**BIP General presentation**

**Solar energy for buildings: from components to cities**

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| **General Information** |
| **Dates for physical activity:** From 19th at 16h00 to 24th 17h30 of November 2023  |
| **Proposed period for virtual component:** VIRTUAL COMPONENT* October – Beginning of November 2023 (asynchronous activity)
* Fall semester 2023 – participation to UNITA Weekly Talks on Renewables Energies
* 2 synchronous meetings 1.5 hours during the month of October/november (dates to be confirmed in September)

INTENSIVE WEEK AT USMBFrom 19th to 24th of November 2023, this includes:* Arrival on the 19thth of November to Chambéry meeting at 16h in city-center. (travel from home, accommodation on 19th and dinner on 19th on your own (book and pay), using Erasmus + travel grant)
* 20th – 24th : week at Yenne (Clos des Capucins), shared with international Scientists – accommodation, meals and transportation provided by organisers
* 24th coming back to Chambéry from Yenne, transportation provided by organisers
* 24th at 18h travel back (on your charge: book & pay on your own, using Erasmus + travel grant), eventual additional accommodation on your own (book & pay)
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| **Location** **of physical activity:** France, Le Bourget-Du-Lac (close to Chambéry, access in public transportation), followed by Yenne in the pre-Alps |
| **Target audience / Participant profile:** Master students, PhD students |
| **No. of ECTS issued:** 3 ECTS |
| **Language of instruction** **and requirements** English (B2) |
| **Requirements/Prerequisites:*** Basic background in engineering or physical sciences,
* General knowledge about solar energy,
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| **Organizing board :** All UNITA universities can send students |
| **Host university****USMB**Ass. Prof. Julien Ramousse(Julien.ramousse@univ-smb.fr) | **UNITA partner 1****UNITO**Prof. Nadia Barbero (nadia.barbero@unito.it)  | **UNITA partner 2****Univ. Zaragosse** María Paz Comech, (mcomech@unizar.es) | **UNITA partner 3****Univ. West Timisoara** Prof. Nicoleta Stefu (nicoleta.stefu@e-uvt.ro) |
| **Program** |
| **Title :** **Solar energy for buildings: from components to cities** |
| **Short description:** The SUN2C scientific school addresses solar energy applications from a technical point of view. A massive deployment of the use of solar energy is inevitable in order to decarbonate the energy sector. This implies to multiply by 5 to 10 the actual capacity in coming years. This can only be achieved through a holistic planning of the deployment of the solar energy.SUN2C aims to participate both in the dissemination of knowledge and the state of the art, but also in the popularization of advances in the following themes:• Development of materials, components and systems for capturing and converting solar energy (Photovoltaic, Solar Thermal, etc.)• Innovative technologies for the integration of clean energy in existing or new buildings• Analysis and design of integrated solar buildings in cities (solar urban development)All these themes will be addressed in the form of educational and accessible presentations to all up to more advanced presentations, through lectures. Workshops will be spread over the week, encompassing the different scales covered and the associated scientific themes, to allow the participants to apply their knowledge to specific case studies. |

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| **Proposed preliminary schedule:**

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|  | Monday | Tuesday | Wednesday | Thursday | Friday |
|  | **Visits** | **Lecture –Material** | **Lecture – Solar technologies** | **Lecture – Building integration** | **Lecture – Solar cities** |
| 08h – 10h | INES LOCIE LEPMI | Material and architecture | PV & ST | BIPV | Solar cadaster  |
| 10h-10h30 | Coffee break |
| 10h30 – 12h30 | Durability, aging | Hybridization | Intermittency management | Energy networks |
| 12h30-14h | Lunch |
|  | **Lecture – Ressource solaire** | **Workshop** | **Workshop** | **Workshop** | **Lecture – Prospectives**  |
| 14h – 16h | Caracterization  | Rotating workshop | Rotating workshop | Rotating workshop | Métabolisme urbain |
| 16h-16h30 | Coffee break |
| 16h30-18h30 | Variability | Rotating workshop | Rotating workshop | Rotating workshop | Return |
| 18h30 – 19h30 | Posters | Closing cocktail |
| 19h30-21h | Dinner |

Friday 18th 16h – coming back to Chambéry at 17h30 |
| **Invited guests/speakers/experts :****Mat Santamouris (UNSW, Australia), Nadia Barbero (UNITO, Italy), Brian Norton (TU Dublin, Irlande) ...**  |
| **Application procedure** |
| **Requirements** :Each UNITA office is in charge of selecting the students * Master students, PhD students, with background in engineering or physical sciences…
* Interest in solar energy**,**
* Equivalent B2 level in English
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| **How to apply** : 1. Email your UNITA Office or International relations office at your home university before **September 30th.** In your e-mail, mention : - your name (First name, SURNAME) - your academic field (*eg: Egyptian History, European Studies, Business Management…*) - your level of studies (*Bachelor, Master, PhD)* - the name of the BIP in which you want to take part (**Solar energy for buildings: from components to cities**) 2. Additionally, complete this survey <https://usmb.moveonfr.com/form/64804ea58a9415c0bf041dea/eng> before **September 30th.** |