

# M1 EMIMEO Intake 3

## Info Session

### 2021-2022

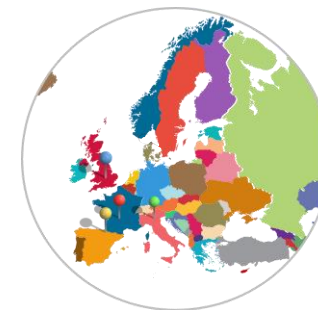
**Monday 6<sup>th</sup> September 2021**



# General Presentation

## EMIMEO : A Joint Master Project Involved Universities and people

- **Aston University (England) :**  
Contact : Sonia Boscolo
- **University of the Basque Country (Spain) :**  
Contact : Juan Mari Collantes/ Joaquin Portilla
- **University of Brescia (Italy) :**  
Contact : Costantino De Angelis/ Daniele Modotto
- **University of Cluj-Napoca (Romania) :**  
Contact : Lorant Szolga
- **University of Limoges (France) :**  
Contact : Denis Barataud/ Alessandro Tonello



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OF BRESCIA



UNIVERSITATEA TEHNICĂ  
DIN CLUJ-NAPOCA



Université  
de Limoges



# General Presentation

## ➤ Context of European re-industrialisation in electronics and optics



Why Europe cares about the exponential success of Photonics

## ➤ Context of **strengthening the Competitiveness** of the Electrical and Electronic Engineering Industry

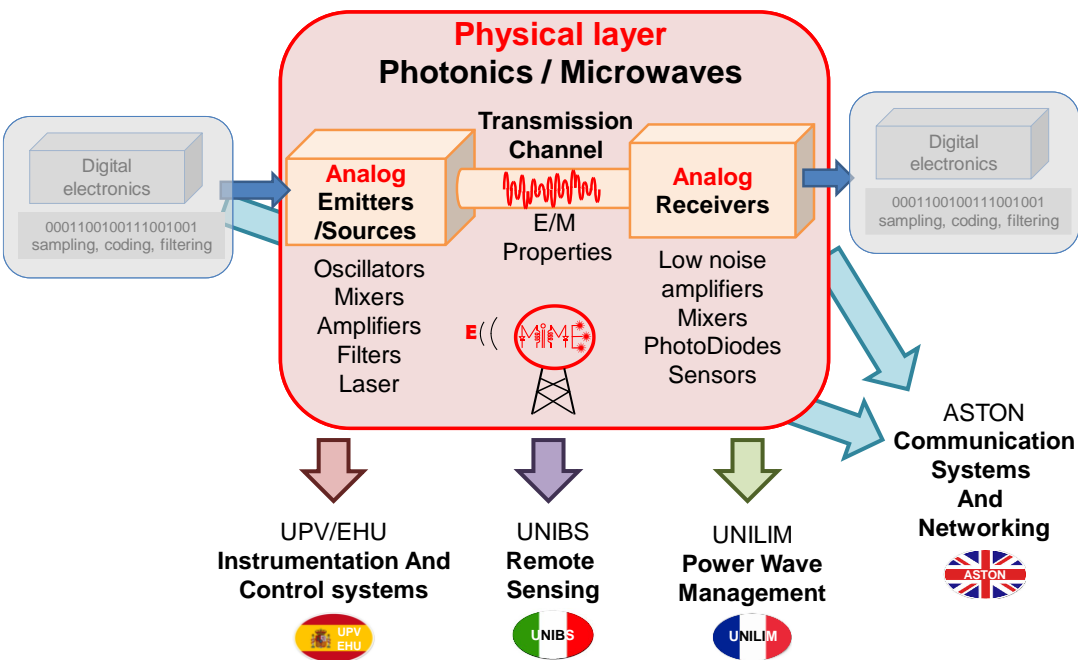
## ➤ To provide **top-quality university education** in the discipline of Microwave electronics and optics disciplines from technology to system applications for future communications in

- Future innovative **Security / Defence** market
- Future innovative **Space** market
- Nowadays and future **Healthcare** and **Bio-medical/life-science** market
- **Facility design and management** market



# General Presentation

- As a graduate of the eMIMEO Master, you will have thorough **scientific knowledge from analogue microwave electronics and photonics**
- By the end of the program, you will acquire :



- Thorough knowledge of the general principles of **microwave electronics and photonics**
- Insight into **latest innovations** in the field of technologies for electronics and optics
- Insight into the latest innovations in the field of control and analog/digital systems
- Proficiency in translating this knowledge into **useful technological applications**
- Extensive analytic and synthetic problem-solving capacities
- Sufficient scientific background to undertake **research**

# Master Year 2

- **Aston University :**
  - Communication Systems and Networking



# Semester 3

- **University of the Basque Country :**
  - Microwave Instrumentation and Control systems



