

MOT D'ACCUEIL

Welcome to the first edition of **Mountains on the Move**.

We are very proud to be hosting this first edition of a new program at Université Grenoble Alpes.

This is the final outcome of a long time project that was initiated right before the merger of Grenoble's universities in 2016. Indeed before that time, in Grenoble, co-existed three universities (sciences, humanities and social sciences).

Here was the challenge, we wanted to create an educational object where staff from all three universities could collaborate, that would have an international component and that could serve as an attractor to our new university.

What could we share? What did we have in common? The answer came almost as fast as we were putting the words down:

MOUNTAINS.

There it was, the object that we all shared whether it was through natural exploration, exploitation, history, language, urban planning all came together.

It is our common identity, it is the cement that holds us together, it dominates our lives, our environment. It pervades our research, our history and most of all we want to understand it, explain it, and share it outside of our common boundaries.

Mountains are alive not only because of the people or animals that live on their flanks or in their valleys but because they evolve through time, adapt to changes, react to motion whether natural or man-made.

This is what we want to share with you in this two-week program. We want to take you with us to explore this environment, to see how it reacts, how we react to it. We want to show you how we study it, where it takes us and why.

But we also want you to enjoy the mountains, revel in their grace, feel at home and always come back.

So have a great time and welcome to Grenoble.

Dr. Sophie-Adelaide Magnier

Director International Partnerships & Projects

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THE SCIENTIFIC BOARD

Frédéric Victor Donzé is a professor at the UGA. His research is dedicated to numerical modelling and geodynamics. The scope of subjects ranges from exploring natural Hydrogen sources to blasts in nuclear facilities to landslides and risk mitigation in seismically active areas which takes him from the Alps to the Kyrgyzstan mountains or the Andes.

Frederic's dominant interests are mountains and mountaineering and is therefore a keen observer of change and risk zones.

Marie-Christine Fourny is a professor of geography and land use planning at UGA. Her research aims at understanding the impact of change on mountain territories. Its work focuses on territorialities in complex situations involving multiple allegiances or spatialities. This has led to analyze cross-border cooperation, networked cities and relations between town and highland. At present her research focuses on the relationship between territory and mobility, particularly in peri-urban and sparsely populated areas. She is head of the LabexItem - a research group of labs dedicated to Mountains and humanities.

Pascale Huyghe is a lecturer at the UGA. She conducts research on the formation and evolution of mountain chains based on the study of sedimentary archives. For almost 20 years, she has focused mainly on the Himalayan chain. In addition, for the past 4 years, she has been involved in an international ocean drilling program in the Bay of Bengal where she studies more specifically the interactions between climate-tectonics-erosion related to the South-East Asian monsoon in the Himalayan chain. Her teachings are related to geodynamics and tectonics which are directly applied in the alpine chain during an end-of-year internship.

Pascale is also a qualified Alpine ski instructor, and thus very aware of the evolution of the climate in mountain areas.

Vincent Rauzier is project leader on territorial affairs in conjunction with the international affairs office. His goal is to motivate projects whereby the University and the territory on which it is anchored, work hand in hand to mutually reinforce each other. His projects include the sentinel shelter, Mountain territory in the green capital of Grenoble.

Vincent is an adamant believer in shaking things up and taking into account every aspect of a project especially those put aside by his colleagues.

ORGANISATION

Rafaëlle Delepaut runs the program's administration.

After studying European affairs and institutions, she started working at Université Grenoble Alpes in 2013.

She has experienced a number of positions in the International team, from student outgoing mobility to partnerships and double degrees, and speaks French, English, Spanish, Portuguese and some German.

It's her second year running the International Office's summer schools.

AGENDA & LOCATIONS*

----- WEEK 1 : 17-21 JUNE -----

Monday 17 June - Grenoble

Welcome & General introduction -Pr. Frédéric-Victor DONZE, Pr. Marie-Christine FOURNY, Dr. Pascale HUYGHE, Dr. Sophie-Adélaïde MAGNIER

Opening session: the Anthropocene – Dr. Pierre-Olivier GARCIA (45 min)

Viewing of “The mysterious volcano from the Middle Ages” (Dir. Pascal GUERIN – Awardee, 2019 Grenoble Science & Mountains short-film festival)

Mountain culture and History in the Alps

TUESDAY 18 JUNE - GRENOBLE

Between product and resource: Understanding the alpine tourist landscape through the study of history - Caterina FRANCO

