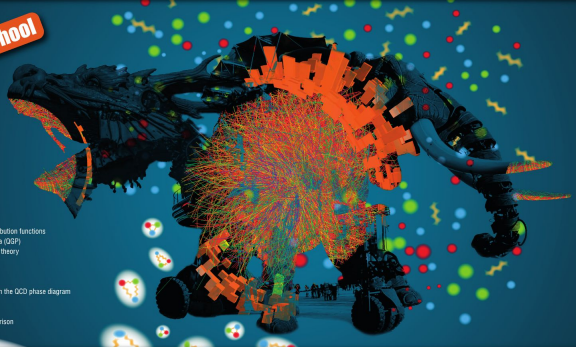


Heavy Ion Collisions in the QCD phase diagram



June 27-July 8, 2022 Subatech, Nantes (France)

Summer School



SCIENTIFIC TOPICS

- Initial state and (nuclear) parton distribution functions
- Hydrodynamics & quark-gluon plasma (QGP)
- QGP thermodynamics & thermal field theory
- Heavy quarks as probes of the QGP
- Jet as probes of the QGP
- In-medium modifications of hadrons
- Fluctuations and critical phenomena in the QCD phase diagram
- Compact stars
- From raw data to observables
- From event generators to data comparison

Organizing committee

Marcus BLUMH (Subatech)
Maxime GUILBAUD (Subatech)
Antonio MAURE (EPIC)
Cyrille MARBUET (CMT)
Carlos MUÑOZ CAMACHO (LJLab)

Martine MAURGANG (Subatech)
Isabelle OLLITRAULT (Subatech)
Tajib PIERRET (Subatech)
Dieter RANSTEIN (LJLab)
Michael WINN (EPN/NSC)

indico.in2p3.fr/HICschool2022
Scan me



Welcome!

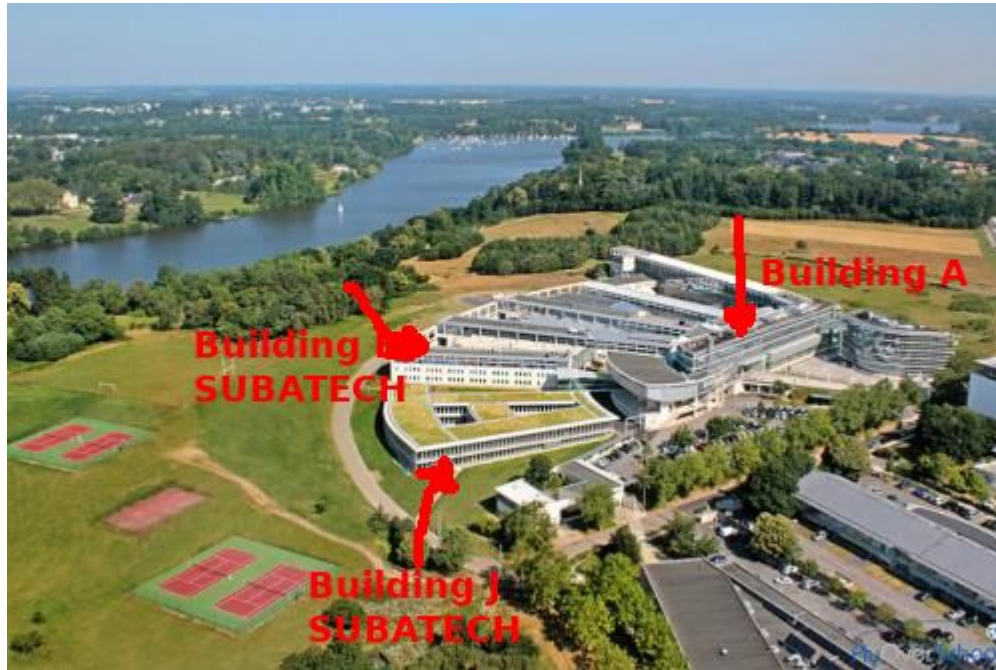
Heavy-ion Collisions in the QCD phase diagram



