Welcome to Toulouse and to L2IT

Jan Stark

Laboratoire des 2 Infinis – Toulouse

Multi-Boson Interactions, September 2024

UNIVERSITÉ TOULOUSE III PAUL SABATIER

cnrs

IN2P3 Institut national de physique nucléaire et de physique des particules

L2IT

Toulouse – a student city

960 thousand inhabitants (fourth-largest city in France),
including 117 thousand students

l'Etudiant

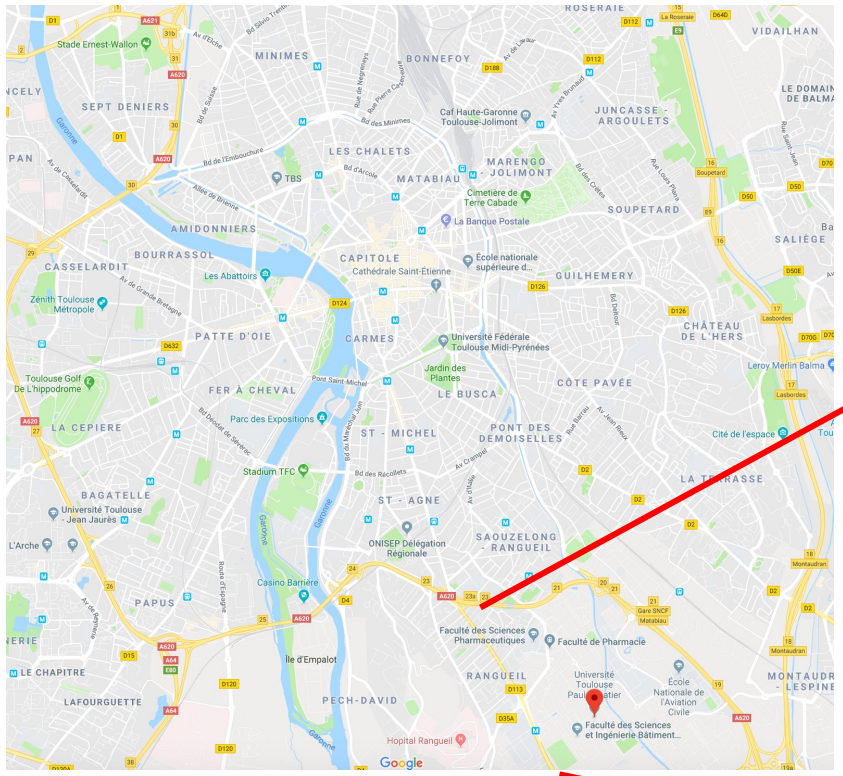
Rang 2019	Évol. /2018		Ville *Cochez jusqu'à 3 villes et comparez les. Pour en savoir plus sur une ville, cliquez dessus.*	Critères 1	2	3	4	5	Total
1	=	☐	Toulouse	23	23	23	20	27	116
2	↓	☐	Lyon	23	24	25	15	27	114
3	=	☐	Montpellier	23	23	22	25	20	113
4	=	☐	Rennes	23	26	21	15	25	110
5	=	☐	Grenoble	22	20	21	23	21	107
5	↑	☐	Nantes	22	22	20	16	27	107

