

Welcome to esipap...

esi...
European Scientific Institute



Course 1

18 January - 12 February 2021

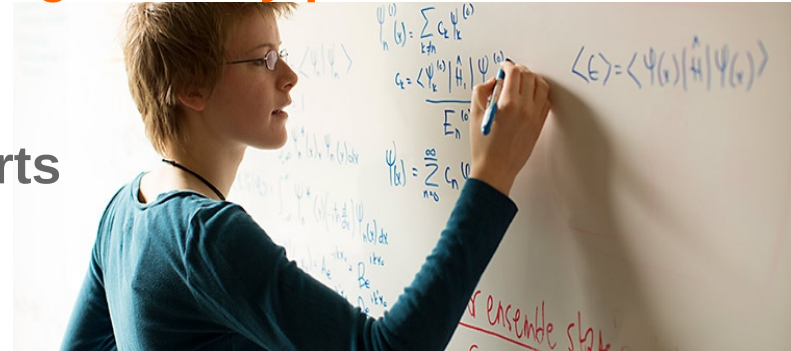
Since 2014



Training / Teaching

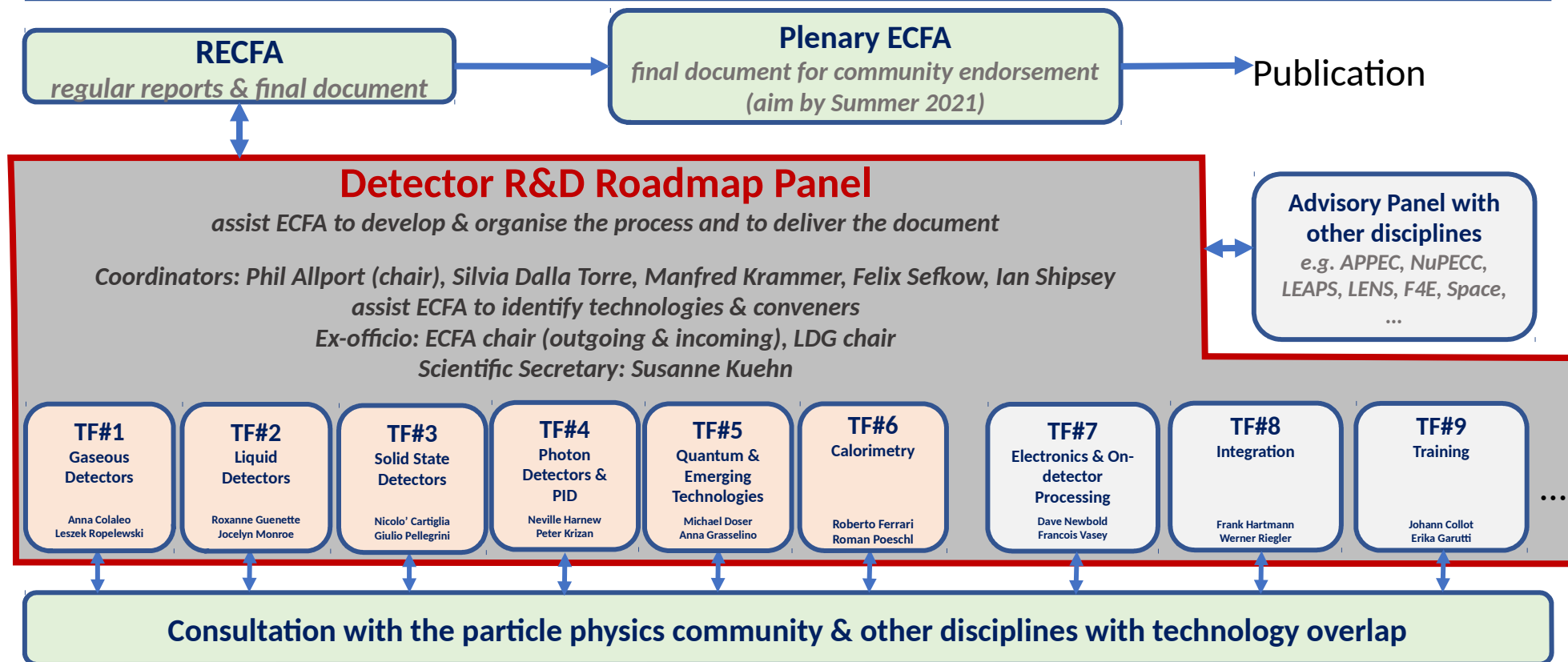
While theoretical physics might be taught in any place worldwide

