution of this minimization problem: based on
numerical calculations

In 2D honeycomb lattice



Solution: based on numerical calculations

in 3D

3D Weaire-Phelan structure with different volumes of 12-sided and 14 sided polyhedra (with slightly different volumes and curvatures than the Weaire-Phelan structure)

