

Welcome

Specifics of the Robotics Master

Microengineering Section

Academic Year 2026–2027

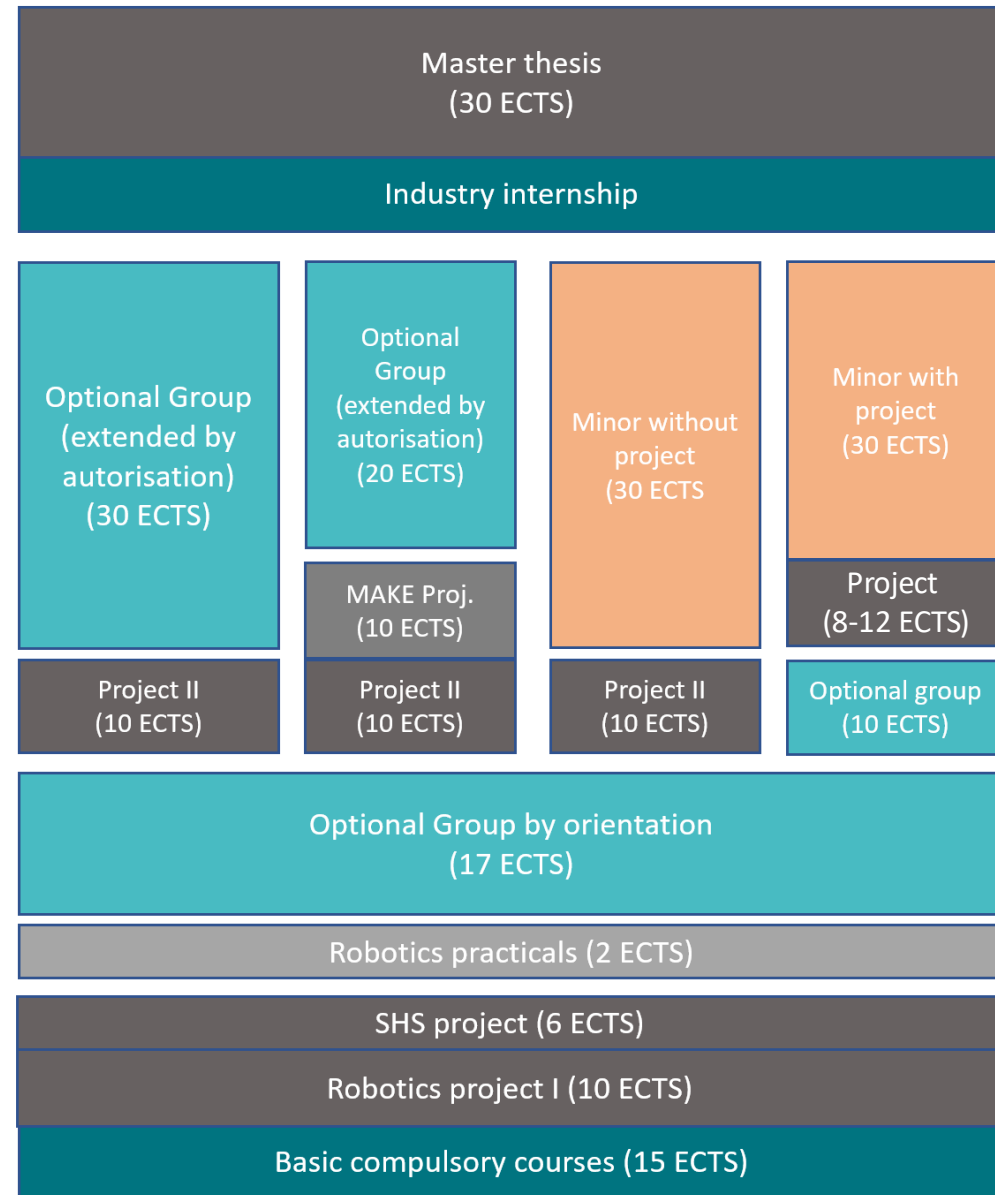