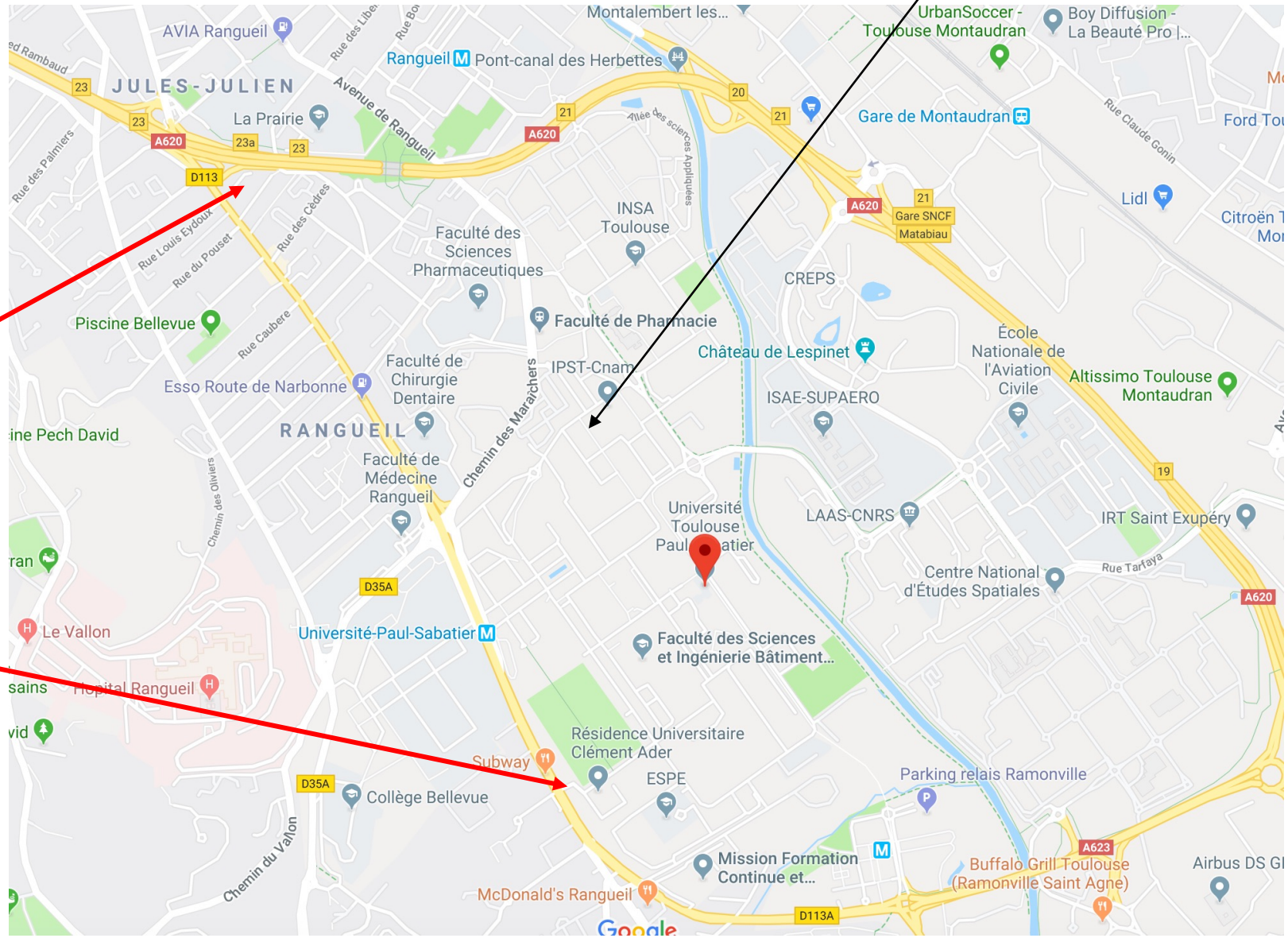
Toulouse – a city of research

Second city in France in terms of
the number of CNRS employees (after Paris)

