



# Data Science, Simulation, and Learning (DSSL)

Adam Lyon

2022-09-12

## About me

1991 BS: North Carolina State, Physics

1997 PhD: U Maryland, Physics (D0)

1997-2002: Postdoc – U Rochester (CLEO II.V/III)

2002-Present: Fermilab Scientist

At FNAL:

- D0, Muon g-2, Quantum Computing
- Data handling (SAM)
- SCD Quadrant head
- SCD Assoc Head for Science
- 2021-2023 UEC member

## About me

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### Misc:

- Daughter is a senior in HS!
- We've had our two rescue dogs for nearly two years
- New skill learned during the Pandemic:  
Large appliance repair!

### At FNAL:

- DO, Muon g-2, Quantum Computing
- Data handling (SAM)
- SCD Quadrant head
- SCD Assoc Head for Science
- 2021-2023 UEC member



# Data Science, Simulation, and Learning (DSSL) Division

- Nearly all of the Artificial Intelligence & Software for Physics Applications dept
- About half of the Frameworks, DAQ & Electronic department
- A few people from Cross Cutting Projects and Initiatives
  
- 52 people!
  
- Activities
  - Software Frameworks and Tools (CMSSW, Art, LArSoft)
  - Simulation: Detector (Geant), Event generator (Genie, Pythia), Accelerator modeling
  - Machine Learning: Contexts - CMS, Neutrinos, Cosmology
  - Computational Science: HPC, GPU
  - Science: CMS, Cosmology, LQCD, Muons, Neutrinos

## Overall goals (a proto-vision)

*Continue the exciting and successful program of activities and plan for growth*

- Meet the needs of stakeholders, experiments, and the science community
- Lead and be prominent members of the HEP computing community
- Commit to Diversity, Equity and Inclusion
- Work safely!
- Take advantage of proximity of activities within the division – cut through silos
- Work easily across divisions and directorates
- Formulate and follow a Strategic Plan for near and long term future
  - E.g. Closer connection to ASCR; Closer connection to Argonne; AI center, LDRD plan, Coordinate with HEP-CCE and SciDac, ...

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- **HAVE FUN!**



## Next steps

I have reached out to the SCD department heads and group leaders entering DSSL

I will talk to everyone entering the division, either as a group or individually in the next 2-3 weeks

My near-term task list:

- Determine division structure (departments, groups)
- Determine heads and my deputy
- Formulate a group to write a Strategic Plan
- Reach out to Data Science and Learning division at Argonne

## Please contact me

Organizing DSSL is an evolving process – I need your opinions and ideas!!!!

You can reach me at...

- Phone: x5522
- E-mail: [lyon@fnal.gov](mailto:lyon@fnal.gov)
- Slack: @lyon-fnal on Fermilab Computing Workspace
- In Person: I'm coming in to the lab 2-3 days/week - typically Tuesday/Thursday
  - My office is at WH9W
- Not in person: Zoom works well too

Thanks!!