

# FAMILIES OF HARISH-CHANDRA MODULES AND THE HYDROGEN ATOM

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*Abstract:*

In this talk I shall explain how the Schrödinger equation of the hydrogen atom gives rise to an algebraic family of Harish-Chandra pairs that is related to  $SO(4)$ ,  $SO(3,1)$  and the corresponding Cartan motion group. I will show that solutions of the Schrödinger equation form an algebraic family of Harish-Chandra modules. If time permits, I will explain how the infinitesimally unitary Jantzen quotients of the family of solutions are related to spectral decomposition of the Schrödinger operator.