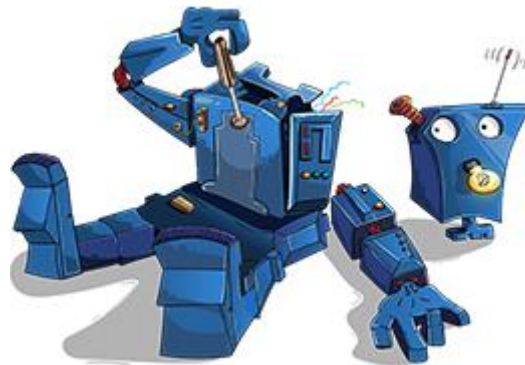


GdR Robotic Winter School

Robotics Principia



January 21-25, 2019
Sophia Antipolis, France

PROGRAM



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This school is aimed primarily at PhD students in robotics in first year and aims to teach the basics of robotics. It is organized within the framework of CNRS GdR Robotics (national network of robotics) at the initiative of the CHORALE and HEPHAISTOS project of Inria. It is important for PhD students to catch the fundamental basics in robotics in a minimum of time. Understanding the background and fundamental basics may help them to understand quicker the main concepts and tools. As the lectures will be delivered in English, all foreign students working in the French laboratories will have access to the winter school.

We hope this winter school will be a favourable place for many discussions and we very much hope you will enjoy your stay in Sophia Antipolis!

The Organizing Committee

Committees and invited lecturers

Organizers (alphabetic order)

Guillaume Allibert (I3S-CHORALE)
Philippe Martinet (Inria-CHORALE)
Jean-Pierre Merlet (Inria-HEPHAISTOS)

Scientific Committee

Stéphane Caro (LS2N)
Mohamed Chetouani (ISIR)
Philippe Fraise (LIRMM)
Jean-Paul-Laumond (LAAS)
Philippe Martinet (Inria-CHORALE)
Jean-Pierre Merlet (Inria-HEPHAISTOS)
Youcef Mezouar (IP)
Mustapha Mouaddib (MIS)
Brahim Tamadazte (FEMTO-ST)

Organizing committee

Agnès Cortell (Inria)
Philippe Martinet (Inria)
Jean-Pierre Merlet (Inria)
Patricia Riveill (Inria)
Patrick Rives (Inria)
Paolo Salaris (Inria)
Laurie Vermeersch (Inria)

Support engineer for the hands-on

André Anglade

Invited Lecturers

Roland Chapuis (IP, Clermont-Ferrand)
François Chaumette (IRISA, Rennes)
Cédric Demonceaux (ImViA-VIBOT, Le Creusot)
Manfred Husty (Innsbrück, Austria)
Florent Lamiroux (LAAS, Toulouse)
Frédéric Précioso (I3S, Sophia Antipolis)
Bruno Siciliano (Napoli, Italy)
Olivier Simonin (INSA/Inria, Lyon)
Olivier Stasse (LAAS, Toulouse)
Catherine Tessier (ONERA, Toulouse)

Venue and useful information

The meeting will take place at Inria Sophia Antipolis, France.



Address:

Inria
2004 route des Lucioles
BP 93
F-06902 Sophia Antipolis cedex
Tel: +33 (0)4 92 38 77 77

Wi-Fi network with access control on site.

You will be given your credentials by registering on site.
Inria is also involved in *Eduroam* project. If your institution provides you with an Eduroam account, you are encouraged to initialize it on your laptop properly (*help in English*)

Catering

Luncheon and breaks will be served on site, according to the programme, from Monday to Friday. The costs for the coffee breaks and luncheons are included in the registration fee.

Accommodation

Accommodation is included in registration fee and will be provided from Sunday 20 to Friday 25:

Centre International de Valbonne, (CIV)
190 Rue Frédéric Mistral
Sophia-Antipolis
<http://www.civfrance.com/centre/hebergement>

The breakfast is included.

The walking time between CIV and Inria is less than 30 minutes. You can also take the bus *Envibus lines 1 or 22* – Bus stop Inria

On Sunday, check-in can be at anytime, the rooms will be available. Keys will be at your disposal in envelopes that you can find at the CIV entrance, close to the left barrier.

Possibility to ask for an extra night on Friday evening if needed, you just have to inform the reception at CIV and pay for it (21€).

