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Analytic quasiperiodic Schrödinger operators at small coupling

We study Schrödinger operators $H = -\frac{d^2}{dx^2} + V$ with quasiperiodic potentials V in the regime of analytic sampling function and small coupling. We prove that elements of its isospectral torus are also quasi-periodic Schrödinger operators in the same regime. We also prove almost periodicity of solutions of the KdV equation $\partial_t u - 6u\partial_x u + \partial_x^3 u = 0$ with this class of initial data $u(x, 0) = V(x)$. The talk describes joint work with Ilia Binder, David Damanik, and Michael Goldstein.