- **University of Brescia :**
  - Remote sensing

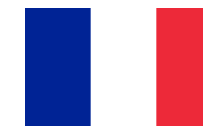


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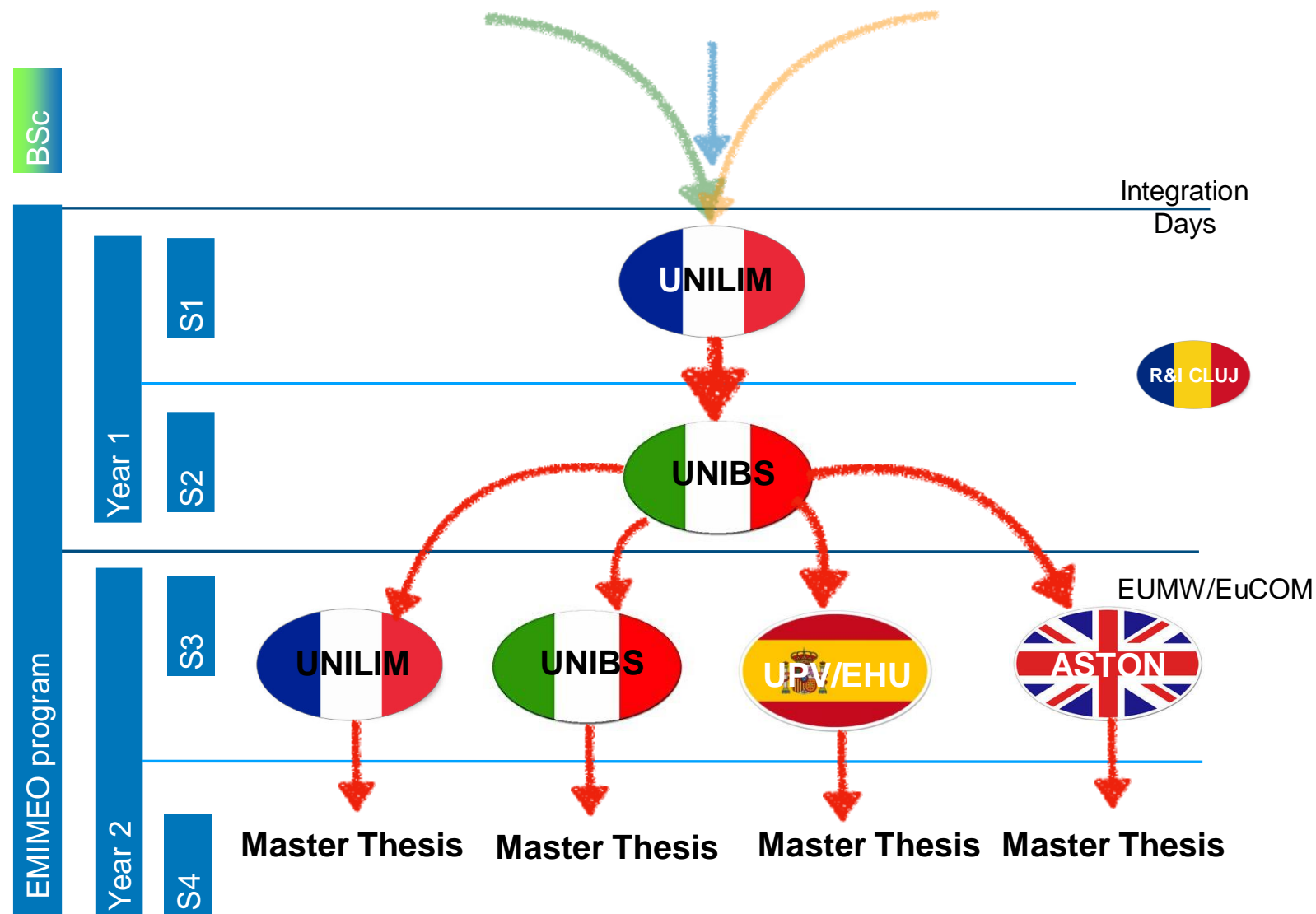


# 4 Paths

- **University of Limoges :**
  - Power Wave Management










# Mobility Scheme





# Programme Content

Year 1	S1	<b>UNILIM+UTCN</b>   <ul style="list-style-type: none"><li>Basics of active and nonlinear electronics</li><li>Foundations of electromagnetic wave propagation</li><li>Fundamentals of coherent photonics</li><li>Optoelectronics, provided by UTCN</li></ul>			
	S2	<b>UNIBS+ UTCN</b>  <ul style="list-style-type: none"><li>Microwave Engineering</li><li>Nanophotonics</li><li>Optical Communication networks</li><li>Antennas</li><li>Wireless system laboratory</li><li>Practical chemistry for nanotechnology</li><li>Optical communication components</li></ul> <p>+ Research and Industrial Week in CLUJ (Organized by UTCN)</p>			
Year 2	S3	<b>UNILIM</b>  <ul style="list-style-type: none"><li>Harmonic and pulsed electromagnetics: applications to antennas and electromagnetic compatibility</li><li>Microwave passive circuits: theory and technologies</li><li>Active microwave circuits</li><li>Optical fibers – Spatial and coherent optics</li></ul>	<b>UNIBS</b>  <ul style="list-style-type: none"><li>Nanotechnology, nanomaterials, quantum information</li><li>Remote sensing</li><li>Electronics for telecommunications</li><li>Tutored projects on nonlinear fibre optics, antennas and nanotechnologies</li></ul>	<b>UPV/EHU</b>  <ul style="list-style-type: none"><li>Experimental Techniques for microwaves</li><li>Electronic noise and EM compatibility</li><li>Instrumentation and control for microwave facilities</li><li>High-power components and systems for microwave facilities</li><li>Software tools for system analysis and design</li><li>Hardware-software advanced digital electronic systems</li><li>Control techniques for complex and distributed systems</li><li>Data analysis: pattern recognition</li><li>Data analysis: statistics</li><li>Introduction to research methodology</li></ul>	<b>ASTON</b>  <ul style="list-style-type: none"><li>Information Theory, Coding and Traffic Theory</li><li>Software Engineering</li><li>Radio Systems and Personal Communication Systems</li><li>Project Management</li><li>Digital Transmission</li><li>Mobile Data Networks</li><li>Telecommunication Networks and Quality of Service</li><li>Optical Communication Systems</li></ul>
	S4	<b>Master Thesis</b>			

# Student division through the 4 paths

## For 23 students

- **Aston University :**
  - 2 open positions



- **University of the Basque Country :**
  - 7 open positions



- **University of Brescia :**
  - 7 open positions



- **University of Limoges :**
  - 7 open positions





### Intake 3. Mobility Track 2021

#### 23 Erasmus Mundus placements

UPV	7
Aston	2
UNIBS	7
UNILIM	7

**Use the moodle platform to make your choice**

**Preferences shall emerge from Student discussions**

### Selection Process

- The student shall only submit **one preference** by **30/01/2022** (Open on January xx<sup>th</sup>).
- The assessors shall give a strong priority to the student's **motivations**.
- The assessors will only accept a limited numbers of placement's requests for each University.
- If the assessors receive more placement's request than available positions, the ranking will be based on the exams' marks (S1).
- 2<sup>nd</sup> choice for the students who were not selected at the first call (from **01/02/2022** to **xx/02/2022**).