Check-in / Registration:

Kahn building

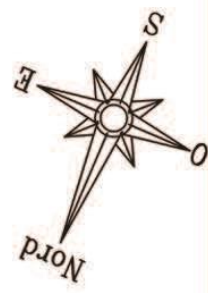
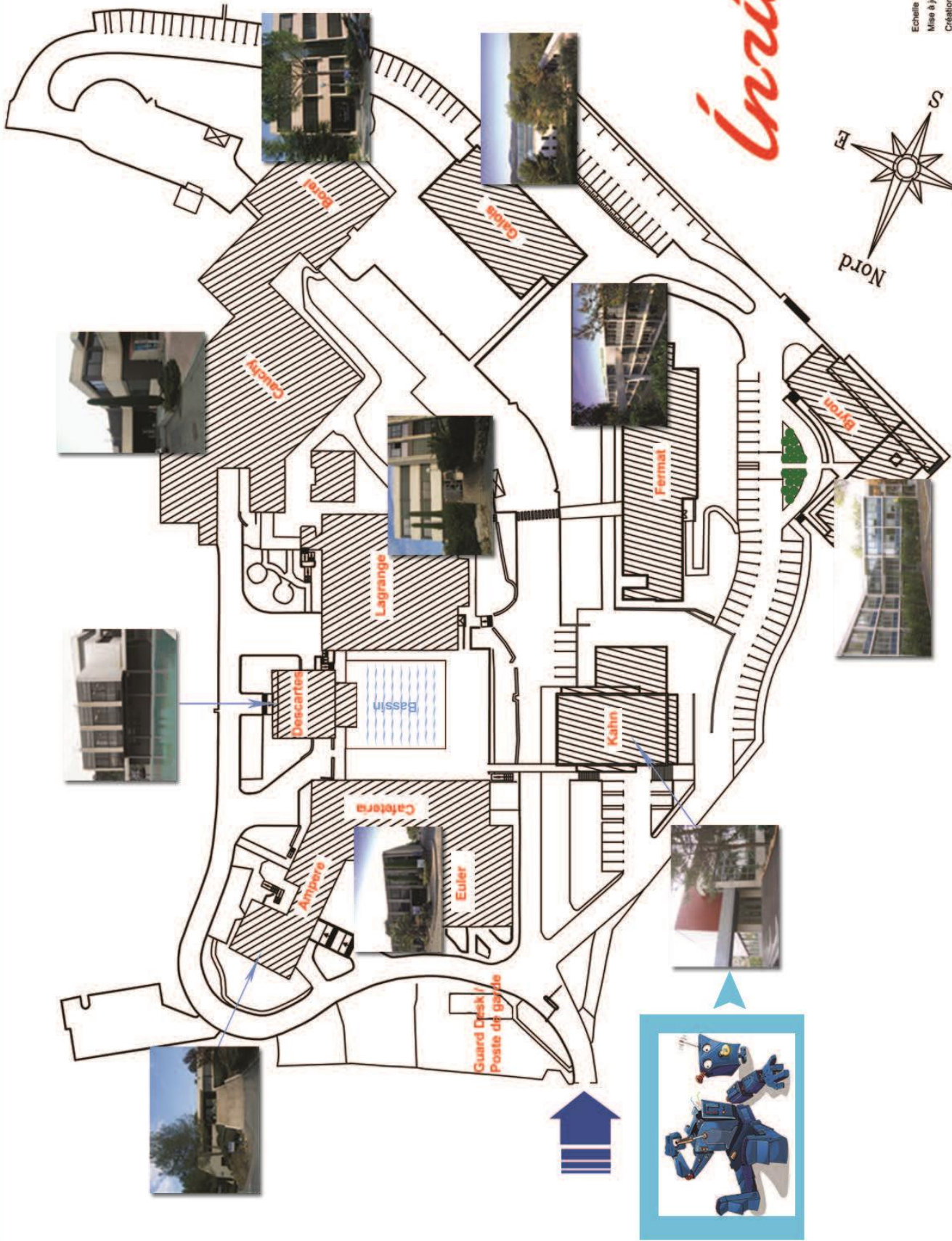
Upon arrival all participants are kindly requested to go to the Winter School registration desk situated in the main entrance hall in order to collect their badges.

Participants are kindly requested to wear their badges during the school and social event.

