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**Estimation of group action via non-commutative Fourier transform with special functions**

TUM Garching, Boltzmannstr. 3, Room HS3 00.06.011,  
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**Abstract:** In this seminar, we will discuss the estimation of group action using the non-commutative Fourier transform.

We'll explore an interesting relationship between the non-commutative Fourier transform and this estimation problem.

Next, we'll optimize our estimation method by leveraging this connection under various conditions, including energy constraints.

Finally, we'll apply the obtained results to uncertainty relations related to compact groups. Throughout this discussion, we'll highlight the significance of several special functions in this topic.