“La Métro”, a Mountain Metropolis – Dr. Alexandre MIGNOTTE

WEDNESDAY 19 JUNE & THURSDAY 20 JUNE

>>OVERNIGHT STAY IN THE

VERCORS<<

VERCORS FIELD TRIP: ADAPTATION TO CHANGE IN MID-ALTITUDE MOUNTAIN RANGES RESORTS

■ WEDNESDAY - CIRCUIT

Touristic Reconversion - New trends - Pr. Philippe BOURDEAU

■ THURSDAY – VILLARD DE LANS - RESEARCH AND TOURISM ECONOMIES

The Viability of snow conditions and its Challenges for mid-altitude Ski resorts - Dr. Hugues FRANCOIS and PhD student Lucas BERARD

Public Policies in support of the Tourism Diversification - Dr. Coralie ACHIN

Touristic Reconversion - New trends (2) - Pr. Philippe BOURDEAU

FRIDAY 21 JUNE - GRENOBLE

Designing Geographic Information for Mountains: mixed methods research to build knowledge – Dr. Raffaella BALZARINI

GROUP PROJECTS

----- WEEK 2 : 24-28 JUNE -----

MONDAY 24 JUNE – GRENOBLE

Climate change in Mountains of the world - Dr. Samuel MORIN

From Crystal growth to Avalanche: Why and How avalanche hazard is impacted by climate change – Dr. Anne DUFOUR

State and Fate of glaciers: What do we know? How do we measure and model it? - Dr. Antoine RABATEL

Black carbon deposition to Ice and Snow: Climate and environmental impacts – Dr. Jennie THOMAS

The International [Ice Memory](#) Research project - Anne-Catherine OHLMANN

TUESDAY 25 JUNE – GRENOBLE

Landslides in Nuclear waste areas of Central Asia – Pr. Frédéric-Victor DONZE

Deciphering and mitigating the effects of climate change on high mountain permafrost – Dr. Xavier BODIN

The many facets of a volcanic eruption: Managing a volcanic crisis – Dr. Alain BÜRGISSER

Preparation to the Oisans, Lautaret & Chenaillet field-trip: Introduction to the Geodynamics of the Alps – Dr. Pascale HUYGHE & Dr. Thierry DUMONT

1. *Observation of extensional and shortening geological features*
2. *Observation of witnesses of the Tethys Ocean incorporated in the mountain range*

WEDNESDAY 26 & THURSDAY 27 JUNE

>>OVERNIGHT STAY IN THE LAUTARET MOUNTAIN

SHELTER<<

FIELD TRIP TO COL D'ORNON - LAUTARET PASS & BOTANICAL GARDEN – LES OPHIOLITES DU CHENAILLET

■ WEDNESDAY

Alpine Geological Transect on the way to [Col d'Ornon](#) & [Villard-Reymond](#) - Dr. Pascale HUYGHE & Dr. Thierry DUMONT

[Lautaret garden Research station](#) – Pr. Jean-Gabriel VALAY, Dir.

Entering the [Trajectories Project](#) Annual Conference - Meeting with Dr. Sandra LAVOREL

■ THURSDAY

[Les Ophiolites du Chenaillet](#) geological Phenomenon - Dr. Pascale HUYGHE & Dr. Thierry DUMONT

FRIDAY 28 JUNE – GRENOBLE

Where do we go from Here ? – Member of the [Intergovernmental Panel on Climate Change \(IPCC\)](#)

GROUP PROJECTS

SYLLABUS

----- WEEK 1: 17-21 JUNE -----

MONDAY 17 JUNE - GRENOBLE

Welcome & General introduction

>Dr. Sophie-Adélaïde MAGNIER, Dir. International projects, UGA International Office

The Anthropocene

> Dr. Pierre-Olivier GARCIA

The Anthropocene defines Earth's most recent geologic time period as being human-influenced, or anthropogenic, based on overwhelming global evidence that atmospheric, geologic, hydrologic, biospheric and other earth system processes are now altered by humans.

Film viewing: "The mysterious volcano from the Middle Ages" (Awardee, 2019 Grenoble Science & Mountains short-film festival - Pascal GUERIN, Director).

> Guest researcher

The origin of a volcanic eruption in the Middle Ages, one of the biggest in the last ten thousand years, had long remained a mystery. It was only in 2013 that a group of scientists would solve the puzzle, in an investigation unlike any other... (CNRS News)

Mountain culture and History in the Alps

> Name to be confirmed

Between product and resource. Understanding the alpine tourist landscape through the study of history

> Caterina FRANCO

In the last two centuries, an acceleration in the evolution of mountain activities brought to a rapid transformation of the territory. The rise of productive activities first, and of tourism later used different resources, located at different altitudes. As a last step in the trajectory, the construction of ski resorts after WW2 highly impacted the high-altitude lands.