Université de Limoges



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Unversidad del País Vasco  
Euskal Herriko Unibertsitatea  
The University of the Basque Country

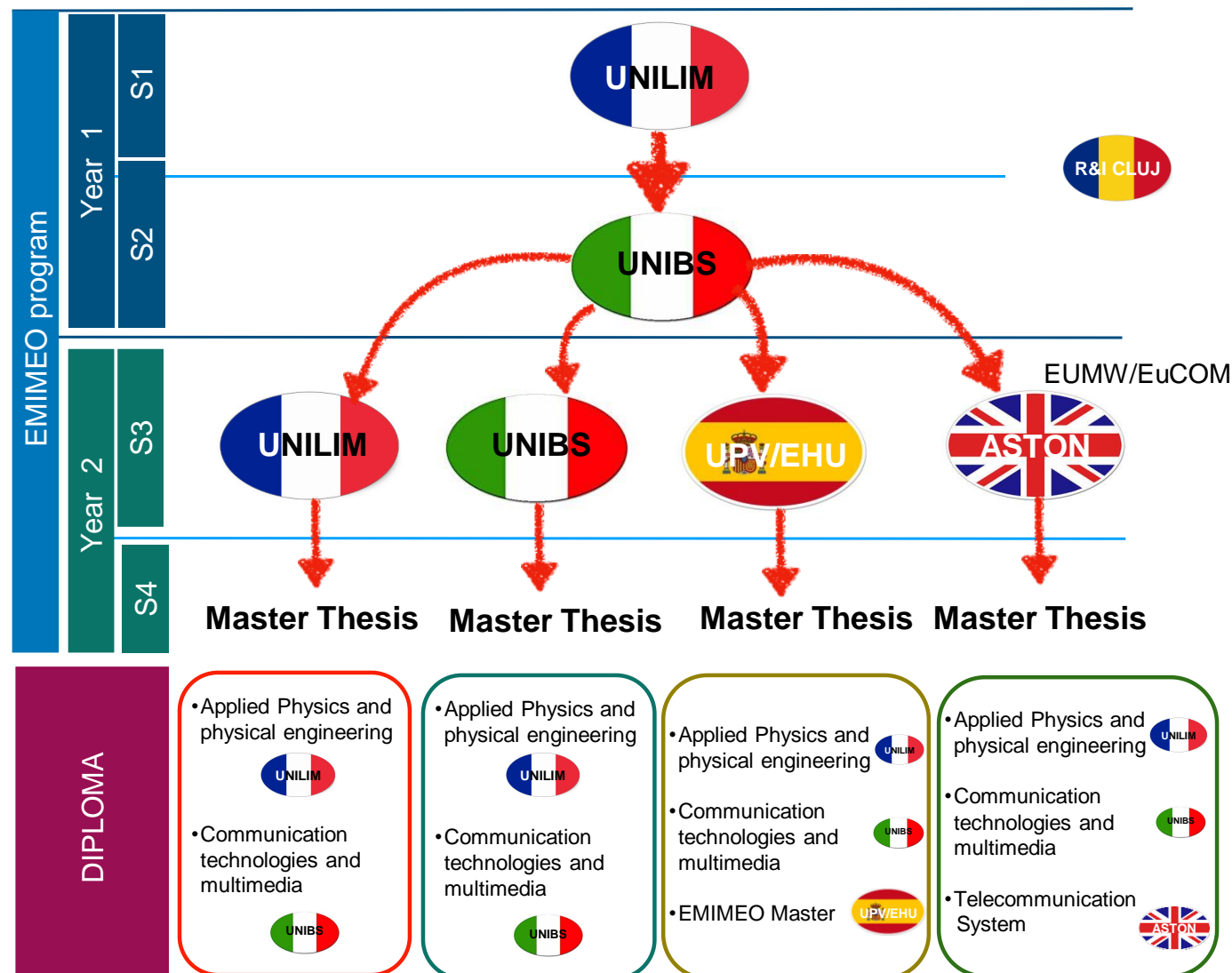


Aston University



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# Diploma



# General Information

➤ University of Brescia (Italy) :



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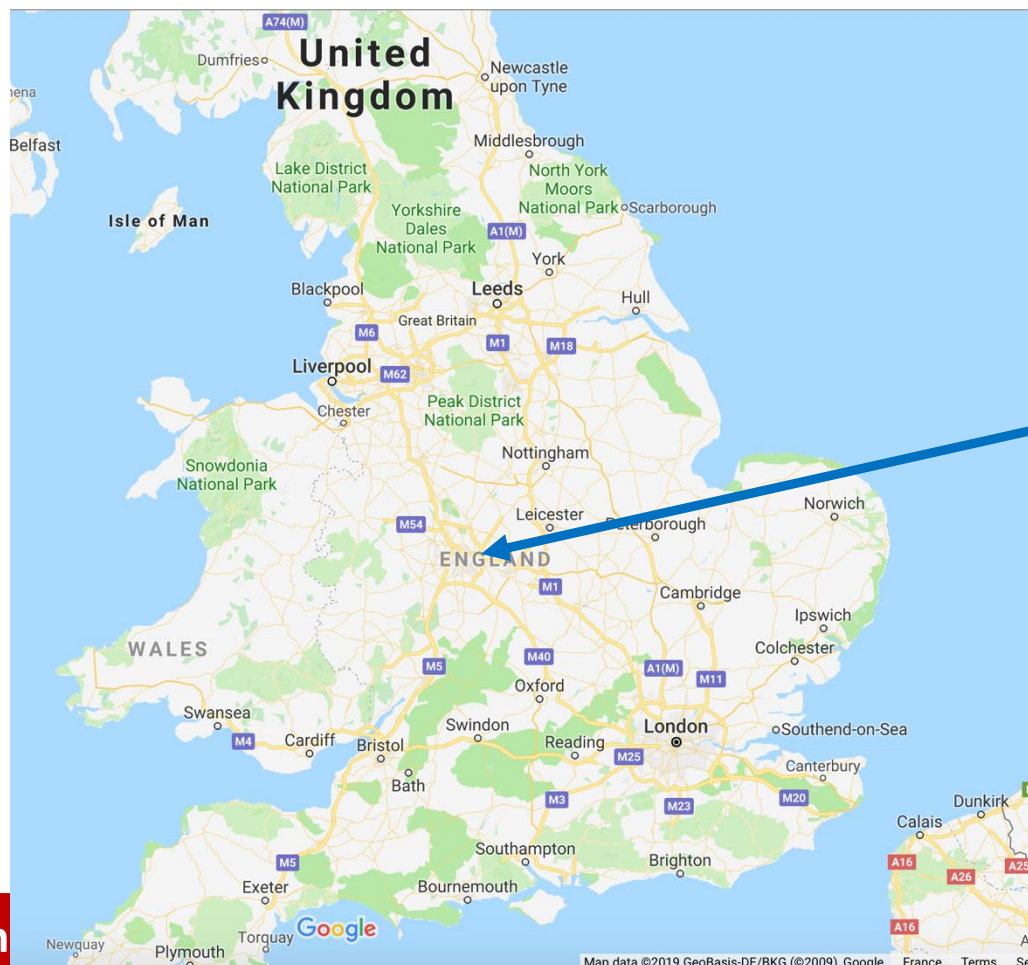


