INTERNATIONAL SUMMER SCHOOL

30.08–07.09.2025

WOOD AND THE CITY

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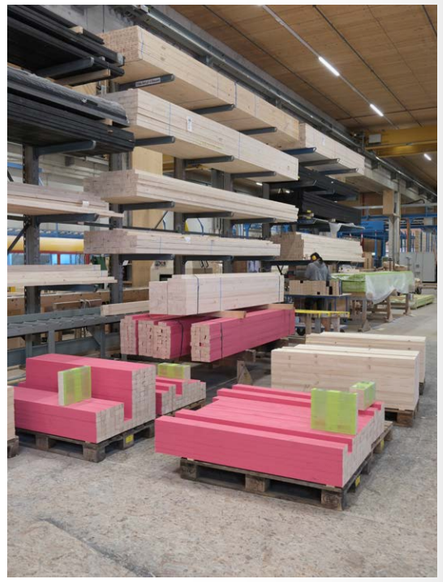
Wood and the City
ZHAW Summer School 2025
Final Report

Organized by

zh aw Architektur, Gestaltung und Bauingenieurwesen

ZHAW Summer School 2025



1–2 Students presenting their work at the final presentations in Winterthur.

3 Site visit at Blumer Lehmann.
4 Stone cutting saw in Vals at Truffer AG.

Preface
3rd International Summer School “Wood & Stone”

This year’s Summer School was dedicated to the investigation of material flows and the exploration of innovative timber-stone hybrid structures, with the aim of analyzing their impact on future landscapes and building practices. A particular focus was placed on identifying and evaluating strategies for the enhanced use of locally available resources, with the goal of fostering sustainable construction methods. The program encouraged participants to critically question existing design approaches and to develop new strategies that enable the revival and integration of traditional building practices into the contemporary construction methods.

The third edition of the Summer School Wood and the City examined the role of timber as a complementary material in architecture, with special attention to its interaction with natural stone. At the center was the question of how far the combination of these materials can not only expand structural and design possibilities but also redefine their influence on landscape and architectural expression.

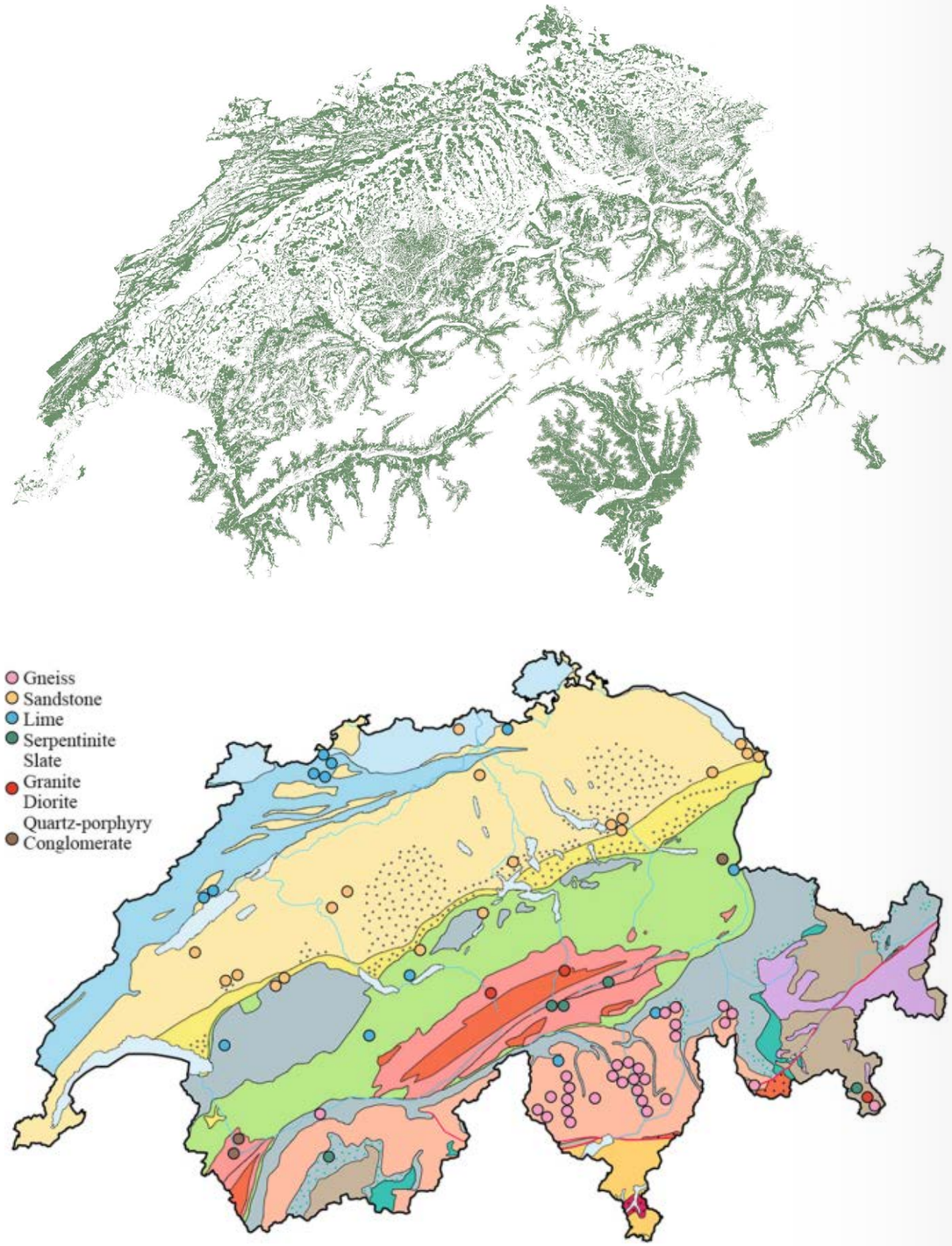
Close collaboration between academia and industry was once again a key component of the Summer School. Excursions to production sites such as Truffer AG in Vals and Müller Naturstein AG in Neuhaus, as well as the timber construction company Blumer Lehmann AG in Gossau, offered participants the opportunity to experience the material, technological, and economic aspects of these industries firsthand and to engage in an interdisciplinary dialogue.

