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PIANO NAZIONALE  
DI RIPRESA E RESILIENZA



Centro Nazionale di Ricerca in HPC,  
Big Data and Quantum Computing



Centro Nazionale di Ricerca in HPC,  
Big Data and Quantum Computing

## Wrap-up Tommaso Diotallevi (UniBO)



Aula D - 8<sup>th</sup> January 2025

# Timetable

- First part open to everyone, with lectures and hands-on covering aspects on distributed data analysis with ROOT and pure Python.

8<sup>th</sup> Jan  
aft.

14:00	Welcome and useful information <i>Aula D, Bologna</i>	Tommaso Diotallevi 14:30 - 14:40
	Introduction to high rate analysis <i>Aula D, Bologna</i>	Tommaso Diotallevi 14:40 - 15:00
15:00	Platforms for high rate analysis <i>Aula D, Bologna</i>	Tommaso Tedeschi 15:00 - 15:20
	Declarative framework for analysis definition and implementation <i>Aula D, Bologna</i>	Paolo Mastrandrea 15:20 - 16:00
	Declarative approach in HEP with ROOT <i>Aula D, Bologna</i>	Vincenzo Esposito 16:00 - 16:30
16:00	Coffee break <i>Sala IR-0A, Bologna</i>	16:00 - 16:30
17:00	Hands on session <i>Aula D, Bologna</i>	16:30 - 18:30
18:00		

**Completed**

9<sup>th</sup> Jan  
mor.

09:00	Python analysis with Scikit-HEP <i>Aula D, Bologna</i>	Davide Valsecchi 09:00 - 09:40
	Hands on session <i>Bologna</i>	09:40 - 10:00
	Coffee break <i>Bologna</i>	10:00 - 10:20
	Hands on session <i>Aula D, Bologna</i>	10:20 - 12:20
11:00		
12:00	Wrap up of public session and next steps <i>Aula D, Bologna</i>	Tommaso Diotallevi 12:20 - 12:40



## Wrap up

- During the workshop, we reached 25 registered users to the high rate platform!
- Of those, about 18 simultaneous connections for the hands-on sessions.



## Next steps

- The platform will stay up and running, even after the workshop.
  - Try your own use-cases, analyses, etc... (for ext users, remember the [INFN IT course](#))
  - Your feedback is important: report any problem or feature request in our mailing list:  
[cn1-spoke2-wp2-analysisfacility@lists.infn.it](mailto:cn1-spoke2-wp2-analysisfacility@lists.infn.it) (click [here](#) to subscribe)
- In the near future, as a planned scale-up of the flagship activity, we will increase the computing power of this platform. **So, stay tuned!**
- In the next days, we will circulate a survey for the general part of the workshop. Any feedback and suggestions is welcome!



# Timetable

- Second part mainly dedicated to the CMS community, covering specific analyses' overview as well as future perspectives given by the collaboration side-groups.

9<sup>th</sup> Jan  
aft.

14:00	<b>Hyperparameter Optimization for Deep Learning Models Using High Performance Computing</b> <i>Muhammad Numan Anwar</i>	
	<b>VBS searches in RDF</b> <i>Tommaso Tedeschi</i>	
	<i>Aula D, Bologna</i>	14:20 - 14:55
15:00	<b>Detector performance analyses with RDF</b> <i>Tommaso Diotallevi</i>	
	<i>Aula D, Bologna</i>	14:55 - 15:30
	<b>Top searches with RDF</b> <i>Antimo Cagnotta</i>	
	<i>Aula D, Bologna</i>	15:30 - 16:05
16:00	<b>Coffee break</b> <i>Sala IR-0A, Bologna</i>	16:05 - 16:20
	<b>Flavor physics use-case with RDF</b> <i>Federica Maria Simone</i>	
	<i>Aula D, Bologna</i>	16:20 - 16:55
17:00	<b>CI/CD on analysis facility with mkShapesRDF</b> <i>Matteo Bartolini</i>	
	<i>Aula D, Bologna</i>	16:55 - 17:30
	<b>PocketCoffee example</b> <i>Davide Valsecchi et al.</i>	
	<i>Aula D, Bologna</i>	17:30 - 18:05
18:00	<b>CMS session - Office hour and open discussion</b> <i>Aula D, Bologna</i>	18:05 - 18:45

10<sup>th</sup> Jan  
mor.

09:00	<b>Introducing the session</b> <i>Aula D, Bologna</i>	<i>Daniele Spiga</i> 09:00 - 09:10
	<b>How to support advanced use cases: Technological highlights</b> <i>Aula D, Bologna</i>	<i>Diego Ciangottini</i> 09:10 - 09:35
	<b>Advanced use cases: a work in progress activity</b> <i>Aula D, Bologna</i>	<i>Raffaele Gerosa</i> 09:35 - 10:00
10:00	<b>Coffee break</b> <i>Sala IR-0A, Bologna</i>	10:00 - 10:20
	<b>Wrap-up</b> <i>Aula D, Bologna</i>	<i>Daniele Spiga</i> 10:20 - 11:20
11:00	<b>Open Discussion</b> <i>Aula D, Bologna</i>	11:20 - 12:35
12:00	<b>Closing remarks</b> <i>Aula D, Bologna</i>	<i>Tommaso Diotallevi</i> 12:45 - 13:00
13:00		

## Lunch break, see you at 14:00

Please, fill in the [form](#) for tonight's dinner.