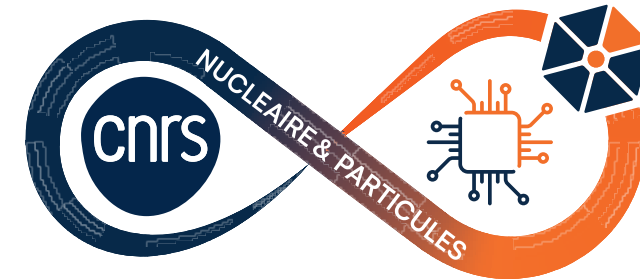


# First Bi-national Conference IN2P3 / INFN on Detector R&D

18-20 November 2025  
LPNHE - Paris



**GDR-DI2I**  
Groupement De Recherche  
DéTECTEURS et INSTRUMENTATION pour les 2 INfinis

# Welcome and motivations

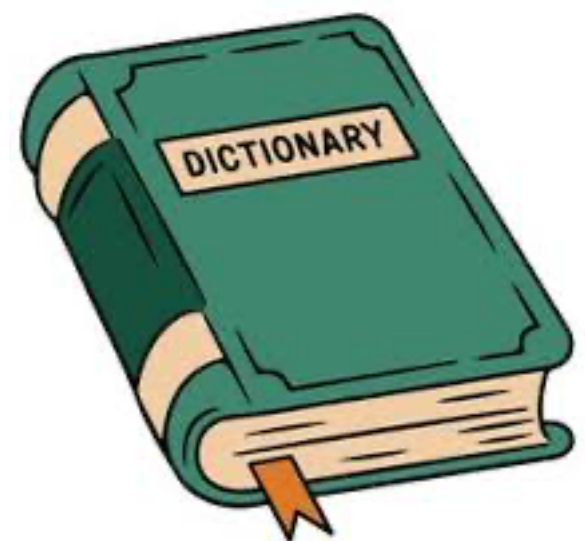
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Originating from the initiative of the GDR DI2I, positively received by **INFN representatives of Gruppi 1 - 5**

- Seminar by Alberto Quaranta, IJCLab May 2025

Bring the two communities closer together, foster idea exchange, identify synergies, and promote collaborations.

We hope the conference becomes a regular (annual) event!



**GDR DI2I : Détecteurs pour les 2 infinis:**  
French national research network ('Groupement de Recherche'), to foster together the community (researchers and engineers) working on R&D for IN2P3, share expertise, and promote young researchers

**INFN, Gruppi 1–5 :** thematic divisions that organize research activities by field. Under the coordination of a president, they set research priorities, evaluate and select projects, and represent the group within INFN's national governance

# Marco Zito

## Director of LPNHE



# Agenda

4 half day sessions, each one on a specific detector technology:

- Photosensors
- Gas detectors
- Solid-state detectors
- Cryo & quantum sensors

14:00	<b>Welcome</b> Amphi Charpak, LPNHE Paris	14:00 - 14:20
	<b>4-Dimensional Tracking at High Intensity</b> Amphi Charpak, LPNHE Paris	Adriano Lai 14:20 - 15:00
15:00	<b>Preparation of the next generation of CMOS-MAPS in France</b> Amphi Charpak, LPNHE Paris	Jerome Baudot 15:00 - 15:40
	<b>Coffee break</b> Amphi Charpak, LPNHE Paris	15:40 - 16:10
16:00	<b>The Arcadia R&amp;D project: CMOS Fully depleted MAPS for FCC</b> Amphi Charpak, LPNHE Paris	Davide Falchieri 16:10 - 16:30
	<b>Development of MAPS with Intrinsic Amplification</b> Amphi Charpak, LPNHE Paris	Andrei DOROKHOV 16:30 - 16:50
17:00	<b>Advanced 4H-SiC Solid-State Detectors: Electric Field Mapping and High-Temperature Neutron Irradiation Studies</b> Alfio Samuele Mancuso	
	<b>Diamond a suitable material for detecting particles in a highly radiative environment</b> Amphi Charpak, LPNHE Paris	Marie-Laure GALLIN-MARTEL 17:10 - 17:30
18:00	<b>Poster session - Cocktail</b> Amphi Charpak, LPNHE Paris	
19:00		17:30 - 19:30