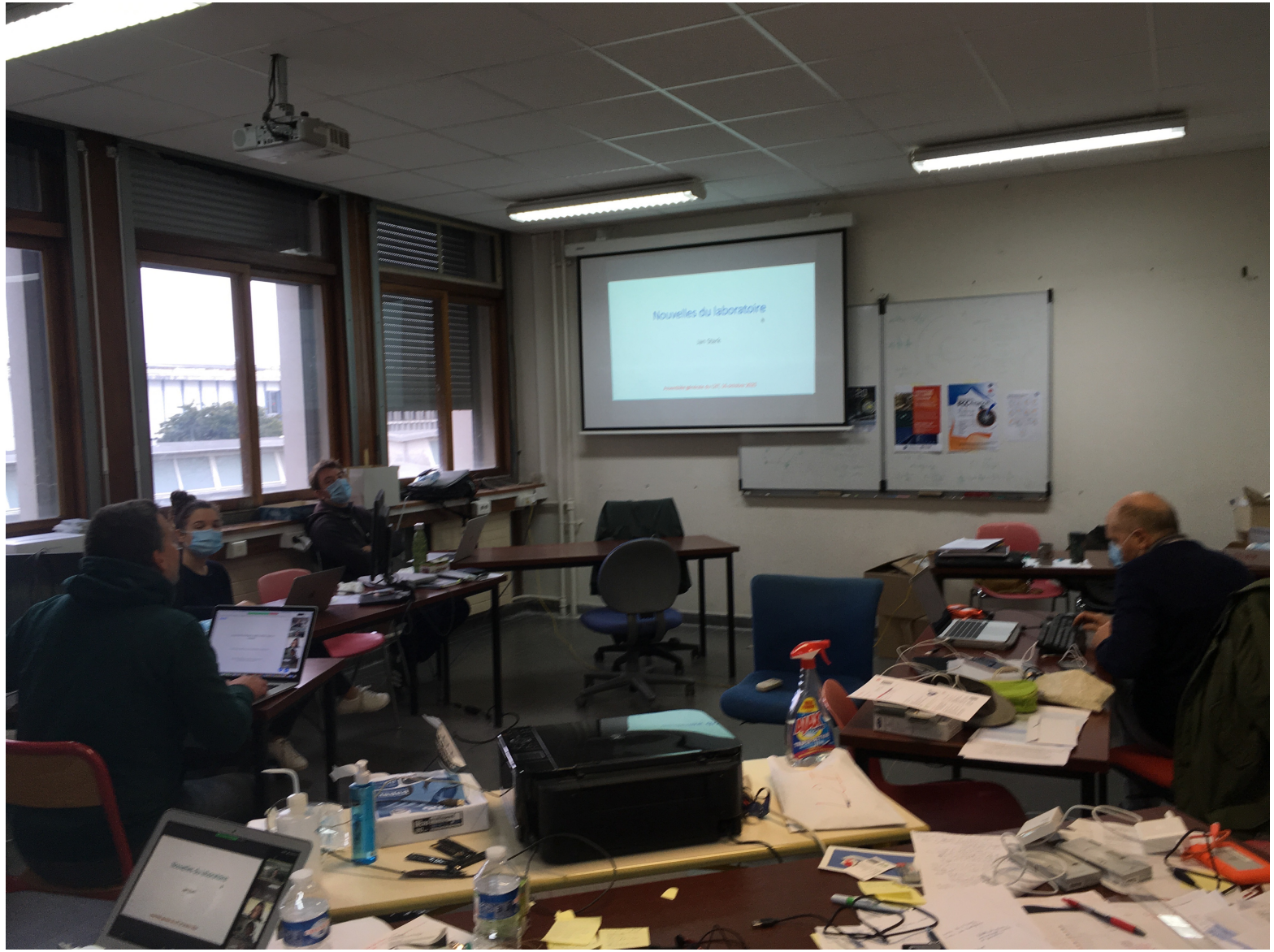
(impossible to list all Labs)

