CMS DAS in Hamburg October 13-17, 2025

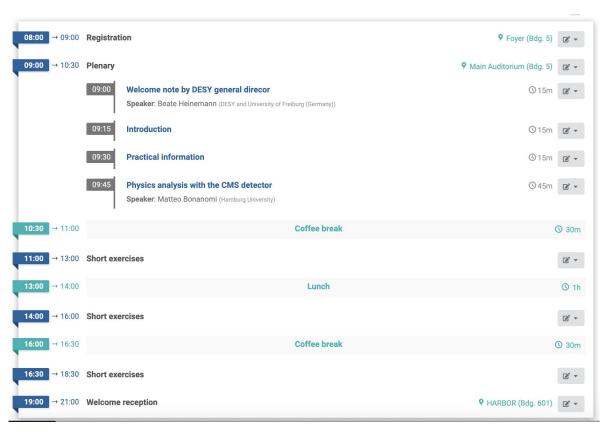
First meeting with facilitators July 15, 2025

Maria Aldaya Martin, Juliette Alimena, Alexander Grohsjean, Matthias Schroeder

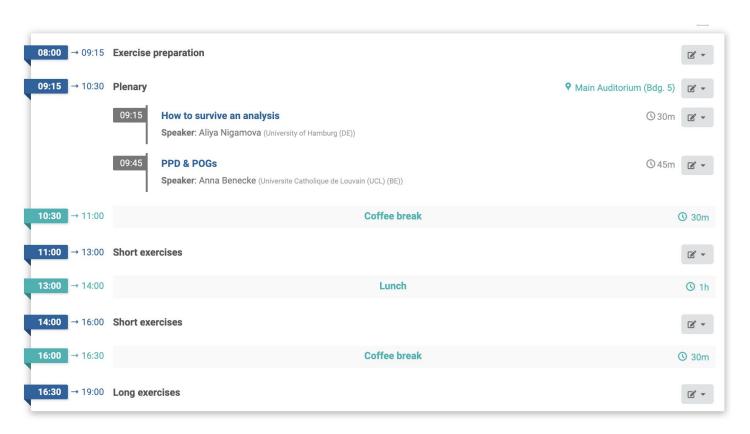
Intro

- The CMS Data Analysis School (DAS) is given several times per year to introduce newcomers to CMS on how to do an analysis
- Focus on CMS tools and practical hands-on short and long exercises
- Some talks on PAGs, POGs, DPGs, perspective from PC, etc.
- At the end of the week (Friday), the participants will present the results of their long exercise

