

AR-804

## Summer School on Designing for Resiliency: RE:GENERATE alpine-urban circularity

Binder Claudia R.

Cursus	Sem.	Type
Architecture and Sciences of the City		Obl.
Civil & Environmental Engineering		Obl.

Language of teaching	English
Credits	2
Session	
Exam	Oral presentation
Workload	60h
<b>Hours</b>	<b>82</b>
Courses	14
Exercises	28
TP	40
<b>Number of positions</b>	<b>20</b>

### Remark

Next time: 2021

### Summary

What makes a community and its livelihoods resilient, given the current social, economic and ecological pressures? What are community regeneration strategies in remote geographies, like mountains? During this PhD summer school in the Italian Alps, we will discover answers to these questions.

### Content

**Organisers EPFL : Prof. Dr. Claudia R. Binder; Dr. Romano Wyss; Anna Pagani**

**Organisers ETHZ : Prof. Dr. Adrienne Grêt-Regamey; Dr. Tobias Luthé ; Reto Spielhofer ; Ana Stritih**

By developing creative solutions at the interface between science, design and practice, the summer school engages with a mountain community in its re-organization and new growth phase, based on three conceptual pillars:

- **Immersion in the local context**

*Production of place-based knowledge on mountain cultures, economies, landscapes, and resilience (socio-technical-ecological system)*

- **Definition of a common vision**

*Exploration and definition of what 'resilient' and 'regenerative' means, based on local identity*

- **Co-Designing tools for the local to regional sustainability transition**

*Identification of locally functioning and generalizable systemic innovation tools*

#### **Theme:**

Mountain regions face multiple challenges, such as climate change, depopulation, political neglect and economic crises. At the same time, they offer hotspots of biodiversity, water reservoirs for downstream life, a home to local people, and valuable complementary spaces for urban areas in terms of tourism spaces and retreats.

In order to exploit their potential as living spaces for the local population as well as complementary spaces for city dwellers, mountain regions are confronted with difficult decisions. How can mountain regions build resilience against undesired types of change, while retaining their key cultural and ecological characteristics? How can the exchange between urban areas and mountain communities be developed in a way that benefits both sides? And what can the mountain life of the future look like, both in terms of form and function? A safe retreat space in times of crises? A new "Alpine urbanism"?

These are truly complex questions which require a systemic approach by design. Systemic design is an emerging field between systems science and design, useful to understand and shape inter- and transdisciplinary transition processes. Scientists and Designers, Architects, Engineers and Planners need to jointly interact with local people, policy makers,

and practitioners to find creative and attractive solutions to complex problems. The interdisciplinary PhD Summer School “Designing for Resilience: RE:GENERATE alpine-urban circularity” will address this need.

#### **Objectives:**

In this summer school you will work in interdisciplinary groups and together with local inhabitants to strengthen local identity and rebuild resilient mountain communities within a regenerative, circular economy. To solve such complex problems, you will be taught methods of *systemic design thinking and doing, combining systemic design* approaches with scientific or practical methods from your own background.

#### **Location:**

The MonViso Institute (MVI) and the community of Ostana will serve both as a study location and a practice example in how to deal with the challenges mentioned above, on integrated spatial and governance scales. The MVI ([www.monviso-institute.org](http://www.monviso-institute.org)) is a unique real-world laboratory for regenerative design and sustainability transitions in mountain areas. It is situated in the Italian Piedmont mountains, Po river valley, close to Turin, and run in close collaboration with the Polytechnic University of Turin, Department of Architecture and Design. MVI is designed exactly to host and integrate educational retreats, in transdisciplinary cooperation with the local community of Ostana, where students engage in the complexity of integrating theory and practice with direct feedback between science and practical implementation.

#### **Learning context and methods:**

In the early 1900s, up to 1200 people lived in the Occitan community in summer, mainly from mountain agriculture and livestock. By 1980, due to interrelated economic and demographic reasons, only 5 people officially remained. Today, Ostana is regenerating, based on a more diverse, flexible, circular economy. To better cope with the complexity of the sustainability challenges at stake, you will study and support this regeneration with a **systemic design perspective**. You will explore the interconnections between the technical, social and ecological elements of the system, and proactively design tools that address the needs of the community. To do so, you will integrate established technical planning and engineering skill-sets with ecological life cycle design and social science methods. You will prototype with local people, take part in design-doing workshops, bio-mimetic outdoor learning and sharing activities. Special attention will be given to the interaction with local practitioners in creating new, regenerative solutions.

#### **Outputs:**

In a low-threshold and inclusive research phase you will collect qualitative and quantitative data. This data will be obtained through the analysis of social networks, drone scanning, mobility experiments or circularity master planning, etc. in order to understand the challenges of the area. You will then develop an adequate communication of the identified challenges and possible solution paths to revive the alpine community (“seeds for systemic innovation”). For example, this may include short films, systems “giga” maps or technical demonstrations. Finally, you will present and discuss the findings and solutions paths at the local Regenerative Design Talk (RDT) series, open to the local community and the public. In general, we encourage you to contribute with your expertise and use methods from your background to make this summer school a valuable broadening of horizons.

#### **Experience:**

As systems thinkers and designers, we embrace the complexity of human-environment relations. The mission of this PhD summer school is to provide for such systemic interaction and emerging connections through interwoven periods of work and play, of collective discourse and individual space. We host an academic environment that provides ample space to understand and experience the local context, enjoying outdoor activities within the beauty of the Italian Alps. Social dining, joint barbecuing at the open fire, drone photography, hiking, rock climbing, and many other activities will allow you to interact with the locals and the unique nature. Expect learning experiences beyond your comfort zone, which is where innovation and systems change thrive!

#### **Note**

To apply, please submit your CV together with a letter of motivation (600-800 words), stating why you want to participate, how this relates to your PhD project, and how you believe you can contribute to this summer school.

#### **Keywords**

Local identity; resilient landscapes; regenerative economy; mountain communities; real-world laboratory; Italian Alps.

#### **Learning Prerequisites**

##### **Important concepts to start the course**

This PhD school accepts applications from highly motivated, interdisciplinary students currently enrolled in a wide range of PhD programs. The openness and ability of students to engage with the local community is

key for the success of this summer school. Interest in mountain environments and practical experience in the fields of planning, design, engineering, architecture, mountain tourism, graphical communication or construction are an advantage.

### Learning Outcomes

By the end of the course, the student must be able to:

- Understand the challenges and opportunities facing mountain communities, recognize their social, ecological, and economic specificities, and identify their strengths and vulnerabilities in coping with future challenges (immersion)
- Apply systemic design methods to integrate socio-ecological, technical and planning perspectives and cope with the complexity of sustainability challenges in the real world. (design) ### Develop innovative solutions that can support regenerative and resilient mountain livelihoods (regeneration and resilience)
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- Effectively communicate complex problems and systemic design solutions to various stakeholders.

### Resources

#### Bibliography

Bibliography will be communicated directly to the participants. Information can be found on the website.

#### Websites

- <http://systemicdesignlabs.ethz.ch>