

ASTERIQS school on solid-state spins

From 25 October to 10 November

**with lectures from 1 to 5 November
in Cargèse, France**



Programme

&

Practical Details

How to read the programme

Colour code

Dark blue – Lectures & Contributed talks

Light blue – Posters: installation, sessions & presentations

Green - Lunch breaks & Free time

Orange – Social activities

Please note that an electronic version of the programme has been stored on the USB stick.

Practical details at IESC, Cargèse

Breakfast

At the institute, breakfast is served from 8:00 – 9:00am.

Participants accommodated in Cargèse village will take breakfast at the respective cafés indicated to them on arrival.

Lunch

Lunch is served at the institute.

Accompanying persons are welcome for lunch at the institute. However, they have to register at the meeting office 1 day ahead.

Dinner

Except on Thursday 4 November, dinner is NOT served at the institute and has to be taken in one of the restaurants in Cargèse village.

Departure

All necessary details concerning the common bus transfers to Ajaccio airport on 6 November will be communicated during the event. The same applies to individual transfer arrangements by taxi on other days.

Environmental protection on site

The IESC being sensible to environmental protection, each participant will receive a hard plastic cup at the beginning of the school. This personal cup shall be used during the breaks and kept over the whole duration of the event.

From Monday 25 to Friday 29 October 2021

Online

Monday

Time	Title	Speaker
09:30 – 10:00	Opening of the School	Thierry Debuisschert
10:00 – 11:15	Theory of the NV center	Marcus W. Doherty
16:00 – 17:15	Quantum control	Christiane Koch

Wednesday

Time	Title	Speaker
09:00 – 10:15	Theory of the NV center	Marcus W. Doherty
10:30 – 11:45	Quantum control	Christiane Koch
16:00 – 17:15	Introduction on ab-initio modeling of defects	Audrius Alkauskas

Friday

Time	Title	Speaker
09:00 – 10:00	Nanoscale magnetic and thermal imaging: glimpse into dissipation in quantum systems	Eli Zeldov
10:15 – 11:15	New defects	Marc Newton
16:00 – 17:15	Magnetic resonance spectroscopic imaging in vivo using hyperpolarized ¹³C-labelled molecules	Franz Schilling

Monday 1 November 2021

Morning lectures

Time	Title	Speaker
08:45 – 09:30	Registration Distribution of the badges and booklets	
09:30 – 09:45	Welcome	Thierry Debuisschert
09:45 – 10:45	Deterministic implantation	Ferdinand Schmidt-Kaler
10:45 – 11:15	<i>Coffee break</i>	

Contributed talks

Time	Title	Speaker
11:15 – 11:45	To be announced	Abhishek Shukla
11:45 – 12:15	To be announced	Michal Gulka

Lunch break

Time	Lunch break
12:30 – 14:00	Lunch at the institute

Posters installation

Time	Posters installation
14:00 – 15:00	Installation of the posters in the outdoor patio of the amphitheater

Contributed talks

Time	Title	Speaker
15:00 – 15:30	To be announced	Samer Kurdi
15:30 – 16:00	To be announced	Yuliya Mindarava

Afternoon lectures

Time	Title	Speaker
16:00 – 17:00	Sensing applications, pressure	Jean-François Roch
17:00 – 17:15	<i>Coffee break</i>	
17:15 – 18:30 Online	Magnetometry and applications	John Barry

Contributed talks

Time	Title	Speaker
18:30 – 19:00	To be announced	Gergő Thiering
19:00 – 19:30	To be announced	Märta Tschudin

Tuesday 2 November 2021

Morning lecture

Time	Title	Speaker
08:45 – 09:45	Photo-Detection of Magnetic Resonance	Milos Nesladek

Contributed talks

Time	Title	Speaker
09:45 – 10:15	To be announced	Souvik Agasti
10:15 – 10:45	To be announced	Rémi Blinder
10:45 – 11:15	<i>Coffee break</i>	

Morning lecture

Time	Title	Speaker
11:15 – 12:30	Ab initio theory of NV center and other centers	Adam Gali

Lunch break

Time	Lunch break
12:30 – 14:00	Lunch at the institute

Poster session

Time	Posters
14:00 – 16:00	Students' posters are displayed in the outdoor patio of the amphitheater <div style="background-color: #92d050; padding: 5px; text-align: center;">Including coffee break from 15:30 to 16:00</div>

