

Curriculum Vitae of T V Ramakrishnan

Current Activities

1. Research

- a) **High Temperature Superconductivity:** Further development of a novel phenomenological theory proposed, implemented and confronted successfully with experiment in papers 118, 120, 122 as also 123 and 127. Ineluctable complexity. Microscopic theory. Novel theory of quantum oscillations in superconducting cuprates. Salient, characteristic, experimental features needing new ideas and comprehensive theory.
- b) **Strongly correlated electron systems:** High temperature incoherence and low temperature quantum coherent fluid. Linear resistivity.
- c) **Quantum spin liquids:** Ubiquity of Kitaev like correlations. New theoretical approaches for comparison with observed spatial, temporal and thermal spin correlations.

2. Education

- a) General popular articles on condensed matter physics.
- b) Textbooks in condensed matter physics:- elementary, intermediate, advanced; novel electronic modular versions.