38th INTERNATIONAL CONFERENCE
ON HIGH ENERGY PHYSICS
AUGUST 3 - 10, 2016
CHICAGO

Contribution ID: **454** Type: **Oral Presentation**

Exclusive determinations of $|V_{cb}|$ and $|V_{ub}|$ from unquenched lattice-QCD calculations (15' + 5')

Friday, 5 August 2016 17:15 (20 minutes)

The Cabibbo-Kobayashi-Maskawa (CKM) elements $|V_{cb}|$ and $|V_{ub}|$ are important input parameters in flavor physics; they are necessary for stringent tests of the Standard Model and the search for new physics. The determination of these quantities via exclusive processes requires experimental measurements of semileptonic B or Λ_b decays and precise theoretical calculations of the relevant nonperturbative hadronic matrix elements. I will discuss the recent progress in the lattice-QCD calculations of these matrix elements, and I will present, in combination with the latest experimental results, the updates for the exclusive determinations of the CKM elements $|V_{cb}|$ and $|V_{ub}|$. I will also discuss the implication of these results for the inclusive/exclusive tensions in both $|V_{cb}|$ and $|V_{ub}|$, and their impact on tests of the unitarity triangle in the Standard Model.

Presenter: Mr ZHOU, Ran (Fermi national accelerator laboratory)

Session Classification: Quark and Lepton Flavor Physics

Track Classification: Quark and Lepton Flavor Physics