09:00

	<b>Fast Cherenkov detectors for TOF-based gamma-ray imaging</b> Amphi Charpak, LPNHE Paris	Sara Mercatili 09:20 - 10:00
10:00	<b>Dual readout calorimetry for experiment at future colliders</b> Amphi Charpak, LPNHE Paris	Gabriella Gaudio 10:00 - 10:40
	<b>Coffee break</b> Amphi Charpak, LPNHE Paris	10:40 - 11:10
11:00	<b>NuCubes: R&amp;D towards a 3D Water-Based Liquid Scintillator near detector for Hyper-Kamiokande</b> Amphi Charpak, LPNHE Paris	Claudio Giganti 11:10 - 11:30
	<b>Innovative Back-Side Illuminated SiPMs (BSI-SiPMs): first results from the IBIS project</b> Amphi Charpak, LPNHE Paris	Roberto Preghenella 11:30 - 11:50
12:00	<b>GRAINITA novel calorimeter</b> Amphi Charpak, LPNHE Paris	Yingrui Hou 11:50 - 12:10
	<b>Analog SiPM R&amp;D for High Energy Physics</b> Amphi Charpak, LPNHE Paris	Marco Guarise 12:10 - 12:30
	<b>Lunch</b>	
14:00	<b>Quantum sensing: a new paradigm for particle physics and beyond</b> Amphi Charpak, LPNHE Paris	Federica Mantegazzini 14:00 - 14:40
	<b>Cryogenic detectors in France</b> Amphi Charpak, LPNHE Paris	Alessandro Monfardini 14:40 - 15:20
15:00	<b>Coffee break</b> Amphi Charpak, LPNHE Paris	15:20 - 15:50
16:00	<b>BULLKID-DM: phonon mediated Kinetic Inductance Detectors for light WIMP direct detection</b> Amphi Charpak, LPNHE Paris	Giorgio Del Castello 15:50 - 16:10
	<b>CUPID, the next-generation <math>0\nu\beta\beta</math> bolometric experiment</b> Amphi Charpak, LPNHE Paris	Pia Loaiza 16:10 - 16:30
	<b>A Cryogenic Muon Tagging System for Error Mitigation in Superconducting Qubits</b> Amphi Charpak, LPNHE Paris	Ambra Mariani 16:30 - 16:50
17:00	<b>Search of light Dark Matter with TESSERACT experiment at Laboratoire Souterrain de Modane</b> Amphi Charpak, LPNHE Paris	Paul Vittaz 16:50 - 17:10
	<b>Social event and visits</b> Amphi Charpak, LPNHE Paris	
		17:10 - 18:00

09:00

	<b>The iRPC project: innovative RPCs for the CMS experience at CERN and COMET at J-Parc</b> Amphi Charpak, LPNHE Paris	Maxime Gouzevitch 09:20 - 10:00
10:00	<b>TPCs from low to high rate: challenges and trends</b> Amphi Charpak, LPNHE Paris	Emilio Radicioni 10:00 - 10:40
	<b>Coffee break</b> Amphi Charpak, LPNHE Paris	10:40 - 11:10
11:00	<b>R&amp;D on next generation LXe TPC</b> Amphi Charpak, LPNHE Paris	Luca Scotto Lavina 11:10 - 11:30
	<b>Development and characterisation of an air-fluorescence-based beam monitor for ultra-high dose rates</b> Amphi Charpak, LPNHE Paris	Antonio Trigilio 11:30 - 11:50
	<b>The R2D2 project for <math>\beta\beta</math> research</b> Amphi Charpak, LPNHE Paris	Pascal Lautridou 11:50 - 12:10
12:00	<b>Exploring the power of Negative Ion Drift operation, a new window on high precision particle detection and tracking</b> Elisabetta Baracchini	