Lectures and practicals:

Kahn building, rooms Kahn

Inria



Echelle : 1/200
Mise à jour : Mai 2007
Création : 10/05/2007 - F. JUVENELLE - SG

How to reach the location conference

By plane

Nearest international airport is Nice-Côte d'Azur (20km)

Regular shuttles from the airport (Terminal 1 and 2) to Sophia Antipolis by bus:

Line 230 - bus stop "Inria"

By car

GPS 43.61619N (43°36'58") 7.06786E (07°04'04")

Access map

- From Marseille-Aix by the *A8 motorway*, take the exit Antibes-Grasse-Sophia Antipolis, direction Sophia Antipolis.
- From Nice by the *A8 motorway*, take the exit Antibes-Sophia Antipolis, direction Sophia Antipolis (the road on the right just after the toll).

By train

The closest railway station is located in Antibes.

Regular shuttles from Antibes SNCF railway station to Sophia Antipolis by bus with *Envibus* (Fare ticket 1,50€):

Lines 1 - 12 - Bus stop "Inria"

Express line: 100 - Bus stop "Templiers" (5mn walking distance from Inria, you just have to cross the campus SophiaTech)

By public transport (Fare ticket 1,50€)

From Nice-Côte d'Azur Airport and Nice city:

Line 230 - Bus stop "Inria"

From Cannes SNCF railway station (with transfer):

Line 630 - Stop "Gare routiere Sophia Antipolis" then take Lines 1, 9, 12 or 100 - Bus stop "Inria" (1,12) or "Templiers" 5mn walking distance from Inria, you just have to cross the campus SophiaTech (9, 100)

From Antibes:

Envibus Lines Lines 1 - 9 - 12 Bus stop "Inria" (1, 12) or "Templiers" (9)

Express line 100 - Bus stop "Templiers" (5mn walking distance from Inria, you just have to cross the campus SophiaTech)

By taxi

About 20 minutes, depending on traffic jam (appr. 55€)

Transfert Service (English spoken) - special rates for Inria +33 (0) 6 09 50 92 53

Taxi Sophia +33 (0) 6 27 51 01 51

Centrale Orange Taxi +33 (0) 820 906 960

Motorbike transport: +33 (0) 6 58 79 81 31

see also: <http://www.cote-azur.com.fr>

Car rental

Nice Cote d'Azur Airport offers a choice of several car *rental companies* (Terminal 2).

Arriving on Sunday in Sophia Antipolis

The bus number 230 does not operate on Sundays. However, you can take *line 250* to Antibes/Golfe Juan. Depending on your time schedule, take Envibus Line 1 or 9 (bus stop "Bermond" for CIV, bus stop "Bouillides" for Ibis and Mercure Hotels, bus stop "Eganaude" for B&B and Beachcomber hotel, Bus stop "Beethoven or Einstein" for Novotel Hotel).

You can also find your route at this web page: www.ceparou06.fr

Nice to know

Opening/closing hours, public holidays, currency, area codes for France, Emergency phone numbers, advice for a trouble-free stay...

Climate

The French Riviera benefits from a Mediterranean-type climate, characterized by exceptional sunshine almost 300 days a year and mild temperatures for most of the year. It rains heavily but infrequently mostly in March/April and October/November. In winter, freezing temperatures are rare, but sweaters are advised.

Opening hours

Shops are usually open from 9 am to 7 pm from Monday to Saturday. Department stores may stay open until 9 pm. Banks are open from 8.30 to 12 noon and 2 to 4.30 pm, Monday to Friday, with some branches opening on Saturday mornings.

Money/currency

Credit cards are accepted in many shops, hotels and restaurants (there is usually a minimum amount of between €7 and €15). For cash, you will find cash-points on just about every street corner (24 hours a day).

Bank branches, exchange bureau and some post offices handle currency exchange transactions and travellers cheque. Whatever you are buying, prices are net. A gratuity is however the custom in restaurants and for certain specific services (taxi cabs.).

Emergency phone numbers

Dial the following numbers (toll-free)

SAMU (medical emergencies): 15

Police emergency: 17

Fire-brigade: 18

European emergency call: 112

Calling

To call France in France: 0 + area number + number

To call France from abroad: 00 + 33 + number

To call abroad: 00 + country exchange number + number

Electric standards

220 Volts - 380 Volts / 50 Hertz

Health Insurance and Health Emergencies

The Organizers will accept no liability for personal injuries sustained by or for loss or damage to property belonging to Congress participants, either during or as a result of the Congress or during all events. Participants are strongly recommended to seek insurance coverage for health and accident, lost luggage and trip cancellation.

