# 1st collaboration workshop on Reinforcement Learning for Autonomous Accelerators (RL4AA'23)

Report of Contributions

Contribution ID: 1 Type: not specified

## IBPT seminar talk by Dr. Simon Hirländer "Reinforcement Learning in particle accelerator control: are we there yet?"

Tuesday, February 21, 2023 2:00 PM (1 hour)

**Presenter:** Dr HIRLÄNDER, Simon (University of Salzburg)

Contribution ID: 2 Type: not specified

## Discussion on RL applications to the real world

Contribution ID: 3 Type: not specified

#### **Introduction to RL**

Tuesday, February 21, 2023 9:00 AM (40 minutes)

Presenter: Dr SANTAMARIA GARCIA, Andrea (KIT)

Session Classification: Introduction to RL workshop

Contribution ID: 4 Type: **not specified** 

#### Advanced concepts in RL

Tuesday, February 21, 2023 9:40 AM (1 hour)

**Presenter:** Dr HIRLÄNDER, Simon (University of Salzburg)

Session Classification: Introduction to RL workshop

Contribution ID: 5 Type: **not specified** 

# Python tutorial: application to an accelerator problem

Tuesday, February 21, 2023 11:00 AM (1h 45m)

Please find the instructions for the tutorial here: https://github.com/RL4AA/RL4AA23

Authors: XU, Chenran (IBPT); KAISER, Jan (DESY)

**Presenters:** Dr SANTAMARIA GARCIA, Andrea (KIT); XU, Chenran (IBPT); KAISER, Jan (DESY); Dr

HIRLÄNDER, Simon (University of Salzburg)

Session Classification: Introduction to RL workshop

Contribution ID: 6 Type: **not specified** 

# Going down to the KARA accelerator, control room, EO setup

**Session Classification:** Tour of the accelerator facilities

Contribution ID: 7 Type: **not specified** 

#### **IR1 & IR2**

Visit to the THz hatch, KALYPSO Visit to IR1, KAPTURE + Highflex + Versal setup

**Session Classification:** Tour of the accelerator facilities

Contribution ID: 8 Type: not specified

## **KIT-Shuttle to Campus Nord**

Contribution ID: 9 Type: not specified

#### **Introduction to IBPT activities**

Monday, February 20, 2023 9:10 AM (20 minutes)

**Presenter:** STEINMANN, Johannes (KIT / IBPT)

Sabrina Appel

Contribution ID: 10 Type: not specified

## Sabrina Appel

Monday, February 20, 2023 1:30 PM (5 minutes)

**Session Classification:** Meet & greet speed talks

Awal Awal

Contribution ID: 11 Type: not specified

#### **Awal Awal**

Monday, February 20, 2023 1:35 PM (5 minutes)

**Session Classification:** Meet & greet speed talks

Niky Bruchon

Contribution ID: 12 Type: not specified

## **Niky Bruchon**

Monday, February 20, 2023 1:40 PM (5 minutes)

**Session Classification:** Meet & greet speed talks

Conrad Caliari

Contribution ID: 13 Type: not specified

## **Conrad Caliari**

Monday, February 20, 2023 1:45 PM (5 minutes)

**Session Classification:** Meet & greet speed talks

Felipe Donoso

Contribution ID: 14 Type: not specified

## **Felipe Donoso**

Monday, February 20, 2023 1:50 PM (5 minutes)

**Session Classification:** Meet & greet speed talks

Contribution ID: 15 Type: not specified

## Julian Gethmann

Monday, February 20, 2023 1:55 PM (5 minutes)

**Presenter:** GETHMANN, Julian (KIT: IBPT/LAS)

**Session Classification:** Meet & greet speed talks

Contribution ID: 16 Type: not specified

## Jan Henry Hetzel

Monday, February 20, 2023 2:00 PM (5 minutes)

**Session Classification:** Meet & greet speed talks

Contribution ID: 17 Type: not specified

## Simon Hirländer

Monday, February 20, 2023 2:05 PM (5 minutes)