A significant focus was placed on the systematic investigation of the properties and potentials of different types of timber and stone in various regional contexts.

Participants were encouraged to analyze these materials in terms of their structural, aesthetic, and ecological qualities and to critically assess their suitability for constructive application.

Through the experimental development and construction of timber-stone hybrid structures at mock-up scale, participants gained practical insights into the structural possibilities and design potentials of this material combination.

We sincerely thank all participants, partners, and visitors for their great commitment!



5 The Forest Area of Switzerland. Map © swisstopo / WSL
6 Data: Tectonic Overview Map from the book “The Mineral Resources of Switzerland” (1997).
Image © Swiss Geotechnical Commission (SGTK); Geo-Resources Switzerland specialist group, ETH Zurich.

01
Summary
Wood and the City
Wood & Stone

Context

The building sector is a major emitter of CO_2 and waste. In Switzerland, construction and building operations account for around 50 % of raw material demand, 30 % of emissions, and over 80 % of waste (SECO, 2023). Globally, buildings are responsible for 34 % of energy use, 37 % of CO_2 emissions (UNEP, 2024), and up to 40 % of waste (Soto-Paz et al., 2023). Decarbonising building materials and integrating them into local, circular value chains is essential (SIA, 2020).

Our Summer School investigated how combining wood with natural stone may have a positive impact to the landscape while contributing to a more sustainable building sector.

Natural Materials

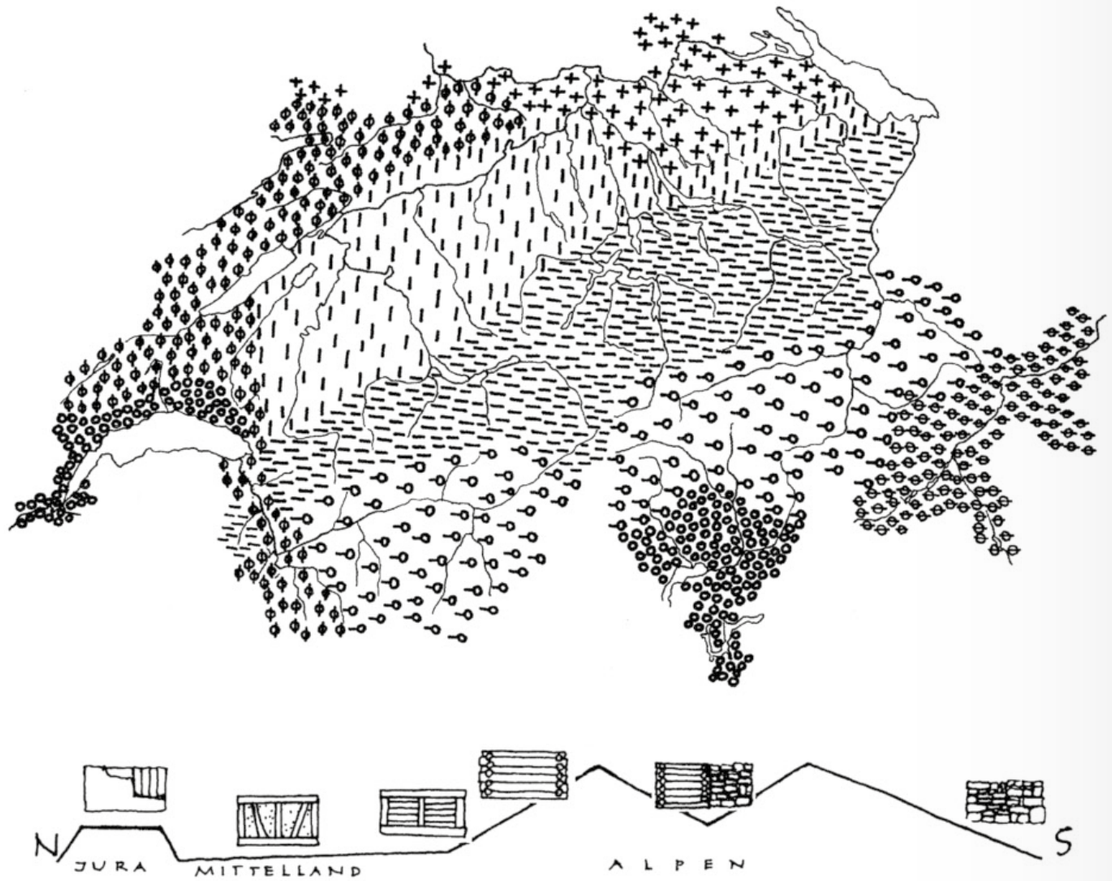
Switzerland is rich in wood and stone, resources that have long shaped its architecture and identity. Their use supports local economies and sustainable development (figures 5 and 6).