Master Program Structure

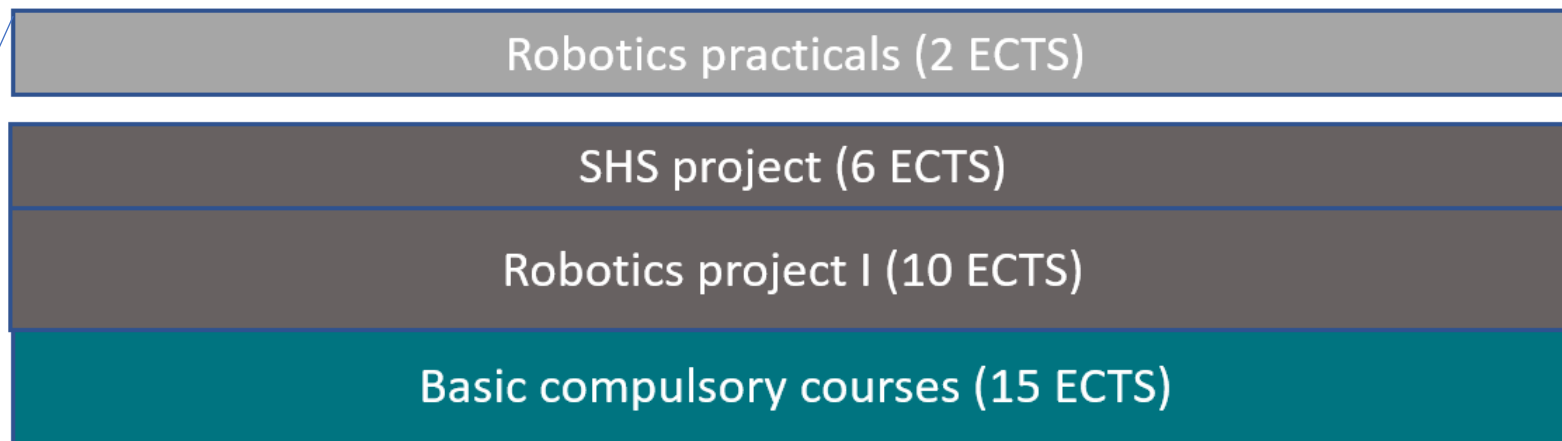
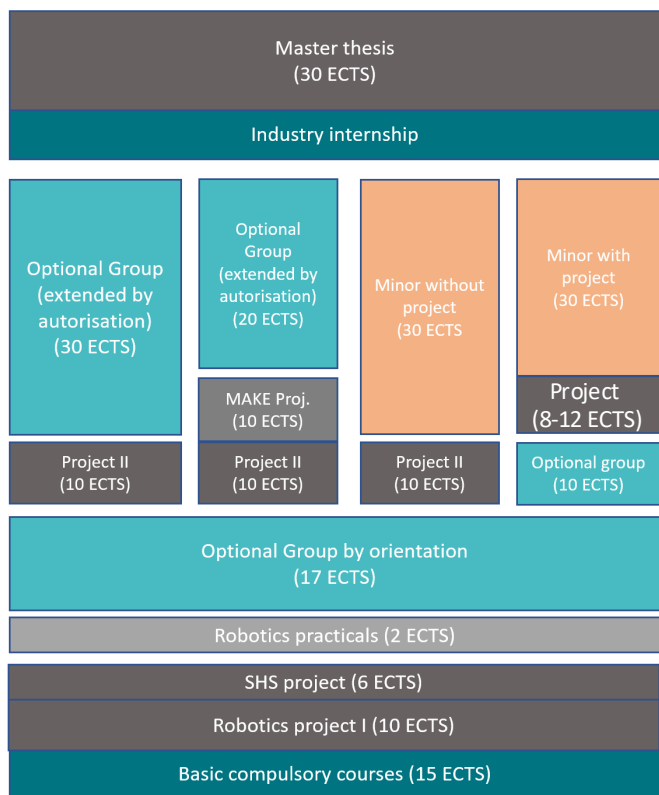
Group 3

