

IITGN Flavour Physics Week: Exploring Quark and Lepton Frontiers



Report of Contributions

Contribution ID: 1

Type: **not specified**

QCD sum rules (Online)

Monday 3 March 2025 14:00 (1 hour)

Presenter: KHODJAMIRIAN, Alexander

Contribution ID: 2

Type: **not specified**

QCD in FeynCalc

Monday 3 March 2025 16:30 (1h 30m)

Presenter: SHTABOVENKO, Vladyslav (University of Siegen)

Contribution ID: 3

Type: **not specified**

QCD sum rules (Online)

Tuesday 4 March 2025 14:00 (1 hour)

Presenter: KHODJAMIRIAN, Alexander

Contribution ID: 4

Type: **not specified**

Constraints on lepton flavor universal and non-universal New Physics in $b \rightarrow s \ell^+ \ell^-$

Thursday 6 March 2025 18:00 (20 minutes)

Presenter: N, Rajeev

Contribution ID: 5

Type: **not specified**

Investigating non-local contributions in $B_s \rightarrow \bar{\ell} \ell$ including higher-twist effects

Thursday 6 March 2025 16:40 (20 minutes)

Presenter: KHAN, Alam

Contribution ID: 6

Type: **not specified**

A combined explanation of $b \rightarrow s l l$ and $B \rightarrow \pi K$ puzzles within SMEFT

Thursday 6 March 2025 17:00 (20 minutes)

Presenter: KUMBHAKAR, Suman (Indian Institute of Technology Bombay)

Contribution ID: 7

Type: **not specified**

Exploring effects beyond SMEFT in $B \rightarrow K^* \tau \tau$ and $\Lambda_b \rightarrow \Lambda_c \tau \nu_\tau$

*Thursday 6 March 2025 17:20 (20 minutes)***Presenter:** KARMAKAR, Siddhartha

Contribution ID: 8

Type: **not specified**

Signature of (axial)vector operators in $B_c \rightarrow D_s^{(*)} \mu^+ \mu^-$ decays

Thursday 6 March 2025 17:40 (20 minutes)

Presenter: MOHAPATRA, Manas (IIT HYDERABAD)

Contribution ID: 9

Type: **not specified**

Finite Temperature Effective Field Theory

Thursday 6 March 2025 09:30 (1h 15m)

Presenter: MOHANTY, Subhendra

Contribution ID: **10**

Type: **not specified**

Neutrino Mass and Mixing

Thursday 6 March 2025 11:15 (1h 15m)

Presenter: GOSWAMI, Srubabati (Physical Research Laboratory)

Contribution ID: **11**

Type: **not specified**

QCD in FeynCalc

Tuesday 4 March 2025 16:30 (1h 30m)

Presenter: SHTABOVENKO, Vladyslav (University of Siegen)

Contribution ID: 12

Type: **not specified**

Finite Temperature Effective Field Theory

Wednesday 5 March 2025 09:30 (1h 15m)

Presenter: MOHANTY, Subhendra

Contribution ID: 13

Type: **not specified**

Neutrino Mass and Mixing

Wednesday 5 March 2025 11:15 (1h 15m)

Presenter: GOSWAMI, Srubabati (physical research laboratory)

Contribution ID: **14**

Type: **not specified**

Flavour physics from the Lattice

Friday 7 March 2025 14:45 (30 minutes)

Presenter: WITZEL, Oliver (Universität Siegen)

Contribution ID: 15

Type: **not specified**

Recent experimental results on flavor anomalies

Thursday 6 March 2025 14:15 (30 minutes)

Presenter: MOHANTY, Gagan (Tata Institute of Fundamental Research (IN))

Contribution ID: **16**

Type: **not specified**

Testing SMEFT and going beyond

Thursday 6 March 2025 14:45 (30 minutes)

Presenter: DIGHE, Amol (Tata Institute of Fundamental Research)

Contribution ID: 17

Type: **not specified**

Anomalies in Hadronic B decays

Thursday 6 March 2025 15:15 (30 minutes)

Presenter: BHATTACHARYA, Bhubanjyoti (Lawrence Technological University)

Contribution ID: **18**

Type: **not specified**

Charm loop effects with Kaon Distribution Amplitude

Thursday 6 March 2025 15:45 (30 minutes)

Presenter: MAHAJAN, Namit (Physical Research Laboratory, Ahmedabad, India)

Contribution ID: **19**

Type: **not specified**

An AMSB-SQCD deep dive into non-perturbative QCD

Friday 7 March 2025 09:30 (30 minutes)

Presenter: ROY, Tuhin (Tata Institute of Fundamental Research)

Contribution ID: 20

Type: **not specified**

Missing energy modes and B-tagging

Friday 7 March 2025 10:00 (30 minutes)

Presenter: TRABELSI, Karim (TYL - KEK)

Contribution ID: 21

Type: **not specified**

Probing the standard model via CP asymmetries of Bd to Ks0 pi0 at Belle & Belle 2

Friday 7 March 2025 10:30 (20 minutes)

Presenter: RAJ G, Vikas (IIT Madras, Belle2)

Contribution ID: 22

Type: **not specified**

Probing new physics through b-hadrons

Friday 7 March 2025 10:50 (20 minutes)