Wood

Forests cover one-third of Switzerland, with strict management ensuring regeneration and biodiversity. Timber is renewable, climate-friendly, and increasingly central to sustainable construction. Modern Swiss architecture uses local species—spruce, fir, larch, beech—and engineered products like CLT and glulam for efficient prefabrication. Wood’s potential lies not only in its ecological and cultural context but also in hybrid use with other materials.

Stone

Switzerland’s diverse geology—granite, gneiss, limestone, sandstone—has shaped landscapes and building traditions. Today, stone is mostly decorative, despite its structural potential.



SIGNATUR	BAUSTOFF	BAUWEISE	SCHEMA	VERBREITUNG
o	1. STEIN	MAUER MIT ODER OHNE VERPUTZ		SÜD- UND WESTSCHWEIZ AUCH JURA
-o	2. STEIN/HOLZ	KÜCHENTEIL GEMAUERT STUBENTEIL IN BLOCKBAU		INNERALPINES GEBIET «GOTTHARDHAUS»
⊖	2a STEIN/HOLZ	WIE OBEN (2) ABER BLOCKBAU DER STUBE VON MAUERMANTEL UMGEBEN.		ENGADIN UND BENACHBARTE GEBIETE «ENGADINERHAUS»
ϕ	2b. STEIN/HOLZ	GEMAUERT, NUR EINZELNE TEILE AUS HOLZ.		JURA UND WESTSCHWEIZ
–	3. HOLZ (LIEGEND)	BLOCKBAU		NORDALPINES GEBIET
I	4. HOLZ (LIEGEND)	BLOCKSTÄNDERBAU = STÄNDERBAU MIT BLOCKFÜLLUNG		NÖRDLICHER ALPENRAND UND TEILE DES MITTELLANDES (IN RELIKTHAFTER STREUUNG NEBEN FACHWERK)
+	5. HOLZ (STEHEND)	STÄNDERBAU (ÄLTER) ODER FACHWERK (JÜNGER)		MITTELLAND NACH NO ZUNEHMEND «RIEGELHÄUSER»

S ↑ N

7 Distribution map: building materials and construction methods in Switzerland.
From: Richard Weiss, Häuser und Landschaften der Schweiz. (Bern: Haupt, 2017)

Of 300,000 m³ quarried annually, less than 10 % is used structurally and 50 % becomes waste. Meanwhile, two-thirds of stone in Swiss construction is imported, raising its carbon footprint (Singer, Pilz & Mosayebi, 2025).

Hybrid Potentials

Timber and stone have long been paired in rural and alpine contexts, directly reflecting local resources (Weiss, 1959/2017). Their contrasting qualities—timber's lightness and renewability versus stone's strength, mass, and durability—make them complementary. Hybrid systems could create sustainable, reusable, and circular construction methods.

Through hands-on experiments the students explored diverse timber-stone joints and typologies, combining digital design with manual craft through prototyping. The research asked: How can this wood and natural sone alliance support regional circular economies? And how might the interplay of soft and hard, light, and heavy materials, inspire new architectural forms?

Throughout the following pages, the Summer School experiences and the Students work are documented thanks to the texts and images selected by students that apply for ETCS Credit. The student work was developed in five groups, each group was asked to produce a poster, a manifesto and a mock-up of their exploration of how wood and natural stone may come together.

