

# Belle II pyhf Open Workshop & Tutorials

Introduction & Overview 3rd March 2023







#### Scope of the Workshop



#### **Overview**

#### The workshop is intended as a mix of

- Tutorials
- Presentation of use cases
- Feedback from users to developers
- Questions from developers to users

We will record the sessions to make the tutorials useful also past the workshop.

- If you have a question during the talk, please just raise your virtual hand
- If you have additional use-cases or prepared material:
  - You can present these after the last use case talk (ca. 15:45)

For the local participants: we will head for lunch at ca. 12:00 - 14:00; coffee breaks are in the FTD coffee kitchen.

#### **Zoom Meeting Link:**

https://uni-bonn.zoom.us/j/62148599664?pwd=T1BhVE5wbWtiTnBzM1pyZlFJZzFXQT09

## **Agenda**

| 09:00 | Welcome & Introduction                               |                                 |
|-------|--|---------------------------------|
|       |  | 09:00 - 09:20                   |
|       | Tutorial on pyhf - basic use                         | Lukas Heinrich                  |
|       |  | 09:20 - 10:00                   |
| 10:00 | Coffee break   | 10:00 - 10:20                   |
|       | Tutorial on pyhf - advanced use I cabinetry          | Alexander Held                  |
|       |  | 10:20 - 11:00                   |
| 11:00 | Q & A / Feedback from Users / Questions to the Users | Slavomira Stefkova              |
|       |  | 11:00 - 11:40                   |
|       | Likelihood preservation                              | Lukas Heinrich<br>11:40 - 12:00 |
| 12:00 | Lunch  |                                 |
|       |  |                                 |
|       |  |                                 |
|       |  |                                 |
| 13:00 |  |                                 |
|       |  |                                 |
|       |  |                                 |
|       |  | 12:00 - 14:00                   |

| 14:00 | Use of pyhf at Belle II Use case 1      | Noreen Rauls          |
|-------|---|-----------------------|
|       |   | 14:00 - 14:30         |
|       | Use of pyhf at Belle II Use case 2      | Paul Feichtinger      |
|       |   | 14:30 - 15:00         |
| 15:00 | Coffee break                            |                       |
|       |   | 15:00 - 15:20         |
|       | Use of pyhf at Belle II Use case 3      | Lorenz Ennio Gaertner |
|       |   | 15:20 - 16:00         |
| 16:00 | How to get involved in pyhf development | Matthew Feickert      |
|       |   | 16:00 - 16:20         |
|       | Live hackathon session                  |                       |
| 17:00 |   |                       |
|       |   |                       |
|       |   | 16:20 - 17:50         |





Can you draft some concluding statement for the introduction slides of a workshop about the pyhf fitting framework?



pyhf."

Certainly! Here is a draft concluding statement for the introduction slides of a workshop about the pyhf fitting framework:

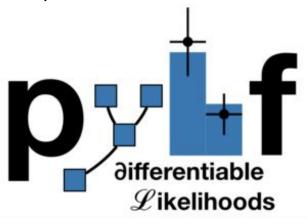


"In conclusion, the pyhf fitting framework is a powerful and flexible tool for statistical modeling and analysis in high-energy physics and beyond. Its modular and portable design, combined with its support for multiple statistical models and backends, make it a versatile and user-friendly framework for researchers and data analysts. We hope this workshop has provided you with the knowledge and skills needed to harness the full potential of pyhf for your research projects. Thank you for your participation, and we look forward to seeing the exciting results that you will achieve with

### Now make it a poem!

Have a good workshop everybody!

Many thanks to Lukas, Alex, Matthew, Lorenz, Noreen, and Paul for their help!





The pyhf fitting framework, A tool both strong and true, A work of art and science, A shining light for you.

With modularity and portability,
And support for models new and old,
It's a versatile and powerful friend,
For researchers, brave and bold.

From high-energy physics to other fields, It guides us through our data's maze, A friendly and familiar face, That brightens up our days.

So let us raise our voices high, In praise of pyhf's might, And cherish all its many gifts, As we journey through the night.

For pyhf is more than just a tool, It's a symbol of our quest, To seek the truth and find the way, And be our very best.

So let us go forth with joy and hope, And use pyhf to blaze a trail, To unlock the secrets of the universe, And see beyond the veil.