Hörmander–Mihlin multipliers in Hardy spaces

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In this talk we are concerned with Hörmander–Mihlin multipliers. They can be viewed as natural generalizations of the classical Marcinkiewicz multiplier conditions which are known to be sufficient for the corresponding multiplier operator be bounded on $L^p_{2\pi}$ provided $p > 1$. We show that for Hörmander–Mihlin multipliers the scale of Hardy spaces is a more proper choice than that of the Lebesgues spaces. Both the trigonometric and the dyadic versions of the problem will be addressed.

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