Bibliography

Journal of Building Engineering, Volume 78 (2023). SECO (State Secretariat for Economic Affairs) Homepage, www.seco.admin.ch, last accessed 2025/03/05. Singer, F., Pilz, N., & Mosayebi, E. (2025).

United Nations Environment Programme. Global Status Report for Buildings and Construction (2024).

Jonathan Soto-Paz, Orlando Arroyo, Luz Elba Torres-Guevara, Brayan A. Parra-Orobio, Miguel Casallas-Ojeda: The circular economy in the construction and demolition waste management: A comparative analysis in emerging and developed countries.

Swiss Society of Engineers and Architects (SIA): Klimaschutz, Klimaanpassung und Energie, Positionspapier (2020).

Forgotten resource, untapped potential – Rediscovering Swiss natural stone as a load-bearing building material. Architecture, Structures and Construction, 5(26). https://doi.org/10.1007/s44150-025-00145-3

02
Agenda of the Week

30.08, Saturday
Arrival Day

Arrival Day

31.08, Sunday
WATC Welcome

8.30
Welcome
Intro
Kick-Off

10.30
Lecture
Stefan Holzer

12.30
Lunch

13.30
ZHAW Tour

14.30
Group
Workshop

16.00
PinUp I

01.09, Monday
Site Visits

7.30
Transfer
Winterthur – Vals

10.00
Site Visit
Truffer AG

12.30
Lunch

13.30
Excursion

16.30
Transfer
Vals – Winterthur

02.09, Tuesday
Site Visits

7.30
Transfer
Winterthur – Neuhaus

8.30
Site Visit
Müller Naturstein AG

12.30
Lunch & Transfer
Neuhaus – Gossau

14.00
Site Visit
Blumer Lehmann

17.30
Transfer
Gossau – Winterthur

03.09, Wednesday
Workshop

8.30
Lecture
Guillaume Habert

10.00
Welcome
Oya Atalay Franck

10.30
Lecture
Laura Zubillaga

11.30
Workshop
Concept / Ideation

12.30
Lunch

13.30
Workshop

17.00
PinUp II

04.09, Thursday
Workshop

7.30
Transfer
Winterthur – Neuhaus

8.30
Workshop
1/2 Group at Müller Naturstein AG

12.30
Lunch

13.30
Workshop
1/2 Group at Müller Naturstein AG

17.30
Transfer
Gossau – Winterthur

05.09, Friday
Workshop

8.30
Lecture
Elli Mosayebi

10.00
Workshop

11.00
PinUp III

12.30
Lunch

13.30
Workshop

Poster
Test-Print

06.09, Saturday
Final Presentation

8.30
Workshop
Preparation Final Presentation

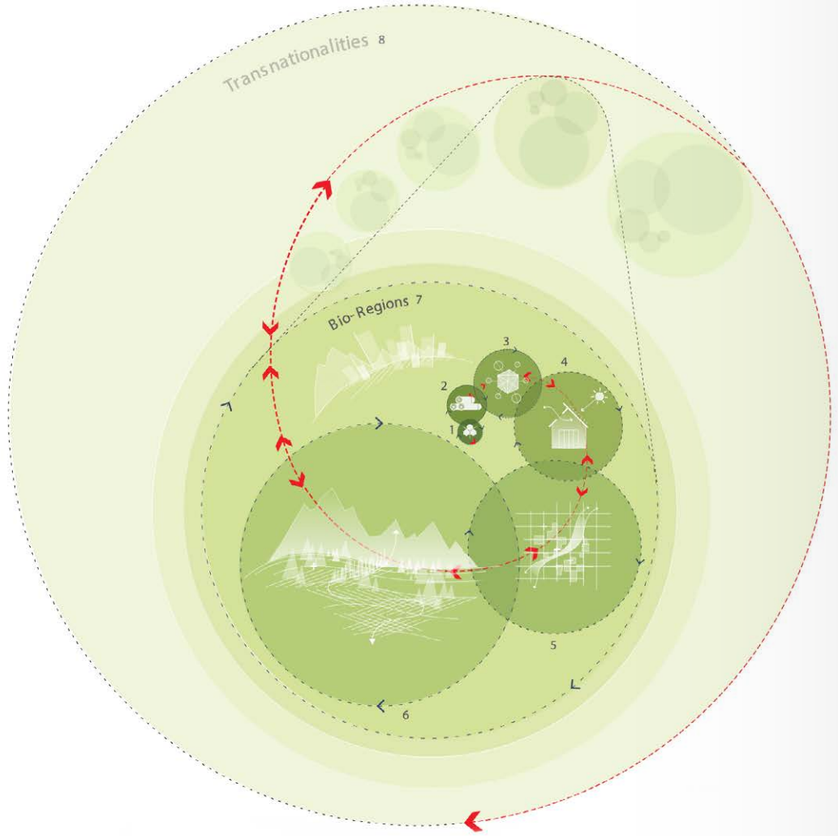
12.00
Lunch

13.00
Final Presentation

16.30
Farewell Apéro

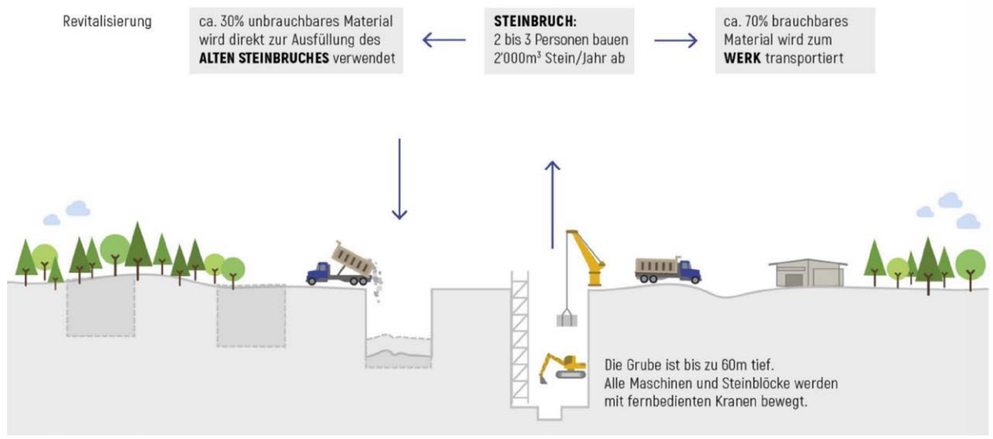
07.09, Sunday
Departure Day

Departure Day



Nested Scales

1. Green Chemistry
2. Raw Materials
3. Products
4. Buildings
5. Communities + Services
6. Landscapes
7. Bioregions
8. Transnationalities



8 Nested Scales. Diagram © Luthe T, Fitzpatrick H, and D Wahl. 2022.
9 Stone Quarry, Müller Naturstein. Diagram © Müller Naturstein AG.

03
Diary of the Week

Context and Value Chains

by Louisa Weitz

The construction sector is one of the largest global sources of CO_2 emissions, making change urgent. At the same time, it faces limited resources, which increases the importance of natural materials such as wood and stone. To understand their role in future building practices, it is necessary to examine value chains—from material origin to processing, transport, use, and reintegration into natural or technical cycles.

