IIHE Annual meeting

15/11/2023
AFRICA Museum

iihe BRUXELLES BRUSSEL

ULB UNIVERSITÉ LIBRE DE BRUXELLES

VUB VRIJE UNIVERSITEIT BRUSSEL

Royal Museum for Central Africa

Welcome !

- News from the directors
- Some infrastructure news

Mission

IIHE since 1972

The Interuniversity Institute for High Energies, IIHE (ULB-VUB), was created in 1972 at the initiative of the academic authorities of both the Université **Libre de Bruxelles** and **Vrije Universiteit Brussel**. Its main topic of research is the physics of elementary particles.

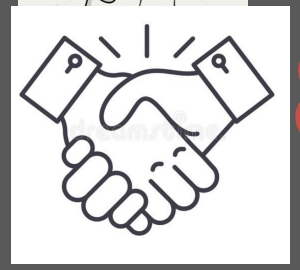
The present research programme is based on the extensive use of the high energy particle accelerators and experimental facilities at CERN (Switzerland) and DESY (Germany) as well as on non-accelerator experiments at the South Pole.
The main goal of this experiments is the study of the strong, electromagnetic and weak interactions of the most elementary building blocks of matter. All these experiments are performed in the framework of large international collaborations and have led to important R&D activities and/or applications concerning particle detectors and computing and networking systems.
Research at the IIHE is mainly funded by Belgian national and regional agencies, in particular the Fonds National de la Recherche Scientifique (FNRS) en het Fonds voor Wetenschappelijk Onderzoek (FWO) and by both universities through their Research Councils.

- Elementary structure of matter
- Fundamental interactions between them
- Content and structure of our universe

- Large insfrastructure - International collaboration
- R&D and hardware development (detection technique, electronics, DAQ, ...)
- Computing infrastructure (grid, software development, ...)
- Analysis tools (ML, statistics, ...)

People

15



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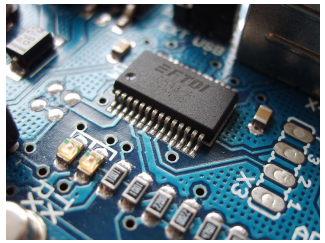
5

2

104

F:25/M:79

The IIHE Family …



6

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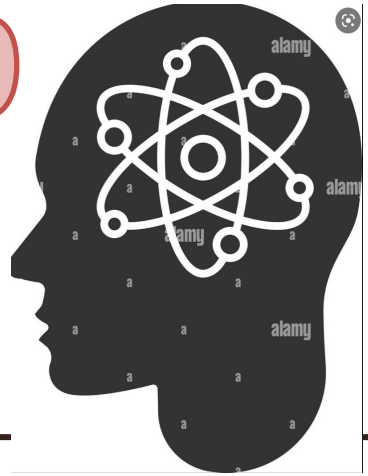
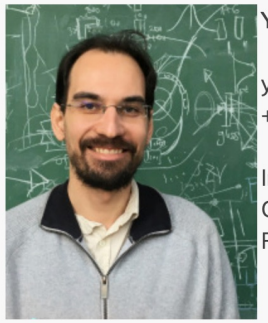
6

20



People

Engineers and technical staff



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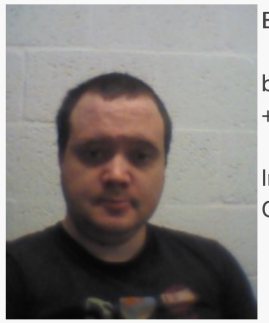
Office: **G.0.47A**
Researchers group(s): **CMS**



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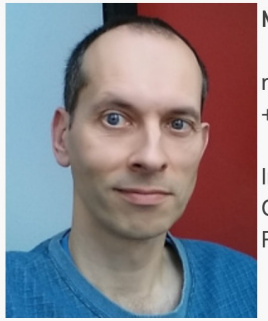

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Researchers group(s): **ARA, CMS, DAQ R&D, JUNO**

