

EACH Winter School 2018



Lyon – Valpré 22 – 26 january 2018

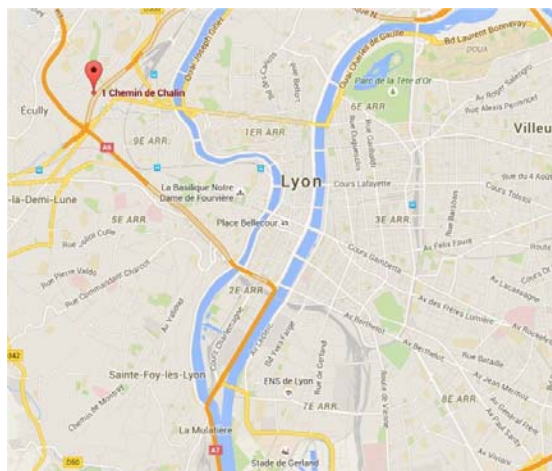
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Where are we ?



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Agenda

Time	Day 0 if needed	Day 1 : 22/01		Day 2 : 23/01		Day 3 : 24/01		Day 4 : 25/01	Day 5 : 26/01
		Students	Consortium committee	Students	Consortium committee	Students	Consortium committee		
8-9		Breakfast		Breakfast		Breakfast		Breakfast	
9-10:45		Introduction Ivo Leito / J Randon		Lecture - Abdelamid Errachid - Smart sensors	Intro, agenda, general questions, start of Student selection for	Lecture NMR - Guido Pintacuda, Anne Lesage, Sami Janin	if needed	Lecture Industrial Analysis - Noémie Caillol	Departures
10:45-11:00		Break		Break		Break		Break	
11:00-12:45		2nd year students presenting to 1st year students the 2nd year universities		Do it yourself: Basic concepts for data acquisition and regulation	Student interviews (Franck Blaco Antonia)	Lecture NMR - Guido Pintacuda, Anne Lesage, Sami Janin	if needed	Analysis in Industry - Nicolas Roques, Hervé Thiébaud, Serge Henrot	Departures
12:45-14:00		Lunch		Lunch		Lunch		Lunch	
14:00-15:45		Discover Lyon and pick samples for Tuesday team work	AOB	Do it yourself : Temperature, Light and photosensors	Student interviews	Visit NMR Facility center at ISA		Student presentation of Team Work	
15:45-16:00		Break		Break		Break		Break	
16:15-18:00	Arrival	Discover Lyon and pick samples for Tuesday team work	Admission of new students	Do it yourself : build your own turbidimeter	Student interviews	Visit NMR Facility center at ISA		Student presentation of Team Work	
18:00-19:00		Dinner		Dinner		Dinner		Dinner	
19:00-21:00		Dinner		Team Work	Selection of students to study tracks, Admission of new students	Team Work	if needed	1. he will give overview about courses to be taken by 1st year students in spring. 2. Feedback from 1st and 2nd year students for the EACH programme and the Winter School 2017	

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Lectures

- Abdelamid Errachid (ISA), Smart sensors
- Guido Pintacuda (ISA), Sami Janin (ISA) and Anne Lesage (ISA), NMR
- Noémie Caillol (AxelOne), Industrial analysis
- Hervé Thiébaud (Arkema), Nicolas Roques (Servier), Serge Henrot (Solvay), Analysis and Industries

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And some other things...

Time	Day 0 if needed	Day 1 : 22/01 Students Consortium committee	Day 2 : 23/01 Students Consortium committee	Day 3 : 24/01 Students Consortium committee	Day 4 : 25/01	Day 5 : 26/01	
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18:00-19:00		Dinner	Dinner	Dinner	Dinner	Dinner	
19:00-21:00		Dinner	Team Work	Selection of students to study tracks, Admission of new students	Team Work if needed	1. No presentations about courses to be taken by 1st year students in spring. 2. Feedback from 1st and 2nd year students for the EACH programme and the Winter School 2017.	

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2d year student's presentation

Monday 22 January 2018

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2d year student's presentation

- The way of life in your 2d year university
- The work load
- The master thesis topics
- ...

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A sample trip in Lyon

Monday 22 January 2018

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A sample trip in Lyon

- A funny trip for your first visit of Lyon
- Bring water samples from Lyon order to perform measurements on Tuesday

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Towards on-line measurement and regulation
Sophie Cavassila (UCBL), Anne-Laure Deman-Him
(UCBL), DIY analytical instrument.

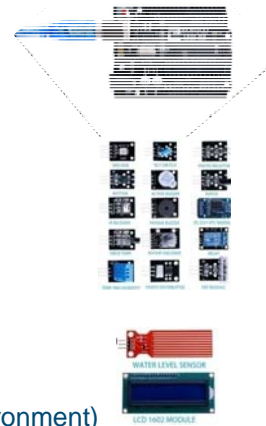
Tuesday - 23 January 2018

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How can we adress instrumentation design ?