Nested scales help explain these connections: from chemistry and raw materials, through products, buildings, and communities, up to landscapes and bioregions. Materials are not only technical resources but also part of larger ecological and social systems. Using local wood or stone reduces transport emissions, supports regional economies, and respects landscape limits, making material cycles part of broader resilience strategies.

Wood offers clear carbon benefits: timber products store carbon, can be regrown, and fit into continuous cycles, making them highly effective low-carbon materials. Natural stone, with its durability and reusability, also performs better than many industrial alternatives. Together, they demonstrate how traditional materials can provide modern solutions to reduce the environmental footprint of buildings. A quarry example shows how value chains can minimize waste: about 70 % of stone is usable, while 30 % is returned to refill sites, helping to restore landscapes. Despite heavy machinery, responsible management reduces long-term damage. In a time shaped by net-zero targets and resource scarcity, integrating local cycles and prioritizing low-carbon materials is crucial. Used thoughtfully, wood and stone point to a clear path toward more sustainable construction.

Wood and Stone as Building Materials

by Fabienne Keller

Wood and stone are among the oldest building materials and have shaped architecture for centuries. Both materials have very different characteristics, reflected in their use, and together they open up exciting perspectives.

Wood, with its warm, natural surface, appears familiar and alive. It is lightweight, easy to work with, and allows for great flexibility in construction. Carpenters and architects appreciate it because complex structures can be created with relatively simple tools. In addition, wood is a natural insulator and comes from renewable sources. Its weaknesses lie in its lower durability; it requires regular maintenance and can be affected by moisture or pests. Nevertheless, the Hōryū-ji Temple in Japan, which has stood since the 7th century, demonstrates that wood can be astonishingly long-lasting when used properly. Contemporary projects by Kengo Kuma or Francis Kéré also highlight the versatility of wood in modern contexts.

Stone, on the other hand, conveys solidity, permanence, and timelessness. It is highly resistant, requires little maintenance, and impresses with its enormous compressive strength. This makes it well suited for massive walls, bridges, and monumental buildings. However, it is difficult to work with, provides poor insulation, and is considered non-renewable. Yet examples such as the Vals Bridge by Jürg Conzett or works by Mario Botta show how powerful and expressive stone can be.