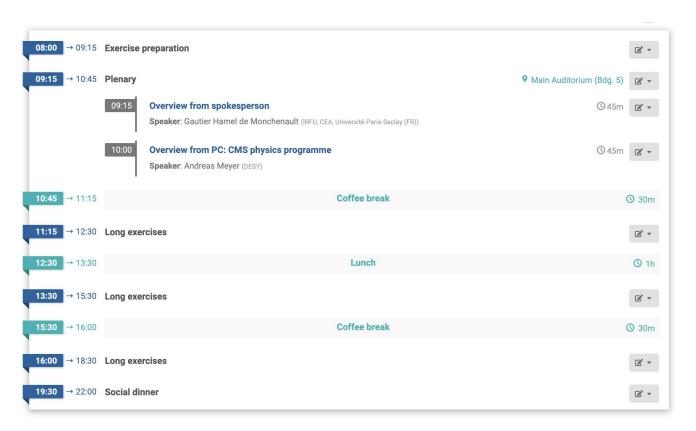
Preliminary agenda: Monday October 13



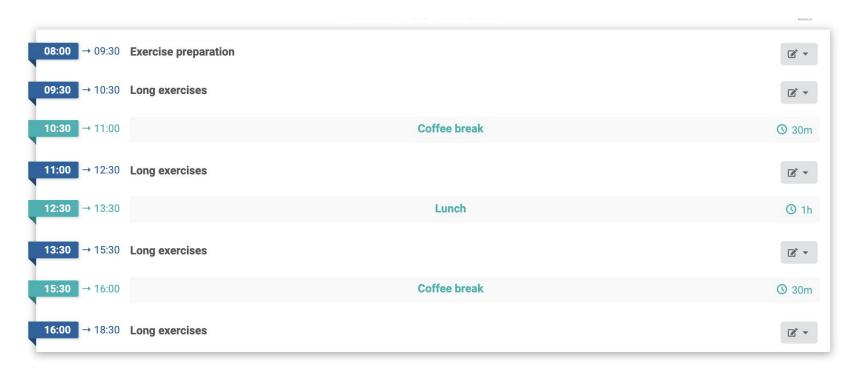
Preliminary agenda: Tuesday October 14



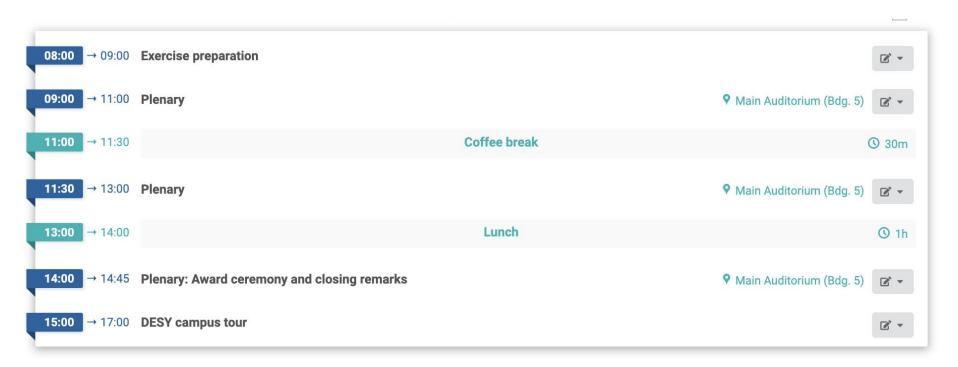
Preliminary agenda: Wednesday October 15



Preliminary agenda: Thursday October 16



Preliminary agenda: Friday October 17



In preparing your exercises

- Should include a very practical approach from the user point of view, rather than a too theoretical approach
- Hands-on
- See previous DASes for examples

Short exercises

- Combine limit setting (Kuan-Yu Lin)
- Combine unfolding (Matteo Defranchis)
- Machine learning (Joern Bach, Matthias Komm)
- Tracking (Brunella D'Anzi, Jan Schultz, Marco Musich)
- E/gamma (Alberto Belvedere, Ying An)
- Muons (Matteo Bonanomi)
- Jets (Andreas Hinzmann)
- Flavor tagging (Philipp Gadow, Uttiya Sarkar)
- Taus (Alexi Raspiareza, Andrea Cardini)
- Generators (Dominic Stafford)
- REANA (Aliya Nigamova, Pallabi Das)
- Gitlab CI (Aliya Nigamova)
- Applying central corrections (Daniel Savoiu)
- Outreach (Freya Blekman)

- Please design a 2 hour exercise
- Can be repeated up to 2-3 times on Monday and Tuesday, depending on demand and available rooms

Long exercises

- Inclusive jets (SMP) Patrick Connor
- Ttbar cross section (TOP) Evan Ranken, Dominic Stafford
- Higgs to 4 leptons (HIG) Daniel Savoiu, Matteo Bonanomi)
- Displaced particles (EXO) Jeremi Niedziela
- Anomaly detection (EXO) ?
- Dark matter (EXO/NPS) Danyer Perez Adan

- Please design an exercise that will start late on Tuesday afternoon and run through Wednesday (except some talks on Wednesday morning) and Thursday
- Participants will present their results as a group on Friday

Computing resources

- We will use **Ixplus** for everything
 - Easiest to interface with previous versions of the exercises
 - Best for future maintenance of code and samples, and better transference to students' future use
- From O&C:
 - Don't expect any major issues running analysis code, as long as the job isn't too long (limit probably around 4 hours)
 - Main concern is the HOME directory, which has a 10 GB quota
 - Checking out code and running it should be fine, but users should avoid producing large outputs there.
 - One option is /tmp, but note that it's machine-specific, you'll need to log in to the same machine each time.
 - Also, if /tmp usage exceeds 90%, the automatic cleanup mechanism will start. More details are here: https://lxplusdoc.web.cern.ch/evolution/fair/tmp/
 - Alternatives:
 - Running on EOS, if the user has EOS space available
 - Requesting additional AFS space (should avoid this, requesting for 50 participants for tutorial does not fit the strategy we have at the moment)
- Avoid relying on the Grid and CRAB
- tl;dr: Could you estimate how much storage space you'll need per participant?
- Any other computing requirements on your side?

Your to do list and questions to answer

- Prepare your exercise :)
- Prepare a short description of the exercise that we can add to Indico such that the students know what to expect
- Are you looking for more facilitators?
 - We want at least 2, ideally one of them being based in Hamburg)
- How much computing space do you need per participant? Any other computing requirements?
- We will recycle the pre-exercises from the last DAS at CERN. Do you have anything to add there?
- Does your exercise depend on another exercise?
 - o e.g. PAG inclusive jet depends on POG jets
- Also we request that you register on indico as a facilitator
- Anything else?

Today

- Separate meetings with short and long exercise facilitators
 - To not make the meetings go too long
- For us to convey this information to you
- To a brief idea from each of you about what you plan
- To answer your questions

Next time we meet: ask that you have your exercises basically ready :)