Brescia



# General Information

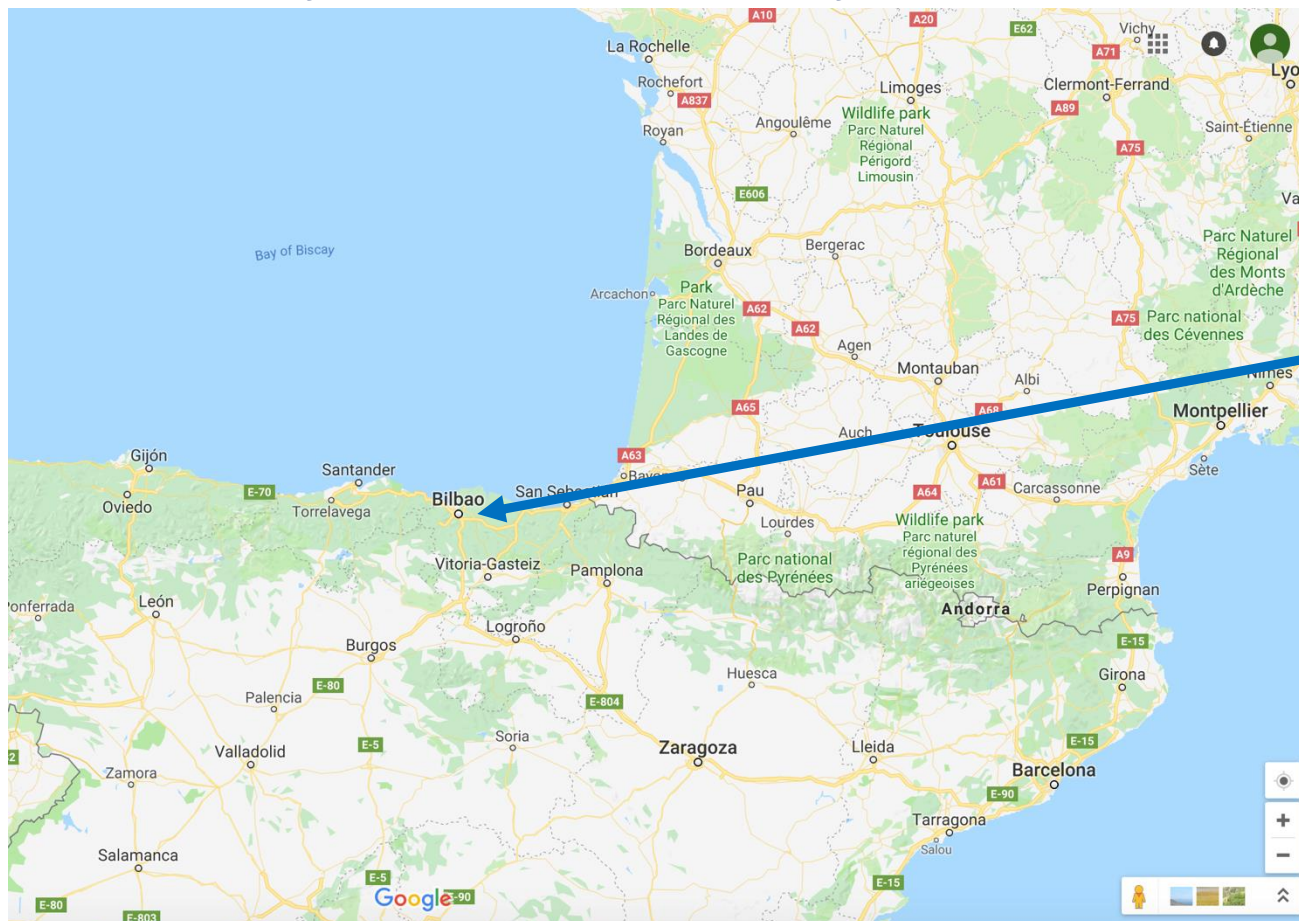
➤ **Aston University (United Kingdom) :**