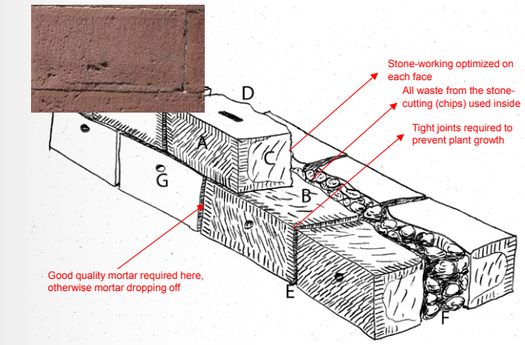
In direct comparison, wood and stone represent opposites: the light and flexible meets the heavy and enduring. It is precisely in this tension that their potential lies. Hybrid constructions combining both materials make it possible to unite sustainability, expressiveness, and technological innovation. Especially today, as regional materials and resource-conscious building practices come increasingly to the forefront, wood and stone together can play an important role in the architecture of the future.

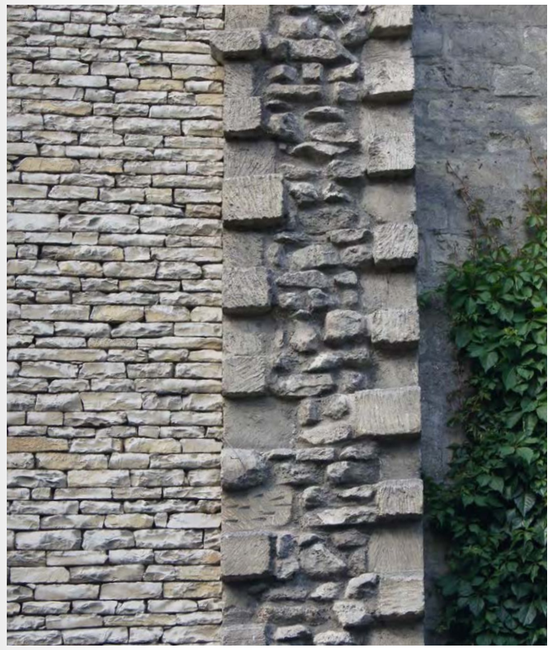
Buidling with stone – the past
Lecture by Stefan Holzer, ETH Zürich

by Jasmin Peter

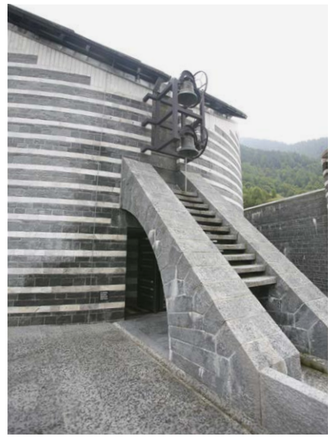
Humans have built with stone for thousands of years, and many ancient structures still stand today. Techniques evolved across regions, materials, and craftsmanship.

Stone walls were often multi-leaf, with inner and outer faces filled with smaller stones—usually gathered on site—minimizing





10 Historical stone masonry: a paradigm of economy and sustainability.
11 Horizontal alignment of courses facilitates rubble construction (Borgo Casnacc, Bondo GR, 16th c.)
12 Ashlar filled with small materials. (Paris, Saint-Germain-des-Prés, chapel Saint-Symphorien, 11th c.)



13 Hōryū-ji Temple in Ikaruga, Japan, 1607.
14 GC Prostho Museum Research Center, by Kengo Kuma architects, 2010.
15 San Giovanni Battista Church in Mogno, Switzerland, by architect Mario Botta, 1992-1996.
16 Valserrheinbrücke by Jürg Conzett and Peter Zumthor, 2009. Image © Jonathan Allemann.

waste. Across Europe, masonry varies: some walls use evenly dressed blocks, others irregular stones. Even rustic walls feature carefully placed corner stones, essential for stability. Openings and corners were often finely crafted, while wall faces were filled with rougher stones, sometimes in herringbone. Courses of similar-sized stones added strength. Mortar was often needed, especially for round stones, though such walls required more upkeep.

Many historic buildings used ashlar—blocks cut from large stones with hammer and chisel. Edges were first dressed, then opposite faces aligned with wooden gauges to prevent twisting, before final shaping. Tool marks remain visible today, from chisels to axes, with Gothic buildings often showing the toothed axe's elegant finish. Ashlar walls, like rubble walls, were frequently multi-leaf, with smooth faces outside, rough inside, and cores of rubble and mortar. Even columns and piers were built this way: solid in appearance but filled inside. This method conserved scarce, heavy stone and improved resistance to earthquakes and fire, unlike monolithic piers that could shatter under heat.

