Tata Institute of Fundamental Research
Survey No. 36/P, Gopanpally Village, Serilingampally Mandal, Ranga Reddy Dist., Hyderabad – 500 046

Seminar

Pulse Sequence Optimization for DNP and NMR

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Pulse sequence optimisation in NMR has traditionally been based on state-to-state transfer (optimal control) by optimising the final density operator. Based on continuous Floquet Theory, we propose an alternative method where we optimise the effective Hamiltonian that is generated by the pulse sequence. We show that such an approach allows a smooth transition from the resonant to the non-resonant case and reproduces exact numerical simulations quite well. We show first results for experimental verification of such sequences in the field of pulsed DNP and homonuclear polarisation transfer.

Thursday, Feb 5th 2026

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

Auditorium, TIFRH