- Low cost electronic devices
 - Based on Arduino motherboards
- Full set of sensors
- Full set of actuators
- Easy to program
 - Enhanced simulation tools : Tinkercad
 - Arduino IDE (Integrated Development Environment)



What kind of project can be designed ?

- Sorting machine



<https://www.youtube.com/watch?v=H7HTQai7Wwg>

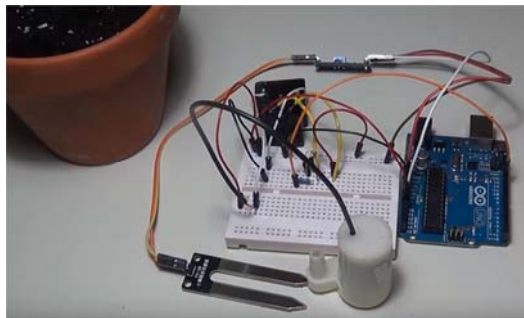


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What kind of project can be designed ?

- Automated House Plant Waterer



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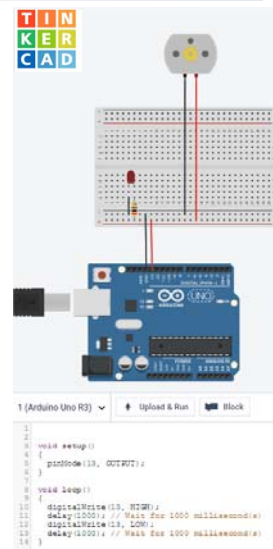
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Is this difficult ?

- Definition of the specifications
- Basic knowledge on electronics, computer science
- Useful simulation software for non-specialists
- Available numerical libraries to implement sensors and actuators

➡ easy programming for beginners



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Åbo Akademi
University

Why do we propose this topic during WS ?

- More and more personal devices
- More and more connected instruments
- More and more data recorded
- Can suffer from a lack of reliability

- Better knowledge of measurement principle

- Link to uncertainty measurement

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Åbo Akademi
University

Project topics in relation to chemical process

- Temperature control and regulation
- Humidity control and regulation
- pH or chlorine regulation in swimming pool
- **Turbidimetry** in water treatment plant
- Spectrophotometric measurements
- Automatic titration device

- Other topic....

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Student interview

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Student interview

- You
- Your project
- Your study track preferences

- Arguments
- Exchange
- Kindness



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One day in NMR

Wednesday 24 January 2018

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Visit of Very High Fields NMR center



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Student presentations of team work Feedback

Thursday 25 January 2018

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Student presentations of team work

- 20 minutes per group
- Presentation
- Discussion
- Convince people to finance your project !

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Friday 26 January 2018

Departure 10:00 am to the airport

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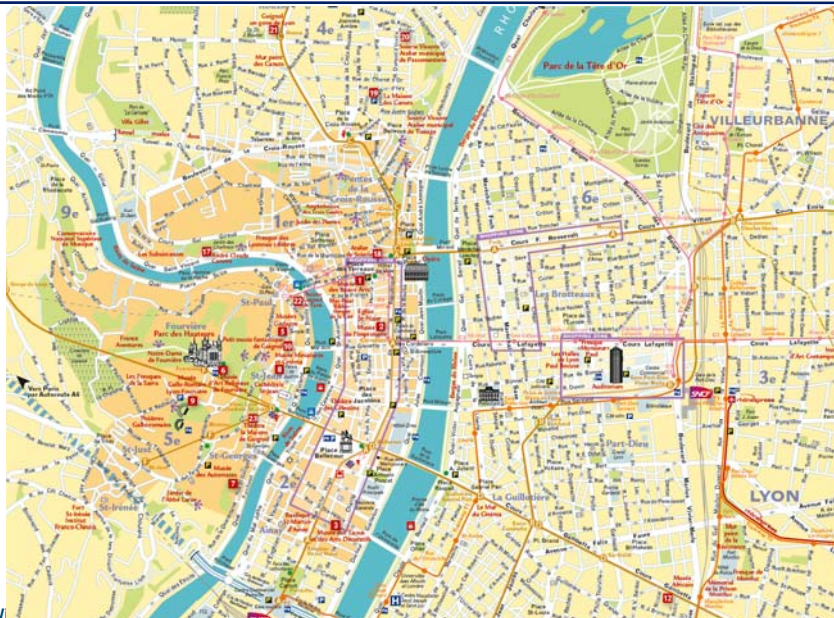
Enjoy your winter school !