Concentrating specifically on the transformations brought by tourism, we propose to understand landscape as the result of a conjoint work between Man and Nature. In fact, the construction of a tourist settlement implied not only the implantation of new buildings but also, the realization of: transportation infrastructure networks to connect city and mountain; water and energetic supply systems; the transformation of forest surfaces; the modification of the topography for the creation of ski slopes, etc. The tools and the methodology are those of a historical research in architecture: through the manipulation of archival documents and cartography we try to discern both the effective steps in the transformation of land (topographic maps of one territory drawn on different years, pictures, etc.) and the ideas that lie behind the actors of the processes (projects produced by architects and urbanists, the regulation plans...).

TUESDAY 18 JUNE – GRENOBLE

"La Métro", a Mountain Metropolis

> Dr. Alexandre MIGNOTTE

WEDNESDAY 19 JUNE & THURSDAY 20 JUNE

VERCORS FIELD TRIP: ADAPTATION TO CHANGE IN MID-ALTITUDE MOUNTAIN RANGES RESORTS

■ **WEDNESDAY**

Touristic Reconversion - New trends

> **Pr. Philippe BOURDEAU**

Against the background of social innovation and climatic, cultural and economic change, you will be shown the ability of people but also organizations to rethink their activity. This course will guide you to observe a series of complementary social, economic and cultural configurations that illustrate varied trajectories of mountain territories evolving towards the diversification of their activities.

■ **THURSDAY – VILLARD DE LANS - RESEARCH AND TOURISM ECONOMIES**

The Viability of snow conditions and its Challenges for mid-altitude Ski resorts

> **Dr. Hugues FRANCOIS and PhD student Lucas BERARD**

Since the late 80's, snow reliability has been a real concern for ski resorts. Over years, natural variability of snowfalls has become an issue addressed by the use of snowmaking. The snow production slowly became an ordinary tool to manage ski areas and it is compulsory to take its effect into account to assess snow reliability. In the context of climate change, the growing need for machine-made snow goes along with the decrease of cold windows required for snow production. Thus, it is important to have a better understanding of its actual impacts compared to its costs before this snowmaking becomes an economical issue.

Public Policies in support of Tourism Diversification

> **Dr. Coralie ACHIN**

With the snow-free winters of the late 1980s and the publication of the IPCC report in 2007, the future of the so-called “mid-elevation ski resorts” is highly questionable. The winter season may no longer be the only alternative for these resorts. Thus, various public policies adopted since the 2000s have aimed to support the tourism diversification. This can result in a diversification of the tourist offer offered in winter or during the other seasons, or even to initiate a diversification of the economy to no longer rely only on tourism. In addition, it raises the question of the territorial scale to be favored for this new tourism project, as well as the actors involved. Finally, it is the renewal of tourism governance that is particularly questioned with the diversification process.

Touristic Reconversion - New trends (2)

> **Pr. Philippe BOURDEAU**

FRIDAY 21 JUNE - GRENOBLE

Designing Geographic Information for Mountains: mixed methods research to build knowledge

> **Dr. Raffaella BALZARINI**

Montello (2009) states that the study of cognition in GIScience is motivated by the desire to improve the usability, efficiency, equity, and profitability of geographic information. These theoretical underpinnings from cartography, GISciences and cognitive sciences, are entirely meaningful in an experimental perspective leading to empirical evidence, which deals with the design of mixed methods protocols based on qualitative and quantitative approaches. They concern conventional and innovative methods of data collection, the design of new tools for measuring, the validation of data formats and their integration into operating systems of trace activity, as well as various data analysis.

In the survey of mountain environment evolution's issues, these approaches are materialized through the setting up of observation systems of the natural and social dynamics. The challenge of these systems is to implement a reproducible methodology for evaluating practices and issues, to stabilize sustainable experimental protocols, to deploy analyses and visualization tools of spatio-temporal data. Since it is not only a matter of leading observation and follow-up campaigns, but also of initiating a long-term process of collective intelligence between researchers and practitioners, the course will show how GISciences provide methods and techniques able to federate and enhance this common knowledge (natural and social sciences). This course will apply models of Geographic Information design, related to the perception of the evolution of mountain environments and the adaptation of landscapes to changes.