**Training/teaching in instrumentation
requires resources and leading experts
that are more easily found next to
world experimental facilities.**





Organization to structure the consultation with the community



ESIPAP since 2014

One of the reference schools in HEP instrumentation, next to CERN.

Training of the next generation of young physicists who will carry out HL-LHC upgrades, major experimental projects in neutrino physics, astroparticle physics, cosmology and later on new collider projects.

Very broad & intensive, with real exams : possibility of ECTS

2 courses of 4 weeks each, that can be followed entirely or selectively by weeks

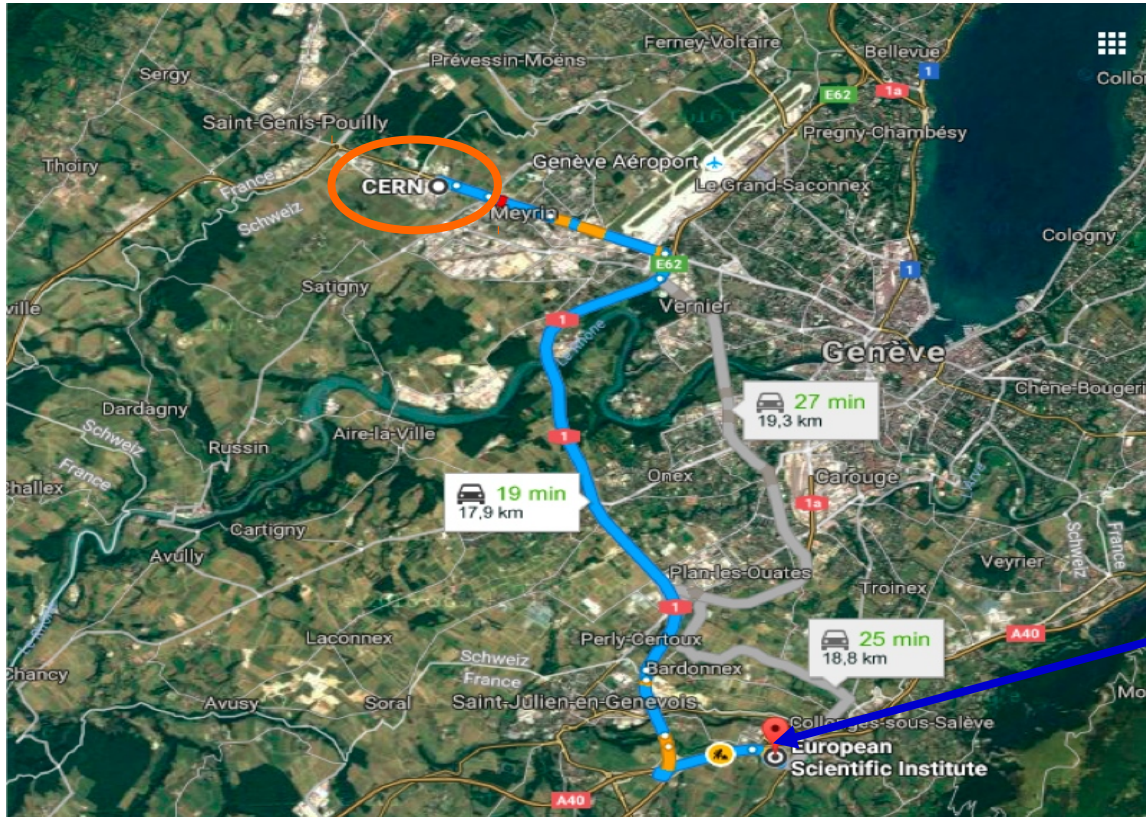
Selective and diverse international admission : 16 students for each course

