Tutorial on Floating-Point Analysis and Reproducibility Tools for Scientific Software

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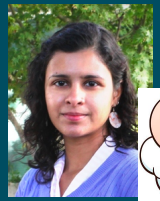

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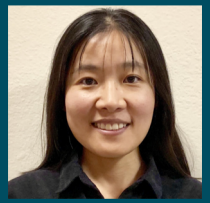

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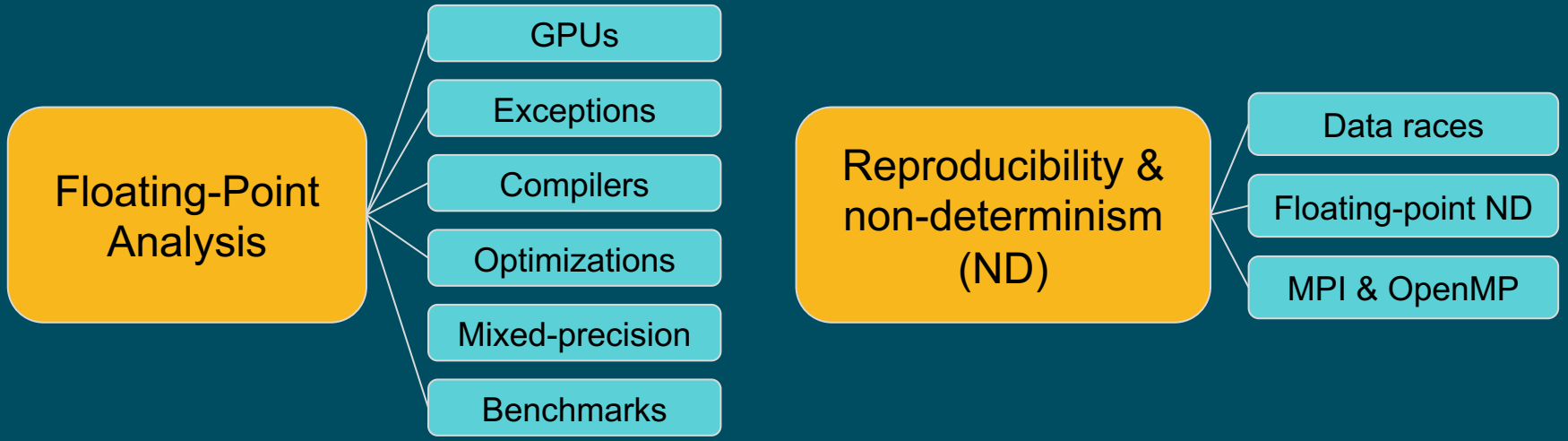
Objective of the Tutorial

Demonstrate tools can be used today



Everything is here:

fpanalysistools.org

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AWS is Used to Run Exercises

- You will need:
  - Username, password, IP address
- Accessing the AWS instance via ssh:

ssh [USERNAME]@[IP ADDRESS]

Directory Structure

```
/home/user1/
   |---Module-TOOL1
      |---exercise-1
      |---exercise-2
      |---exercise-3
   |---Module-TOOL2
      |---exercise-1
      |---exercise-2
      |---exercise-3
   ...
```

Agenda

Time	Module	Presenter
9:00 - 9:10am	Introduction (housekeeping)	Ignacio
9:10 - 9:30am	Floating-point background	Ganesh
9:30 - 10:00am	**FPChecker**: floating-point exceptions, GPUs, CUDA	Ignacio
10:00 - 10:15am	Break or Q&A	
10:15 - 10:45am	**ARCHER**: data races, OpenMP	Ian
10:45 - 11:30am	**FLiT**: floating-point variability, compiler optimizations	Ian
11:30 - 12:00pm	**ReMPI**: MPI, floating-point variability	Ignacio, Ian
12:00 - 12:15pm	Q&A	