The Abdus Salam
International Centre for Theoretical Physics

**Advanced Workshop on
"Anderson Localization, Nonlinearity and
Turbulence: A Cross-Fertilization"**

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TITLE:
"Supercritical NLS: Quasi-periodic solutions and almost global existence "

ABSTRACT:

We construct quasi-periodic solutions and prove almost global existence for the supercritical NLS on the d-torus (d arbitrary). In the high frequency limit, these quantitative solutions could also be relevant to compressible Euler equations. The main new ingredient is a fine analysis of the resonance geometry using algebraic equations.