GROUP PROJECTS

----- **WEEK 2: 24-28 JUNE** -----

MONDAY 24 JUNE - GRENOBLE

Climate change in Mountains of the world

> Dr. Samuel MORIN

This presentation will provide evidence and key information on changing climate conditions in mountain regions, with direct impacts on snow, glaciers and permafrost, and indirect impacts on virtually all components of the mountainous environment. Emphasis will be placed on the European Alps, with examples also taken from other mountainous regions of the world.

From Crystal growth to Avalanche: Why and How avalanche hazard is impacted by climate change

> Dr. Anne DUFOUR

In this presentation, we will explore how seasonal snowpacks grow and evolve from the micro to the macro scale : beginning with crystal growth in the cloud, their fall on the ground and the subsequent metamorphism once in the snowpack, conditioning its stability or instability. A special focus will be put on avalanche risk forecasting at the regional scale and numerical tools associated.

As a conclusion, we'll discuss why and how avalanche hazard is impacted by climate change.

State and Fate of glaciers: What do we know? How do we measure and model it?

> Dr. Antoine RABATEL

This lecture will first present an overview of glaciers evolution through time from the glacial/interglacial cycles during the Pleistocene to the current glacier shrinkage. In a second time, a focus will be made on the methods (in situ and remote sensing) used to monitor the glaciers and the modeling approaches developed to simulate the evolution of glaciers. Finally, the up-to-date simulations of glaciers future changes will be discussed (including their limits) as well as the related impacts in terms of sea level rise and water resources.

Black carbon deposition to Ice and Snow: Climate and environmental impacts

> Dr. Jennie THOMAS

Black carbon particles (often referred to as soot) are formed by combustion, such as fossil fuel and wood burning. Black carbon impacts climate by absorbing solar radiation (warming) when it is present in both in the atmosphere and on snow/ice surfaces. It has a relatively short lifetime in the atmosphere (~1 week), but still has significant impacts on the climate. Snow and ice covered regions are impacted by black carbon because the particles are darker than snow and therefore reduce snow reflectivity and increase the rate of melting. This is important in the Arctic region, including the Greenland ice sheet, and can also impact snow present in mountain regions such as the Alps and the Himalayas. Here, the sources, processes, and environmental impacts of black carbon are presented.

The International [Ice Memory](#) Research project

> Anne-Catherine OHLMANN

The project's goal is to create a global ice archive sanctuary in Antarctica, a continent devoted to science and peace, in an effort to preserve ice cores from the world's key endangered glaciers. That way, scientists in the decades and centuries to come will still have enough high-quality raw material to investigate and make future discoveries.

TUESDAY 25 JUNE - GRENOBLE

Landslides in Nuclear waste areas of Central Asia

> Pr. Frédéric-Victor DONZE

There is high level of environmental disaster risk of regional and transboundary characters in warehousing areas of radioactive and toxic mining wastes of Central Asia (Mailuu-Suu, Min-Kush, for examples). These waste storehouses are located in hazardous zones of geological processes (earthquakes, landslides, avalanches, mudflows), which are typical for geodynamic active mountain areas of Tien-Shan. In a worst-case scenario, the fertile land of the Ferghana Valley and the 6 million people who live in and around it could face severe pollution with radioactive elements and heavy metals, lasting hundreds of years. We will discuss the existing options for remediation.

Deciphering and mitigating the effects of climate change on high mountain permafrost

> Dr. Xavier BODIN

A few decades ago we discovered that high mountains are affected by permafrost, and, at the same time, that 'ground ice' may constitute a natural concrete of many rock walls or debris accumulations covering the slopes. In the Alps, the warming of mountain permafrost is clearly documented in several boreholes, and related geomorphological processes, such as the increase of rock falls activity or the speed-up of rock glaciers flow, are thought to be a regional consequence of global warming. Though numerous anthropic activities are developing on permafrost itself (for instance, touristic facilities...) or downvalley, it is not yet well known where, when and how the 'emerging' risks related to the degradation of permafrost may hit mountain territories. In this lecture, we will see how remote sensing techniques, as well as in situ measurements, long-term monitoring or modelling approaches help us to explore and better understand the state and evolution of mountain permafrost and the impacts on socio-environmental systems.

The many facets of a volcanic eruption: Managing a volcanic crisis

> Dr. Alain BÜRGISSER

Volcanic eruptions are highly disruptive events for humans. Volcanologists have a panel of modern tools at their disposal to follow the mood of the volcano prior to an eruption. Mitigation of the volcanic risks, however, does not stop at the work of a handful of scientists riveted to their instruments. Populations at risk need to be

warned and displaced to safer grounds. Managing a volcanic crisis involves many disciplines, and this course will explore some of them in a hands-on manner.