IMT Atlantique
Bretagne-Pays de la Loire
École Mines-Télécom

Gines Martinez, Director of Subatech laboratory

Where you are



Planning for the week

Regularly consult our program:

<https://indico.in2p3.fr/event/26074/timetable/#20220627>

General structure:

1.5hrs lecture (please organise the necessity of having a short break yourselves)

coffee break

1.5hrs lecture (please organise the necessity of having a short break yourselves)

lunch break

1.5hrs lecture (please organise the necessity of having a short break yourselves)

coffee break

hands-on session and/or student talks

pick up of dinner

Social dinner on Friday July 1!

(More information later)

Excursion on Saturday July 2!

(More information later)

Overview of lectures

First week

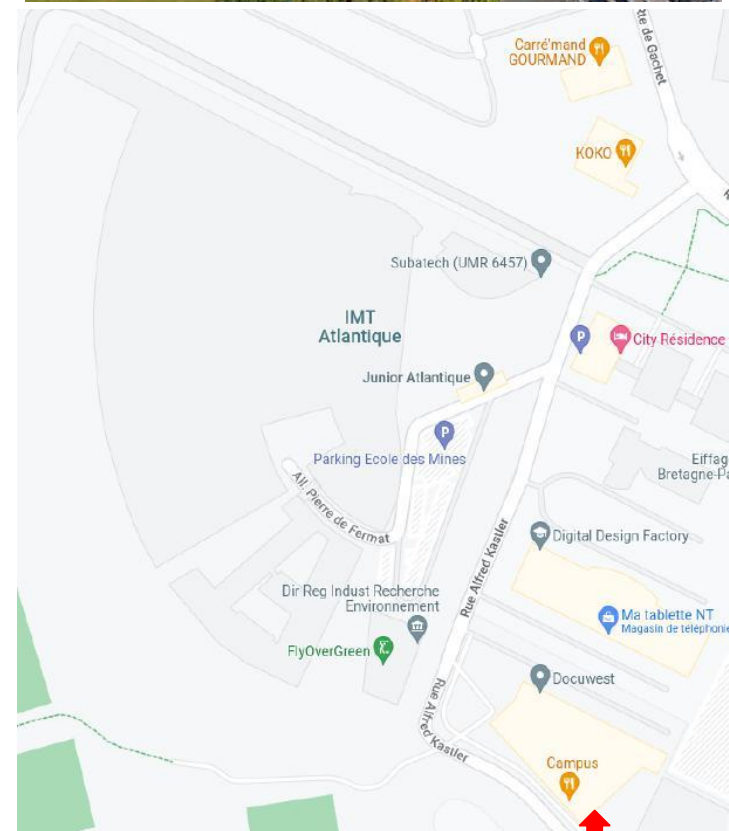
- Hydrodynamics and QGP
[Jean-Yves Ollitrault](#)
- Phases of QCD at high baryon density and compact stars
[Andreas Schmitt](#)
- Fluctuations in the QCD phase diagram
[Volker Koch](#)
- From event generators to data comparison
[Klaus Werner](#)
- Theory of heavy-quark dynamics
[Pol Bernard Gossiaux](#)

Second week

- Theory of heavy quark dynamics
[Pol Bernard Gossiaux](#)
- Jets as QGP hard probes
[Leticia Cunqueiro](#)
- Hadrons in medium
[Tetyana Galatyuk](#)
- From raw data to observables
[Antonio Uras](#)
- HIC initial state and (n)pdf
[Pia Zurita](#)
- Heavy-quark observables in HIC (via zoom)
[Sarah Porteboeuf-Houssais](#)

Lunch and dinner

- **Lunch** will be served at the canteen of IMT Atlantique
- Lunch/dinner tickets to be presented at the counter
- Lunch includes: a starter (entrée), a main dish (plat) and a desert (dessert)
- Water is served at the water fountains in the hall of the canteen
- **Dinner** is served at the cafeteria as take away (unfortunately, but at least biodegradable waste...) from **17h30-19h**.



