

QUANTUM FIELD THEORY

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Introduction.

Canonical Quantization. Why fields? . Classical field theory. Klein-Gordon: free scalar theory. Dirac.

Interactions and Feynman diagrams. Interacting field theory. Perturbations and Feynman diagrams. S matrix.

Electrodynamics. Gauge invariance. QED: elementary processes

Non perturbative methods. Symmetries. LSZ. Ward identities

Renormalization. Statement of the problema. Renormalizability. QED