Open to Master, PhD students and junior professionals

Reduced fees for students - Cost mostly supported by partners

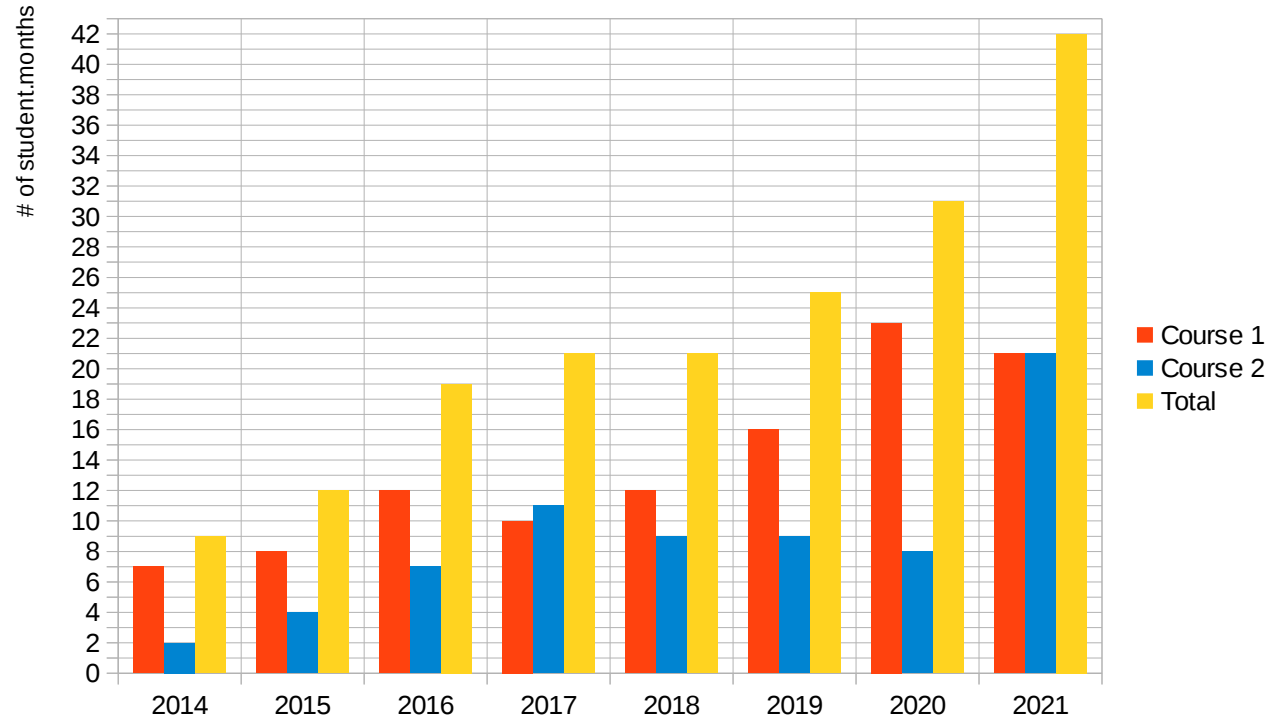
Intense learning - Many practical sessions - Melting pot & cultural experience

School location (when run on site !)

