INSTITUTE Littoral Urbain Durable Intelligent

Smart Urban Coastal Sustainability
1993
Creation of
La Rochelle Université

2004
Convergence
with the CNRS

2008
First labelisations
by the CNRS:
• Creation of LIENSs,
• Creation of the FREDD

The CRMM, which joined
the institution in 2004,
evolves and becomes
a Joint Service Unit
(La Rochelle Université -
CNRS): the PELAGIS
Observatory

2009
La Rochelle
Université becomes
autonomous
(extended
competences)

2009
Adoption of
the University’s
transformation
project and the
specialisation on
Smart Urban Coastal
Sustainability (LUDI):
Creation of the LUDI
Institute

2011
Continued dialogue and
contractualisation with the CNRS:
• Integration of the CEBC
• Creation of the LaSIE

2014
Creation of the EU-CONEXUS
European University on the
LUDI concept

2018
Operationalisation
of the LUDI Institute

2021

Footnotes:
1 Centre National de la Recherche Scientifique
2 Littoral Environnement et Sociétés
3 Fédération de Recherche en Environnement pour le Développement Durable
4 Centre de Recherche sur les Mammifères Marins
5 Centres d’Études Biologiques de Chizé
6 Laboratoire des Sciences de l’Ingénieur pour l’Environnement
La Rochelle Université is a widely recognised internationally at the highest level in training and research, following disciplinary and multidisciplinary approaches, around a unique signature in France and abroad on the Smart Urban Coastal Sustainability (LUDI in French).

The LUDI Institute focuses its efforts on the scientific niches in which La Rochelle Université has already gained international recognition and will extend them in an interdisciplinary and systemic vision.

The LUDI Institute also aims to respond to a major societal and economic challenge by targeting studies on the quality of life of populations living in coastal areas strongly impacted by global climate change.

Thus, the environmental transition is addressed from the perspective of integrated coastal zone management. The issues associated with the energy transition are addressed in close relation to the notions of sustainable construction and transport. Digital transformation, a major challenge in the evolution of our societies, is a strong element in the rapprochement of the so-called "hard" sciences and the humanities. The human and social sciences, at the heart of the LUDI Institute, are working on what "living in an urbanised coastline" means, combining the themes of the environment, sustainable construction and transport, and digital technology with a view to the livability and comfort of coastal urban spaces. This desire to provide answers to the challenges of tomorrow is also reflected in the support provided to public policies and in a strong European presence through the EU-CONEXUS European University.
The Institute: a few numbers

More than 1,300 students (22 master’s courses)

440 permanent staff (teachers, researchers, engineers, technicians)

5 CNRS research federations

6 observatories

9 laboratories, including 3 CNRS UMRs

1 UMS CNRS

1 European University EU-CONEXUS

500 publications of rank A/ year

230+ doctoral students (1 multidisciplinary doctoral school)

1 workshop area

15 million budget (excluding the wage bill for permanent staff)
Broad-based, interdisciplinary themes

The ambition is to address all the scientific questions raised by the transitions and major societal challenges resulting from the anthropisation of the coastline. An incentive policy allows the emergence of new scientific questions, notably through an interdisciplinary approach.

To unite

the potential of teacher-researchers, researchers, teaching and research staff around the societal challenges linked to sustainable development in coastal areas.

Areas of expertise of the LUDI Institute

**Digital transition**
Dematerialisation and valorisation of digital resources, security, images, digital humanities, data management and governance.

**Societal issues**
Migration flows, identities and otherness, law, justice, environmental law.

**Energy transition**
Sustainable building, energy eco-efficiency in urban areas, durability of materials and structures, environmental and social impacts.

**Environmental transition**
Environmental risk, flooding and coastline erosion, biodiversity and ecosystem services, health, social impacts.
Laboratories

To promote a systemic and interdisciplinary approach to research and training, drawing on the disciplinary excellence of its researchers.