Stone walls are more than relics—they showcase sustainable building. Through precise craftswwmanship, efficient use of material, and structural ingenuity, they achieved durable, resource-conscious construction that has lasted for centuries.

Vals Site Visit: Truffer AG

by Edmond Gashi

The Vals Quarry and Stone

Vals Stone, a quartzite of exceptional hardness and durability, has been quarried for centuries in Graubünden. Abundant and versatile, it became central to local building culture. Today, its fine layering, grey-green hues and elegant veining make it an internationally prized natural stone, combining robustness with refinement.

Extraction in the Quarry

The quarry above Vals has long shaped the local economy. Extraction, once done by hand, now relies on modern technology. Boreholes are drilled, precisely charged and blasted so blocks break cleanly without damage. These multi-tonne blocks, already massive in presence, are then moved with heavy machinery.

Transport and Cutting

From the quarry, blocks go to the processing hall, where huge diamond-tipped saws cut them into slabs. Thickness varies by use—structural facade panels, durable tiles, or thin cladding. The precision is striking, given the size of the raw stone.

Further Processing

Slabs are either left in standard formats or refined to highlight texture and veining. Surfaces can be split rough, ground smooth, or polished. Advanced milling and craftsmanship also produce custom pieces—from washbasins and benches to smaller household objects.

Regional and Architectural Importance

Vals Stone defines the village: roofs, walls, and paths all use it, giving the place its cohesive character. Internationally, its reputation was cemented by Peter Zumthor's Vals Thermal Baths, an icon of modern architecture where the stone's timeless quality meets contemporary design.

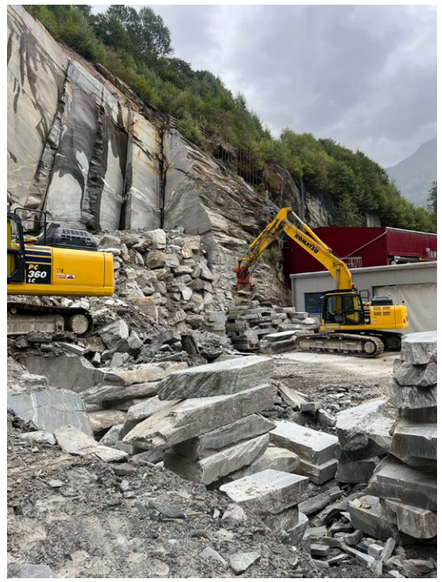
Visit at Müller Naturstein AG

by Giovanni Böwer

Since 2022, Müller Naturstein AG has been led in the fifth generation, combining traditional stone craftsmanship with modern technology and a strong focus on sustainability. At its core is the quarrying and processing of Bollinger sandstone from the company's own shafts. Bollinger sandstone, formed 20–25 million years ago in the Oligocene, is found along the northern shore of Lake Zurich. Its blue-grey to grey-green tones and layered texture give it a distinct appearance. Dense, strong, and weather-resistant, it has long been used for both historic monuments and contemporary buildings.

Extraction and Processing

Sandstone is extracted by shaft mining at depths of 40 to 60 meters. About 70 % is processed, while 30 % refills the shafts, which are used for 10–20 years each. Unlike open pits, this preserves the surface landscape. Stone from deeper layers is also denser and more durable. Today, extraction uses diamond wire saws, chain saws, and conveyor systems, allowing precise cuts with minimal waste. Raw blocks are processed at the plant using gang saws and wire saws, then shaped with milling techniques. CNC-controlled mills, guided by digital models, enable highly complex geometries. Stone lathes create precise columns or spheres, while stonemasons refine surfaces and details by hand. Finishes range from polished to sandblasted, depending on design needs.



17–18 Site visit at the quarry of Truffer AG in Vals.

19 Site visit at the quarry of Müller Naturstein AG in Zurich.

20–22 Site visit at Blumer Lehmann AG in Gossau.

Architectural Context

Since the Middle Ages, Bollinger sandstone has shaped Zurich and beyond: the Grossmünster, Credit Suisse at Paradeplatz, Einsiedeln Monastery, and St. Gallen Abbey are key examples. Today, it remains relevant in modern projects such as Santiago Calatrava's Haus zum Falken, where CNC-milled organic façade elements were produced in the workshop.

Workshop Day

During the visit, five groups worked on their own projects, experimenting with both hand tools and machines. Tasks included cutting lines, drilling bars, and turning a cone from a leftover stone core. The process revealed sandstone's versatility and showed how traditional craft, digital technology, and creativity can come together in practice.

