

# About Me

Judith Höfer

IFIC Newcomers Event – November 25<sup>th</sup> 2024

# Hometown

- Born in **Bamberg** in Northern Bavaria, Germany
- Is UNESCO world heritage since 1993



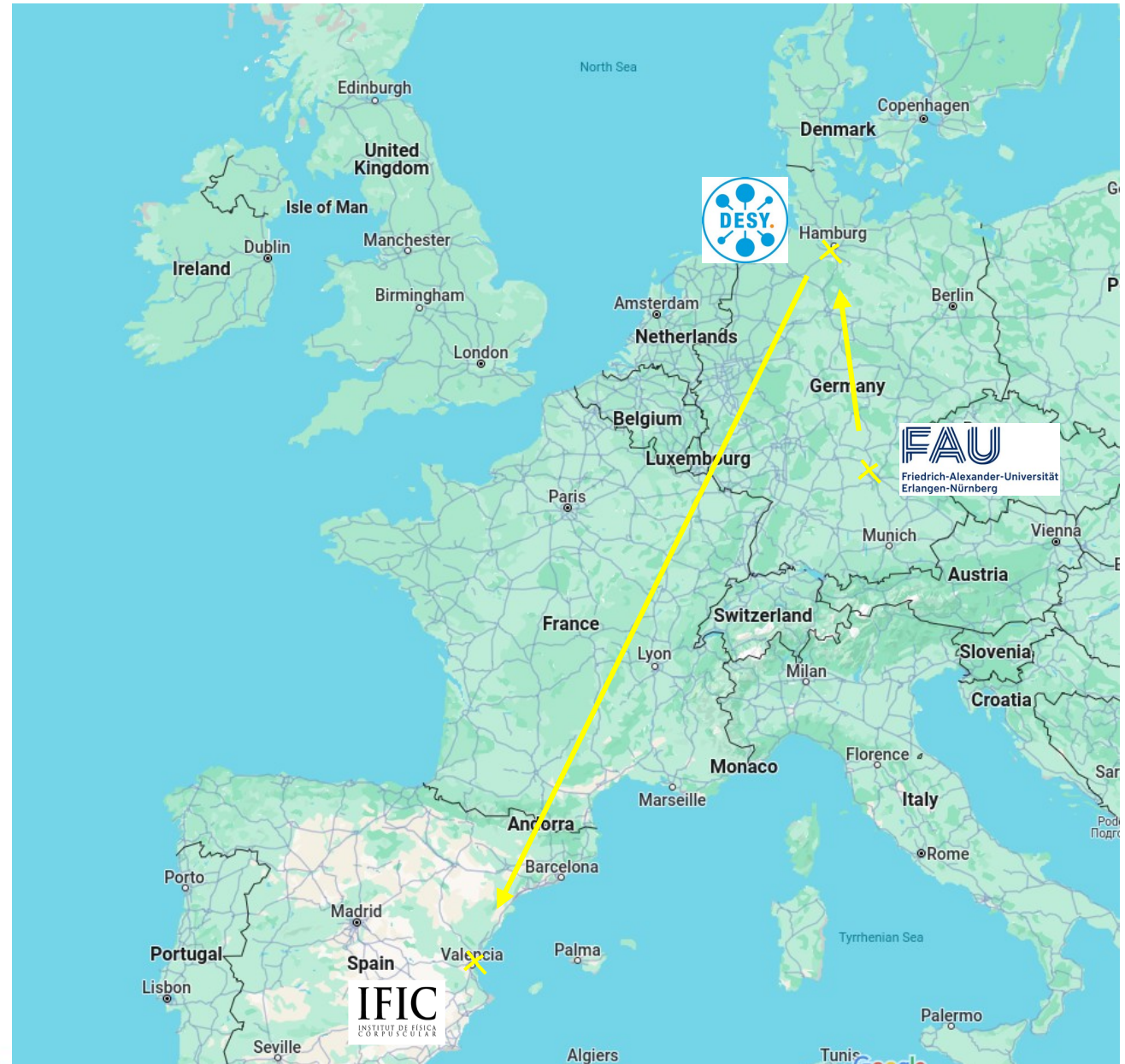
The [Schlenkerla](#), one of Bamberg's breweries and taverns.