CEBC: Centre d’Études Biologiques de Chizé UMR CNRS 7372
Biodiversity/Adaptation/Conservation/Environmental constraints

CEIR: Centre for International Studies on Romany
History of Law
History of law/History of political ideas
Mediterranean/North-South relations/Romany

CEJLR: Centre for Legal Studies of La Rochelle
Private Law, Criminal Sciences, Public Law, Political Science
Insurance/Companies/Environment Europe/Justice

CEREGE: Centre de Recherche en Gestion (co-accredited with the University of Poitiers)
Management Sciences, Economics, Law science
Digitalisation/Sustainable development/Corporate social responsibility

CRHIA: Centre de Recherche en Histoire Internationale et Atlantique (co-accredited with the University of Nantes)
History, Civilisations, Anthropology, Languages, Literature
Migrations/Identities/Heritage/Cultures/Societies

L3i: Laboratoire Informatique Image Interaction
Computer Science - Computer Engineering, Automation and Signal Processing
Digital documents/Data mining/Internet of Things/Artificial Intelligence/Big Data

LaSIE: Laboratoire des Sciences de l'Ingénieur en Environnement UMR CNRS 7356
Engineering Sciences
Environmental engineering/Civil engineering/Transfer phenomena/Material design and behaviour/Corrosion

LIENSs: Littoral Environnement et Sociétés UMR CNRS 7266
Biology, Ecology, Geophysics, Earth Sciences/Geography, History, Chemistry, Biotechnology, Law, Political Sciences
Ecology/Risks/Biotechnology/Sustainable management

MIA: Mathematique, Image et Applications
Mathematics
Applied geometry/Partial differential equations/Computer vision/Deep learning algorithms/Mathematical engineering

Observatoire Pelagis UMS CNRS 3462
Ecology
Conservation/Marine megafauna/Public policy/Strandings/At sea observations
In order to fully play its role as an economic player in the region, La Rochelle Université has set up CampusInnov, a global approach based on partnership innovation, in order to develop and support projects.
Master training

To train high-level professionals in the Institute’s main disciplinary fields and to intensify the coupling of research and training from the master’s to the doctorate level.

The diversity of our training courses aims to train experts who will share a common culture of taking into account societal issues and a commitment to meeting the challenges of tomorrow.

With the European University EU-CONEXUS, joint masters will be set up with our 8 partners to train European eco-citizens.

22 Master's degree courses

- Biotechnology
- Computer Science
- Civil engineering
- Applied foreign languages
- History
- Materials Science and Engineering
- Teaching, education and training professions
- Science for the environment
- Management and International Trade - Asia
- Mathematics and applications
- Science for the environment
- Management and International Trade - Asia
- Mathematics and applications
1 multidisciplinary doctoral school

To produce international experts in different disciplinary fields of a very high level on the theme of Smart Urban Coastal Sustainability, with a systemic understanding of the issues of a theme clearly positioned as interdisciplinary.

Law
Mathematics, computer science
Management Sciences
Environmental sciences (biology, earth sciences, ecology, geography...)
Engineering sciences (materials, chemistry, physics, fluid mechanics)
Humanities and social sciences (history, literature, languages, cultures)

But also a lifelong learning offer to meet the needs of stakeholders and decision-makers for sustainable coastal management at local, regional, national and international levels.

Towards a European PhD with EU-CONEXUS
CampusInnov

To stimulate a dynamic of innovation contributing to the development of the socio-economic environment and to accompany the valorisation of research.

CampusInnov aims to support and accelerate a dynamic of innovation and entrepreneurship at the service of territorial socio-economic development. As a true link between the academic world and the business world, CampusInnov offers a variety of mechanisms, each at their own level, to help the emergence, implementation or maturation of innovation and entrepreneurship projects, for students, researchers, doctoral students, companies, local authorities and associations.

CampusInnov also supports the valorisation of research work from La Rochelle University, notably through the partnership with SATT Aquitaine Science Transfert.

Currently under construction, the CampusInnov co-innovation centre is designed to be a technological centre of excellence supported by academic research. A genuine scientific intermediary, it hosts innovation projects that intensify the link between research and the socio-economic sector.

Its aim is to combine complex technological infrastructures and high-level specialised expertise by hosting researchers and companies for the duration of a project.
Encouraging scientific culture is performed by the centre for scientific, technical and industrial culture Cap Science and Mendes France.
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