Introduction to the Geodynamics of the Alps - Preparation to the Oisans, Lautaret & Chenaillet field-trip

1. ***Observation of extensional and shortening geological features***
2. ***Observation of witnesses of the Tethys Ocean incorporated in the mountain range***

> **Dr. Pascale HUYGHE & Dr. Thierry DUMONT**

The Alpine range results from the closure of a part of the Tethyan ocean opened during Jurassic times between Eurasia and Gondwana, and Tertiary collision from 55 Ma onwards due to the northward drift of the African plate relative to Europe. The Western termination of the Alps is arc shaped due to lateral extrusion of the Adria microplate, a northern extension of Africa, since 30 Ma. This kinematics caused recent exhumation of the Alpine roots, allowing their observation along a short E-W transect near Grenoble.

WEDNESDAY 26 & THURSDAY 27 JUNE –

FIELD TRIP TO COL D'ORNON - LAUTARET PASS & BOTANICAL GARDEN – LES OPHIOLITES DU CHENAILLET

■ **WEDNESDAY**

Alpine Geological Transect on the way (Col d'Ornon & Villar Reymond)

> **Dr. Pascale HUYGHE & Dr. Thierry DUMONT**

Our fieldtrip will cover famous remnants of the Jurassic passive margin and ocean from the Alpine front to the Internal zones, more or less preserved from compressional deformation: a kilometric-scale normal fault scarp with slided blocks (Ornon "Olistoliths"), syn-rift sedimentary sequences with huge variations across tilted blocks, and a quite unique witness of the Tethyan oceanic floor showing spectacular pillow basalts and serpentinized peridotites exposed. Parallel to this, the orogenic processes will be illustrated, through tectonic inversion of marginal structures, polyphase thrusting and subduction/exhumation record. Particular attention will be paid to geological and geomorphological landscape interpretation along natural cross-sections carved by quaternary glaciers.

The [Lautaret Garden Research station](#): A geological panorama of its own creating exceptional biodiversity in a region of major Alpine passes

> **Pr. Jean-Gabriel VALAY**

The Lautaret Alpine Station is located at the very heart of the French Alps right next to Lautaret pass, between the urban centres of Grenoble and Briançon in the Hautes-Alpes area. The Lautaret pass is located close to the driest spot in the French Alps, and enjoys an exceptional climate which combines dry summers, lots of sunshine and significant temperature variations. The natural diversity of species growing in the Lautaret region is due to its extraordinary geographic, geological and climatic configuration. There are over 1,500 species (out of the 5,000 recorded species in France) growing in the wild in the three nearest municipal areas.

The Lautaret pass is renowned for its geological panorama, where the large Alpine structural units that overlap from east to west with very complex tectonics can be observed.

Entering the [Trajectories Project](#) Annual Conference

> **Dr. Sandra LAVOREL**

■ **THURSDAY**

The [Ophiolites du Chenaillet](#) geological phenomenon -

> Dr. Pascale HUYGHE & Dr. Thierry DUMONT

Our fieldtrip will cover famous remnants of the Jurassic passive margin and ocean from the Alpine front to the Internal zones, more or less preserved from compressional deformation: a kilometric-scale normal fault scarp with slided blocks (Ornon "Olistoliths"), syn-rift sedimentary sequences with huge variations across tilted blocks, and a quite unique witness of the Tethyan oceanic floor showing spectacular pillow basalts and serpentinized peridotites exposed. Parallel to this, the orogenic processes will be illustrated, through tectonic inversion of marginal structures, polyphase thrusting and subduction/exhumation record. Particular attention will be paid to geological and geomorphological landscape interpretation along natural cross-sections carved by quaternary glaciers.

Nota: Hike to observe the Ophiolites ! Around 800m total elevation, 5h return walk.

FRIDAY 28 JUNE - GRENOBLE

Where do We go from here?

