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Nekrasov's gauge origami and Oh-Thomas's virtual cycles

Monday 20 January 2025 16:30 (1 hour)

Nekrasov's 4D ADHM quiver is a generalisation of the 2D and 3D ADHM quivers. I will give a mathematical definition of the corresponding "gauge origami" partition function in terms of certain torus localized Oh-Thomas virtual cycles. I will relate the orientation problem of gauge origami to the one of Hilbert schemes of points on affine 4-space, which was previously analysed in physics by Nekrasov-Piazzalunga ("Magnificent Four") and in algebraic geometry in a joint work with J. Rennemo. I will provide a conjectural sheaf-theoretic interpretation of gauge origami in terms of certain moduli of 2-dimensional framed sheaves on $(\mathbb{P}^1)^4$. Joint work with N. Arbesfeld and W. Lim.

Presenter: KOOL, Martijn