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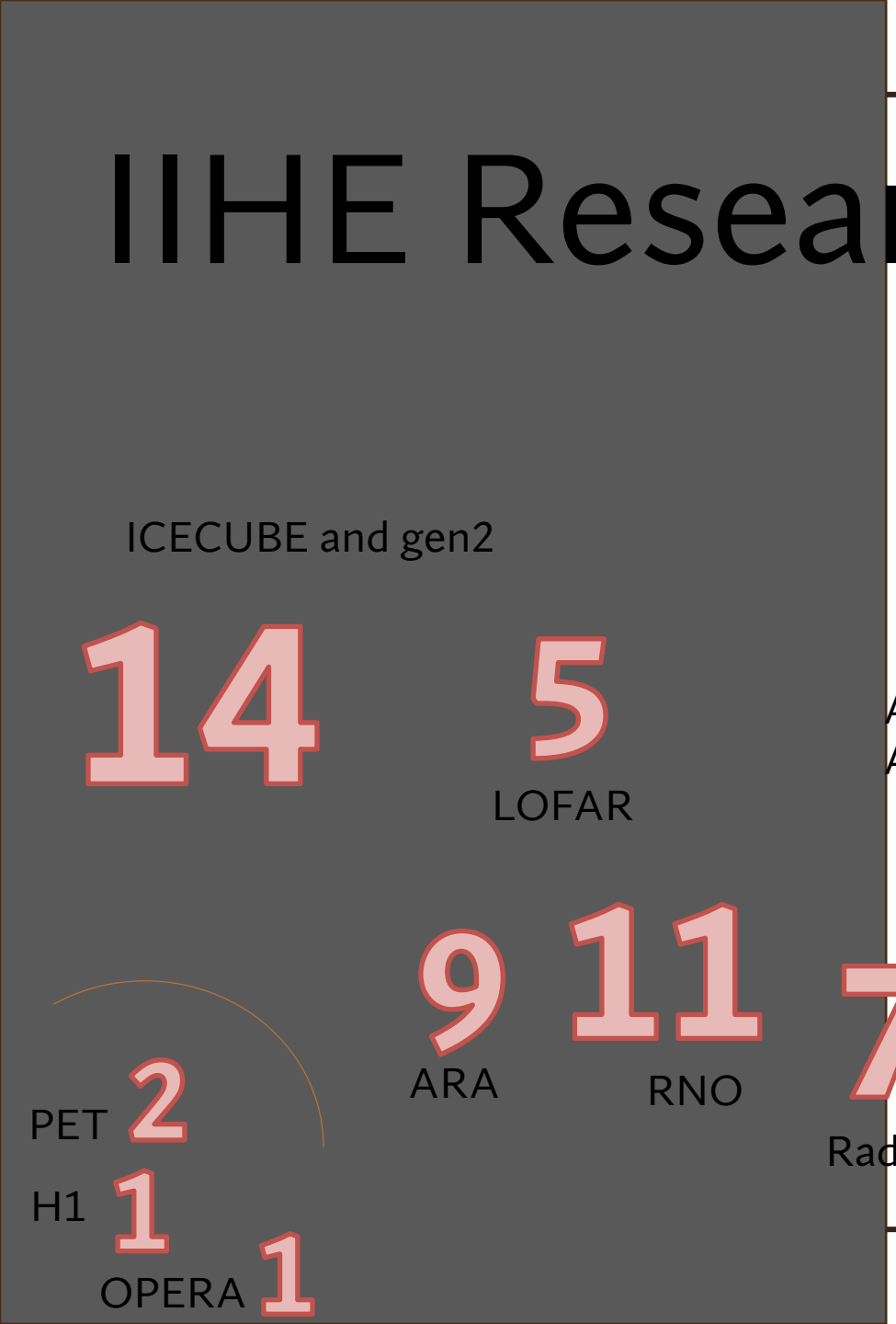
Researchers group(s): **CMS**

