

**SEMICLASSICAL OSCILLATING FUNCTIONS OF
ISOTROPIC TYPE AND THEIR APPLICATIONS**

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Abstract: Rapidly oscillating functions associated with Lagrangian submanifolds play a fundamental role in semiclassical analysis. In this talk I will describe how to associate classes of semiclassical oscillating functions to isotropic submanifolds of phase space, and show that these classes are invariant under the action of Fourier integral operators (modulo the usual clean intersection condition). Some sub-classes (coherent states, Hermite states) and applications will also be discussed. This is based on joint works with V. Guillemin (MIT) and A. Uribe (U. Michigan).