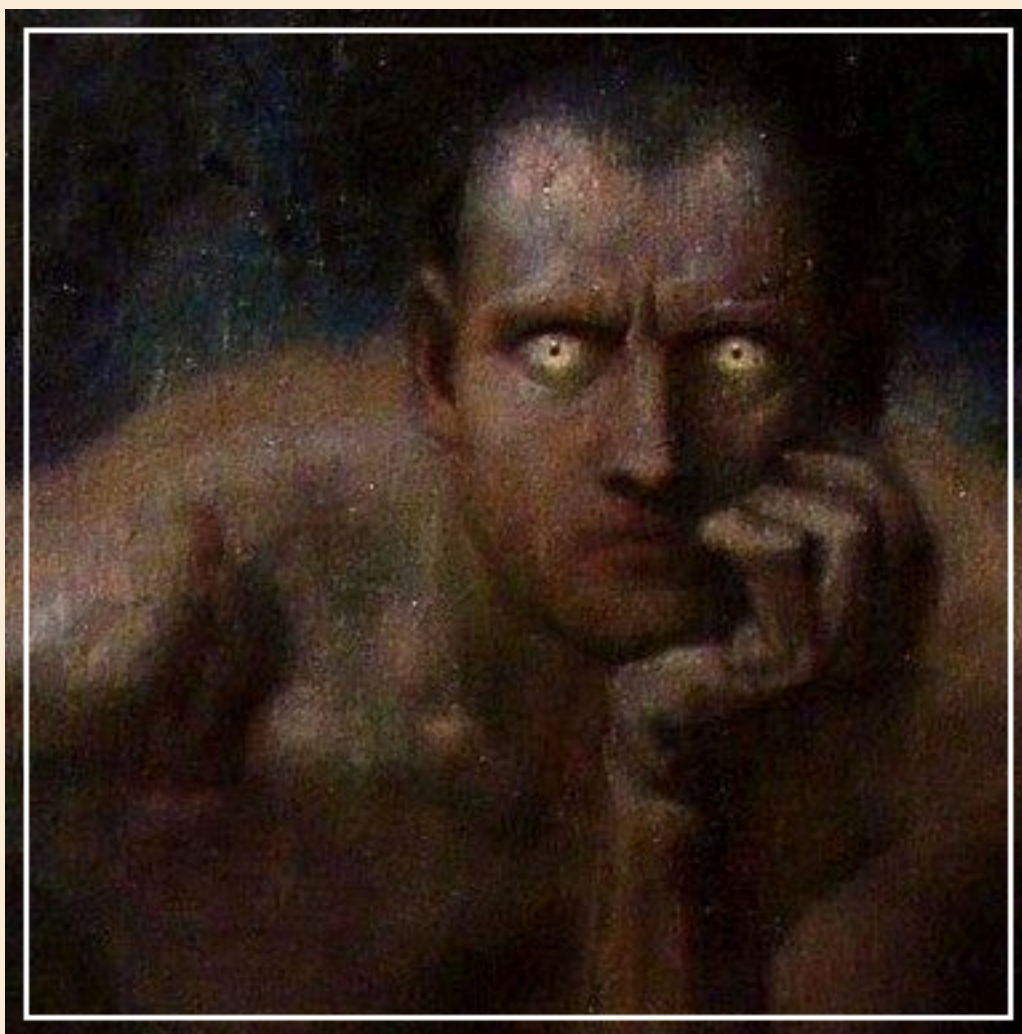


# Journal notes on: Condensed matter concepts

by Francisco Lobo



icmm

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## I. MODELS

### A. Crystalline

*Kronig-Penney Model*

### B. Magnetism

*Jaynes-Cummings model*

*Heisenberg model*

*Ising model*

*Anderson model*

*Aubry-Andre model*

*Hubbard model*

### C. Superconductivity

*SSH model*

*Kane-Mele model*

*Kitaev model*

*Oreg-Lutchyn model*

## II. MATERIALS

### A. 2D materials

*Graphene*

*Bernal bilayer graphene*

*Twisted bilayer graphene*

### B. Kondo insulators

### C. Type II superconductors

### D. Topological insulators

## III. EFFECTS

### A. Magnetism

*Friedel oscillations*

*Kondo effect*

### B. Superconductivity

*Josephson effect*

### C. Topological superconductivity