A few tips for a pleasant trouble-free holiday

- You are strongly recommended to respect smoking/no smoking signs in public places.
- It is always useful to have a little cash on you at all times for little out-of-pocket expenses like taxi fares to the airport, drinks, etc.
- A service charge is included in the price of each item on the menu in any cafe or restaurant as required by French law. In theory, no further tipping is expected.

However, it is pretty common to leave something after a bite to eat or drink. But it's never expected and is only given for good or attentive service, or at a place you habituate frequently. Extra generosity will never hurt.

- If you are driving, park only where authorized and respect speed limits on highways and motorways.

Program

	Monday 21	Tuesday 22	Wednesday 23	Thursday 24	Friday 25
8H30-9H	Introduction				
9H-10H30	Perception I <i>Roland Chapuis</i>	Modelling I <i>Bruno Siciliano</i>	Control I <i>Bruno Siciliano</i>	Motion planning <i>Florent Lamiraux</i>	SBC <i>François Chaumette</i>
10H30-11H	Coffee break	Coffee break	Coffee break	Coffee break	Coffee break
11H-12H30	Perception II <i>Cédric Demonceaux</i>	Modelling II <i>Bruno Siciliano</i>	Control II <i>Bruno Siciliano</i>	Learning <i>Frédéric Precioso</i>	Decision <i>Olivier Simonin</i>
13-14H	Lunch	Lunch	Lunch	Lunch	Lunch
14H-15H30	Experimental approach & Ethics <i>Catherine Tessier</i>	Mathematical tools <i>Manfred Husty</i>	Program/simulation tools: ROS/Gazebo/VREP <i>Olivier Stasse</i>	Hands on 4	Restitution
15H30-16H	Coffee break	Coffee break	Coffee break	Coffee break	Closing
16H-17H30	Hands on 1	Hands on 2	Hand on 3	Hands on 5	
18-20H	Hands on extension	Hands on extension	Special event	Hands on extension	

The program consists of lectures in the morning and early afternoon. The rest of the afternoon and evening, students will work in groups on a predefined task called “**hands on**” which will be given to them at the beginning and which must be done with a robotic system. The main results will be presented publicly on Friday afternoon.

Monday January 21

- 8:30-9:00 Welcome and Introduction
- 9:00-10:30 Perception I: Roland Chapuis
- 11:00-12:30 Perception II: Cédric Demonceaux
- 14:00-15:30 Experimental approach & Ethics : Catherine Tessier
- 16:00-17:30 Hands on
- 18:00-20:00 Hands on

Tuesday January 22

- 9:00-10:30 Modelling I: Bruno Siciliano
- 11:00-12:30 Modeling II: Bruno Siciliano
- 14:00-15:30 Mathematical tools: Manfred Husty
- 16:00-17:30 Hands on
- 18:00-20:00 Hands on

Wednesday January 23

- 9:00-10:30 Control I: Bruno Siciliano
- 11:00-12:30 Control II: Bruno Siciliano
- 14:00-15:30 Programming/simulation tools: ROS/Gazebo/VREP: Olivier Stasse
- 16:00-17:30 Hands on
- 19:00-21:00 Special Event

Thursday January 24

- 9:00-10:30 Motion Planning: Florent Lamiroux
- 11:00-12:30 Learning: Frédéric Precioso
- 14:00-15:30 Hands on
- 16:00-17:30 Hands on
- 18:00-20:00 Hands on

Friday January 25

- 9:00-10:30 Sensor Based Control: François Chaumette
- 11:00-12:30 Decision: Olivier Simonin
- 14:00-15:30 Hands on
- 16:00 Closing

Social Event

Wednesday 23

DINNER AT PHENICIA RESTAURANT

19:30 Dinner
17:45 Meeting point at Winter School registration desk
18:00 Bus leaves Sophia Antipolis to Antibes
22:30 Back to Sophia Antipolis

(Dress code: Smart casual)



Address

1 avenue Barquier
06600 Antibes
☎ +33 4 93 33 76 27

[Access map](#)

