

## **Seminar**

### **Functional Renormalisation Group approaches to Quantum Spin Systems**

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We review the pseudo-fermion (PF) and pseudo-Majorana (PM) functional renormalisation group (FRG) and their specific ability to address higher-dimensional frustrated quantum magnetism. First developed more than a decade ago, the PFFRG interprets a Heisenberg model Hamiltonian in terms of Abrikosov pseudofermions, which is then treated in a diagrammatic resummation scheme formulated as a renormalisation group flow of  $m$ -particle pseudofermion vertices. We discuss the success of FRG in explaining the quantum spin liquid behaviour in 3D material candidates and present an outlook of future challenges.

***Thursday, Mar 28<sup>th</sup> 2024***

***16:00 Hrs (Tea / Coffee 15:45 Hrs)***

***Seminar Hall, TIFR-H***