**Session Classification:** Meet & greet speed talks

Jan Kaiser

Contribution ID: 18 Type: not specified

#### Jan Kaiser

Monday, February 20, 2023 2:10 PM (5 minutes)

**Presenters:** KAISER, Jan (DESY); KAISER, Jan (DESY)

**Session Classification:** Meet & greet speed talks

Contribution ID: 19 Type: not specified

#### Sabrina Pochaba

Monday, February 20, 2023 2:25 PM (5 minutes)

**Session Classification:** Meet & greet speed talks

Contribution ID: 20 Type: not specified

#### Andrea Santamaria Garcia

Monday, February 20, 2023 2:30 PM (5 minutes)

**Session Classification:** Meet & greet speed talks

Contribution ID: 21 Type: not specified

#### **Michael Schenk**

Monday, February 20, 2023 2:35 PM (5 minutes)

**Session Classification:** Meet & greet speed talks

Contribution ID: 22 Type: not specified

## Pierre Schnizer

Monday, February 20, 2023 2:40 PM (5 minutes)

**Session Classification:** Meet & greet speed talks

Contribution ID: 23 Type: not specified

## Alexander Schütt

Monday, February 20, 2023 2:45 PM (5 minutes)

**Session Classification:** Meet & greet speed talks

Contribution ID: 24 Type: not specified

## Luca Scomparin

Monday, February 20, 2023 2:50 PM (5 minutes)

Presenter: SCOMPARIN, Luca

**Session Classification:** Meet & greet speed talks

Chenran Xu

Contribution ID: 25 Type: not specified

#### Chenran Xu

Monday, February 20, 2023 3:00 PM (5 minutes)

**Presenter:** XU, Chenran (IBPT)

**Session Classification:** Meet & greet speed talks

Contribution ID: 26 Type: not specified

## Discussions, Q&A

Monday, February 20, 2023 3:05 PM (20 minutes)

**Session Classification:** Meet & greet speed talks

Contribution ID: 27 Type: not specified

# Discussion Group 1: Modeling, limitations, and methods

Tuesday, February 21, 2023 3:30 PM (35 minutes)

Discussion Group 1: Modeling, lim...

Presenter: HIRLÄNDER, Simon

Session Classification: Discussion on advanced RL topics

Contribution ID: 28 Type: not specified

#### **Discussion Group 2: Challenges I**

Tuesday, February 21, 2023 4:05 PM (35 minutes)

**Presenter:** XU, Chenran (IBPT)

Session Classification: Discussion on advanced RL topics

Contribution ID: 29 Type: not specified

#### **Discussion Group 3: Challenges II**

Tuesday, February 21, 2023 4:40 PM (35 minutes)

Presenter: SCHENK, Michael

Session Classification: Discussion on advanced RL topics

Contribution ID: 30 Type: not specified

#### **Discussion Group 4: Community**

Tuesday, February 21, 2023 5:15 PM (35 minutes)

Presenter: KAISER, Jan

**Session Classification:** Discussion on advanced RL topics

Farewell

Contribution ID: 31 Type: not specified

#### **Farewell**

Tuesday, February 21, 2023 5:50 PM (10 minutes)

Presenter: SANTAMARIA GARCIA, Andrea (KIT)

Session Classification: Discussion on advanced RL topics

Welcome

Contribution ID: 32 Type: not specified

#### Welcome

Monday, February 20, 2023 9:00 AM (10 minutes)

Presenter: SANTAMARIA GARCIA, Andrea (KIT)

Reuf Kozlica

Contribution ID: 33 Type: not specified

#### **Reuf Kozlica**

Monday, February 20, 2023 2:15 PM (5 minutes)

**Session Classification:** Meet & greet speed talks

Contribution ID: 34 Type: not specified

## Stephan Kötter

Monday, February 20, 2023 2:20 PM (5 minutes)

**Session Classification:** Meet & greet speed talks

Contribution ID: 35 Type: not specified

#### Waheedullah Sulaiman Khail

Monday, February 20, 2023 2:55 PM (5 minutes)

**Session Classification:** Meet & greet speed talks