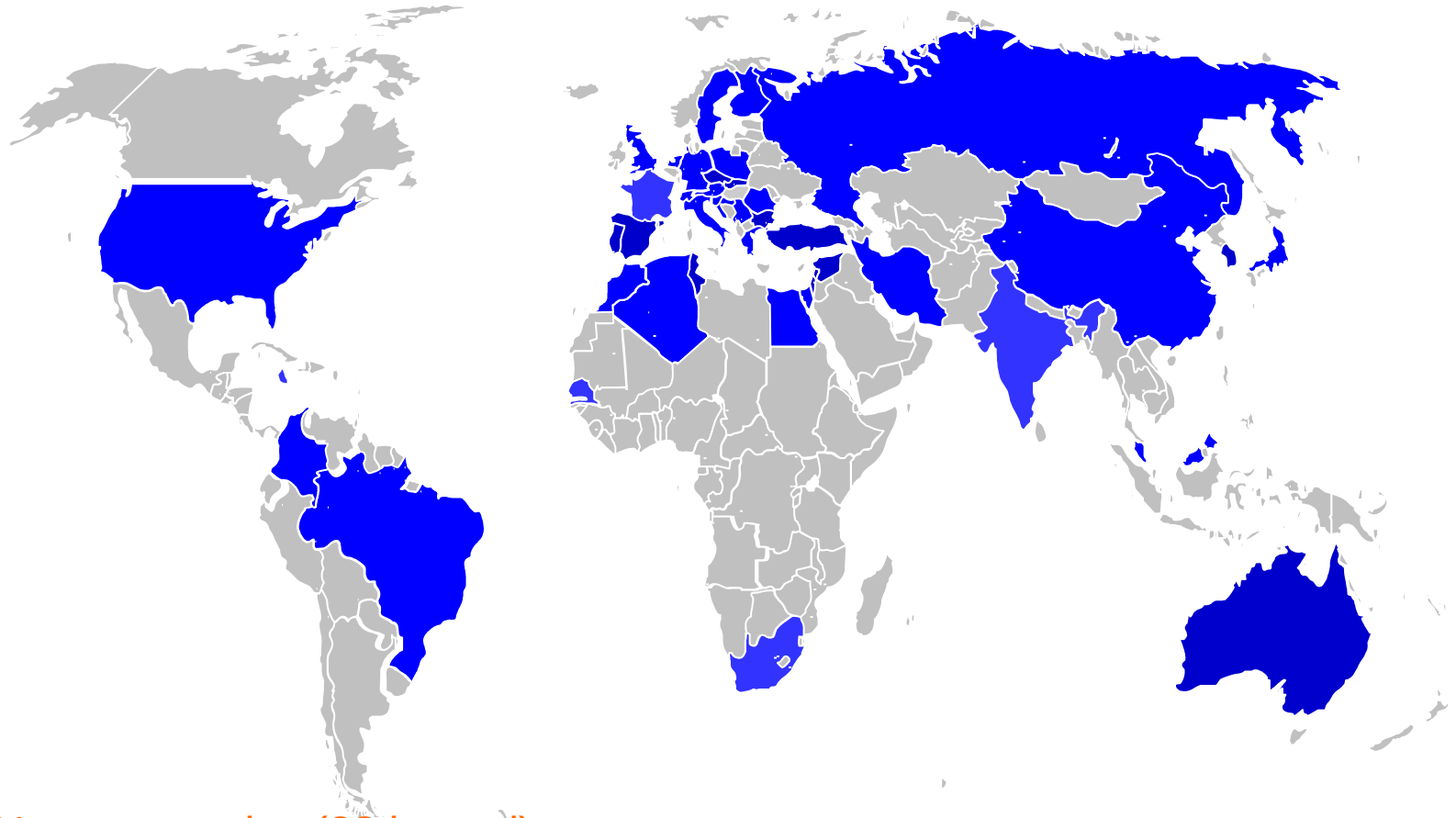


Archamps Technopole

Student attendance




Student Origin



Home countries (38 in total)
of ESIPAP alumni (110 till now)