Birmingham

# General Information

## ➤ University of the Basque Country (Spain) :

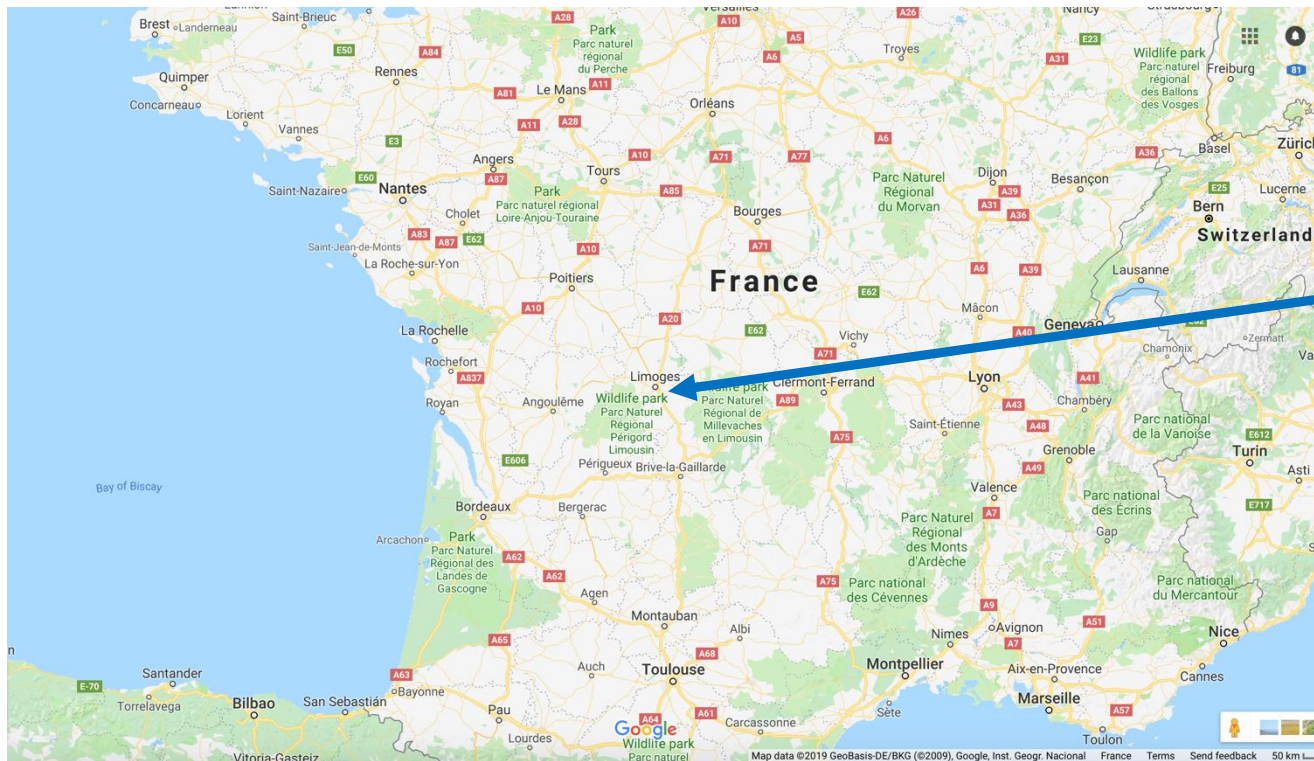
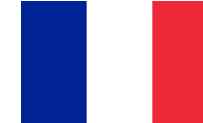


