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A few problems at the interface of harmonic and microlocal analysis

The two areas of mathematical analysis mentioned in the title share a rich history. Harmonic analysis has inspired and contributed to many microlocal analysis problems; techniques from microlocal analysis have been crucial in answering questions in harmonic analysis, geometric measure theory and spectral theory of manifolds. In this talk, we will state a few problems that lie at the vibrant intersection of these fields. We will then pick one of them and discuss a bit more, with the aim to highlight the interplay of different methodologies.

No specialized knowledge beyond advanced undergraduate mathematics will be assumed. Bring lots of questions - curiosity is a plus!