> Member of the [Intergovernmental Panel on Climate Change](#) (IPCC) - Name to be confirmed

GROUP PROJECTS

SPEAKERS' LIST

ACHIN Coralie (Dr.): [Mountain ecosystems and societies Lab, IRSTEA Grenoble](#)

Personal webpage: <https://labexitem.fr/en/membre/achin-coralie-0>

BALZARINI Raffaella (Dr.): French National Institute for Computer science and Applied Mathematics

Personal webpage: <https://sites.google.com/site/raffabalza/cv/short-resume>

BERARD Lucas (PhD student): [Mountain ecosystems and societies Laboratory, IRSTEA Grenoble](#)

Personal webpage: <https://trajectories.univ-grenoble-alpes.fr/trajectories/ils-ont-rejoint-trajectories/berard-lucas-736499.htm>

BODIN Xavier (Dr.) - [Environments, Dynamics and Mountain Territories](#), CNRS/Université Savoie Mont-Blanc

Personal webpage: <http://edytem.univ-savoie.fr/annuaire/membres316/bodin-xavier>

BOURDEAU Philippe (Full Professor), [Laboratoire PACTE](#)

Personal webpage: <https://labexitem.fr/en/membre/bourdeau-philippe-0>

BÜRGISSER Alain (Dr.) - [Institute of Earth Science](#)

Personal webpage: <https://www.isterre.fr/annuaire/pages-web-du-personnel/alain-burgisser?lang=fr>

DONZE Frédéric-Victor (Full Professor) - [Institute of Earth Science](#)

Personal webpage: <http://people.3sr-grenoble.fr/users/fdonze/>

DUFOUR Anne (Dr.) - [Snow research Centre](#), National Centre for Meteorological Research

Personal webpage: <https://www.umr-cnrm.fr/spip.php?article500>

DUMONT Thierry (Dr.) - [Institute of Earth Science](#)

More information: <http://ujf-grenoble.academia.edu/thierrydumont>

GARCIA Pierre-Olivier (Dr.): Assistant Professor, Laboratoire PACTE, "Environments" research team (UGA)

Personal webpage: <https://www.pacte-grenoble.fr/en/user/4095>

FRANCO Caterina (PhD student): [Lab MHAevt, ENSAG, Université Grenoble Alpes](#) and [DABC, Politecnico di Milano](#)

PhD candidate of Université Grenoble Alpes in the Research Lab: Les Métiers de l'histoire de l'architecture, édifices-villes-territoires (École Nationale Supérieure d'Architecture de Grenoble) and of Politecnico di Milano, in the Department Architecture Built Environment and Construction. The conjoint thesis, titled L'architecture du loisir dans l'après Seconde Guerre mondiale. Le cas des Alpes franco-italiennes, has been financed by the Ministry of Culture (2015-2018) and by a mobility bourse of the Université franco-italienne.

Her researches are focused on the history of mass tourism infrastructure on the high-altitude alpine land. Through the methods and tools of the history of architecture the thesis proposes to understand not only the process of construction of buildings at a high altitude but also the transformation of an entire landscape (infrastructure, soil, hydrology, etc.). This approach enables to understand some of the critical issues that ski resorts are facing today.

FRANCOIS Hugues (Dr.): [Mountain ecosystems and societies Laboratory, IRSTEA Grenoble](#)

GEORGE Emmanuelle (Dr.): Director of the [Mountain ecosystems and societies Laboratory, IRSTEA Grenoble](#)

HUYGHE Pascale (Dr.) - [Institute of Earth Science](#)

Personal webpage: <https://www.isterre.fr/annuaire/pages-web-du-personnel/pascale-huyghe?lang=en>

LAVOREL Sandra (Dr.) – [Alpine Ecology Lab](#)

More information: https://www.researchgate.net/profile/Sandra_Lavorel

MAGNIER Sophie-Adélaïde (Dr.), Direction of International projects, UGA International Office

MIGNOTTE Alexandre (Dr.) – Grenoble Alpes Métropole

MORIN Samuel (Dr.)– Director - [Snow research Centre](#), National Centre for Meteorological Research

Personal webpage: <https://www.umr-cnrm.fr/spip.php?article250&lang=en>

OHLMANN Anne-Catherine - Executive Director - [University Grenoble Alpes Foundation](#)

More on: fondation.univ-grenoble-alpes.fr

RABATEL Antoine (Dr.) - [Institute for Environmental geoscience](#)

Personal webpage: <http://pp.ige-grenoble.fr/pageperso/rabatel/index.html>

THOMAS Jennie (Dr.) - [Institute for Environmental geoscience](#)

VALAY Jean-Gabriel (Full Professor) – Director of the [Lautaret garden research station](#)

Personal webpage: <https://www.jardinalpindulautaret.fr/node/1274/organisation-chart/cv-jean-gabriel-valay?language=en>

ASSESSMENT

Based on the topics, knowledge and methods encountered during the course of this program, the participants will provide, over 3-5 slides (or on a format agreed on with the academic supervisor):

