The Spectra of Multiplication Operators Associated with Families of Operators

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joint work with M. Moeller and R. Denk

If the highest derivatives in a system of partial differential equations do not contain derivatives with respect to a certain variable, this variable can be used as a parameter for a corresponding family of operators. We will study the spectrum of multiplication operators associated with such operator families. As an example, the natural oscillations of an incompressible fluid in the neighbourhood of an elliptical flow is considered.