Campus of *Paul Sabatier University*





L2IT in 2020

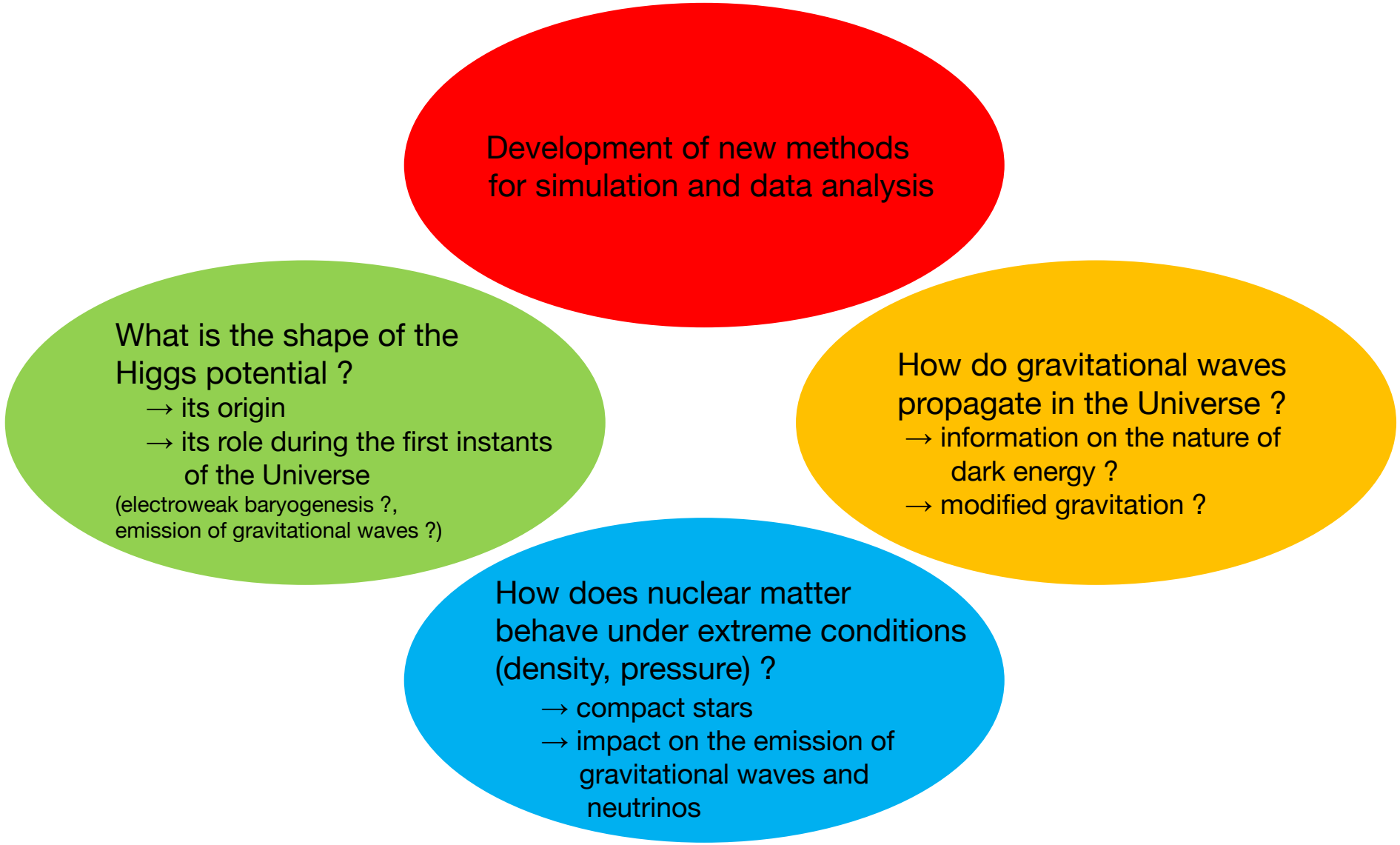


The Lab was created by Paul Sabatier University and IN2P3 / CNRS in January 2020 with initially 4 members.

… and now

As of today: 35 members

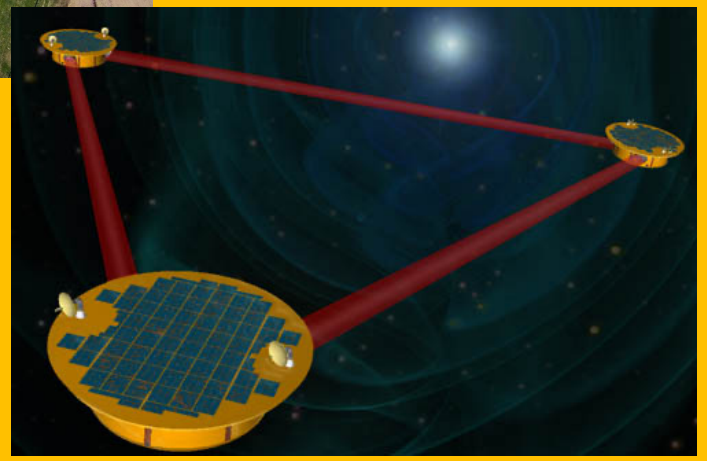
Research topics



Research topics

Gravitational waves

Virgo detector



Future
LISA mission
(3 satellites)

new methods
nd data analysis

How do gravitational waves propagate in the Universe ?
→ information on the nature of
rk energy ?
modified gravitation ?