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Orientering in Lyon

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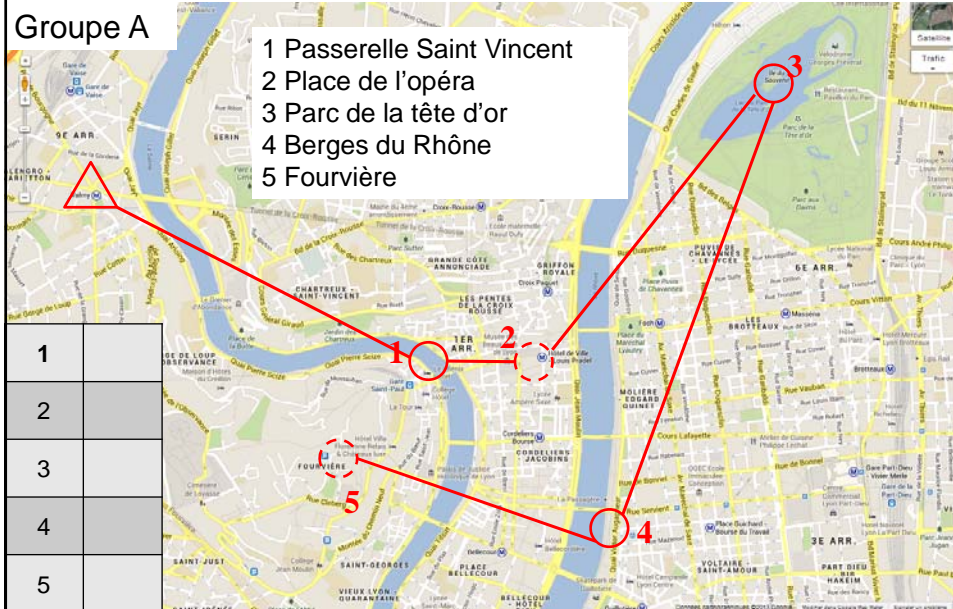


Orientering race in Lyon

- **The objectives** : To collect water in 5 different locations in Lyon (3 of them are specified, chose the others). You will analyse these samples as part of your studying during the Winter School.
- **Equipment**: Sampling bottles, Map of Lyon, Camera, 1 day ticket
- **Rules** : Each team has a specific itinerary to follow to reach all the collection points. Respect the order of your itinerary. Take pictures !

Take the D line direction Gare de Venissieux

Groupe A



1 Passerelle Saint Vincent



2 Place de l'opéra

5 Fourvière



ONLY LYON 

3 Parc de la tête d'or



4 Berges du Rhône

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At each of the 5 points...

- Record the time on the table at the bottom of your map
- Take a photo of your group (altogether) showing the location
- Remember to identify your sample with the location name and your group name
- Along the way, between the different locations, you need to take pictures to document your afternoon. Have fun and be creative.

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Try to be back

- You need to return to Valpré by 7:00pm. On arrival, check in. Your arrival time will be logged and your pictures checked.
- Emergency Jérôme Randon +33 (0)682991448
- The first team to return within the rules will be awarded 10 points, then the 2nd 8 points, 3rd 7 points.

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Bonus points opportunity (2 points each) :

- Picture of your group with the ONLYLYON structure
- Picture of your group in a roman area
- Picture of your group within a traboule
- Picture of your group in front of painted walls (2 point per building)
- Picture of yourselves with a giraffe
- Picture of a statue with at least one horse

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Reporting during the winter school

- Be prepared to be able to provide explanations and interesting facts about your photos.
- For Thursday 25th, you will prepare a slide show.
- The best one will be awarded a prize.

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Teams

First name	Family name	Group	First name	Family name	Group
Dániel	Papp	A	Fadillah Putri	Patria	F
Yijiao	Yao	A	Diana	Visanu	F
Anton	Roshchin	A	Jay Pee	Oña	F
Abhishek	Sonu	A	Ajit Jung	Karki	F
Jovana	Petrović	B	Irina Diane	Castaños	G
Thi Duong	Bui	B	Hồ Thanh Hải	Hoàng	G
Jayaruwan	Gamaethiralalage	B	Dmitriy	Chikhirev	G
Shidong	Chen	B	Alisija	Prakapaité	G
Hiu Mun	Man	C	Davit	Tediashvili	H
Snežana	Đorđević	C	Nur Eka	Fitriani	H
Kenneth	Arandia	C	Marko	Bertić	H
Mohan	Ghorasaini	C	Kalliroi	Sdougkou	H
Nikola	Obradović	D	Angelique	Dafun	I
Giorgi	Tsiklauri	D	Allen Jun Peñez	Anies	I
Duc Khanh Tho	Nguyen	D	Jose Antonio	Wrzosek Cabrera	I
Changbai	Li	D	Malika	Beishanova	I
Mark Justine	Racelis Zapanta	E			
Daniela Alejandra	Pinto Pérez	E			
Ruixin	Huang	E			
Slim	Blidi	E			