Pierre Dewulf

IIHE Research... Rich and Diverse



4
AUGER and AUGERprime

2
SOLID and Solid phase2

JUNO
5

CMS and GEMS/CMS phase 2
49

Future experiments
4

3
DAQ R&D

MilliQan
2

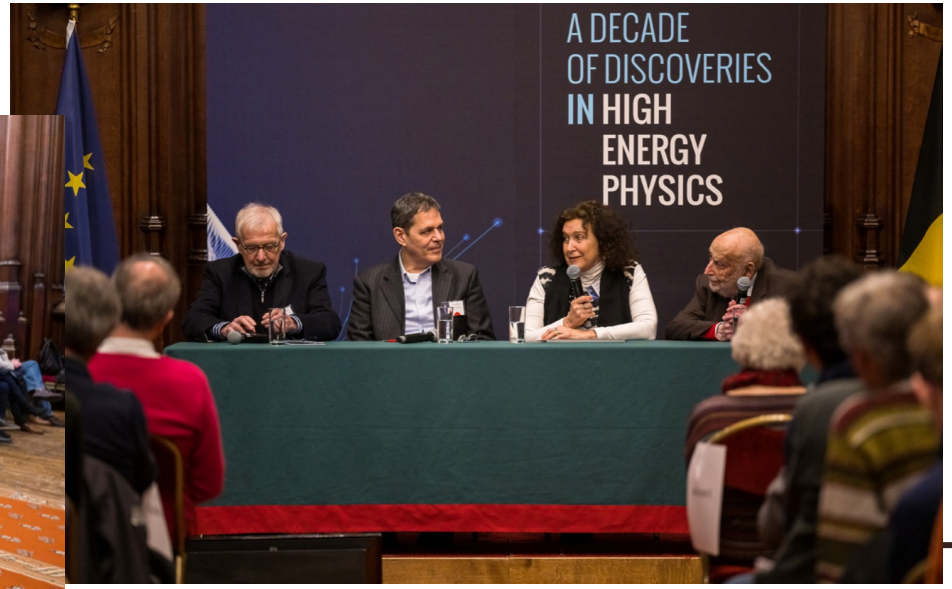
11
PHENO and GW

Since last annual meeting

…

July 1st, 2022
September 14th, 2022