Dictionary

petit déjeuner - breakfast

déjeuner - lunch

dîner - dinner

Around IMT Atlantique

- Parc de la Chantrerie - Erdre river
Wonderful place to explore

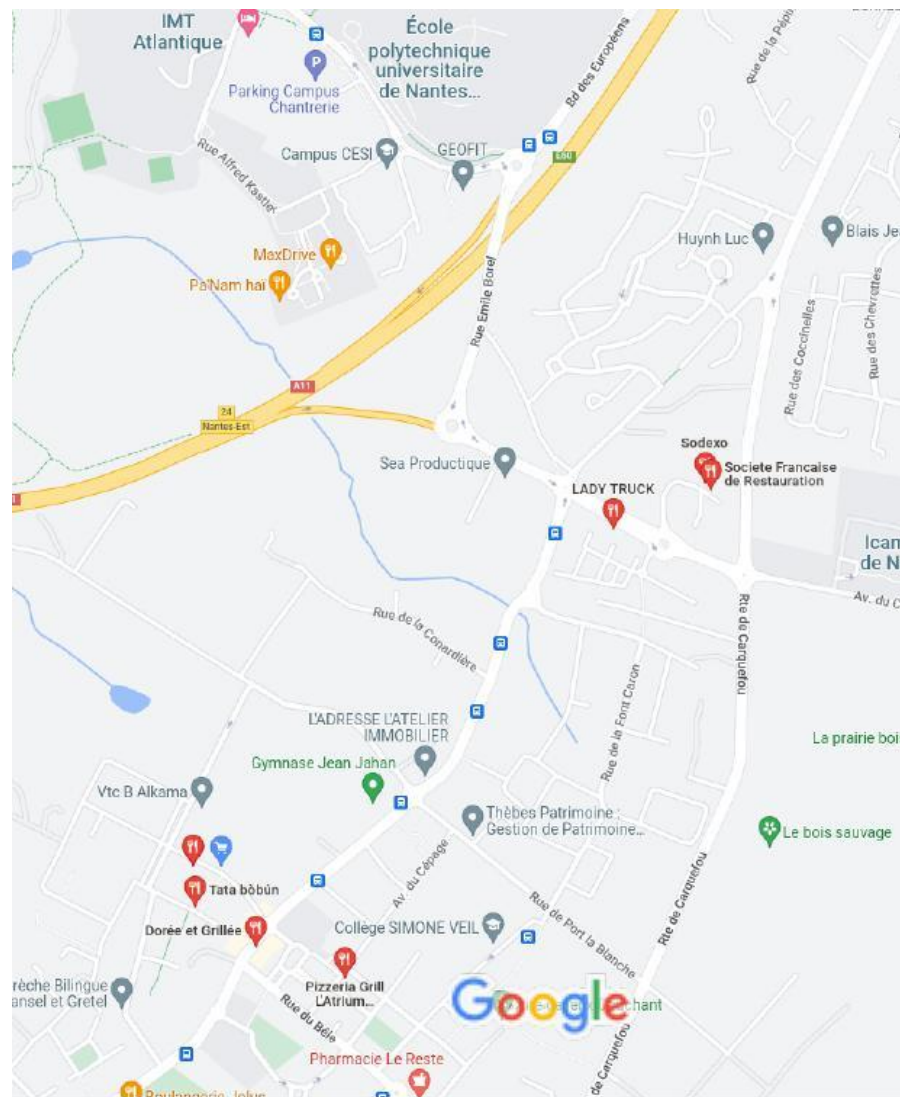


- Captain Bike mobility
 - Rent electric bikes and scooters to use in the Chantrerie-Carquefou area for 15 minutes free of charge.
 - Several stations over all of Chantrerie-Carquefou area
 - Download app and choose a flat rate of 0 Euros



