# A Portrait of the Uni Heidelberg, MPIK and KIT groups

Jahrestreffen der deutschen LHCb-Gruppen (Theorie und Experiment),
October 1-2, 2026 RWTH Aachen

Gefördert durch:
BMFTR
FSP LHCb
Erforschung von
Universum und Materie

# Group Leaders

UNIVERSITÄT
HEIDELBERG
ZUKUNFT
SEIT 1386

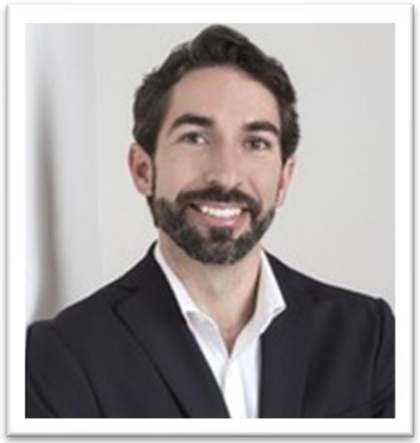
Prof Dr Stephanie Hansmann-Menzemer

Prof Dr Ulrich Uwer

Dr Christoph Langenbruch

# The SciFi and MightySciFi Tracker Team

Dr Sebastian Bachmann



Dr Blake Leverington

Dr Xiaoxue Han

Tengiz Kvaratskheliya
(Technical support/Safety)