[wiki/Bamberg](https://en.wikipedia.org/wiki/Bamberg)



# Physics

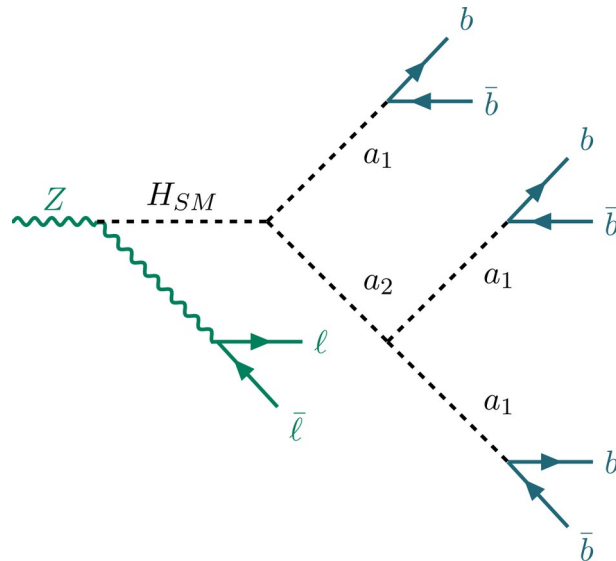
- Bachelor & Master in Erlangen
- PhD in Hamburg (DESY)
- Now PostDoc in Valencia



# Physics

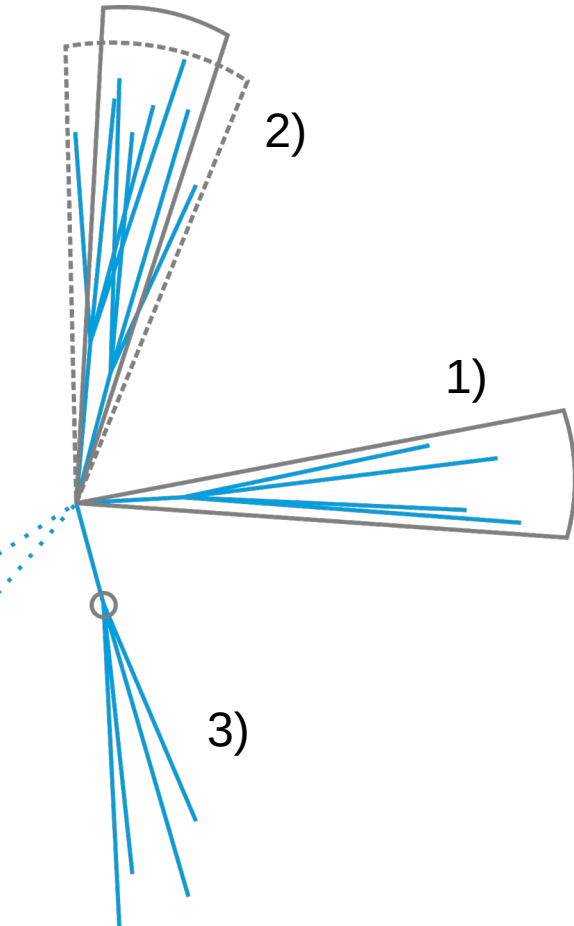
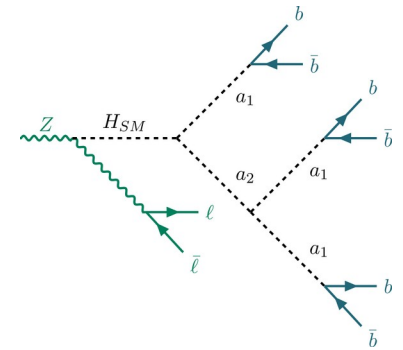
- Am a member of the ATLAS collaboration since starting my PhD
- Working on data analysis: search for beyond-the-standard-model physics
- Main analysis during my PhD:

Search for Exotic Higgs decays to two light scalars



→ a special feature:  
many low-momentum b-hadrons in the final state

# Physics

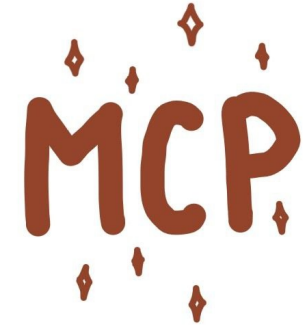


- B-hadron reconstruction a main feature of the analysis
- Utilized
  - ▶ standard b-tagged jets
  - ▶ double-b-tagged jets (a ✨special✨ low-pT version)
  - ▶ secondary vertices outside of jets
    - I performed a calibration of the reconstruction algorithm  
[arxiv/2405.03253](https://arxiv.org/abs/2405.03253)
- We did not find any beyond-the-standard-model physics
- Good limits across wide mass range of the light scalars

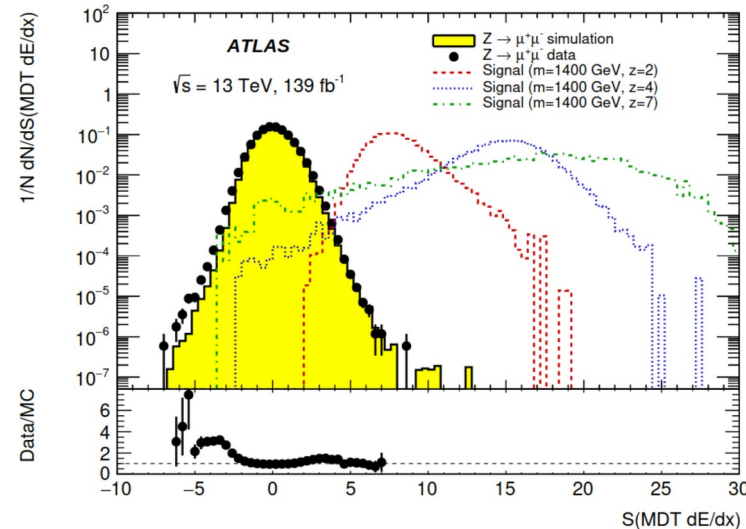
# Physics



- Now I am at IFIC in the AITANA group
- Working on ATLAS search for **long-lived multi-charge particles**
  - ▶ electric charge between  $2e - 7e$ , mass  $o(1 \text{ TeV})$
  - ▶ important discrimination handle:  
higher ionization loss when traversing the detector

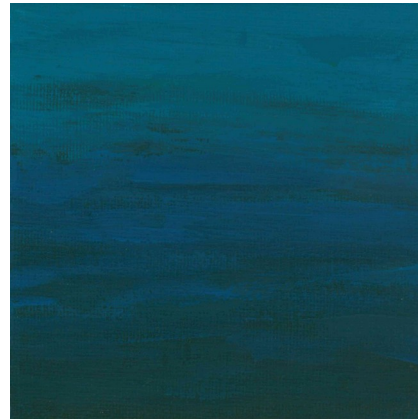


From previous iteration of the analysis → [arxiv/2303.13613](https://arxiv.org/abs/2303.13613)



# Personal hobbies

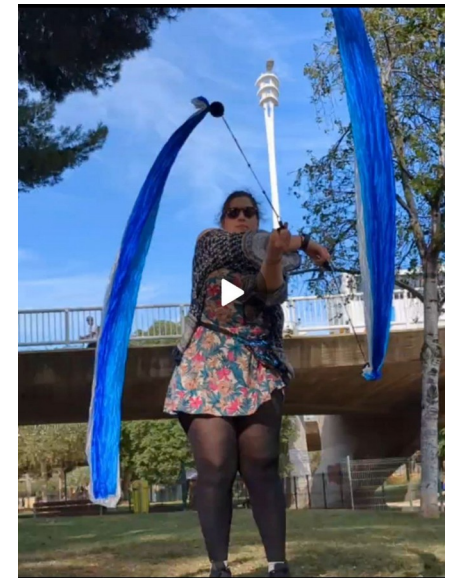
- Abstract paintings



- Cooking



- Playing poi





Thank you for your attention. :)

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