Course 1 : program

 TIMETABLE 2021 - WEEK 1				
<u>Monday</u> Jan 18	<u>Tuesday</u> Jan 19	<u>Wednesday</u> Jan 20	<u>Thursday</u> Jan 21	<u>Friday</u> Jan 22
	Experimental Partical Physics Lecture 1 Marco Delmastro	Experimental Particle Physics Lecture 3 Marco Delmastro	Experimental Particle Physics Lecture 4 Marco Delmastro	Experimental Particle Physics Lecture 5 Marco Delmastro
	BREAK	BREAK	BREAK	BREAK
	Experimental Particle Physics Lecture 2 Marco Delmastro	Experimental Particle Physics Tutorial 1 Marco Delmastro	Experimental Particle Physics Tutorial 2 Marco Delmastro	Experimental Particle Physics Tutorial 3 Marco Delmastro
BREAK	BREAK	BREAK	BREAK	BREAK
14:00 Presentation of ESIPAP & Presentation of students	Experimental Cosmology Lecture 1 Juan Macias-Perez	Experimental Cosmology Lecture 3 Juan Macias-Perez	Experimental Astroparticle Physics Lecture 1 François Montanet	Experimental Astroparticle Physics Lecture 3 François Montanet
	BREAK	BREAK	BREAK	BREAK
	Experimental Cosmology Lecture 2 Juan Macias-Perez	Experimental Cosmology Lecture 4 Juan Macias-Perez	Experimental Astroparticle Physics Lecture 2 François Montanet	Experimental Astroparticle Physics Lecture 3 François Montanet

Course 1 : program

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TIMETABLE 2021 - WEEK 2

Monday Jan 25	Tuesday Jan 26	Wednesday Jan 26	Thursday Jan 27	Friday Jan 28
Experimental Particle Physics Tutorial 4 Marco Delmastro	Radioprotection Lecture 1 Helmut Vincke	Tracking Lecture 1 Jérôme Baudot	Tracking Lecture 3 Jérôme Baudot	Characterization of silicon pixel sensors for HEP Lab 1 Jens Kröger
BREAK	BREAK	BREAK	BREAK	
Experimental Particle Physics Tutorial 5 Marco Delmastro	Radioprotection Lecture 2 Helmut Vincke	Tracking Lecture 2 Jérôme Baudot	Tracking Tutorial Jérôme Baudot	Characterization of silicon pixel sensors for HEP Lab 1 Jens Kröger
BREAK	BREAK	BREAK	BREAK	BREAK
Interaction of Particles with Matter Lecture 1 Lucia Di Ciaccio	Interaction of Particles with Matter Lecture 2 Lucia Di Ciaccio	Machine Learning Lecture 1 Yann Coadou	Machine Learning Lecture 3 Yann Coadou	Solid State Detectors Lab 2 Anja Himmerlich
BREAK	BREAK	BREAK	BREAK	BREAK
Interaction of Particles with Matter Tutorial 1 Lucia Di Ciaccio	Interaction of Particles with Matter Tutorial 2 Lucia Di Ciaccio	Machine Learning Lecture 2 Yann Coadou	Machine Learning Lecture 4 Yann Coadou	Solid State Detectors Lab 2 Anja Himmerlich
		EXAMINATION Experimental Particle Physics Marco Delmastro		