Restaurants and supermarkets close by

- KOKO
27 Rte de Gachet, 44300 Nantes - Chantrerie
- Carré'mand, bakery, lunch, closes at 15h
35 Rte de Gachet, 44300 Nantes - Chantrerie
- Tata bòbún, Asian food
14 Rue des Grands Pâtis, 44300 Nantes - Saint Joseph
- Comptoir Libanais, Lebanese food
17 Rue Barbara, 44300 Nantes - Saint Joseph
- Master Pizza,
17 Rue Barbara, 44300 Nantes - Saint Joseph
- Dorée et Grillée, fast food
490 Rte de Saint-Joseph, 44300 Nantes- Saint Joseph
- Bakery Jolus,
458 Rte de Saint-Joseph, 44300 Nantes - Saint Joseph
- Supermarket Intermarché,
18 Rue Barbara, 44300 Nantes - Saint Joseph
- Biocoop Les Hameaux, organic food supermarket
22 Rue Barbara, 44300 Nantes - Saint Joseph



Public transport to the city center - C6



Public transport to the city center - tram 1



Nantes - city center



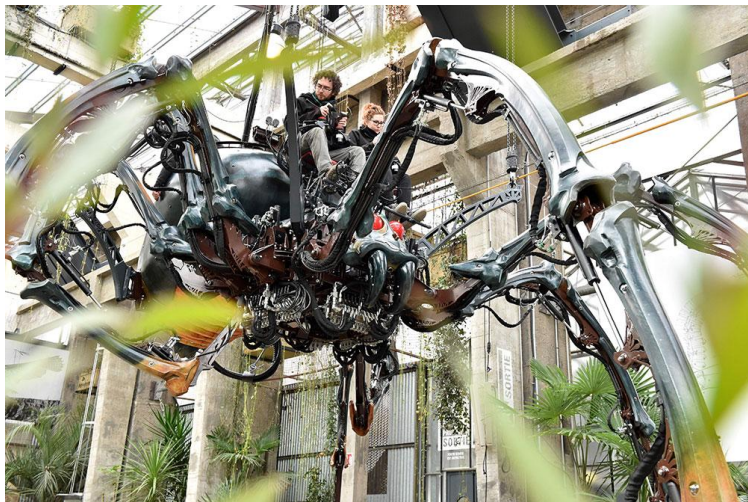
Social dinner on Friday July 1

Restaurant "Lieu Unique"



Excursion on Saturday July 2

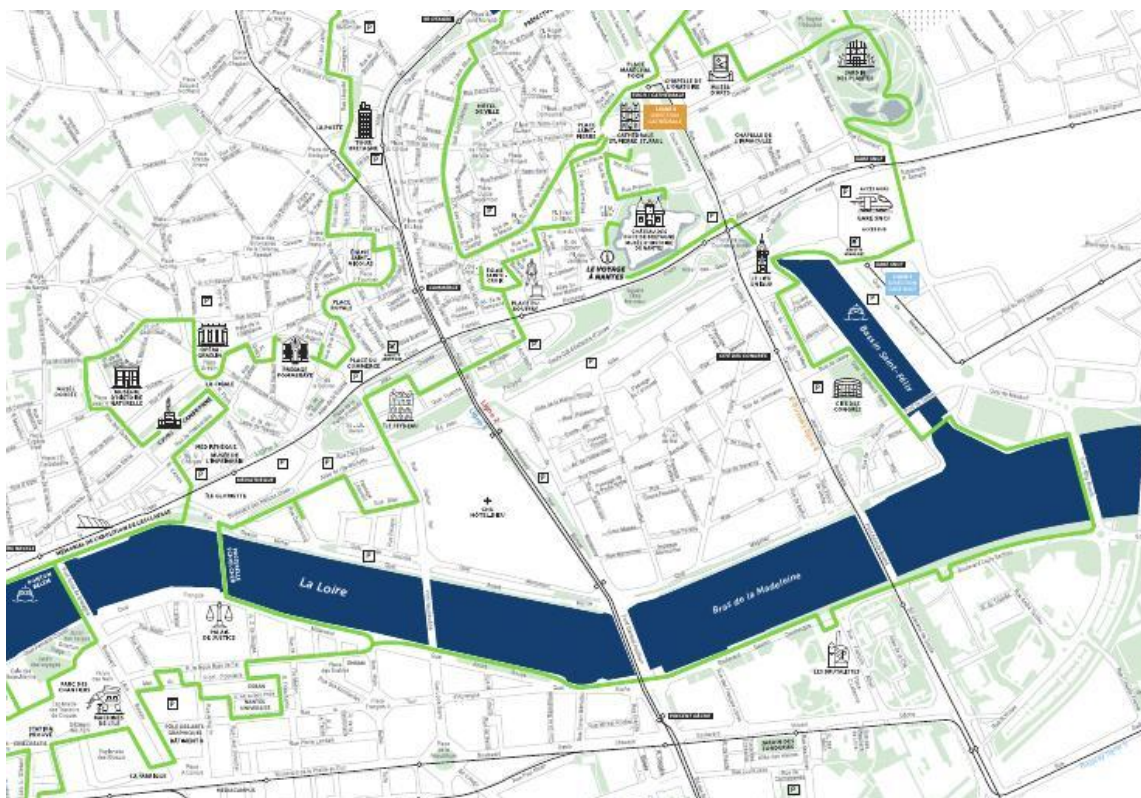
Guided tour to “Les machines de l’île”...



