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## Oberseminar Analysis und Theoretische Physik

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# Global wave-front sets of Modulation Space type and Hyperbolic Cauchy Problems on $\mathbb{R}^n$

I will illustrate recent results on wave-front sets, related to different "regularity properties" (for instance, the smoothness of temperate distributions and/or their "decay at infinity"). I will focus on global wave-front sets with respect to general modulation spaces, introduced in [2]. In particular, I will discuss the propagation of such singularities from the initial data to the solution of certain hyperbolic Cauchy problems on  $\mathbb{R}^n$ .

### References

- [1] H. O. Cordes. The Technique of Pseudodifferential Operators. Cambridge Univ. Press (1995).  
[2] S. Coriasco, K. Johansson, J. Toft. Global Wave-front Sets of Banach, Fréchet and Modulation Space Types, and Pseudo-differential Operators. J. Differential Equations 254, 8, 3228-3258 (2013). [3] S. Coriasco, L. Maniccia. Wave front set at infinity and hyperbolic linear operators with multiple characteristics. Ann. Global Anal. Geom. 24, 375-400 (2003). [4] S. Coriasco, R. Schulz. Global Wave Front Set of Tempered Oscillatory Integrals with Inhomogeneous Phase Functions. J. Fourier Anal. Appl. 19, 5, 1093-1121 (2013).

**Dienstag, 03.06.2014, 15:15h, Raum g005  
Hauptgebäude der Leibniz Universität**

Dazu laden herzlich ein:

Prof. Dr. Joachim Escher

Prof. Dr. Olaf Lechtenfeld

Prof. Dr. Elmar Schrohe

Prof. Dr. Christoph Walker