

Topical Lectures "Effective Field Theories" in Groningen

Report of Contributions

Contribution ID: 1

Type: **not specified**

General Introduction to EFTs

Wednesday, 12 April 2023 10:30 (50 minutes)

Lagrangians, power counting

Presenter: TIMMERMANS, Rob (University of Groningen)

Session Classification: General Introductions to EFTs

Contribution ID: 2

Type: **not specified**

General Introduction to EFTs

Wednesday, 12 April 2023 11:50 (50 minutes)

Quantum corrections

Presenter: TIMMERMANS, Rob (University of Groningen)

Session Classification: General Introductions to EFTs

Contribution ID: 3

Type: **not specified**

Exercise and Discussion Session

Wednesday, 12 April 2023 14:00 (45 minutes)

Dimensions of operators, curvature, Einstein-Hilbert action and extensions

Presenter: TIMMERMANS, Rob (University of Groningen)

Session Classification: General Introductions to EFTs

Contribution ID: 4

Type: **not specified**

General Introduction to EFTs

Wednesday, 12 April 2023 15:10 (50 minutes)

RG flow

Presenter: PALLANTE, Elisabetha

Session Classification: General Introductions to EFTs

Contribution ID: 5

Type: **not specified**

Exercise and Discussion Session

Wednesday, 12 April 2023 16:00 (45 minutes)

Presenter: PALLANTE, Elisabetha

Session Classification: General Introductions to EFTs

Contribution ID: 6

Type: **not specified**

Energy scales in the Standard Model and beyond

Thursday, 13 April 2023 09:30 (50 minutes)

Presenter: BOER, Daniel (Van Swinderen Institute, RUG)

Session Classification: EFTs for LHC experiments

Contribution ID: 7

Type: **not specified**

Application of EFTs for B physics

Thursday, 13 April 2023 10:50 (50 minutes)

Presenter: DE BRUIJN, Kristof

Session Classification: EFTs for LHC experiments

Contribution ID: 8

Type: **not specified**

SMEFT and constraints from colliders

Thursday, 13 April 2023 13:00 (50 minutes)

Part 1

Presenter: ROJO, Juan

Session Classification: EFTs for LHC experiments

Contribution ID: 9

Type: **not specified**

SMEFT and constraints from colliders

Thursday, 13 April 2023 14:00 (50 minutes)

Part 2

Presenter: ROJO, Juan

Session Classification: EFTs for LHC experiments

Contribution ID: **10**

Type: **not specified**

Hands-on session: SMEFiT

Thursday, 13 April 2023 15:20 (1h 45m)

Presenters: ROJO, Juan; GIANI, Tommaso

Session Classification: EFTs for LHC experiments

Contribution ID: 11

Type: **not specified**

Gravity as an EFT

Friday, 14 April 2023 09:30 (50 minutes)

Resources:

- Gravity and EFT: arXiv:hep-ph/9512287 (<https://arxiv.org/abs/hep-ph/9512287>)
- Massive gravity: arXiv:1105.3735 (<https://arxiv.org/abs/1105.3735>)
- EFTs for Black Hole binaries: arXiv:1908.01493 (<https://arxiv.org/abs/1908.01493>)

Presenter: ROEST, Diederik (Groningen)

Session Classification: EFTs for non-accelerator experiments

Contribution ID: 12

Type: **not specified**

The EFT of the Big Bang

Friday, 14 April 2023 10:50 (50 minutes)

For a pedagogical summary on EFTs for inflation, see arXiv:0804.4291 (<https://arxiv.org/abs/0804.4291>)

For a more historical perspective on the development of EFTs, see arXiv:0908.1964 (<https://arxiv.org/abs/0908.1964>)

Presenter: FASIELLO, Matteo (IFT Madrid)

Session Classification: EFTs for non-accelerator experiments

Contribution ID: 13

Type: **not specified**

EFT studies of EDMs

Friday, 14 April 2023 13:00 (50 minutes)

Presenter: VRIES, Jordy de

Session Classification: EFTs for non-accelerator experiments

Contribution ID: 14

Type: **not specified**

EDM experiments using cold molecules & lab tour

Friday, 14 April 2023 14:00 (1h 30m)

Presenters: WILLMANN, Lorenz (VSI, RuG); HOEKSTRA, Steven (University of Groningen, and Nikhef)

Session Classification: EFTs for non-accelerator experiments

Contribution ID: 15

Type: **not specified**

Summary Q&A Session

Friday, 14 April 2023 15:30 (30 minutes)

Contribution ID: 16

Type: **not specified**

PhD Council Presents: Bowling & Dinner

Thursday, 13 April 2023 17:30 (4 hours)

For those that have signed up.

Instructions on how to get there can be found in the attached slides.

Presenter: GALATI, Maria Domenica (Van Swinderen Institute, University of Groningen)

Contribution ID: 17

Type: **not specified**

Message from the PhD Council

Thursday, 13 April 2023 10:40 (10 minutes)

Presenter: VAN WEELDEN, Gijs

Session Classification: EFTs for LHC experiments