- .∴ a research question or a problem statement,
- .∴ an abstract,
- .∴ an outline of discussion, and
- .∴ a bibliography

CREDIT ATTRIBUTION

The course does not directly deliver credits, however the program is built so as to be potentially recognized a certain amount of credits by your institution on the basis of:

75 hours total estimated duration of which:

- .∴ 60 hours classes and field trips
- .∴ 15 hours individual and group work, as well as assessment

N.B.: We will deliver all necessary supporting documents (detailed descriptions, transcript and certification) for your Higher Education Institution to receive the right elements to proceed to a recognition into their own credit system. However it will eventually remain all up to the HEI to decide on the final equivalence. We advise that the student speaks with their study advisor before they apply.

PRACTICAL INFORMATION

PREPARING FOR DEPARTURE

Checklist: Don't forget the following documents!

- Identity card (Europeans) or valid passport
- Health Record / Vaccination certificates (if available)
- Private health insurance certificate from your home country/university
- Admission letter from Université Grenoble Alpes (original if available)
- Student card from your home school/university (for students)
- Driver's license if you intend to drive in France

IMMIGRATION

Coming to France to take the course may occur differently according to your nationality and State of residence, current situation, and projected stay.

France is a [Schengen area](#) country. As such, entering the country for less than 90 days may or may not require that you submit a visa application.

Please check visa information and follow the procedure on: https://france-visas.gouv.fr/en_US/web/france-visas/short-stay-visa

Make sure you allow enough time for visa processing if needed!

In any case, please make sure you own a valid ID (passport if needed).

Our International Student and Scholars Office (ISSO) can inform or help you if needed:

- Visit their website : <https://international.univ-grenoble-alpes.fr/en/student/visa-and-residence-permits/>
- For specific questions, you can also email isso@univ-grenoble-alpes.fr

INSURANCE

Please make sure that you have adequate travel insurance to cover any medical or other emergency costs while you are abroad. **You must have sufficient travel and health insurance in order to participate on this trip.**

MONEY

Visa and Mastercard are accepted in most stores (Visas more often).

!! However it seems Canadian and American cards aren't always recognized by the public transportation system (TAG) machines. In which case you can go to the dedicated shops or in many "Presse-Tabac" (where you'll find newspapers, magazines, and whose logo is:



As for *Traveler's cheques*, please be aware that they must be exchanged at a bank to obtain cash.

PACKING : FIELD EQUIPMENT AND WEAR

Field work equipment to be provided:

- notebook for taking notes in the field: prefer medium to small format 12 x 18 or 22.5 x 17.5 cm max,
- coloured pencils, eraser(s), pencil(s), pens,.....
- camera (for panoramas)
- small field bag (small backpack or shoulder bag)

Basic personal equipment to pack:

- warm and waterproof sports wear– nights are cold up in the mountains, even on a warm summer!
- change of clothes
- mountain boots (hiking type) and thick socks
- canteen
- sunscreen (to protect you and not to tan!), sunglasses....
- cap or other headgear.....
- bathroom towel for nights outside of Grenoble

ARRIVING IN FRANCE

Customs

You will have to go through customs at the airport. If the immigration officer asks you what the purpose of your stay is, answer **“to participate in a short-term summer study program” organized by Université Grenoble Alpes.**

How to reach Grenoble : https://international.univ-grenoble-alpes.fr/en/doctoral-student/doing-a-doctorate/travelling-to-the-communaute-universite-grenoble-alpes-583831.htm?RH=GUETREN_STUVPT

There are several airport possibilities you can consider. Lyon and Geneva can be easier solutions than Paris.

HOUSING

You shall be accommodated in the [Résidence Galilée](#).

6 Place Pasteur 38 031 Grenoble

Transportation:

- Stop: « Chavant » Tramway Ligne A, (to/from gare SNCF)
- Stop: « Chavant » Tramway Ligne C, (to/from Domaine Universitaire)

MEALS

Some of the meals (a few lunches, all picnicks, one restaurant) shall be arranged by the Program.

However, you will be free to organize your own meals.

The Résidence Galilée offers fully equipped kitchen (fridge, microwave oven, hotplates).

You also will be able to use an UGA student card that will give you access to University restauration for less than 4€ for a full meal.

LIFE IN GRENOBLE

GETTING AROUND

In Grenoble : <https://www.grenoble-tourisme.com/en/practical-information/getting-around/>

On-Campus: <https://www.univ-grenoble-alpes.fr/en/direct-access/maps/maps-144626.kjsp?RH=1458561227158>

TRANSPORTATION

The TAG – www.tag.fr is Grenoble public transportation company:
You can download the Metromobilité app!