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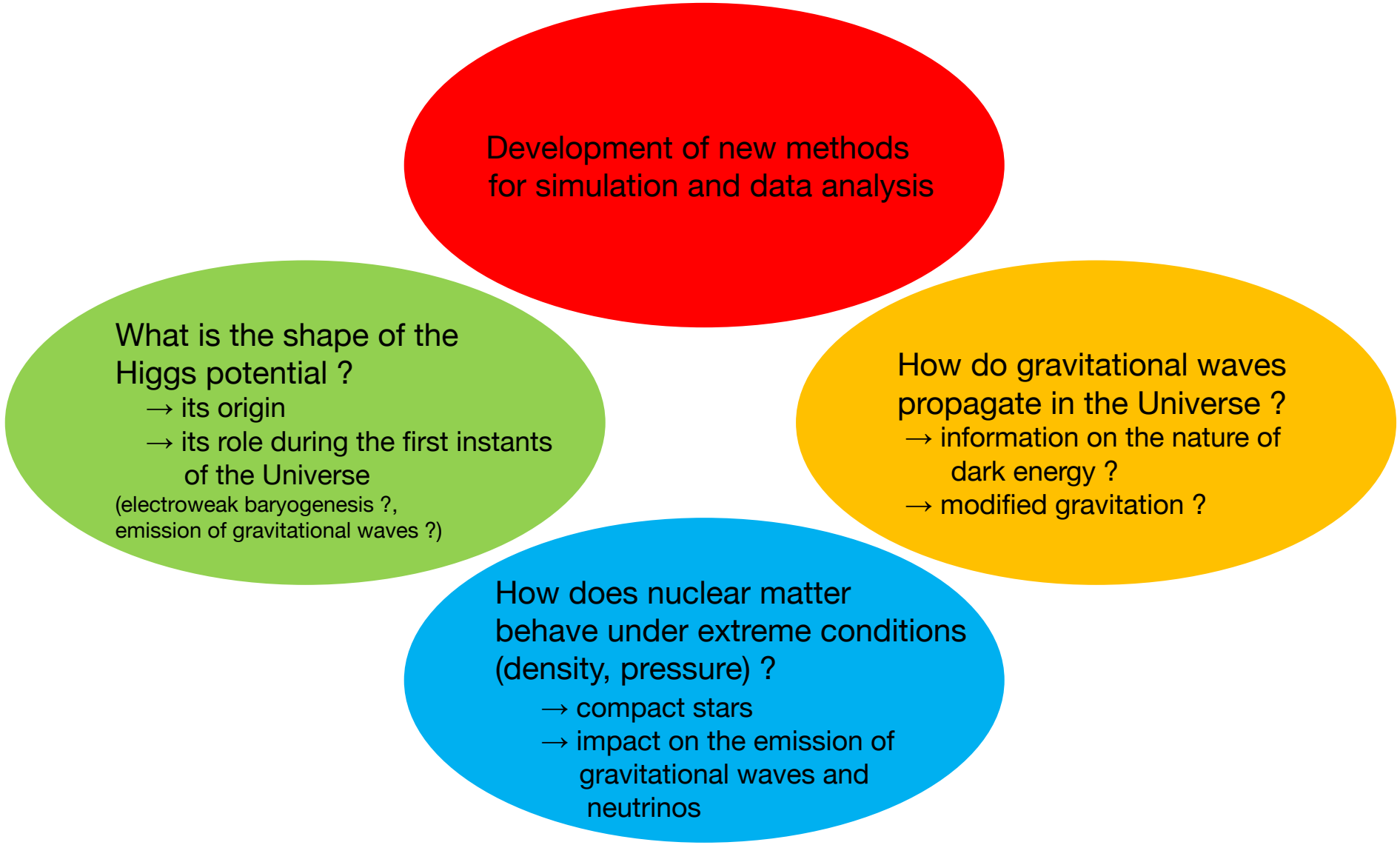
e) ?
ars
he emission of
al waves and