Bloc 2

Bloc 1



Structure



Compulsory courses

Foundation

- Basics of Mobile Robotics
(4 ECTS, Prof. Mondada, Fall)
- Basics of robotics for manipulation
(3 ECTS, Prof. Bouri, Fall)

Algorithms and Methods for Robotics

- Applied machine learning
(4 ECTS, Prof. Billard, Fall)
- Model Predictive Control
(4 ECTS, Prof. Jones, Fall)

Practicals

- Robotics Practicals
(2 ECTS, Prof. Mondada et al, Spring)

Orientations

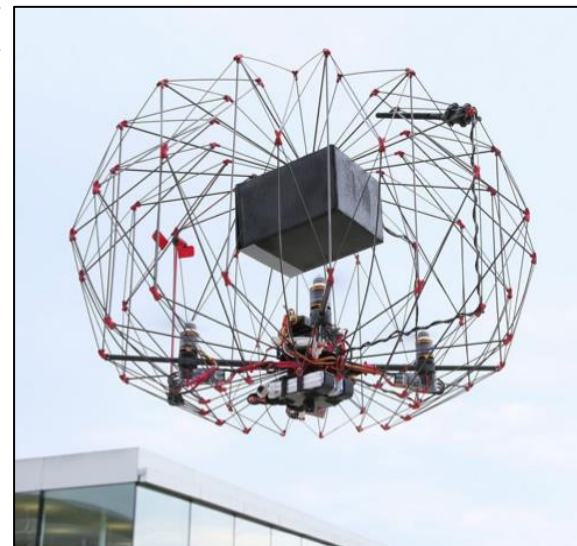
17 optional credits chosen among the optional courses of the chosen orientation, then free choice in robotics options.



Industrial Robotics



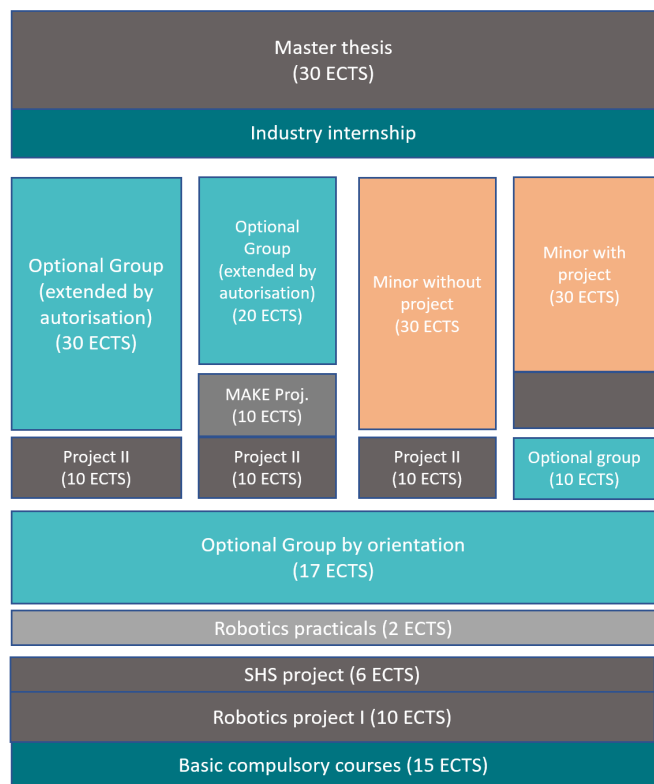
Medical Robotics



Mobile robotics

Orientations

Students must choose 17 ECTS of optional courses in one of these three orientations:

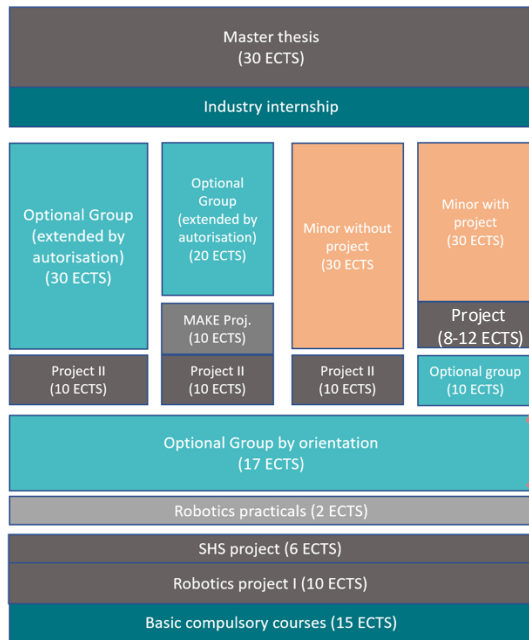


A Industrial robotics
B Medical robotics
C Mobile Robotics

Groupe à options
Grand choix de cours
(17 ECTS)

Optional courses and orientation	A	B	C	59
Advanced control systems	A	B	C	3
Advanced machine learning	A	B	C	4
Advanced MEMS & microsystems			C	3
Advanced satellite positioning			C	4
Analyse de produits et systèmes	A			2
Analysis and modeling of locomotion		B	C	4
Biomaterials		B		4
Commande embarquée de moteurs	A			2
Computational motor control		B	C	4
Computer vision	A	B	C	4
Conception mécanique intégrée	A			3
Continuous improvement of manufacturing systems	A			4
Controlling behavior in animal and robots		B	C	4
Deep learning	A	B	C	4
Distributed intelligent systems			C	5
Embedded systems	A	B	C	4
Evolutionary robotics			C	3
Flexible bioelectronics		B		4
Flying robots			C	4
Fundamentals of computer aided manufacturing	A			5
Fundamentals of neuroengineering			C	4
Haptic human robot interfaces	A			3
How technology shapes the workplace of the future	A	B	C	3
Image analysis and pattern recognition		B	C	4
Image processing I		B		3
Image processing II		B		3
Industrial automation	A			3
Industry dynamics, models & trends	A			4
Intelligent agents	A		C	6
Interdisciplinary project				10
Organic and printed electronics		B	C	2
Production management	A			5
Real-time embedded systems	A	B	C	4
Robotique industrielle et appliquée	A			2
Sensorimotor neuroprosthetics		B		4
Sensor orientation			C	4
Sensors in medical instrumentation		B		3
Signal processing for functional brain imaging		B		3
System identification	A	B	C	3
Systèmes mécatroniques	A	B	C	5