... followed by lunch and a walk through
Trentemoult village

Le voyage à Nantes

Starts on July 2! Just follow the green line through all the city and explore fascinating art, events, music, surprises, ...!



Suivre la ligne verte !

Avec un étonnement de tous les instants.

Le parcours permanent dans l'espace public.

Follow the green line! To be surprised at every instant

The permanent itinerary throughout the city

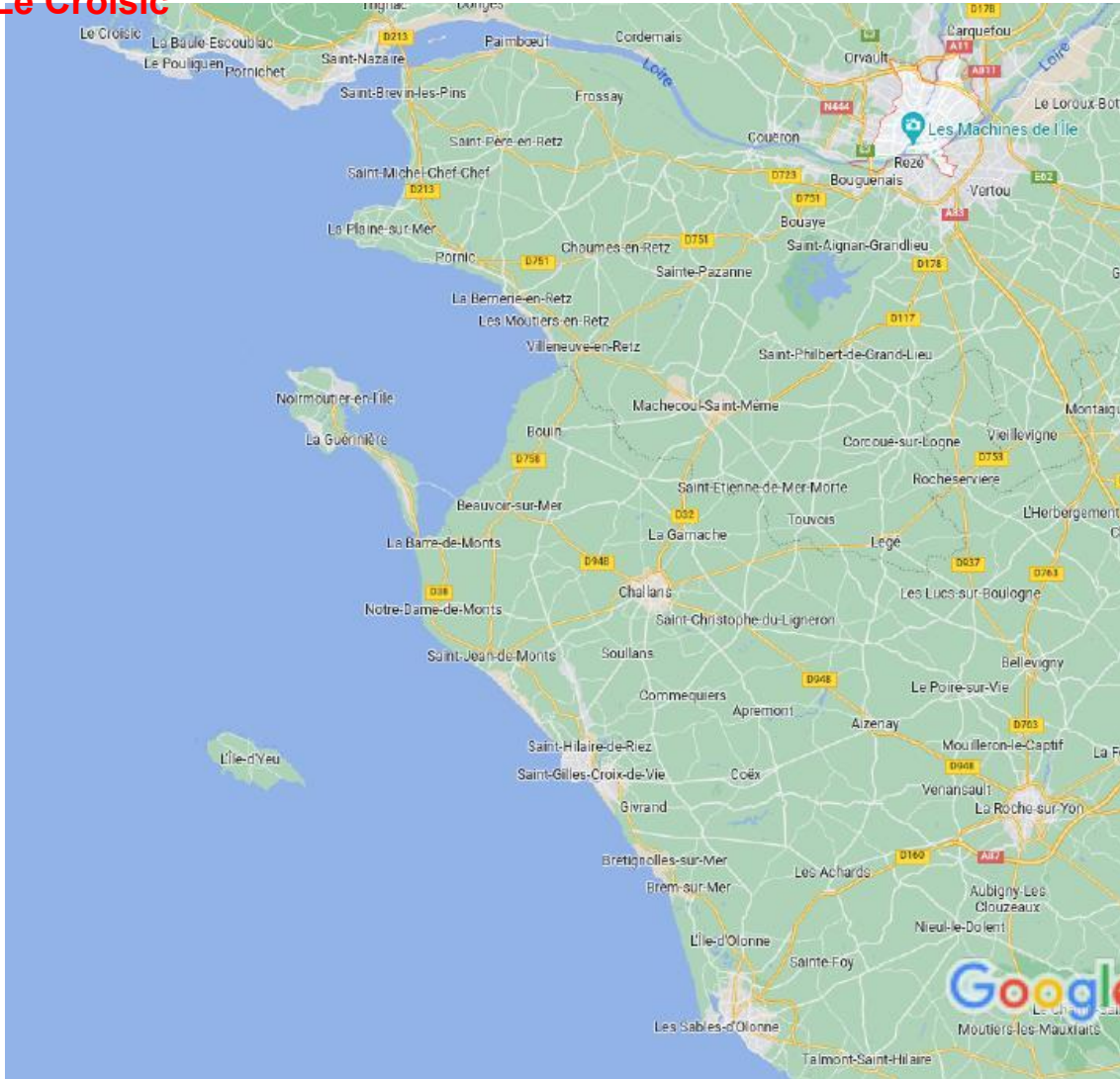
¡Sigue la línea verde! Con una sorpresa en cada rincón