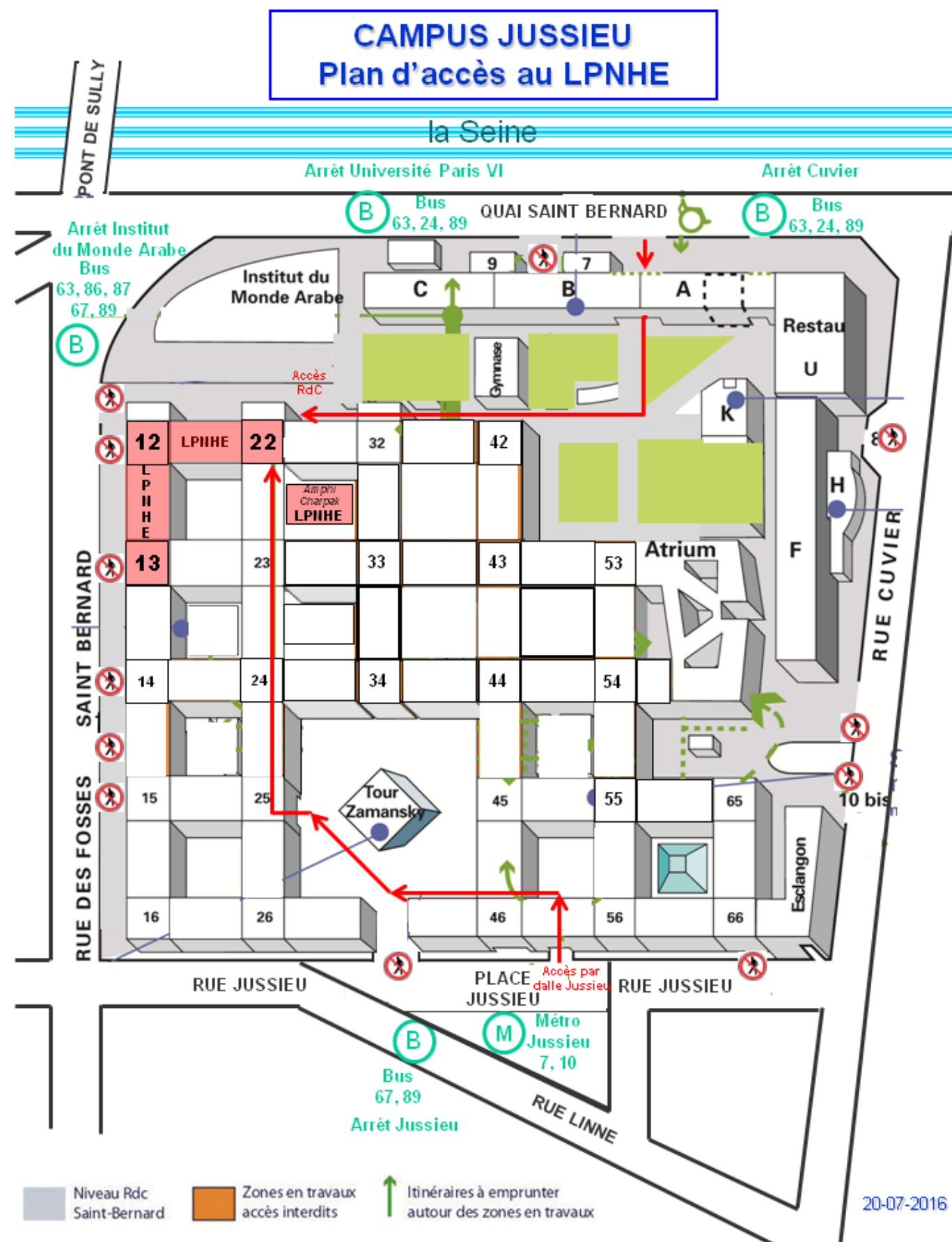
Each session:

2 keynote speakers (30 + 10 min)  
4 short talks (15 + 5 min)

Please be on time



# Practical information



**Conference and coffee break in Amphi Charpak**

Tour 22, Ground floor



**Poster session & Cocktail this evening**

Tour 12, 1st floor



**Visite Collection de Minéraux de Sorbonne Université**

Campus Jussieu, Tomorrow 17:10 (Max 50 people). **Please fill the form**

# Practical information

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- Lunch and dinners are free
- You can find around many places where to eat (Boulangeries, restaurants,...)



Sessions restart at 14:00

# Acknowledgments

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## Scientific committee

Andrea CATALANO - LPSC Grenoble

Gian-Franco DELLA BETTA - TIFPA e Università di Trento

Marie-Laure GALLIN-MARTEL - LPSC Grenoble

Giulia HULL - IJCLab Paris

Claudia GEMME - Università di Genova

Alberto QUARANTA - TIFPA e Università di Trento

Angelo RIVETTI - Università di Torino

Mariangela SETTIMO - SUBATECH Nantes

## Local organizing committee

Romain GAIOR - LPNHE Paris

Giulia HULL - IJCLab Paris

Mariangela SETTIMO - SUBATECH Nantes

*And thanks to LPNHE  
for hosting us*

Welcome to all!

Enjoy the conference (and Paris)