Bilbao



# General information

➤ **University of Limoges (France) :**



Limoges



More than 15,000 students, including 2,000 foreign students



# Campus of The Faculty of Sciences



I Building

# Campus of The Faculty of Sciences





# General Master Calendar

Calendrier universitaire général des formations 2021/2022

SEPTEMBRE			OCTOBRE			NOVEMBRE			DÉCEMBRE			JANVIER			FÉVRIER			MARS			AVRIL			MAI			JUIN			JUILLET			AOÛT		
mer. 1	Rentrée	ven. 1	Cours	lun. 1	Toussaint	mer. 1	Cours ou Révisions	dim. 1	Nouvel An	mar. 1	Cours	mer. 1	Cours	mar. 1	Cours	ven. 1	Cours	dim. 1	Fête Travail	mer. 1	révisions ou cours	ven. 1	Examens	lun. 1	Vacances										
jeu. 2		sam. 2		mar. 2	jeu. 2	dim. 2		Vacances	mer. 2	jeu. 2		mer. 2		jeu. 2		sam. 2		jeu. 2	mer. 2	jeu. 2		sam. 2		mar. 2											
ven. 3		dim. 3		mer. 3	ven. 3	lun. 3		jeu. 3	ven. 3	jeu. 3		ven. 3		jeu. 3		dim. 3		ven. 3	dim. 3	mer. 3															
sam. 4		lun. 4		jeu. 4	sam. 4	mar. 4		ven. 4	mer. 4	jeu. 4		ven. 4		jeu. 4		lun. 4		mer. 4	sam. 4	jeu. 4															
dim. 5	Cours	mar. 5	Cours	ven. 5	Vacances	dim. 5	Révisions ou Examens	mer. 5	Cours ou Examens	jeu. 5	Cours	ven. 5	Cours	jeu. 5	Cours	ven. 5	Cours	jeu. 5	Cours ou examens	dim. 5	Pentecôte	mer. 5	Examens	ven. 5	Vacances										
lun. 6		jeu. 6		mar. 6		lun. 6		mer. 6		jeu. 6		ven. 6		jeu. 6		ven. 6		jeu. 6		ven. 6		lun. 6		mer. 6		sam. 6	ven. 6								
mar. 7		ven. 7		dim. 7		mar. 7		jeu. 7		ven. 7		mer. 7		jeu. 7		ven. 7		jeu. 7		ven. 7		mar. 7		jeu. 7		dim. 7	mar. 7								
mer. 8		sam. 8		lun. 8		mer. 8		dim. 8		jeu. 8		ven. 8		mer. 8		jeu. 8		ven. 8		jeu. 8		dim. 8		mer. 8		ven. 8	lun. 8								
jeu. 9	Cours	dim. 9	Cours	mar. 9	Cours	jeu. 9	Révisions ou Examens	ven. 9	Cours ou Examens	dim. 9	Cours	lun. 9	Cours	jeu. 9	Cours	ven. 9	Cours	jeu. 9	Cours	dim. 9	Victoire 1945	mer. 9	Examens	ven. 9	Vacances										
ven. 10		lun. 10		jeu. 10		ven. 10		mer. 10		jeu. 10		ven. 10		jeu. 10		ven. 10		jeu. 10		ven. 10		lun. 10		mer. 10		sam. 10	ven. 10								
sam. 11		mar. 11		ven. 11		sam. 11		dim. 11		lun. 11		mer. 11		jeu. 11		ven. 11		jeu. 11		ven. 11		mar. 11		jeu. 11		dim. 11	mar. 11								
dim. 12		jeu. 12		mar. 12		dim. 12		mer. 12		jeu. 12		ven. 12		jeu. 12		ven. 12		jeu. 12		ven. 12		dim. 12		mer. 12		ven. 12	lun. 12								
lun. 13	Cours	mer. 13	Cours	ven. 13	Cours	lun. 13	Révisions ou Examens	mer. 13	Cours ou Examens	jeu. 13	Cours	ven. 13	Cours	jeu. 13	Cours	ven. 13	Cours	jeu. 13	Cours	dim. 13	Cours, examens ou révisions	mer. 13	Examens ou révisions ou cours	ven. 13	Vacances										
mar. 14		jeu. 14		mar. 14		jeu. 14		mer. 14		jeu. 14		ven. 14		jeu. 14		ven. 14		jeu. 14		ven. 14		lun. 14		mer. 14		dim. 14	mar. 14								
mer. 15		ven. 15		jeu. 15		ven. 15		dim. 15		lun. 15		mer. 15		jeu. 15		ven. 15		jeu. 15		ven. 15		mar. 15		jeu. 15		ven. 15	lun. 15								
jeu. 16		sam. 16		dim. 16		sam. 16		lun. 16		mer. 16		jeu. 16		ven. 16		jeu. 16		ven. 16		jeu. 16		dim. 16		mer. 16		sam. 16	jeu. 16								
ven. 17	Cours	dim. 17	Cours	mer. 17	Cours	ven. 17	Révisions ou Examens	dim. 17	Cours ou Examens	jeu. 17	Cours	ven. 17	Cours	jeu. 17	Cours	ven. 17	Cours	jeu. 17	Cours	dim. 17	Cours, examens ou révisions	mer. 17	Examens ou révisions ou cours	ven. 17	Vacances										
sam. 18		lun. 18		jeu. 18		sam. 18		mer. 18		jeu. 18		ven. 18		jeu. 18		ven. 18		jeu. 18		ven. 18		lun. 18		mer. 18		sam. 18	jeu. 18								
dim. 19		mar. 19		ven. 19		dim. 19		mer. 19		jeu. 19		ven. 19		jeu. 19		ven. 19		jeu. 19		ven. 19		dim. 19		mer. 19		ven. 19	lun. 19								
lun. 20		jeu. 20		mar. 20		lun. 20		mer. 20		jeu. 20		ven. 20		jeu. 20		ven. 20		jeu. 20		ven. 20		mar. 20		jeu. 20		sam. 20	jeu. 20								
mar. 21	Cours	ven. 21	Cours	dim. 21	Cours	mer. 21	Vacances	jeu. 21	Cours ou Examens	ven. 21	Cours	dim. 21	Cours	jeu. 21	Cours	ven. 21	Cours	jeu. 21	Cours	dim. 21	Cours, examens ou révisions	mer. 21	Examens ou révisions ou cours	ven. 21	Vacances										
mer. 22		sam. 22		lun. 22		mer. 22		jeu. 22		ven. 22		dim. 22		jeu. 22		ven. 22		jeu. 22		ven. 22		mar. 22		jeu. 22		sam. 22	jeu. 22								
jeu. 23		dim. 23		mar. 23		jeu. 23		mer. 23		jeu. 23		ven. 23		jeu. 23		ven. 23		jeu. 23		ven. 23		dim. 23		mer. 23		ven. 23	lun. 23								
ven. 24		lun. 24		jeu. 24		ven. 24		dim. 24		lun. 24		mer. 24		jeu. 24		ven. 24		jeu. 24		ven. 24		mar. 24		jeu. 24		sam. 24	jeu. 24								
sam. 25	Cours	mer. 25	Cours	ven. 25	Cours	sam. 25	Noël	jeu. 25	Cours ou Examens	ven. 25	Cours	dim. 25	Cours	jeu. 25	Cours	ven. 25	Cours	jeu. 25	Cours	dim. 25	Cours, examens ou révisions	mer. 25	Examens ou révisions ou cours	ven. 25	Vacances										
dim. 26		jeu. 26		mar. 26		dim. 26		mer. 26		jeu. 26		ven. 26		jeu. 26		ven. 26		jeu. 26		ven. 26		mar. 26		jeu. 26		sam. 26	jeu. 26								
lun. 27		ven. 27		jeu. 27		ven. 27		dim. 27		lun. 27		mer. 27		jeu. 27		ven. 27		jeu. 27		ven. 27		dim. 27		mer. 27		ven. 27	lun. 27								
mar. 28		sam. 28		dim. 28		mar. 28		jeu. 28		ven. 28		dim. 28		jeu. 28		ven. 28		jeu. 28		ven. 28		mar. 28		jeu. 28		sam. 28	jeu. 28								
mer. 29	Cours	ven. 29	Cours	dim. 29	Cours	mer. 29	Vacances	jeu. 29	Cours ou Examens	ven. 29	Cours	dim. 29	Cours	jeu. 29	Cours	ven. 29	Cours	jeu. 29	Cours	dim. 29	Cours, examens ou révisions	mer. 29	Examens ou révisions ou cours	ven. 29	Vacances										
jeu. 30		sam. 30		lun. 30		jeu. 30		mer. 30		jeu. 30		ven. 30		jeu. 30		ven. 30		jeu. 30		ven. 30		mar. 30		jeu. 30		sam. 30	jeu. 30								

# Semester 1 : Assessment Methods and Weights

Module Description					Methods of Assessment and Weighting												
Sem.	Apogée Code	Module Title	Supervisor	ECTS	Methods of delivery & learning ) Lectures/Tutorials/Practical Works (PW)		Total Learning Hours	Number of slots (1.5H Slots Course and Tutorials)	Number of PW groups	Total Number of slots (1.5H Slots Course and Tutorials)	Face to Face Hours	Single Session with 1 resit				Postpone	
												Exam ( lectures & tutorials)		Duration	Weight		Mark Calculation
1	S7PQ458U	Basics of active and nonlinear electronics	J. M. Nebus	9	Lectures	36	90	24	1	24	36	Written Exam 1 (WE1) and Resit 1 (WR1) if ("Average Mark of S1"<10 and WE1<10)		2H00	0.75	0.75*(Highest(WE1,WR1)) + 0.25*(Highest(PW1,PW2))	PW1 if ≥ 10
					Tutorials	30		20	1	20	30	PW (PW1) and Resit 1 (PW2) if ("Average Mark of S1"<10 and PW1<10)		1H45	0.25		
					Practical Works	24		6	2	12	48						
1	S7PQ468U	Foundations of electromagnetic wave propagation	O. Tantot	9	Lectures	36	90	24	1	24	36	Written Exam 1 (WE1) and Resit 1 (WR1) if ("Average Mark of S1"<10 and WE1<10)		2H00	0.75	0.75*(Highest(WE1,WR1)) + 0.25*(Highest(PW1,PW2))	PW1 if ≥ 10
					Tutorials	30		30	1	30	30	PW (PW1) and Resit 1 (PW2) if ("Average Mark of S1"<10 and PW1<10)		1H45	0.25		
					Practical Works	24		24	2	48	48						
1	S7PQ478U	Fundamentals of coherent photonics	P. Di Bin	9	Lectures	36	90	24	1	24	36	Written Exam 1 (WE1) and Resit 1 (WR1) if ("Average Mark of S1"<10 and WE1<10)		2H00	0.75	0.75*(Highest(WE1,WR1)) + 0.25*(Highest(PW1,PW2))	PW1 if ≥ 10
					Tutorials	30		30	1	30	30	PW (PW1) and Resit 1 (PW2) if ("Average Mark of S1"<10 and PW1<10)		1H45	0.25		
					Practical Works	24		6	2	12	48						
1	S7PQ488U	Optoelectronics	L.Szolga	3	Lectures	18	30	12	1	12	18	Written Exam 1 (WE1) and Resit 1 (WR1)		2H00	1	(Highest(WE1,WR1))	
					Tutorials	0		1	0	0							
					Practical Works	12		1	12	12							

