

DIMENSION REDUCTION FOR OPTIMAL POINT CONFIGURATIONS

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I will present some new techniques developed with L. Betermin for studying the structure of minimising point configurations for long-range interactions, amongst lattices and more general point configurations.

In all cases the problem is simplified by looking at layers within the configurations and reducing the dimension of the problem.

I will mention the links to Computer Science problems, to the Thompson problem, and to crystallization conjectures in Statistical Physics.