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Some oscillatory integrals and their applications. (English) [Zbl 0577.42010](#)

Journ. Équ. Dériv. Partielles, Saint-Jean-De-Monts 1985, No. 1, Exp. No. 4, 5 p. (1985).

Summary: We discuss several kinds of oscillatory integrals, and we describe briefly their applications to some questions related to the $\bar{\partial}$ -Neumann problem, real-variable problems connected with certain maximal functions, and analysis on nilpotent Lie groups. The three kinds of oscillatory integrals we treat are in appearance quite different from each other, but in reality the ideas used to deal with each have much in common. This paper describes some joint work done with D. H. Phong, C. D. Sogge and F. Ricci.

MSC:

[42A50](#) Conjugate functions, conjugate series, singular integrals

[42B25](#) Maximal functions, Littlewood-Paley theory

[42A38](#) Fourier and Fourier-Stieltjes transforms and other transforms of Fourier type

Keywords:

maximal functions; nilpotent Lie groups; oscillatory integrals

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