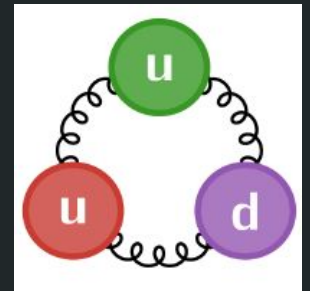# JuliaHEP WG Meeting
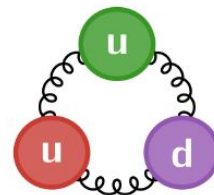
Pere Mato Vila, Tamas Gal, Uwe Hernandez Acosta, Alexander Moreno Briceño

JuliaHEP WG

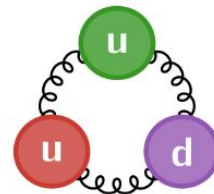- The JuliaHEP HSF working group, created after **CHEP 2023**, brings together a community of developers and users of Julia in Particle Physics, with the aim of improving the sharing of knowledge and expertise, as well as unify effort in developing Julia packages useful for the community
- We have topical meetings
    - JuliaHEP WG Meeting - 14-12-2023
    - JuliaHEP WG Meeting - 22-02-2024
    - JuliaHEP WG Meeting - 18-04-2024
- Everyone is welcome to join the community, and participate and contribute to the WG meetings

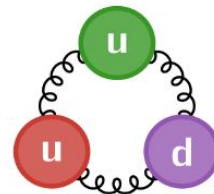   (Contact us at **hsf-juliahep-organisation@googlegroups.com**)

JuliaHEP Events

- **WG Meetings**
  - JuliaHEP WG Meeting - 20-06-2024
- **JuliaHEP 2024**
  - **JuliaHEP 2024 Workshop at CERN in September 30-October 3**
  - **JuliaHEP Tutorials from 25-27 September**:
    - Julia basics
    - Highlights of the Julia ecosystem
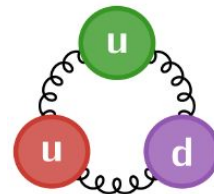   - HEP tasks and analysis in Julia

JuliaHEP News

- **Google Summer of Code 2024**
  - **GSoC 2024** projects related to **JuliaHEP**
    - Julia interoperating with HEP C++ libraries (Pere Mato and Philippe Gras)
    - Machine Learning in Julia for Calorimeter Showers (Graeme Stewart, Pere Mato and Piyush Raikwar)
  - **Timeline**
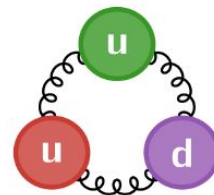   - **May 1 - Accepted student projects announced**

JuliaHEP News

- **JuliaCon 2024 - July 9th-13th**. Talks:
  - UnROOT.jl - Data I/O for High-Energy Physics in Julia - Jerry Ling. 07-10, 16:30–17:00 (Europe/Amsterdam).
  - Geant4.jl - Particle transport in Julia - Pere Mato. 07-10, 14:30–15:00 (Europe/Amsterdam).
  - Jet Reconstruction in Julia - Graeme Stewart. 07-10, 15:00-15:30 (Europe/Amsterdam).
- **CHEP 2024 - October 19-25**
  - Talks: Julia in HEP
  - List of Julia abstracts for CHEP
  - Important dates:
    - **Abstract submission closed 17.05.2024**
    - **Abstract acceptance notifications 17.06.2024**
    - **Early registration closes 17.07.2024**

JuliaHEP News

- **Recent papers:**
    - Bridging Worlds: Achieving Language Interoperability between Julia and Python in Scientific Computing (Ianna Osborne, Jim Pivarski and Jerry Ling)
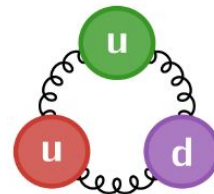   - UltraDark.jl: A Julia package for simulation of cosmological scalar fields (Nathan Musoke)

Find us

hepsoftwarefoundation.org

The JuliaHEP organization website

Contact us at **hsf-juliahep-organisation@googlegroups.com**

Today's Talk

Optimizations on DAG-Representations of Domain-Specific

Computations for Heterogeneous Systems and Application to Quantum

Electrodynamics

Anton Reinhard