Afternoon lectures

Time	Title	Speaker
16:00 – 17:00 Online	Prospects of Group-IV-vacancy centers in diamond for quantum sensing	Christoph Becher
17:00 – 18:15	To be announced	Toeno Van der Sar

Welcome cocktail

Time	Social activity
18:30 – 19:30	Welcome cocktail at the institute

Wednesday 3 November 2021

Morning lectures

Time	Title	Speaker
08:45 – 09:15	To be announced	Frank Engelke
09:15 – 09:45	Application of NV centers to RF sensing	Thierry Debuisschert
09:45 – 10:15	To be announced	Khaled Karrai
10:15 – 10:45 Online	To be announced	Matthew Markham
10:45 – 11:15	<i>Coffee break</i>	

Contributed talks

Time	Title	Speaker
11:15 – 11:45	To be announced	Tetyana Shalomayeva
11:45 – 12:15	To be announced	Maxime Rollo

Lunch break

Time	Lunch break
12:30 – 14:00	Lunch at the institute

Poster session

Time	Posters
14:00 – 16:00	Students' posters are displayed in the outdoor patio of the amphitheater <div style="background-color: #92d050; padding: 5px; text-align: center;">Including coffee break from 15:30 to 16:00</div>

Afternoon lectures

Time	Title	Speaker
16:00 – 17:00	Material	Alexandre Tallaire
17:00 – 18:15	Sensing nuclear spin inside diamond	Mohamed Abobeih

Contributed talks

Time	Title	Speaker
18:30 – 19:00	To be announced	Antoine Hilberer
19:00 – 19:30	To be announced	Marwa Garsi

Thursday 4 November 2021

Morning lecture

Time	Title	Speaker
08:45 – 10:00	Creation and engineering of solid-state spins	Sébastien Pezzagna

Contributed talk

Time	Title	Speaker
10:00 – 10:30	To be announced	Ilia Chuprina
10:30 – 11:00	<i>Coffee break</i>	

Morning lecture

Time	Title	Speaker
11:00 – 12:00 Online	To be announced	Christoph Zollitsch

Contributed talk

Time	Title	Speaker
12:00 – 12:30	To be announced	To be announced

Lunch break

Time	Lunch break
12:30 – 14:00	Lunch at the institute

Excursion

Time	Social activity
14:15-17:30	Boat trip or guided bus tour Details to be provided in the preceding days

PCR Tests in Ajaccio (for those concerned)

Time	Activity
14:15-17:30	PCR Test in Ajaccio, including transportation

Friday 5 November 2021

Morning lectures

Time	Title	Speaker
08:45 – 10:00	Toward efficient hyperpolarization with NVs	Nir Bar-Gill
10:00 – 10:30	To be announced	Jan Rhensius
10:30 – 11:00	<i>Coffee break</i>	
11:00 – 11:30 Online	To be announced	Andreas Brenneis Tino Fuchs

Contributed talks

Time	Title	Speaker
11:30 – 12:00	To be announced	To be announced
12:00 – 12:30	To be announced	To be announced

Lunch break

Time	Lunch break
12:30 – 14:00	Lunch at the institute

Poster session

Time	Posters
14:00 – 16:00	Students' posters are displayed in the outdoor patio of the amphitheater. Including coffee break from 15:30 to 16:00

Afternoon lectures

Time	Title	Speaker
16:00 – 17:00 Online	Spin-mechanics with levitating diamonds	Gabriel Hétet
17:00 – 18:15	NV magnetometry at low temperatures	David Broadway

Closing of the Cargèse school

Time	Title	Speaker
18:30 – 19:00	Closing of the 5 day event	Thierry Debuisschert

From Monday 8 to Wednesday 10 November 2021

Online

Monday

Time	Title	Speaker
16:00 – 17:00	Sensing applications	Ronald Walsworth
17:00 – 18:00	Condensed matter applications	Amir Yacoby

Wednesday

Time	Title	Speaker
09:00 – 10:00	Nanothermometry: sensing with nanodiamond	Quan Li
10:15 – 11:15	Microwave detection with NV	Hannes Majer
15:15 – 16:15	Material	Volker Cimalla
16:30 – 17:30	Creating quantum systems with silicon carbide and molecules	David D. Awschalom

Acknowledgements

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