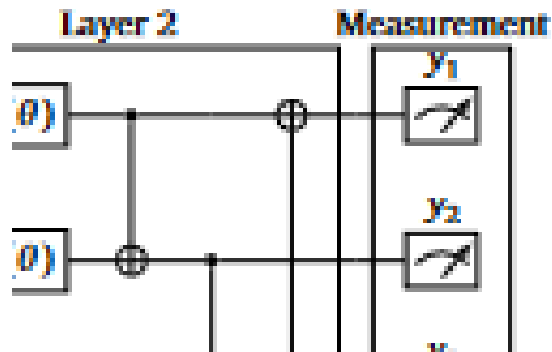


# Quantum Computing for High-Energy Physics



## Report of Contributions

Contribution ID: 1

Type: **not specified**

# Theory-driven Quantum Machine Learning for HEP

*Tuesday, 19 September 2023 10:10 (25 minutes)*

**Presenter:** ARAZ, Jack (IPPP - Durham University)

**Session Classification:** Session 1

Contribution ID: 2

Type: **not specified**

## Welcome

*Tuesday, 19 September 2023 10:00 (10 minutes)*

**Presenters:** BARR, Alan (University of Oxford); SPANNOWSKY, Michael (Durham); SPANNOWSKY, Michael (IPPP, Durham University)

**Session Classification:** Session 1

Contribution ID: 3

Type: **not specified**

# Quantum simulation of colour in perturbative quantum chromodynamics

*Wednesday, 20 September 2023 11:00 (25 minutes)*

**Presenter:** CHAWDHRY, Herschel (University of Oxford)

**Session Classification:** Session 6

Contribution ID: 4

Type: **not specified**

## **CERN applications with quantum computing & examples**

*Tuesday, 19 September 2023 11:40 (40 minutes)*

**Presenter:** GROSSI, Michele (CERN)

**Session Classification:** Session 2

Contribution ID: 5

Type: **not specified**

# Quantum integration of elementary-particle processes

*Tuesday, 19 September 2023 14:00 (25 minutes)*

**Presenter:** PELLEN, Mathieu (University of Freiburg)

**Session Classification:** Session 3

Contribution ID: 6

Type: **not specified**

## **Do we have freedom of choice in high-energy experiments and why should we care?**

*Wednesday, 20 September 2023 09:40 (30 minutes)*

**Presenter:** ECKSTEIN, Michal (Jagiellonian University)

**Session Classification:** Session 5

Contribution ID: 7

Type: **not specified**

## **Quantum State-Channel Duality for the calculation of Standard Model scattering amplitudes**

*Wednesday, 20 September 2023 09:10 (25 minutes)*

**Presenter:** ALTOMONTE, Clelia (King's College, London)

**Session Classification:** Session 5



Contribution ID: 8

Type: **not specified**

## Testing quantum mechanics and beyond

*Tuesday, 19 September 2023 10:35 (25 minutes)*

**Presenter:** HORODECKI, Pawel (University of Gdańsk, International Centre for Theory of Quantum Technologies)

**Session Classification:** Session 1

Contribution ID: 9

Type: **not specified**

## Quantum information and CP measurement in $H \rightarrow \tau, \tau^*$ at future lepton colliders

*Tuesday, 19 September 2023 14:25 (30 minutes)*

**Presenters:** SAKURAI, Kazuki (University of Warsaw); SAKURAI, Kazuki (University of Warsaw)

**Session Classification:** Session 3

Contribution ID: 10

Type: **not specified**

## Event Generation on a Quantum Computer

*Wednesday, 20 September 2023 11:30 (25 minutes)*

**Presenter:** WILLIAMS, Simon (Imperial College London)

**Session Classification:** Session 6

Contribution ID: **11**

Type: **not specified**

**tbc**

*Wednesday, 20 September 2023 12:00 (30 minutes)*

**Presenter:** ABEL, Steven (IPPP)

**Session Classification:** Session 6