Research topics

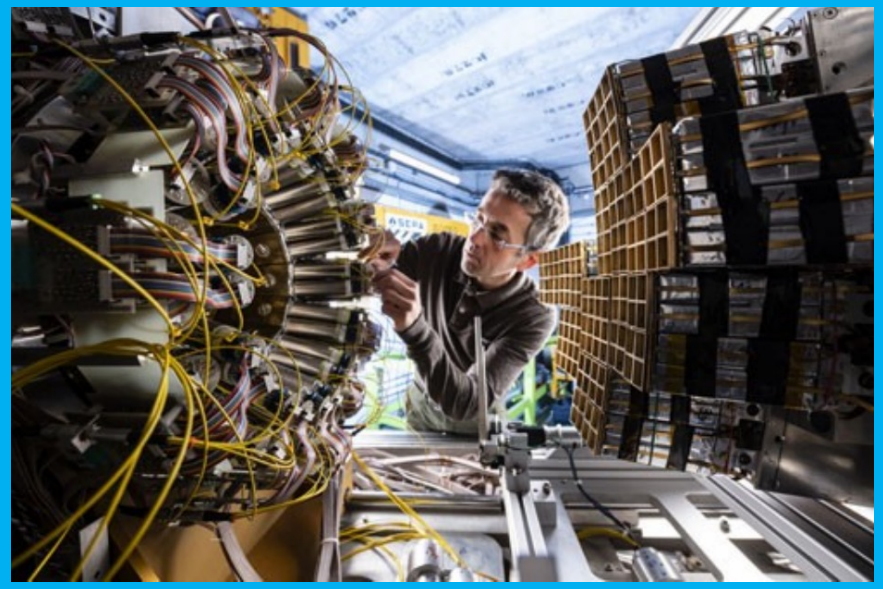


Research topics

What is the shape of the Higgs potential ?
→ its origin
→ its role during the first in
of the Universe
(electroweak baryogenesis ?, emission of gravitational waves ?)

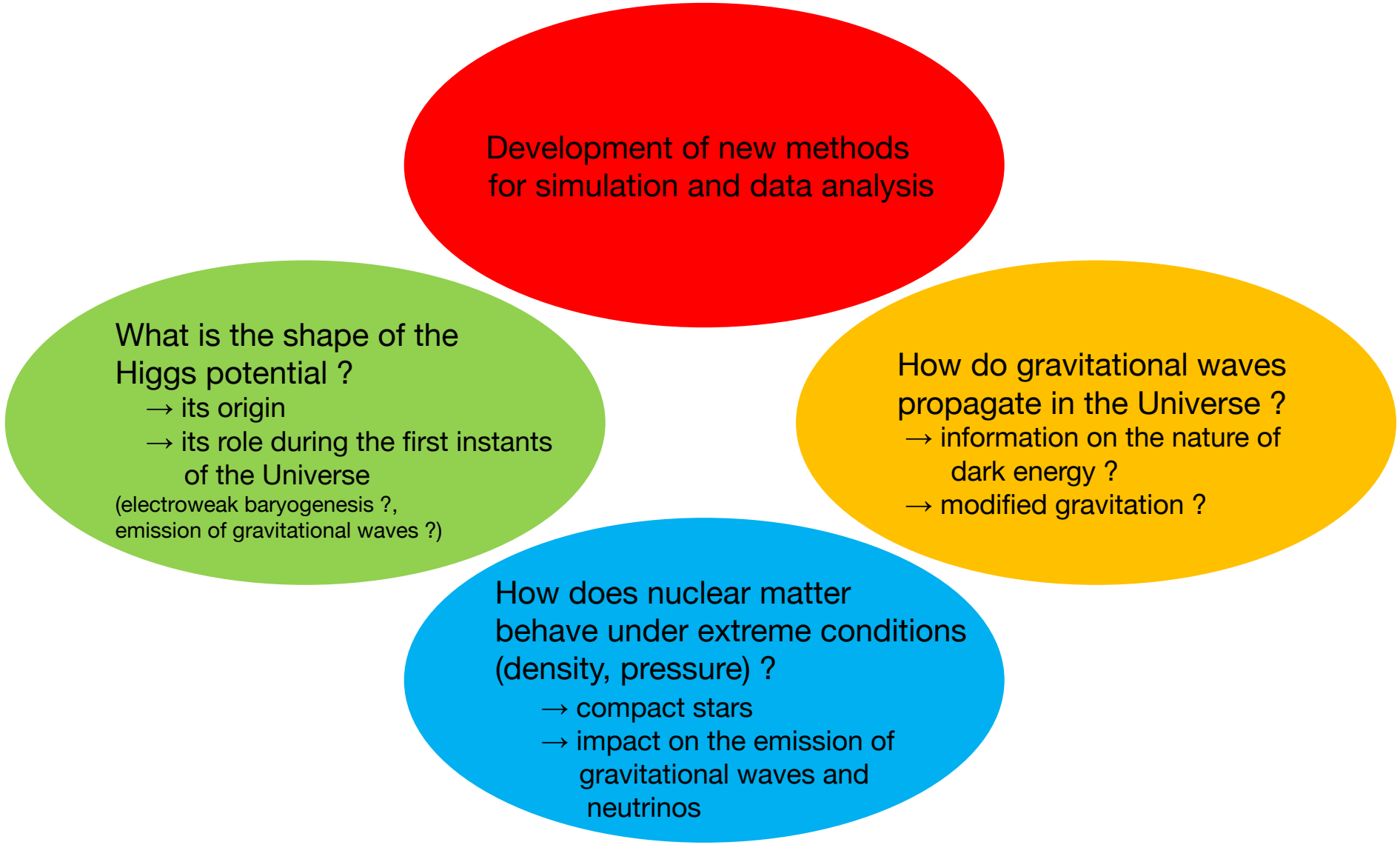
→ compa
→ impact e emission of gravitational waves and neutrinos

