Itinerant Ferromagnetism

Fermi Gas

Ferromagnetic phase transition in a gas of fermions in a periodic crystal (top, shown in blue) and in a gas without a crystalline structure (bottom). As the repulsive forces between the fermions are gradually increased, the fermions (red spheres) tend to point in the same direction. The red shadow shows the itinerant or delocalized nature of the fermions (or conduction electrons).

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Preprint Paper

MIT press release  MIT News story  Science perspective  Science NOW

- What is Itinerant Magnetism?
- Stoner's instability in ultracold atoms
- Description of the experiment
- Evidences for Itinerant Ferromagnetism