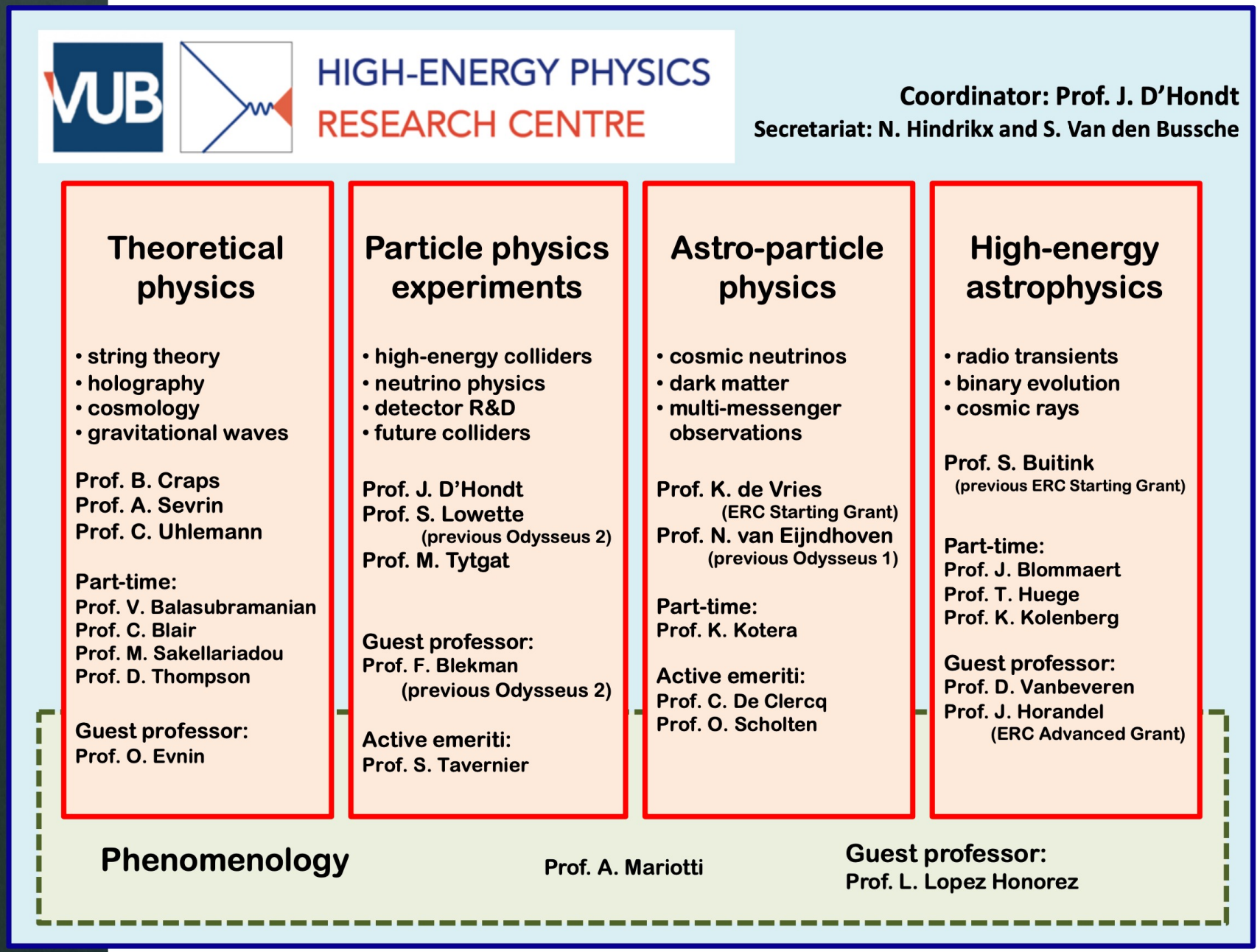
March 9th, 2023



VUB news

Three research groups merged into one large research group HEP@VUB.

In the context of Flanders the largest cluster for high-energy physics.



Upcoming renovation →

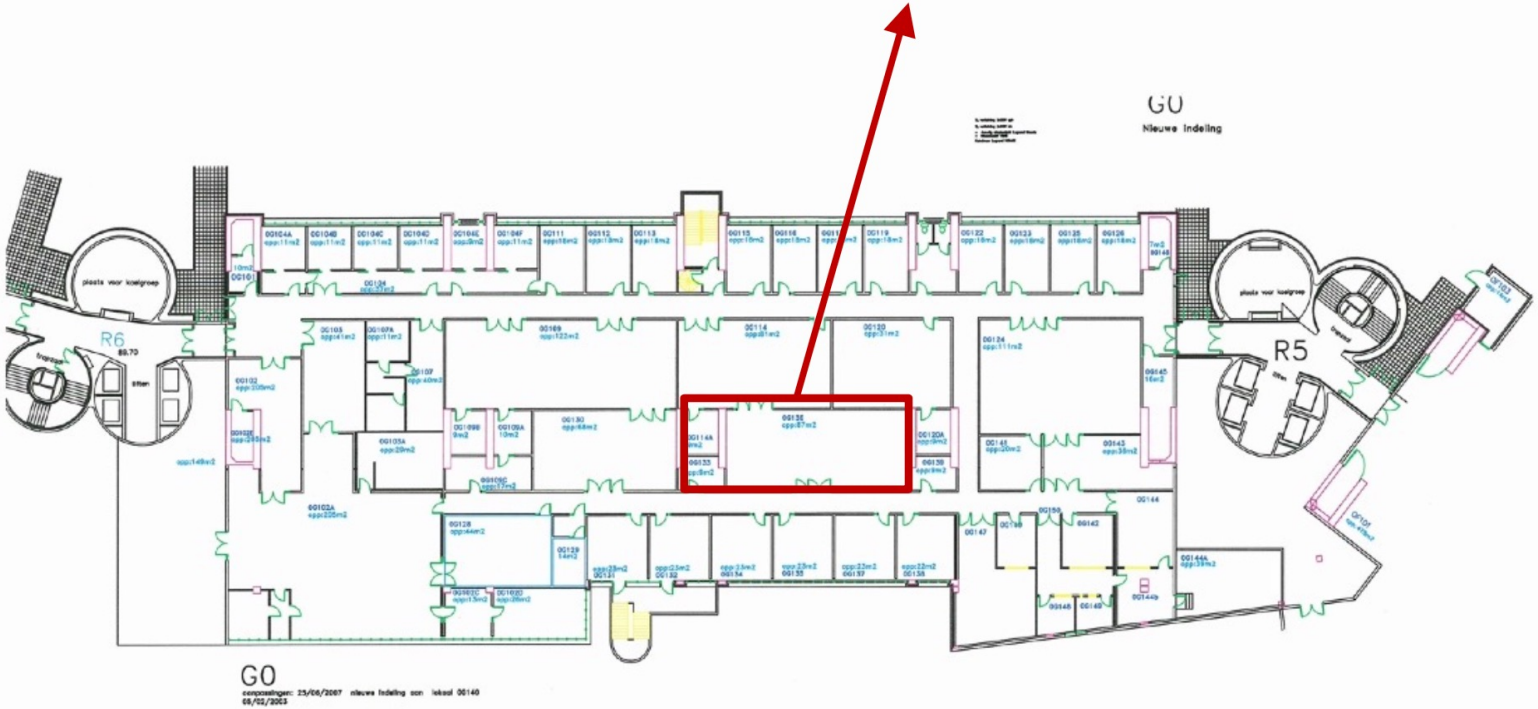
Traditional keys will be replaced on all doors by a card system.