Nuclear physics



INDRA-FAZIA experiment at
Grand Accélérateur National d'Ions Lourds
(GANIL, Caen)

Research topics



Research topics

What is the shape of th
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→ its origin
→ its rol
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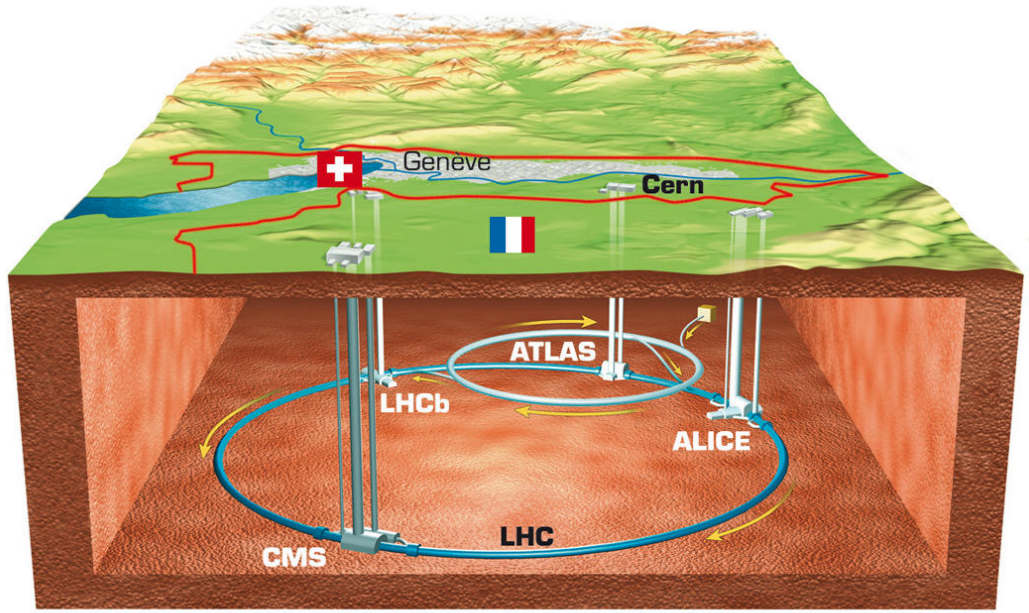
emission of gravitationa

