

## **Session Program**

**30 June 2025 to 4 July 2025**



# **GIREP-EPEC**

Transforming physics learning via Research & Practice  
LEIDEN, 2025

## **GIREP-EPEC 2025 Conference, Leiden, The Netherlands**

### ***Parallel oral presentations QUANT***

Leiden University, Gorlaeus building  
Einsteinweg 55 2333 CC Leiden <https://www.universiteitleiden.nl/en/locations/gorlaeus-building#tab-1>

# Monday 30 June

13:30

## Parallel oral presentations QUANT: Parallel oral presentations 112 QUANT

**Session** | **Location:** Gorlaeus building, BM1.26, Einsteinweg 55 2333 CC Leiden | **Convener:** James Freericks

13:30-13:50

### Grasping the Invisible: Design and Implementation of Electronic Quantum Dice

**Speaker**

Bart Folkers

13:50-14:10

### Factors that Support Classroom Implementation of Quantum Concepts in High School

**Speaker**

Karen Matsler

14:10-14:30

### Pre-service teachers' flexible use of classical and quantum ontologies during a Kundt's tube analogy assignment

**Speaker**

Mr Paul de Haas

14:30-14:50

### Teaching quantum mechanics without waves or matrices

**Speaker**

James Freericks

15:00

## Tuesday 1 July

09:00

### Parallel oral presentations QUANT: Parallel oral presentations 215 QUANT (option for DiDaDoDa)

**Session** | **Location:** Gorlaeus building, BM1.26, Einsteinweg 55 2333 CC Leiden | **Convener:**  
Dr Kim Krijtenburg-Lewerissa

09:00–09:20

#### Why should high-school students learn Quantum Physics? Various stakeholders' perspectives

##### Speaker

Dr Avraham Merzel

09:20–09:40

#### History as a Tool for Clarity: Enhancing Quantum Mechanics Understanding through Key Historical Insights

##### Speakers

Luisa Loviseti, Marco Giliberti

09:40–10:00

#### Evaluation of an Activity Connecting Art and Quantum Concepts for Primary Education

##### Speakers

Leonie Sonneveld, Rutger Ockhorst

10:00–10:20

#### What quantum topics and concepts should be included in an ideal secondary school quantum physics curriculum?

##### Speakers

Dr Kim Krijtenburg-Lewerissa, Philipp Bitzenbauer

10:30

15:30

### Parallel oral presentations QUANT: Parallel oral presentations 223 QUANT

**Session** | **Location:** Gorlaeus building, BM1.26, Einsteinweg 55 2333 CC Leiden | **Convener:** Benjamin Zwickl

15:30–15:50

#### NV-center magnetometer experiment for school and its educational concept

##### Speaker

Mr Simon Koppenhöfer

15:50–16:10

#### Exploring Teaching Strategies and Pedagogical Content Knowledge for Teaching the Band Gap Concept in Secondary Education

##### Speaker

Tim Bouchée

16:10–16:30

#### God plays quantum dice - teaching bosons and fermions to high school students

##### Speaker

Dr Efraim Yehuda Weissman

16:30-16:50

**Identifying opportunities to integrate quantum sensing into bachelor's-level physics courses**

**Speaker**

Benjamin Zwickl

17:00

Friday 4 July

09:00

Parallel oral presentations QUANT: Parallel oral presentations 512  
QUANT

**Session** | **Location:** Gorlaeus 'schotel', C4/5, Einsteinweg 57 2333 CC Leiden | **Conveners:**  
Gesche Pospiech, Gesche Pospiech

09:00-09:20

**Quantum for the Curious: An academic minor to enhance quantum literacy for non-physics students**

**Speaker**

Carolien Castenmiller

09:40-10:00

**Formal and informal approaches to quantum mechanics using quantum cryptography**

**Speaker**

Maria Bondani

10:00-10:20

**Teaching quantum science between interpretational debate and pragmatism: learning about Nature of Science**

**Speaker**

Gesche Pospiech

10:30