Tom Wolf

Ya Zhao

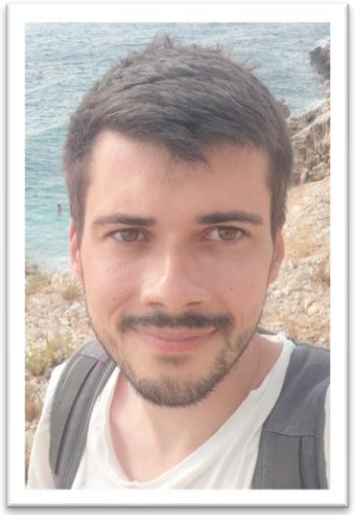
**Dr** Chishuai Wang

Calibration: Hit Resolution, Time alignment, Operation Piquets

# The MightyPixel Tracker Team

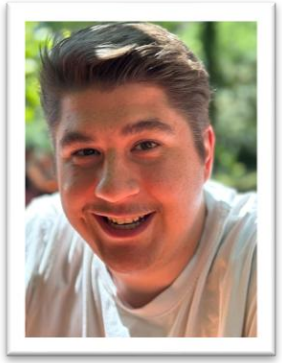
Dr Sebastian Bachmann

Lucas Dittmann



Ruben Kolb

Celina Welschoff



Masters – David Kuhn,
TID studies

MightyPix (and other MAPS) tests, study, irradiation, and testbeams

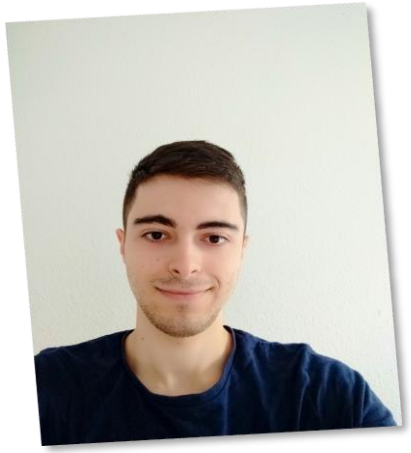
# RTA, Tracking and Alignment

Dr Giulia Tuci,
Alignment

**Dr** Lennart Uecker,
Kalman Filter

Dr. Martin Tat,
Tracking&Trigger

Dr. Fabian Glaser,
Tracking

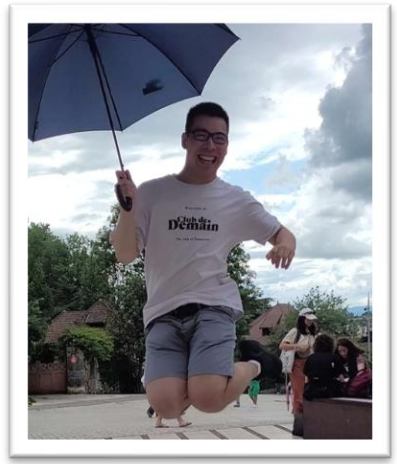


Miguel Ruiz Diaz,
Alignment

Maurice Morgenthaler,
Tracking

Penelope Hoffmann,
Kalman Filter HLT1

Nicolas Himbert,
Alignment,
inclusive flavour tagger

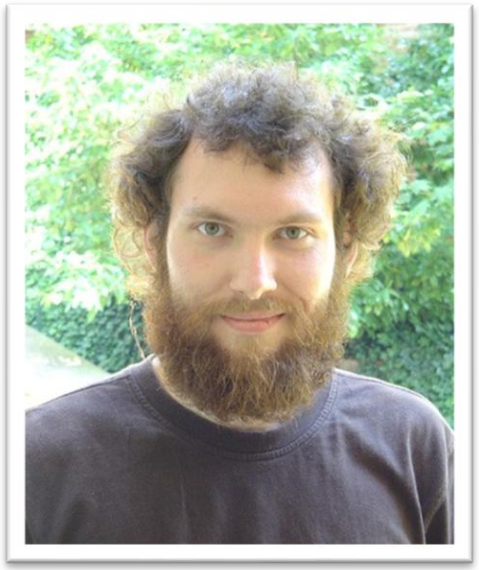


Yukai Zhao,
ML for simulation and
DFEI for flavour tagging

# Computing

Dr Jörg Marks

Dr Alexey Zhelezov



Dr Manuel Schiller

Core Computing, Grid computing, SciFi Database

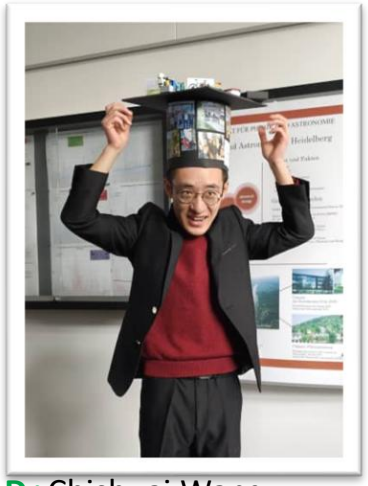
# Physics Analysis

Dr Giulia Tuci ,
Charm

Dr. Fabian Glaser,
B->MuNuGamma and Bc->Jpsi Xc

Dr. Martin Tat,
K*mumu

Dr. Carlos Cocha,
Dark photons from D*



**Dr** Chishuai Wang,
LFU test R(Lambda)

Dr. Lennart Uecker,
Delta_m mixing

# Physics Analysis

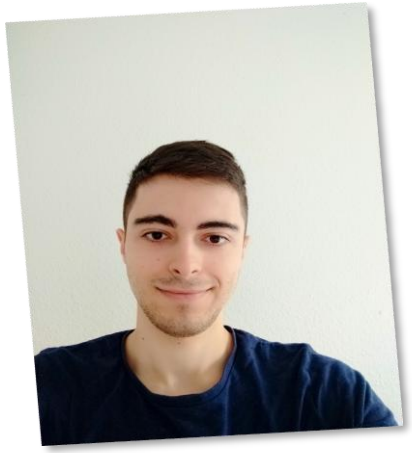
Ya Zhao,
B to tautau

Penelope Hoffmann,
CP violation in D0 to KSKS

Tom Wolf,
/Delta/Gamma_d

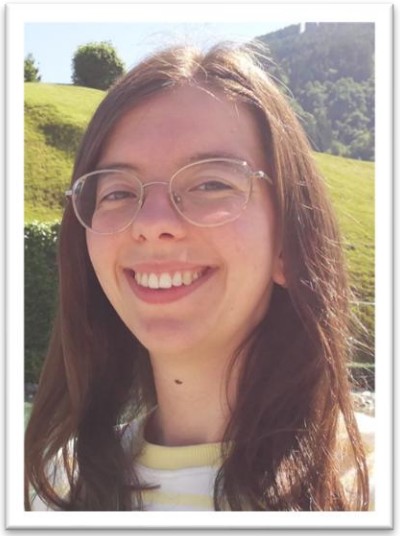
Maurice Morgenthaler,
Mixing phase Phi_s

Nicolas Himbert,
phi_s



Miguel Ruiz Diaz,
mixing and CPV in D0 -> Kspip

# Master's Students



Claudia Schudy,
U2 Tracking and Performance

Sidney Schwarz,
B->tautau

Mads Madsen,
AI applications

Sascha Müller,
CPV in Charm D->etapi

# Bachelor's Students

Tobiasz Makarczyk, U2 tracking (matching with UP)

Nicolas Winkel

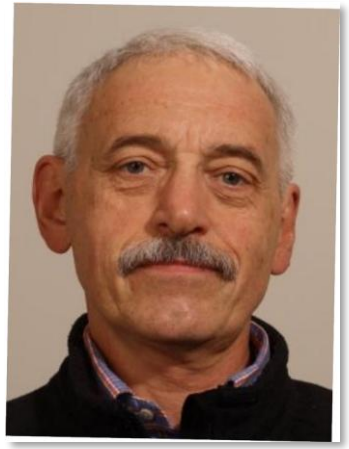
# ErUM FSP Office

Dr Daniel Heuchel – ErUM FSP office

# Max-Planck-Institut für Kernphysik

Prof Dr Michael Schmelling (group leader)

- test of CPT-symmetry and Lorentz invariance by means of V0 decays
- inclusive cross-section measurements in pp and pA (also SMOG)
  - in collaboration with Dortmund and Kiev



Dr Mikhail Zavertiaev (senior, guest researcher)

- analysis of low-pileup pp data at 7 and 13 TeV

**Outreach activities:** Using Netzwerk Teilchenwelt detectors and work on PIN-diode based cosmic ray muon detector

# Karlsruhe Institute of Technology

**Prof Dr Ivan Peric (group leader)**

- The KIT-group "ASIC and Detector Lab" (ADL) develops integrated electronics and sensors for particle physics experiments and medicine.
- **More than 80 chip** designs including ATLASPix, MuPix, Belle readout asics, HITPix
- Design of the monolithic sensor for the LHCb tracker upgrade: **MightyPix**

Group members: Dr Toko Hirono, Nicolas Striebig & Dr Richard Leys