- The **EMIMEO Exam Rules** are the rules applied in the university where the semester is realized :
  - In Limoges, the exam rules are the Limoges university Rules
  - In Brescia, the exam rules are the Brescia University Rules
- **Specific French lectures** (mandatory on Thursday afternoon) – no marks, no credits : useful for everyday life : certification.

# Events during the 1<sup>st</sup> Semester

- **xx<sup>th</sup> September : International Welcome Day (JAI) for new international students**
- **xx<sup>rd</sup> October :Annual Integration Day**  
The oldest know it as the Sports Festival. This year, you will have to count on "Pull yourself a log"!
- **XLIM PhD Workshop in November**



# 1<sup>st</sup> Week Agenda

## M1 EMIMEO Intake 2 - Semester 1 - Week 1

	8:00	9:30	9:45	11:15	11:30	13:00	14:00	15:30	15:45	17:15	17:30	19:00
<b>MONDAY</b> 06/09/2021								WELCOME STUDIO Cours				
<b>TUESDAY</b> 07/09/2021	Photonics Teaching Module STUDIO Cours 09:00 - 09:30	Photonics DP1 STUDIO Cours					EM Theory SV1 STUDIO Cours	Photonics FR1 STUDIO Cours				
<b>WEDNESDAY</b> 08/09/2021		Photonics DP2 STUDIO Cours					Photonics FR2 STUDIO Cours					
<b>THURSDAY</b> 09/09/2021												
<b>FRIDAY</b> 10/09/2021		Photonics DP3 STUDIO Cours					EM Theory SV2 STUDIO Cours	Photonics FR3 STUDIO Cours				



# Exam Week January 2020 (Example)

**M1 EMIMEO - Semester 1 - Week 16**

	8h00	9h30	9h45	11h15	11h30	13h	14h00	15h30	15h45	17h15	17h30	19h00
<b>MONDAY</b> 13/01/2020	<b>Exam Correction</b>											
<b>TUESDAY</b> 14/01/2020	<b>Exam Correction</b>											
<b>WEDNESDAY</b> 15/01/2020	<b>Preparation of Jury</b>											
<b>THURSDAY</b> 16/01/2020	<b>Jury</b>											
<b>FRIDAY</b> 17/01/2020	<b>List of students for session 2</b>											

**M1 EMIMEO - Semester 1 - Week 17**

	8h00	9h30	9h45	11h15	11h30	13h	14h00	15h30	15h45	17h15	17h30	19h00
<b>MONDAY</b> 20/01/2020	<b>Revision</b>											
<b>TUESDAY</b> 21/01/2020	<b>Revision</b>											
<b>WEDNESDAY</b> 22/01/2020	<b>Revision</b>											
<b>THURSDAY</b> 23/01/2020	<b>Revision</b>											
<b>FRIDAY</b> 24/01/2020	<b>Revision</b>											

# After the EMIMEO Master

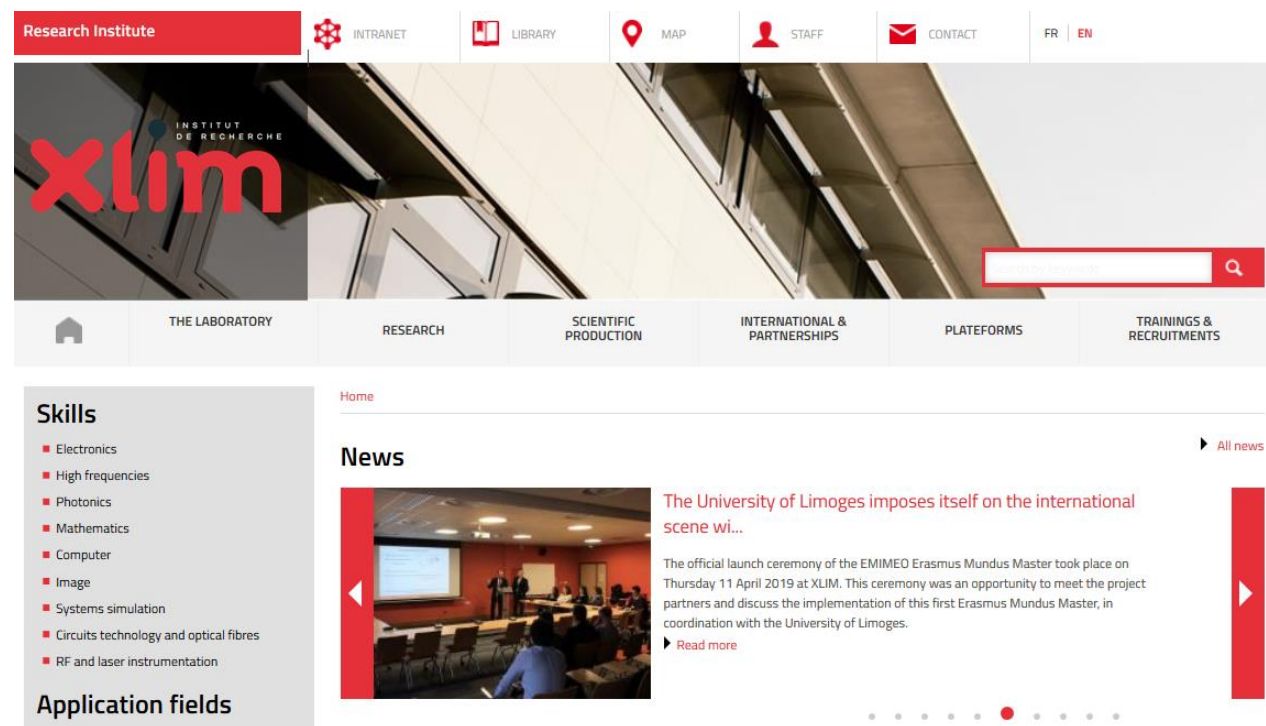
## □ Integration of the Job Market as Engineer