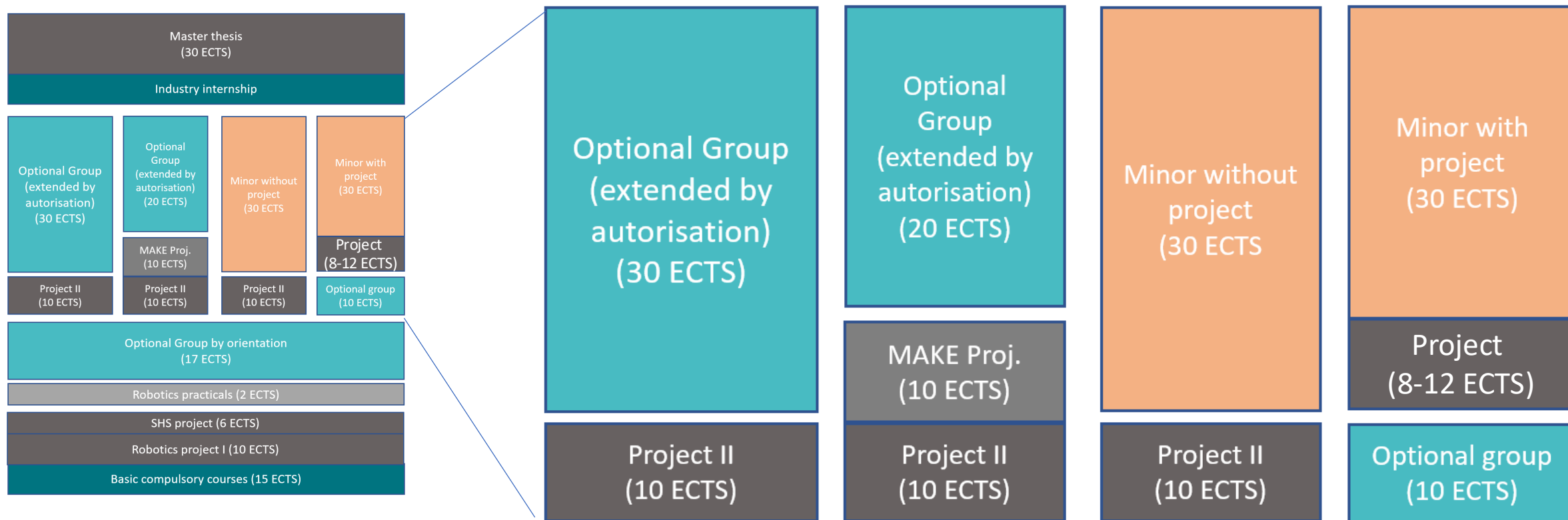
Orientation courses examples



Code	Course name	Credits	Orientation
MICRO-451	Applied and industrial robotics	3	A
MICRO-510	Commande embarquée de moteurs	3	A
CIVIL-426	Machine learning for predictive maintenance applications	6	A
ME-524	Advanced control systems	3	A, B, C
ME-421	System identification	3	A, B, C
BIOENG-421	Basics in bioinstrumentation	4	B
EE-511	Sensors in medical instrumentation	3	B
NX-422	Neural interfaces	6	B
ME-484	Numerical methods in biomechanics	3	B
ME-436	Micro/Nano robotics	3	A, B, C
MICRO-502	Aerial robotics	5	C
MICRO-507	Legged robots	4	C
MICRO-462	Learning and adaptive control for robots	4	C
CIVIL-459	Deep learning for autonomous vehicles	6	C
ENV-548	Sensor orientation	4	C