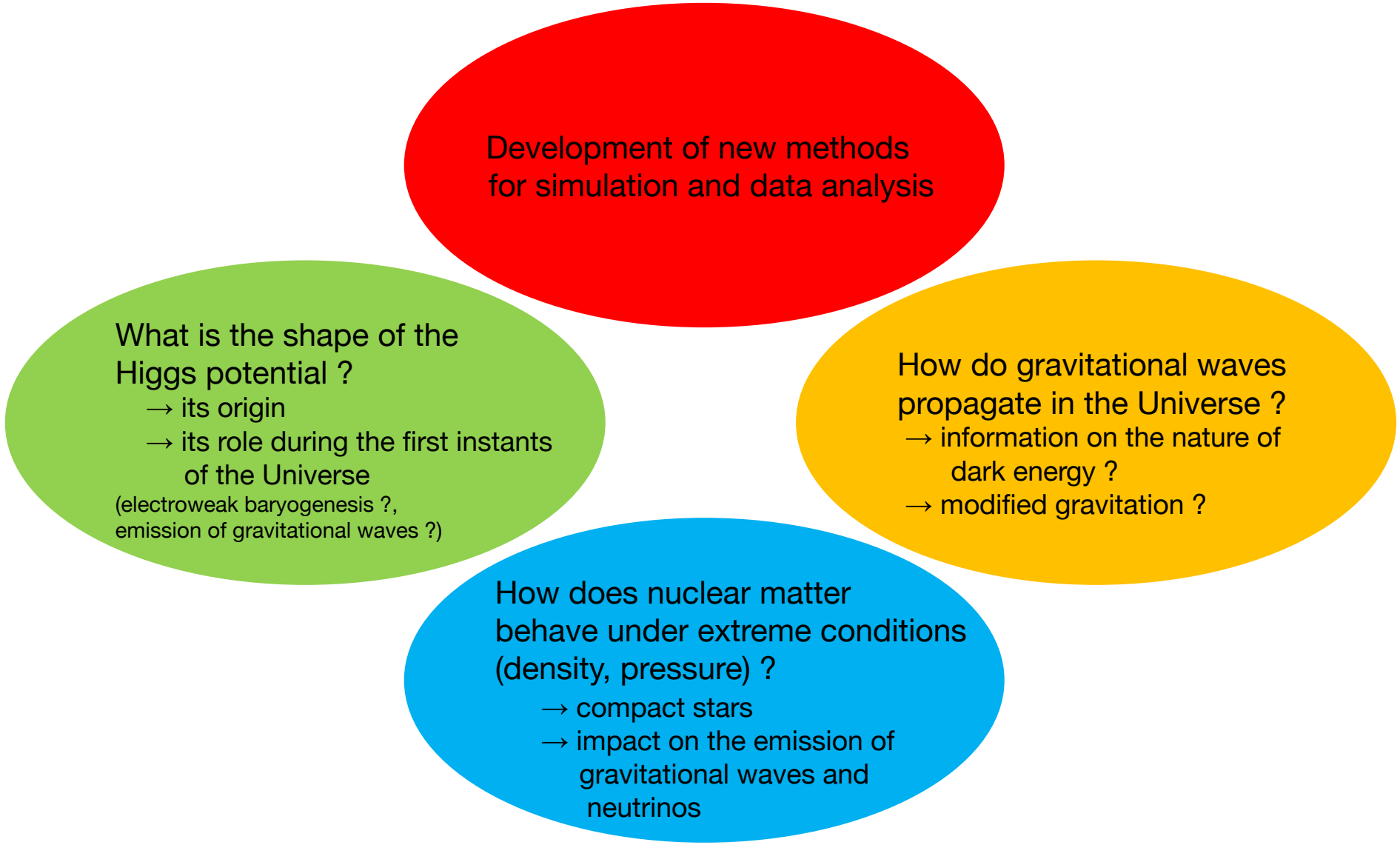
gravitational waves and
neutrinos

Particle physics



ATLAS experiment at CERN

Research topics



Research topics

Defining feature:

Focus on novel analysis methods

Modelling, simulation and modern analysis techniques are the main focus of L2IT.

We are developing these innovative aspects of research in the fields of nuclear and particle physics and cosmology, in close collaboration with experts from Toulouse's ecosystem of research in computing, artificial intelligence, physics, astronomy and astrophysics.

→ impact on the emission of gravitational waves and neutrinos

Welcome !
It is a pleasure to have you here.

Let’s have a productive workshop.