

**7th Thailand School on
High-Energy and
Astro-Physics (SHEAP 2025):
QFT**

Report of Contributions

Contribution ID: 1

Type: **not specified**

Welcome remarks

Monday 23 June 2025 10:00 (5 minutes)

Presenter: Prof. GUMJUDPAI, Burin

Session Classification: Inaguration

Contribution ID: 2

Type: **not specified**

Welcome remarks

Monday 23 June 2025 10:05 (5 minutes)

Author: Dr OPRASERTSAWAT, Monhakarn

Presenter: Dr OPRASERTSAWAT, Monhakarn

Session Classification: Inaguration

Contribution ID: 3

Type: **not specified**

Event report

Monday 23 June 2025 10:10 (5 minutes)

Author: Dr ABHINAV, Kumar (NAS, Mahidol University, Nakhonsawan Campus)

Presenter: Dr ABHINAV, Kumar (NAS, Mahidol University, Nakhonsawan Campus)

Session Classification: Inaguration

Contribution ID: 4

Type: **not specified**

Opening address

Monday 23 June 2025 10:15 (10 minutes)

Author: Prof. SRITARA, Piyamitr

Presenter: Prof. SRITARA, Piyamitr

Session Classification: Inauguration

Contribution ID: 5

Type: **not specified**

Introduction to the Event Activities by the LOC Team by the head of LOC

Monday 23 June 2025 10:25 (10 minutes)

Session Classification: Inaguration

Contribution ID: 6

Type: **not specified**

Classical Fields and Symmetries

Monday 23 June 2025 10:50 (1h 30m)

Presenter: Dr UTTAYARAT, Patipan

Session Classification: Classical fields

Contribution ID: 7

Type: **not specified**

Klein-Gordon Fields & Field decomposition

Monday 23 June 2025 13:00 (1h 30m)

Presenter: Dr UTTAYARAT, Patipan

Session Classification: Classical fields

Contribution ID: 8

Type: **not specified**

Discussion & tutorial preparation

Monday 23 June 2025 14:30 (30 minutes)

Session Classification: Classical fields

Contribution ID: 9

Type: **not specified**

Tutorials

Monday 23 June 2025 15:15 (1h 30m)

Presenters: Mr TITA, Amornthep; Dr TREESUKRAT, Wararat

Session Classification: Classical fields

Contribution ID: **10**

Type: **not specified**

Canonical Quantization of Scalar Field

Tuesday 24 June 2025 09:00 (1h 30m)

Only the first part of these notes is relevant here.

Presenter: Dr VANICHCHAPONGJAROEN, Pichet

Session Classification: Scalar field quantization (Spin 0)

Contribution ID: 11

Type: **not specified**

Properties of Quantized Scalar Field

Tuesday 24 June 2025 10:45 (1h 30m)

The second part of these notes will be relevant here.

Presenter: Dr VANICHCHAPONGJAROEN, Pichet

Session Classification: Scalar field quantization (Spin 0)

Contribution ID: 12

Type: **not specified**

Discussion & Tutorial preparation

Tuesday 24 June 2025 13:30 (30 minutes)

Session Classification: Scalar field quantization (Spin 0)

Contribution ID: **13**

Type: **not specified**

Tutorial

Tuesday 24 June 2025 15:15 (1h 30m)

Solutions will be uploaded in the due time.

Presenters: Mr TITA, Amornthep; Dr TREESUKRAT, Wararat

Session Classification: Scalar field quantization (Spin 0)

Contribution ID: 14

Type: **not specified**

Dirac Equation & Spin- $\frac{1}{2}$ Particles & Symmetries

Wednesday 25 June 2025 09:00 (1h 30m)

Presenter: Dr TAWABUTR, Yossathorn

Session Classification: Dirac fields (Spin 1/2)

Contribution ID: 15

Type: **not specified**

Quantization of Dirac Field & Properties

Wednesday 25 June 2025 10:45 (1h 30m)

Presenter: Dr TAWABUTR, Yossathorn

Session Classification: Dirac fields (Spin 1/2)

Contribution ID: **16**

Type: **not specified**

Tutorial

Thursday 26 June 2025 09:00 (1h 30m)

Presenter: Dr TAWABUTR, Yossathorn

Session Classification: Dirac fields (Spin 1/2)

Contribution ID: 17

Type: **not specified**

Maxwell's equations & U(1) gauge invariance

Thursday 26 June 2025 10:45 (1h 30m)

Presenter: ABHINAV, Kumar (NAS, Mahidol University, Nakhonsawan Campus)

Session Classification: Abelian gauge fields (Spin 1)

Contribution ID: **18**

Type: **not specified**

Guge field quantization & Properties

Thursday 26 June 2025 13:30 (1h 30m)

Presenter: ABHINAV, Kumar (NAS, Mahidol University, Nakhonsawan Campus)

Session Classification: Abelian gauge fields (Spin 1)

Contribution ID: **19**

Type: **not specified**

Discussion & Tutorial preparation

Thursday 26 June 2025 15:15 (1h 15m)

Session Classification: Abelian gauge fields (Spin 1)

Contribution ID: **20**

Type: **not specified**

Tutorial

Thursday 26 June 2025 16:30 (1h 30m)

Presenters: Mr TITA, Amornthep; Dr TREESUKRAT, Wararat

Session Classification: Abelian gauge fields (Spin 1)

Contribution ID: 21

Type: **not specified**

Path Integral & Propagation

Friday 27 June 2025 09:00 (1h 30m)

Presenter: Dr VANICHCHAPONGJAROEN, Pichet

Session Classification: Field dynamics & Interactions

Contribution ID: 22

Type: **not specified**

Introduction to QED (Feynman Diagrams)

Friday 27 June 2025 10:45 (1h 30m)

Presenter: Dr VANICHCHAPONGJAROEN, Pichet

Session Classification: Field dynamics & Interactions