## □ Starting a PhD Thesis in :

- ✓ Industrial Labs :
- ✓ Academic Labs : in Limoges

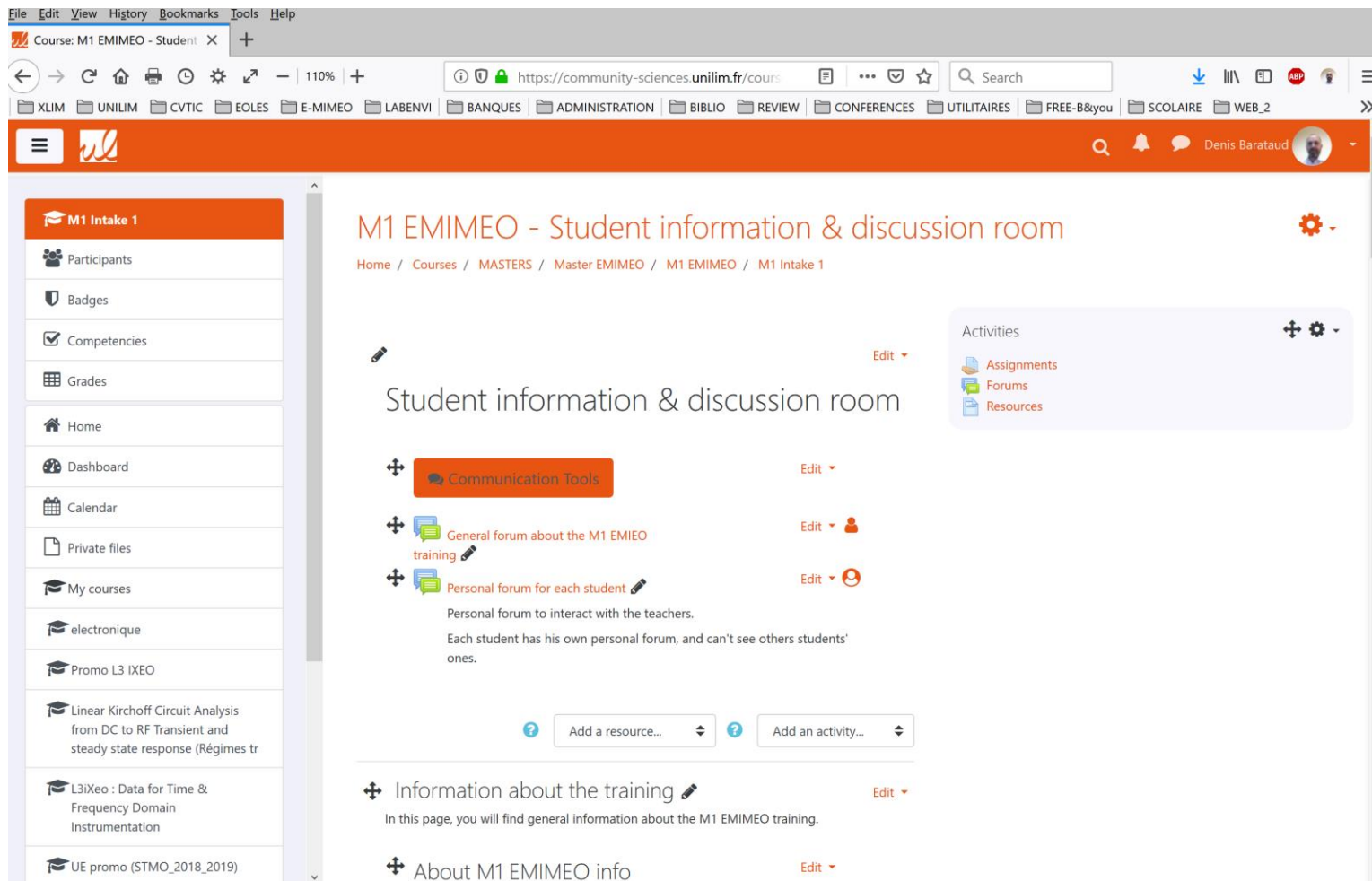
### XLIM figures

- 440** people
- 3** scientific poles
- 6** research focus
- 1** virtual laboratory
- 1** industrial Chair
- 1** laboratory of excellence



## ➤ XLIM Visit on Thursday Morning

# Community Science : Moodle Platform



The screenshot displays the Moodle LMS interface for the 'M1 EMIMEO - Student information & discussion room'. The browser address bar shows the URL <https://community-sciences.unilim.fr/cours>. The top navigation bar includes a search bar and a user profile for 'Denis Barataud'. The left sidebar contains a menu with options like 'M1 Intake 1', 'Participants', 'Badges', 'Competencies', 'Grades', 'Home', 'Dashboard', 'Calendar', 'Private files', 'My courses', 'electronique', 'Promo L3 IXEO', 'Linear Kirchoff Circuit Analysis from DC to RF Transient and steady state response (Régimes tr', 'L3iXeo : Data for Time & Frequency Domain Instrumentation', and 'UE promo (STMO\_2018\_2019)'. The main content area is titled 'M1 EMIMEO - Student information & discussion room' and includes a breadcrumb trail: 'Home / Courses / MASTERS / Master EMIMEO / M1 EMIMEO / M1 Intake 1'. Below the title, there is a section for 'Student information & discussion room' with an 'Edit' button. To the right, an 'Activities' block lists 'Assignments', 'Forums', and 'Resources'. The main content area features a 'Communication Tools' block with a 'General forum about the M1 EMIMEO training' and a 'Personal forum for each student'. Below this, there are buttons for 'Add a resource...' and 'Add an activity...'. At the bottom, there are sections for 'Information about the training' and 'About M1 EMIMEO info', both with 'Edit' buttons.