Grenoble's transportation system mostly consists of trams and buses. There is only one fare zone.

N.B.: Don't forget to validate your ticket each time before you get on the tram.

The TAG webpage also exists in English. There, you can easily **ask for itineraries & transportation times**.

Lines and Timetables:

- Trams (A, B, C, D, E) run between 4.30 am and 1 am (check individually for more details)
- Chrono Buses (C1, C2, C3, C4, C5, C6, C7) run from 5 am to 11 am (check individually for more details)

For Trams and Chrono buses, the longest waiting time will be 25 minutes (late, during the school holidays and on Sundays)

LEISURE

The program will take you to some of the most renowned places in Grenoble.

Outside of the Program

Students benefit from reductions in every venue when showing their student ID card.

Have a drink: in France - alcohol is not allowed to minus 18 years.

The Tourism office Tram A & B Hubert Dubedout-Maison du Tourisme - <https://www.grenoble-tourisme.com/en/>

5 Cinemas, several music and live shows Venues

On-campus : [EVE](#) (bar & venue), l'EST, l'Amphidice, L'Aquarium, Le No Name, Le Canberra (every Wednesday)

Sports

! Mountain sports are risky... You should always check the weather forecast and make sure you and someone else know your itinerary before setting on an excursion.

You can contact **La Maison de la Montagne** for advice or check their website <http://www.grenoble-montagne.com/>, in downtown Grenoble in the same building as the Office de Tourisme. They suggest itineraries, organize excursions, canyoning, rafting activities etc., redirect you to the right clubs and associations for what you'd like to do...

14 rue de la République // Tél: 04 57 04 27 00 // grenoble.montagne@grenoble.fr

Websites for Hiking itineraries:

Visorando: <https://www.visorando.com/>

Altitude rando : <https://www.altituderando.com/>

IN CASE OF ILLNESS

ANYWHERE IN EUROPE, YOU CAN DIAL 112 TO GET CONNECTED TO THE RIGHT EMERGENCY SERVICE

In Grenoble : https://international.univ-grenoble-alpes.fr/en/student/health/health-care/health-care-584660.htm?RH=GUETREN_STUH

The Communauté Université Grenoble Alpes healthcare centers

1. On-campus health care center
 - a. 180 rue de la Piscine
 - b. *Tram B station « Les Taillées » or tram C station « Hector Berlioz »*
 - c. Opening Hours: from 8 a.m. to 5 p.m on Mondays, Wednesdays, Thursdays and Fridays, and 9 a.m. to 5 p.m. on Tuesdays
2. City center healthcare center
 - a. 10, rue Vassieux en Vercors, 38000 Grenoble
 - b. *Tram B station « CEA - Cambridge »*
 - c. *Opening hours Tuesday 10h-17h // Monday and Thursday 8h-17h*

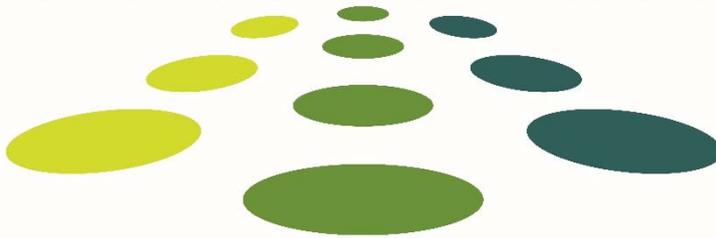
- **Fire Brigade:** Call 18 (or 112 from a cell phone)
- **Police:** Call 17
- **Hospital:** 04 76 76 75 75
- **Casualty medical officers** (from 20h to 24h and on weekends): 04 76 865 900
- **Emergency Health Intervention:** Call 15
- **Hopital Michallon Emergency unit:**
 - Tram B, "Grand Sablon" Tram stop - access on the "Belledonne" side
- **Groupe Hospitalier Mutualiste (GHM) Emergency unit:**
 - 8, rue du Dr Calmette
 - Tram C "Vallier-Dr Calmette" stop or Bus 12 - "Groupe Hospitalier Mutualiste" stop
- **See a doctor without an appointment at Médecins 7 sur 7 (7/7 Doctors)**
 - 84 cours Jean Jaurès (downtown Grenoble)
 - Tram E "Condorcet" stop
 - 8h to 24h and on week-ends

Logos + celui de la region



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