

2017 Summer School on Cosmology and Particle Physics

Monday, August 7, 2017 - Friday, August 11, 2017

CTPU PTC

Scientific Program

Course 1 : Flavor Physics (□□□)

1. Flavor physics and the Standard Model
2. Discrete symmetry and CKM matrix
3. Renormalization and muon g-2
4. RG and Effective field theory
5. CP violation and BSM flavor physics

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Ta-Pei Cheng Ling-Fong Li, Gauge theory of elementary particle physics (1982)

Ho Kim, Elementary Particles and Their Interactions (2004)

Peskin and Schroeder, Introduction to Quantum Field Theory (1995)

Thomas Mannel, Effective Field Theories in Flavour Physics (2004)

Jorge C. Romao, Modern Techniques for One-Loop Calculations (2006)

Andrzej J. Buras, Weak Hamiltonian, CP Violation and Rare Decays, hep-ph/9806471

Marc Knecht, The anomalous magnetic moment of the muon: a theoretical introduction, hep-ph/0307239

K.S. Babu, TASI Lectures on Flavor Physics, arXiv:0910.2948

S.J. Lee and H. Serodio, A Short Guide to Flavour Physics and CP Violation, arXiv:1504.07549

Course 2 : Introduction to Cosmology (□□□)

1. □□□□ □□
2. □□□□□□ □□□□

3.

4.

Kolb and Turner, The Early Universe

Course 3 : Dark Matter ()

1.

2.

3.

4. (cosmic-ray)

5.

The Early Universe (by Edward Kolb & Michael Turner)

<https://arxiv.org/abs/hep-ph/9506380>

<https://arxiv.org/abs/hep-ph/0404175>

<https://arxiv.org/abs/1705.01987>

<http://www.sciencedirect.com/science/article/pii/S0927650596000473?via%3Dihub>