And many more

Free options



Alumni Careers

Careers after EPFL's MA Program in Robotics



HARVARD
UNIVERSITY



ETH zürich

Imperial College
London



TESLA

CREDIT SUISSE



BLUE ORIGIN



logitech

ANYbotics

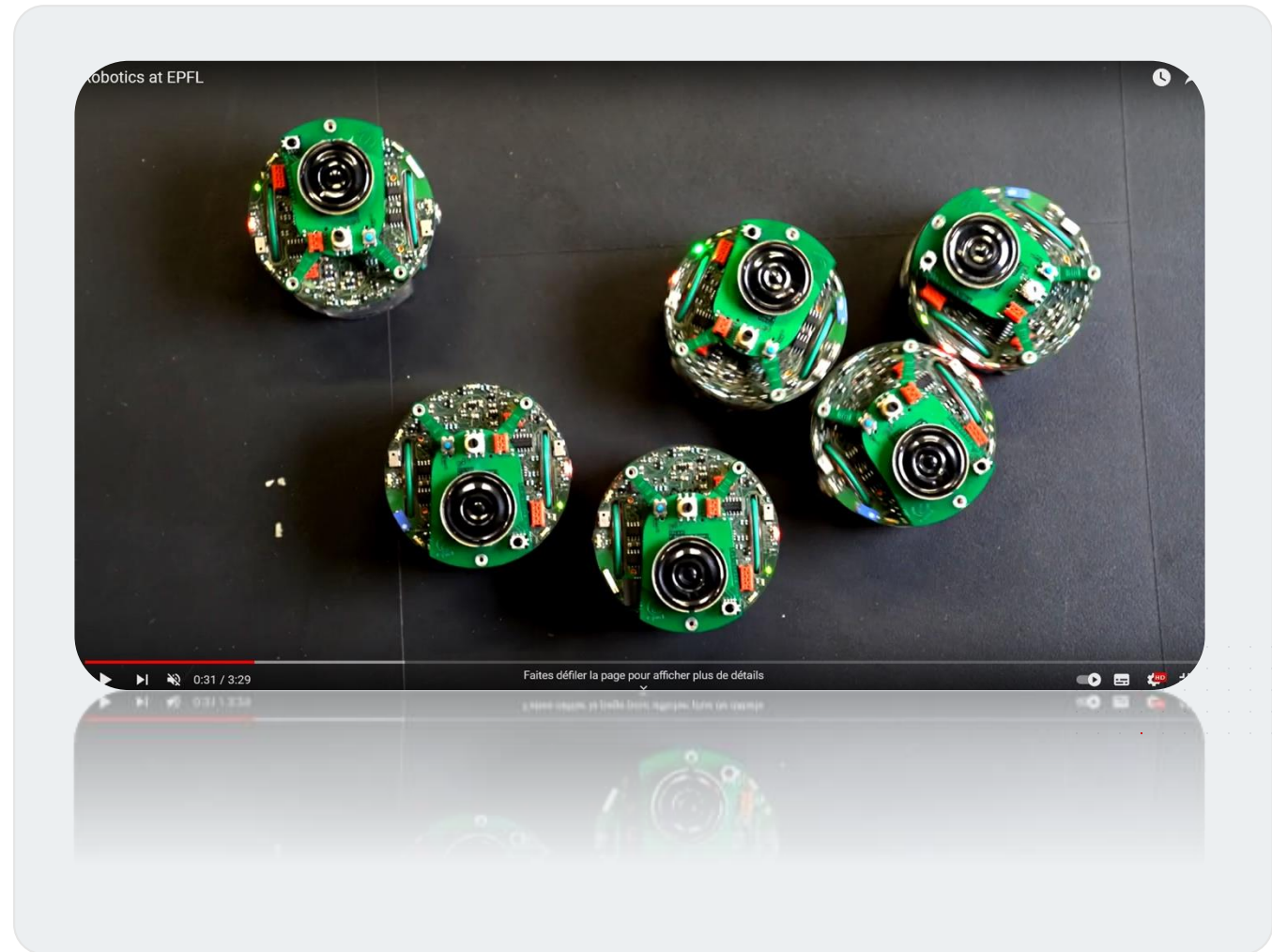


Alumni Careers

Graduated in
2020 and 2021

42matters	EPFL	Philip Morris
Aircall	ETHZ	Pilatus Aircraft Ltd
Alpine Intuition	Flyability	Pix4D
Alpine Intuition	Flybotix	Precitrame Machines SA
Anaglyph Ltd	Freshape	Qwestive
ANYBotics	GF Machining Solutions	Rolex
Bain & Company	Hamilton Medical	Scandit
Beaver Innovation	Harvard University	SCS - Supercomputing Systems AG
Biped AI	Imperial College	Selexis SA
BLUE ORIGIN	Koenigsegg Automotive AB	SHL Medical
Capgemini	Kudelski Group	Sonova Group
CERN	LAAS-CNRS	Spes Robotics
China Nanhu Academy of Electronics and Information Technology	Logitech	Strategy&
ClearSpace	Magnebotix AG	Swisscom
CORTEXIA	Meta	Technis
Credit Suisse	Metaphysiks Engineering SA	Tesla
Datwyler Group	Mikron	Typeless
Décovi SA	MOBBOT	Universidad del País Vasco
DragonBox Kahoot!	myBrain Technologies	Université Paris-Saclay
ei3	OHB SE	University of Oxford
Embedded Factory	Omnisense SA	USI Università della Svizzera italiana
	Open Web Technology	Wearin'