El recorrido permanente al aire libre.



Free time on Sunday - trip to the Atlantic Ocean?

Le Croisic



Home icon | m.ter.sncf.com/pays-de | 72 | Menu icon

SNCF | Aéroport en TER | Shopping cart icon | Profile icon

Nantes → Le Croisic
dim. 3 juil. , 1 voyageur

Sélectionner votre billet

Modes de transport

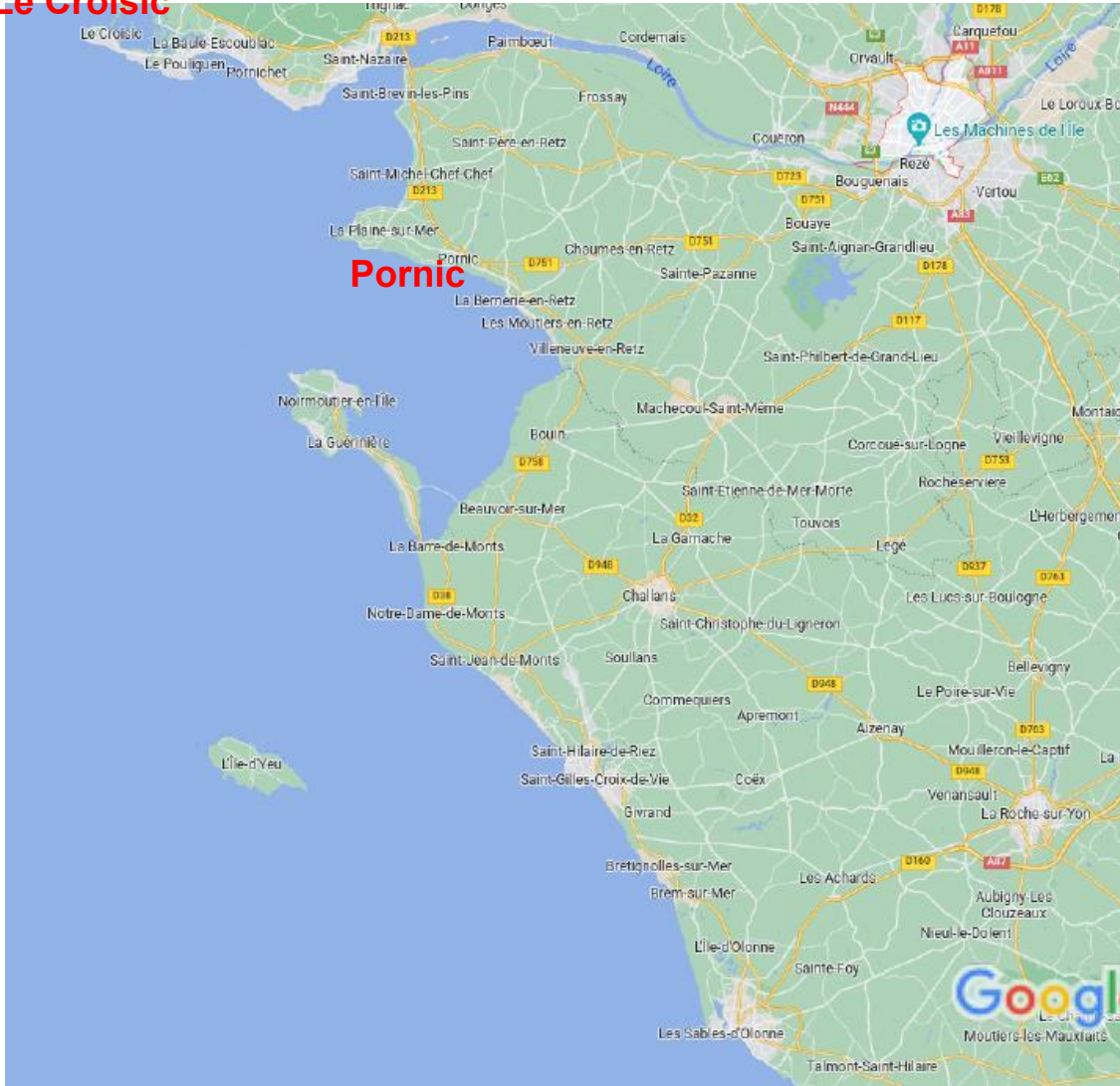
Dimanche 3 juillet | Horaires précédents

09h06	1h09	10h15
Nantes		Le Croisic
TER 857385		À partir de 12,00 €
Détails ▾		
10h15	1h24	11h39
Nantes		Le Croisic
TER 860003		À partir de 10,00 €

VOTRE AVIS ?

Free time on Sunday - trip to the Atlantic Ocean?

Le Croisic



Navigation icons: menu, SNCF, Aéroport en TER, shopping cart, user profile.

Nantes → Pornic
dim. 3 juil. , 1 voyageur

Sélectionner votre billet

Modes de transport

Dimanche 3 juillet [Horaires précédents](#)

09h39	1h01	10h40	VOTRE AVIS ?
Nantes		Pornic	
TER 859243		À partir de 8,00 €	
Détails			
12h09	59 min	13h08	
Nantes		Pornic	
TER 859287		À partir de 8,00 €	
Détails			

Free time on Sunday - trip to the Atlantic Ocean?

Le Croisic

Pornic

Les Sables-d'Olonne



Nantes → Les Sables-d'Olonne
dim. 3 juil. , 1 voyageur

Sélectionner votre billet

Modes de transport

Dimanche 3 juillet

[Horaires précédents](#)

09h35 — 1h26 — 11h01

Nantes

Les Sables-d'...

TER 85887

À partir de
14,00 €

Détails

10h35 — 1h18 — 11h53

Nantes

Les Sables-d'...

TER 85889

À partir de
14,00 €

Détails

VOTRE AVIS ?

The local organising committee

Please come see us for any questions, comments, suggestions, problems, etc.!



Marcus Bluhm



Maxime Guilbaud



Marlene Nahrgang



Tanja Pierret

Now, the stage is open to our lecturers!