SEARCH Conference

First meeting, Dec 3rd, 2024

Session times

- 2 panels with 4 members, plus 15 main sessions

Session	Monday	Tuesday	Wednesday	Thursday	Friday
Morning 1 (9.00-10.30)	Registration	Session 3	Session 7	Session 11	Session 15
Coffee (10:30-11:00)		Coffee	Coffee	Coffee	Coffee
Morning 2 (11.00-12.30)		Session 4	Session 8	Session 12	Session 16
Lunch	Lunch	Lunch	Lunch	Lunch	Lunch
Afternoon 1 (14.00-15.30)	Session 1	Session 5	Session 9	Session 13	Closing Panel
Coffee (15:30-16:00)	Coffee	Coffee	Coffee	Coffee	
Afternoon 2 (16.00-17.30)	Session 2	Session 6	Session 10	Session 14	
Evening					

Discussion on Topics

Link to google sheet

Summarizing some thoughts during the last meeting and via email

- Have 17 sessions (including panels), need like 6-8 themes
- Dynamic contributions? Like posting contributions and then one is selected as a lighting talk? (coupled to a poster session/dinner?) Or posting contributions which could be included in the main talks?
- Joker talks for the experiments? Or for everyone?

Goal of this meeting: Start to discuss what themes we want and what concrete talks could go in them

Some thoughts on themes

- The unconventional and reconstruction:
  - What's interesting? Where are the walls? Future hardware. Future phase spaces, future approaches/ML, polarization and what can we do? (Summary of improvements to detector calibration and reconstruction and forward paths from there).
- Model exploration:
  - Current perspectives on compelling paradigm, where do we stand in exclusions? Where can we still be looking? What's hard and where do we need new experimental ideas?
- The Future:
  - Where do we go with searches with new detectors and new colliders? What can new revolutions in triggering bring? (Change to 'Discovery now at the LHC: new capacities at/for the LHC.')
- The Machine:
  - Where can ML change theory and experiment? What becomes possible? What can we do with anomaly detection, etc?, ML based searches and how to interpret them broadly?

Discussion on Topics

- Non-Collider Synergies
  - Avenues within dark matter, axions, HNL, etc
- The Playoff between Precision and Searches
  - What can precision results tell us about new physics? EFT's in BSM? Searches in bulk of the distributions (i.e. via precision measurements but also more reconstruction techniques like merged objects)
- The Higgs
  - Mysteries of the scalar sector, where are we not looking (and should be)?
- The technical details:
  - Where we stand on tools? Do we want something like this? (where are PDFs now, for example)
- (Some bread-and-butter talks to bring communities up to speed on what progress we have had)
- (where do theory uncertainties then start to bit us)