Presenter: SAIN, Ria

Contribution ID: 23

Type: **not specified**

Quest for Heavy Neutral Lepton : Phenomenology and Experimental Searches

Friday 7 March 2025 11:30 (30 minutes)

Presenter: MITRA, Manimala (Institute of Physics, Bhubaneswar)

Contribution ID: 24

Type: **not specified**

Possible Neutrino NSI Effects

Friday 7 March 2025 12:00 (30 minutes)

Presenter: GIRI, Anjan

Contribution ID: 25

Type: **not specified**

Fixed points in the inert models and enhancing vacuum stability for heavy fermionic extensions

Friday 7 March 2025 12:30 (30 minutes)

Presenter: BANDYOPADHYAY, Priyotosh

Contribution ID: 26

Type: **not specified**

Heavy quark system in medium

Friday 7 March 2025 14:15 (30 minutes)

Presenter: DATTA, Saumen

Contribution ID: 27

Type: **not specified**

Heavy quark polarization in QCD medium

Friday 7 March 2025 15:15 (30 minutes)

Presenter: JAISWAL, Amaresh (National Institute of Science Education and Research)

Contribution ID: 28

Type: **not specified**

Heavy quark dynamics in the pre-equilibrium phase

Friday 7 March 2025 15:45 (30 minutes)

Presenter: DAS, Santosh Kumar (School of Physical Science, Indian Institute of Technology Goa, India)

Contribution ID: 29

Type: **not specified**

Charm quark as effective probe of the QCD medium

Friday 7 March 2025 16:15 (30 minutes)

Presenter: KURIAN, Manu (McGill University)

Contribution ID: **30**

Type: **not specified**

Beyond the flavors of the Standard Model: a Mega Science vision for India

Friday 7 March 2025 17:00 (1h 30m)

Presenter: DIGHE, Amol (TIFR)

Contribution ID: **31**

Type: **not specified**

Deciphering the nature of New Physics from rare B decays

Saturday 8 March 2025 09:30 (30 minutes)

Presenter: MOHANTA, Rukmani

Contribution ID: 32

Type: **not specified**

BSM Posteriors, ML-Assisted

Saturday 8 March 2025 10:00 (30 minutes)

Presenter: PATRA, Sunando

Contribution ID: 33

Type: **not specified**

Unveiling the role of new physics in lepton flavor violating decays $b \rightarrow s\ell_1\ell_2$ through model independent analysis

Saturday 8 March 2025 10:30 (20 minutes)

Presenter: BHATTA, aishwarya

Contribution ID: 34

Type: **not specified**

Quark model predictions to various semileptonic and radiative B meson decays

Presenter: Ms PATNAIK, Sonali (National Institute of Science Education and Research)

Contribution ID: 35

Type: **not specified**

Women in Science

Saturday 8 March 2025 11:30 (1h 30m)

Presenters: KIRUBAKARAN, Sivapriya (IIT Gandhinagar); GOSWAMI, Srubabati (Physical Research Laboratory)

Contribution ID: 36

Type: **not specified**

Analysis of $B_{d(s)} \rightarrow M_{(c\bar{c})}(1S, 2S)K_s$ decays in RIQ Model.

Saturday 8 March 2025 14:30 (20 minutes)

Presenter: NAYAK, Lopamudra (PhD Student)

Contribution ID: 37

Type: **not specified**

Quantum corrections to the heavy-to-light form factors

Saturday 8 March 2025 14:50 (20 minutes)

Presenter: DATTA, Sudeepan (Indian Institute of Science)

Contribution ID: **38**

Type: **not specified**

The Dark HyperCharge Symmetry

Saturday 8 March 2025 15:10 (20 minutes)

Presenter: PRAJAPATI, HEMANT KUMAR (INDIAN INSTITUTE OF SCIENCE, EDUCATION & RESEARCH- BHOPAL (IISER BHOPAL))

Contribution ID: 39

Type: **not specified**

A_4 Flavor symmetry to dark Z_2 symmetry,

Saturday 8 March 2025 15:30 (20 minutes)

Presenter: KUMAR, Ranjeet (IISER Bhopal)

Contribution ID: 40

Type: **not specified**

CP Violation in B-decays

Monday 3 March 2025 09:30 (1h 15m)

Presenter: BHATTACHARYA, Bhubanjyoti (Lawrence Technological University)

Contribution ID: 41

Type: **not specified**

Introduction to Lattice Gauge Theory

Monday 3 March 2025 11:15 (1h 15m)

Presenter: WITZEL, Oliver (Universität Siegen)

Contribution ID: 42

Type: **not specified**

Heavy Quark Effective Theory (Online)

Monday 3 March 2025 15:00 (1 hour)

Presenter: MANNEL, Thomas

Contribution ID: 43

Type: **not specified**

CP Violation in B-decays

Tuesday 4 March 2025 09:30 (1h 15m)

Presenter: BHATTACHARYA, Bhubanjyoti (Lawrence Technological University)

Contribution ID: 44

Type: **not specified**

Introduction to Lattice Gauge Theory

Tuesday 4 March 2025 11:15 (1h 15m)

Presenter: WITZEL, Oliver (Universität Siegen)

Contribution ID: 45

Type: **not specified**

Heavy Quark Effective Theory (Online)

Tuesday 4 March 2025 15:00 (1 hour)

Presenter: MANNEL, Thomas