

CMS Job matching event October 2021

Thomas Hebbeker



wanted: **research associate (postdoc)**

period: Jan. 2022 – Dec. 2024 (= 3 years, non permanent)

qualification: PhD

experiences: CMS data analysis incl. computing, statistics

tasks: CMS data analysis (Model independent search = MUSiC)
DT muon calibration

work place: Aachen, with frequent travels to CERN

gross salary: around 55-60 kEuros/year + compensation for travel / CERN stays

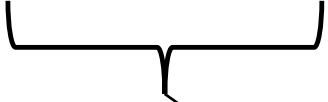


Aachen



~ 250 000 inhabitants

RWTH Aachen University



Rheinisch-Westfälische Technische Hochschule



Region

Technical University



Wikipedia: With more than 45,000 students enrolled in 144 study programs, it is the largest technical university in Germany. [↓](#)

RWTH Aachen Physics Department

Astroparticle physics and Cosmology
Elementary Particle Physics
Condensed Matter Physics

Experimental physics
Theoretical physics



Campus

Three Institutes = Particle Physics (3 x Experiment + 1 Theory)
one of them: Phys. Inst. IIIA (Prof. Hebbeker et al)

Physics Institute IIIA



Active participation in CMS since the very beginning

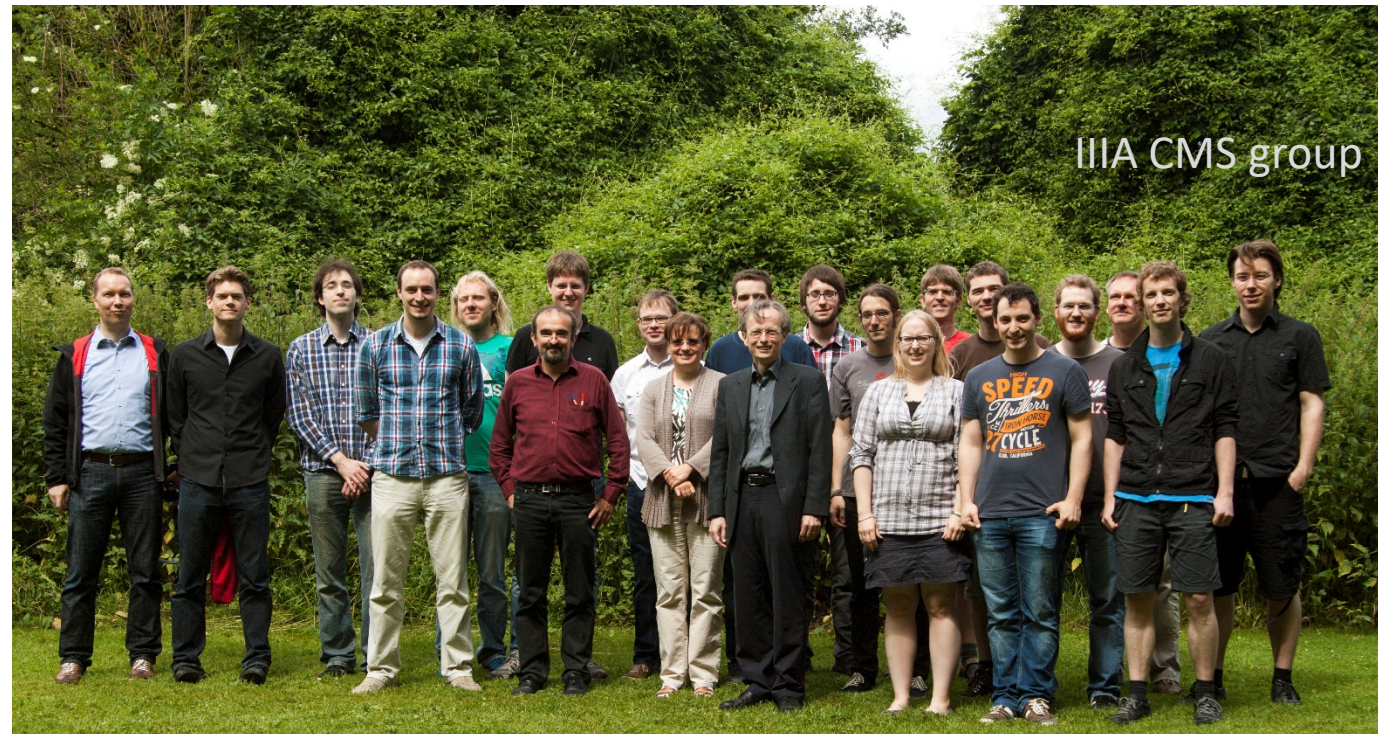
+ astroparticle physics + axion search ...

Construction of part of CMS DT muon chambers
Many data analyses

IIIA: Three professors with CMS teams

senior members IIIA team Hebbeker:

Thomas Hebbeker (inst. leader)
Kerstin Hoepfner
Markus Merschmeyer
Arnd Meyer



IIIA - team Hebbeker

Many data analyses, in particular searches:

W' bosons dark matter
extra dimensions excited leptons
supersymmetry ...



MUSiC = Model Unspecific Search in CMS

global automatized comparison data – SM prediction

to do: search in full run 2 data set
prepare for run 3
include identified taus and bottom jets
explore Machine Learning search algorithms

team: senior physicist, PhD student, bachelor/master students, **YOU**

2016 data: [arXiv:2010.02984](https://arxiv.org/abs/2010.02984)
= [Eur. Phys. J. C 81 \(2021\) 629](https://doi.org/10.1007/s00034-021-02629-0)
Sarany Ghosh et al
EXO-19-008