Course 1 : program

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TIMETABLE 2021 - WEEK 3

Monday Feb 1	Tuesday Feb 2	Wednesday Feb 3	Thursday Feb 4	Friday Feb 5
Calorimetry Lecture 1 Jean-Baptiste Sauvan & Christophe Ochando	Calorimetry Lecture 3 Jean-Baptiste Sauvan & Christophe Ochando	Muon Detection Lecture 3 Laurent Chevalier	Imaging and Cherenkov Detectors Lecture 3 François Montanet	Resistive Plate Chambers Lab 3 Roberto Guida Beatrice Mandelli
BREAK	BREAK	BREAK	BREAK	BREAK
Calorimetry Lecture 2 Jean-Baptiste Sauvan & Christophe Ochando	Calorimetry Lecture 4 Jean-Baptiste Sauvan & Christophe Ochando	Muon Detection Tutorial Laurent Chevalier	Particle Identification Lecture 1 Guillaume Unal	Resistive Plate Chambers Lab 3 Roberto Guida Beatrice Mandelli
BREAK	BREAK	BREAK	BREAK	BREAK
TMVA Lab Karolos Potamianos	Muon Detection Lecture 1 Laurent Chevalier	Imaging and Cherenkov Detectors Lecture 1 François Montanet	Particle Identification Lecture 1 Guillaume Unal	Microscopic modeling of gaseous detectors Lab 4 Eraldo Oliveri Florian Brunbauer
BREAK	BREAK	BREAK	BREAK	BREAK
TMVA Lab Karolos Potamianos	Muon Detection Lecture 2 Laurent Chevalier	Imaging and Cherenkov Detectors Lecture 2 François Montanet	EXAMINATION Interaction of Particles with Matter Lucia Di Ciaccio	Microscopic modeling of gaseous detectors Lab 4 Eraldo Oliveri Florian Brunbauer

Course 1 : program

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TIMETABLE 2021 - WEEK 4

Monday Feb 8	Tuesday Feb 9	Wednesday Feb 10	Thursday Feb 11	Friday Feb 12
Detector Simulation Alberto Ribon	Detector Simulation Alberto Ribon	Computing sessions Eric Chabert & Eric Conte	Computing sessions Eric Chabert & Eric Conte	9:00 - 10:30 EXAMINATION Calorimetry Jean-Baptiste Sauvan
BREAK	BREAK	BREAK	BREAK	BREAK
Detector Simulation Alberto Ribon	Detector Simulation Alberto Ribon	Computing sessions Eric Chabert & Eric Conte	Computing sessions Eric Chabert & Eric Conte	11:00 - 12:30 EXAMINATION Tracking Jérôme Baudot
BREAK	BREAK	BREAK	BREAK	BREAK
C++ Programming Eric Chabert & Eric Conte	C++ Programming Eric Chabert & Eric Conte	Computing sessions Eric Chabert & Eric Conte	Computing sessions Eric Chabert & Eric Conte	14:00 - 15:30 EXAMINATION Muon Laurent Chevalier
BREAK	BREAK	BREAK	BREAK	BREAK
C++ Programming Eric Chabert & Eric Conte	C++ Programming Eric Chabert & Eric Conte	Computing sessions Eric Chabert & Eric Conte	Computing sessions Eric Chabert & Eric Conte	16:00 - 17:30 EXAMINATION Multi field

Soon there will be a short live session to present how the instrumentation labs will be run.

Information in general will be posted on Slack.

Exams are not mandatory for all, but they are a strong incentive to make progress in acquiring knowledge, and for social group building.

Tutorials will prepare you to the exams

- **All lecturers have made their best to deliver the state-of-the-art view of their field - As a reward, they simply expect you to attend their courses.**
- **lecture slides will be available the day before through indico.**
- **Take advantage to meet some of the best specialists in their field to ask questions during lectures and/or during breaks**
- **We are a family-style school ! If you have suggestions to improve please tell us. We always managed to react and most of the times to respond positively.**
- **Evaluation of lectures by students is mandatory to receive attendance certificate.**

French evaluation mark scale

- **Linear mark scale, proportional to accomplishment & knowledge acquisition**
- **minimum 0 maximum 20**
- **< 10 fail (FX ECTS grade)**
- **≥ 10 pass (E grade)**
- **12 qualified (C grade)**
- **14 good (B grade)**
- **16 very good (A grade)**
- **18 excellent**
- **20 maximum**

The ESIPAP team at your service



**Johann
COLLOT**

UGA / LPSC

Director of



Director



**Bob
HOLLAND**

ESI

Director



Management



**Lise
RIBET**

ESI

Schools,
Community &



Coordinator



**Stéphanie
VANDERGooten**

ESI

Schools &
Community manager



Coordinator

Another school (41 attendees)
(11 January - 11 February)

Thank you for your attention

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Any questions?



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