The renovations of the toilets are communicated as high-priority to the relevant VUB services.

IIHE level 0G

Electronics lab

new (ESD) floor and furniture



IIHE Social Room

New coffee machine!
(requires dedicated coffee beans)

In order to maintain the IIHE Social Room in an adequate state, we will soon initiate a weekly shift system involving all of us.

Treat me well, and I will continue to deliver delicious coffee!

IIHE X-mas party!

Dec 11 from 16:00
't Complex @ VUB campus

Winter BBQ & open bar

For only 25 EUR you can participate (50 EUR for external partners/children)

An email will follow...

IIHE Annual Meeting *agenda*

09:00 → 09:20	**Overview from IIHE directors** **Speakers**: Barbara CLERBAUX (IIHE), Jorgen D'Hondt (Vrije Universiteit Brussel)	20m	
09:20 → 09:50	**Highlights from CMS** **Speaker**: Gerrit Van Onsem (IIHE)	30m	
09:50 → 10:20	**Highlights from IceCube** **Speaker**: Nhan Chau	30m	
10:20 → 10:40	**Coffee break**	20m	
10:40 → 11:00	**CMS Phase-2 Tracker project** **Speaker**: Inna Makarenko	20m	
11:00 → 11:20	**CMS Muon systems** **Speaker**: Michael Tytgat (Vrije Universiteit Brussel)	20m	
11:20 → 11:35	**Status and first results of the Radio Neutrino Observatory Greenland (RNO-G)** **Speaker**: Felix Schlüter (IIHE - ULB)	15m	
11:35 → 11:50	**The Radio Echo Telescope (RET)** **Speaker**: Enrique Huesca Santiago (IIHE-VUB)	15m	
12:00 → 13:30	**Lunch**	1h 30m	
13:30 → 13:50	**ICT systems at the IIHE** **Speaker**: Dr Romain Rougny (UA)	20m	
13:50 → 14:10	**High-Energy Astronomy with LOFAR and SKA** **Speaker**: Stijn Buitink (Vrije Universiteit Brussel (VUB))	20m	
14:10 → 14:30	**Gravitational wave physics and pheno research** **Speaker**: Alberto Mariotti (IIHE Vrije Universiteit Brussel)	20m	
14:30 → 14:50	**Neutrino physics with JUNO and SoLid** **Speaker**: Pierre-Alexandre Petitjean (ULB)	20m	
14:50 → 15:10	**coffee + dessert**	20m	
15:10 → 15:20	**Tagging electroweak processes with machine learning** **Speaker**: Andrea Malara	10m	
15:20 → 15:30	**The milliQan experiment** **Speaker**: David Vannerom (VUB)	10m	
15:30 → 15:55	**Introduction of newcomers at the IIHE** One slide per person	25m	
16:00 → 17:00	**End of meeting - visit museum**	1h	

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