

Program

Feb 7 - 12, 2022

International Meeting on EFFECTIVE PATHWAYS TO NEW PHYSICS (IMEPNP)

Institute of Physics, Bhubaneswar
Sachivalaya Marg, Bhubaneswar - 751005, India.

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Mon, February 7

2:00 PM

Mon, February 7

2:00 – 7:30 PM

Monday Afternoon Session

Session | **Convener:** DILIP KUMAR GHOSH (IACS)

Description

Zoom Details:

<https://us02web.zoom.us/j/85656187122?pwd=NEdMZzNFc0hObkRIZUE0Smh6SWZYQT09>

Meeting ID: 856 5618 7122

Passcode: 907097

2:00 – 2:15 PM (15m)

Inauguration by Director, IOP

2:15 – 3:45 PM (1h 30m)

Pedagogical lecture on EFT

Speaker

Clifford Peter Burgess (McMaster University (CA))

3:45 – 4:00 PM (15m)

Break

4:00 – 5:00 PM (1h)

Review Talk on Flavour Physics and EFT

Speaker

Luca Silvestrini (CERN and INFN, Rome)

5:00 – 5:30 PM (30m)

Break

5:30 – 6:30 PM (1h)

Review Talk on Top Physics and EFT

Speaker

Eleni Vryonidou (University of Manchester (GB))

7:30 PM

Tue, February 8

9:30 AM

Tue, February 8

9:30 AM – 1:00 PM

Morning Session

Session | **Convener:** Poonam Mehta (Jawaharlal Nehru University)

Description

Zoom Details:

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Meeting ID: 856 5618 7122

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9:30 – 10:30 AM (1h)

Review Talk on EFT and Neutrino Physics, Baryon and Lepton Number violation

Speaker

Kaladi Babu (Oklahoma State University)

10:30 – 11:00 AM (30m)

Break

11:00 – 11:45 AM (45m)

Light from the Neutrinos and Pathways to New Physics**Speaker**

Dr Sudip Jana

1:00 PM

2:00 PM

Tue, February 8

2:00 – 6:00 PM

Tuesday Afternoon Session

Session | **Convener:** Subhendu Rakshit (IIT Indore)

Description

Zoom Details:
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Meeting ID: 856 5618 7122

Passcode: 907097

2:00 – 3:30 PM (1h 30m)

Pedagogical lecture on EFT

Speaker
Clifford Peter Burgess (McMaster University (CA))

3:30 – 4:00 PM (30m)

Break

4:00 – 5:00 PM (1h)

Review Talk on EFT with Sterile Neutrino

Speaker
Martin Hirsch

6:00 PM

Wed, February 9

9:30 AM

Wed, February 9

9:30 AM – 1:00 PM

Wednesday Morning Session

Session | **Convener:** Partha Konar (Physical Research Laboratory, Ahmedabad, Gujarat-380 009, INDIA)

Description

Zoom Details:

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Meeting ID: 856 5618 7122

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9:30 – 11:00 AM (1h 30m)

Pedagogical lecture on EFT (POSTPONED)

Speaker

Michael Robert Trott (University of Copenhagen (DK))

11:00 – 11:30 AM (30m)

Break

11:30 AM – 12:15 PM (45m)

Dark Matter freeze-in and freeze-out via Effective Operators: A couple of illustrations

Speaker

Subhaditya Bhattacharya

1:00 PM

4:00 PM

Wed, February 9

4:00 – 8:30 PM

Wednesday Afternoon Session**Session** | **Convener:** Kajari Mazumdar (Tata Inst. of Fundamental Research (IN))**Description**

Zoom Details:

<https://us02web.zoom.us/j/85656187122?pwd=NEdMZzNFc0hObkRIZUE0Smh6SWZYQT09>

Meeting ID: 856 5618 7122

Passcode: 907097

4:00 – 5:00 PM (1h)

Review Talk on Global SMEFT Fit**Speaker**

John Ellis (Kings College London)

5:00 – 5:30 PM (30m)

Break

5:30 – 6:30 PM (1h)

Review Talk on B anomalies and EFT**Speaker**

Gino Isidori (University of Zurich (CH))

6:30 – 7:00 PM (30m)

Break

7:00 – 8:00 PM (1h)

Review Talk on Higgs and EFT**Speaker**

Sally Dawson (BNL)