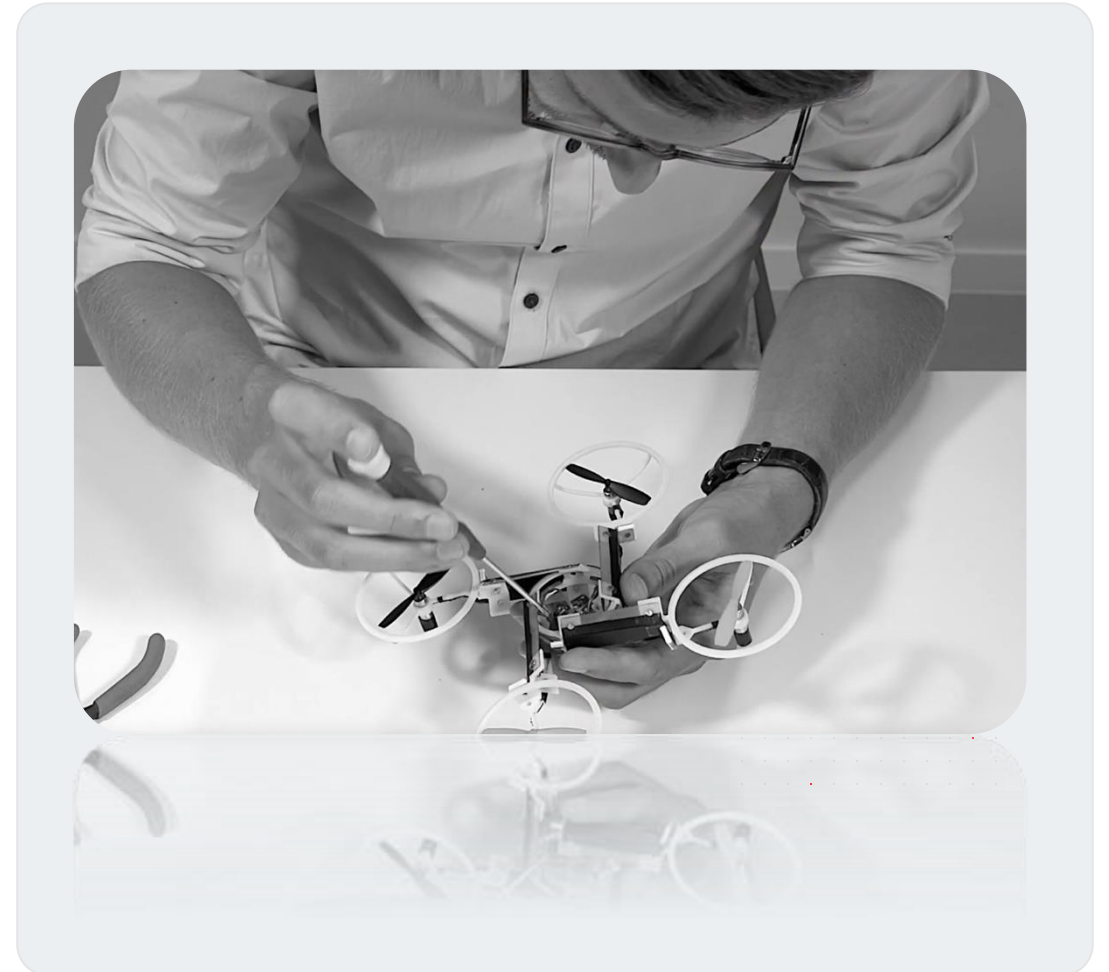
Short Movie to learn More



Student Testimony



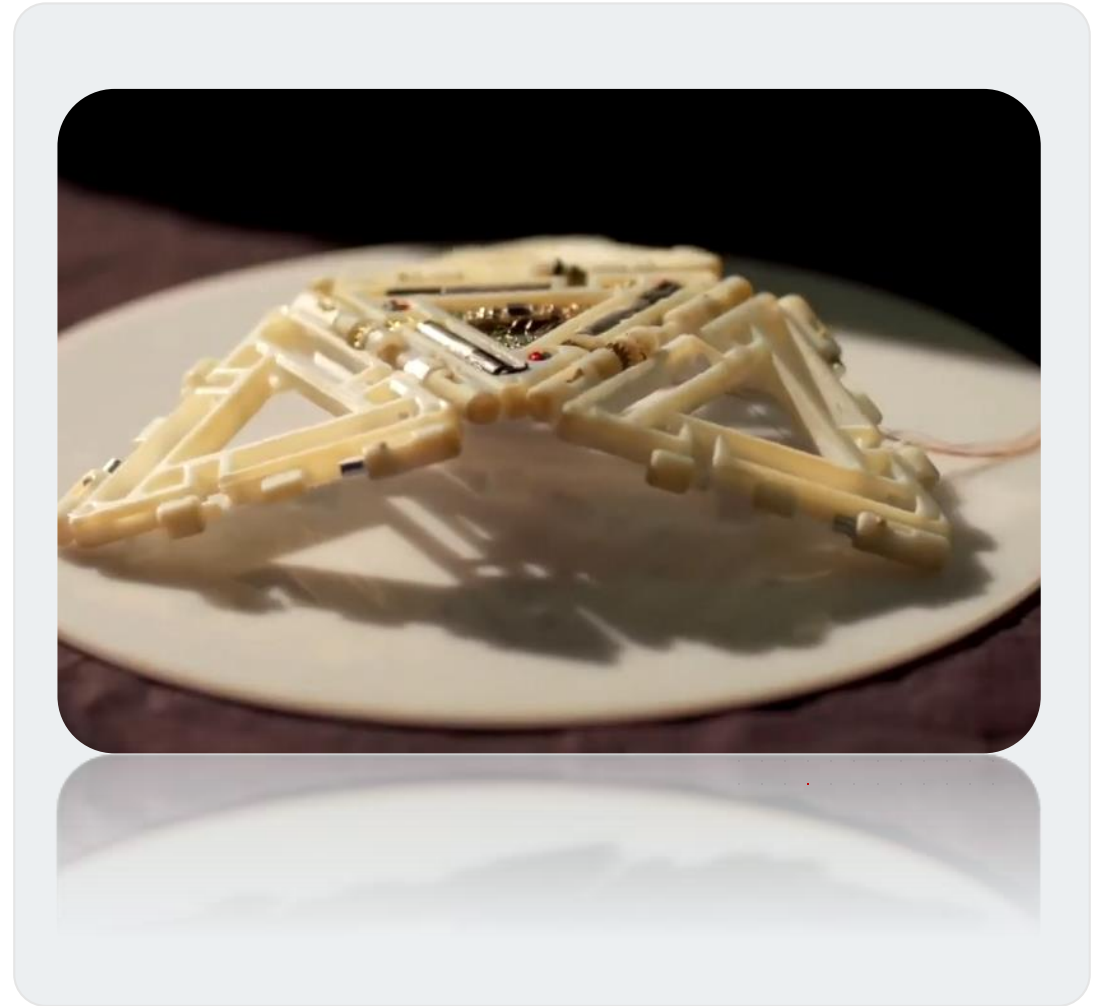
Sébastien de Rivaz
about the Robotics Master



Student Testimony



Arwen Blanche Giraud
about the Robotics
Master



Alumni Testimonies



Adrien Briod
Founder and CTO
Master Microtechnique
terminé en 2009
Thèse doctorat EPFL
2013