8:30 PM

2:30 PM

Thu, February 10

2:30 – 6:10 PM

Student / PDF talks

Session | **Conveners:** Subhadip Mitra, Sujoy Poddar (JU)

Description

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2:30 – 2:50 PM (20m)

Consequences of $b \rightarrow s\mu^+\mu^-$ anomalies on $B \rightarrow K(*)\nu\nu^-$, $Bs \rightarrow (\eta, \eta')\nu\nu^-$ and $Bs \rightarrow \phi\nu\nu^-$ decay observables

Speaker

Rajeev N

2:50 – 3:10 PM (20m)

Right Handed Neutrinos, TeV Scale BSM Neutral Higgs and FIMP Dark Matter in EFT Framework

Speaker

ROJALIN PADHAN (Institute of Physics, Bhubaneswar)

3:10 – 3:30 PM (20m)

Constraining the SMEFT top sector via searches in tZj and $t\bar{t}Z$ channels with Machine Learning

Speaker

Rahool Kumar Barman

3:30 – 3:50 PM (20m)

Searching for New Physics with the Standard Model Effective Field Theory

Speaker

Tisa Biswas (University of Calcutta)

3:50 – 4:10 PM (20m)

Cancellation in Dark Matter-Nucleon Interactions: the Role of Non-Standard-Model-like Yukawa Couplings

Speaker

Bibhabasu De (IOP Bhubaneswar)

4:10 – 4:30 PM (20m)

Break

4:30 – 4:50 PM (20m)

Measurement of Higgs self coupling from non-resonant Higgs pair production in CMS experiment

Speaker

Soumya Mukherjee (Tata Inst. of Fundamental Research (IN))

4:50 – 5:10 PM (20m)

Phenomenological analysis of the effective extensions of BSM scenarios

Speaker

Upalaparna Banerjee

5:10 – 5:30 PM (20m)

Automatisation of Integrating out heavy fields at one-loop

Speaker

shakeel ur rahaman

5:30 – 5:50 PM (20m)

EFT Diagrammatica: UV roots of the CP-conserving SMEFT**Speaker**

Suraj Prakash

5:50 – 6:10 PM (20m)

Directly Probing the Higgs-top Coupling at High Scales**Speaker**

Roshan Mammen Abraham (Oklahoma State University)

6:10 PM

Fri, February 11

9:30 AM

Fri, February 11

9:30 AM – 1:15 PM

Friday Morning Session

Session | **Convener:** BIPLOB BHATTACHERJEE (Indian Institute of Science)

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9:30 – 10:30 AM (1h)

Review Talk on Dark Matter and EFT

Speaker

Tim M.P. Tait (University of California, Irvine)

10:30 AM – 12:00 PM (1h 30m)

Pedagogical lecture on EFT

Speaker

Michael Robert Trott (University of Copenhagen (DK))

12:00 – 12:45 PM (45m)

Higgs Self-coupling in EFT framework

Speaker

Ambresh Shivaji (IISER Mohali)

1:15 PM

2:00 PM

Fri, February 11

2:00 – 8:30 PM

Friday Afternoon Session

Session | Conveners:

Subhadip Mitra (IIIT Hyderabad), Amit Chakraborty (High Energy Accelerator Research Organization (KEK)), Sujoy Poddar (JU)

Description

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2:00 – 3:30 PM (1h 30m)

Pedagogical lecture on Formalism of SMEFT

Speaker

Adam Falkowski (LPT Orsay)

3:30 – 4:00 PM (30m)

Break

4:00 – 5:00 PM (1h)

Review Talk on SMEFT Operators and UV Correspondences at any mass dimension

Speaker

Jiang-Hao Yu

5:00 – 5:30 PM (30m)

Break

7:00 – 8:00 PM (1h)

Review Talk Shining light on the Higgs: the Higgs boson anomalous couplings

Speaker

Andrei Gritsan (Johns Hopkins University (US))

8:30 PM

Sat, February 12

2:00 PM

Sat, February 12

2:00 – 6:00 PM

Saturday Afternoon Session

Session | **Convener:** Rohini Madhusudan Godbole (Indian Institute of science (IN))

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2:00 – 3:30 PM (1h 30m)

Pedagogical lecture on Formalism of SMEFT

Speaker

Adam Falkowski (LPT Orsay)

3:30 – 4:00 PM (30m)

Break

4:00 – 5:00 PM (1h)

Concluding talk

Speaker

John Ellis (Kings College London)

6:00 PM