Blumer Lehmann AG: Tradition and Timber Innovation
A Site Visit to a Fifth-Generation Swiss Company

by Erson Kadrija

Founded in 1875 as a small sawmill in Gossau, Blumer Lehmann has grown over five generations into a leading timber construction company. What began with simple sawing expanded into joinery, prefabrication, and today, advanced timber engineering and modular construction. Rooted in Switzerland yet active internationally, the company is known as a pioneer in innovative timber processing.

From Tree to Building Element

Logs from Swiss forests arrive from sustainable sources, keeping transport short and ecological impact low. In the sawmill, they are cut into boards and beams with care to minimize waste and maximize usable material.

Finger Jointing and Processing

Boards and beams are edged to remove defects, then scanned and joined into long, stable beams. Finger jointing transforms small pieces into high-quality construction elements. The beams are dried, sorted, planed, and cut to precise dimensions, ensuring quality and accuracy.

Prefabrication and Modular Construction

In prefabrication halls, elements are assembled into large modules—often including windows, doors, and interiors. On site, these modules are combined quickly and precisely, enabling efficient construction of housing, schools, and temporary buildings.

Timber's Importance and Future

For Blumer Lehmann, timber is both tradition and innovation. Renewable and CO_2-storing, it supports sustainable construction while offering strength, lightness, insulation, and warmth. The company develops free-form structures and new products in collaboration with architects and researchers, showing how timber can define the architecture of the future.

Material Diets: Stone, Wood and the Ethics of Construction
Input by Prof. Dr. Guillaume Habert

by Jasmin Angst

Sustainability in architecture is about time. Buildings can last in two ways: through strong, durable materials or through regular repair and renewal. The pyramids still stand, but the knowledge of how they were built is lost. A mosque, on the other hand, is repaired every year, keeping both the building and skills alive. Sustainability can mean material longevity or the continuation of traditions and knowledge.

It is important to remember that material durability and building lifespan are not the same. Many materials last longer than the building itself. Therefore, buildings should be designed to be adaptable and easy to take apart. In this way, buildings become "material banks" for the future.

Climate change makes this more urgent. For the first time, the climate is changing faster than civilizations can adapt. Cities and buildings will need to respond. Architecture is not just shelter it is also a message to the future. What do we want to leave behind: stored carbon, traditional skills, or healthy forests instead of timber for roof beams?

Materials have two logics. Natural materials like wood or stone already exist; their environmental impact comes from extraction and shaping. Industrial materials like concrete or steel must be produced, which takes a lot of energy and creates more emissions. For natural materials, bigger and simpler is often better. For industrial materials, using less is better. Transport is usually less important than production. Even moving reused materials long distances can be better than making new ones. Reuse is almost always the best choice.

The idea of a "material diet" is simple: sustainability is not about a single material, but how much we use. Wooden buildings use less mass than concrete, saving 20–30 % of emissions. Biogenic materials like wood or straw store carbon while growing, sometimes even reducing the total carbon footprint. But we must always use resources wisely.

Finally, sustainability is more than carbon. It includes ethics, fair work, and cultural values. Beauty matters too: people preserve what they value. Buildings that are used, cared for, and loved are the most sustainable of all.

Wood Program Aalto University

by Marina Bosch

The Wood Program at Aalto University

The Wood Program is a one-year course in wooden architecture for architects, engineers, and design students with a strong interest in timber. Its aim is to explore the architectural, technical, and ecological dimensions of wood—from forest to built structures. The curriculum combines theory with practical experimentation, including prototyping, prefabrication, and full-scale construction. Students test new techniques, investigate sustainability, and consider wood's role in industrialized building systems.

Projects and Teaching

Laura Zubillaga, lecturer in Wood Architecture at Aalto, introduced the program at the ZHAW Summer School 2005. She has led more than ten experimental design-build projects that have gained national and international recognition.

Two examples:

Alava — a summer theatre for Annantalo Youth Arts Centre in Helsinki, is a square-plan building with triangular openings that frame the stage in three directions.

Kokoon — a modular living unit, addressing Finland's shortage of temporary housing. Prefabricated modules can be stacked in various configurations and were prototyped at the Museum of Finnish Architecture and Design.

Pedagogical Framework

Over thirty years, the program has realized dozens of experimental wooden buildings. These projects are full-scale works testing innovation in material use, sustainability, structural systems, and social roles of architecture. Students engage in every stage—from design to prototyping, construction, and assembly—emphasizing collaborative learning.

Vision

The Wood Program is recognized internationally for its innovative approach to education. It treats wood not only as material and technique, but as a medium linking ecology, industrial design, and social values. Through her teaching and project leadership, Zubillaga plays a central role in connecting pedagogy, sustainability, and architectural discourse.

Natural stone as a load-bearing building material
Input by Elli Mosayebi

by Lilian Hostettler

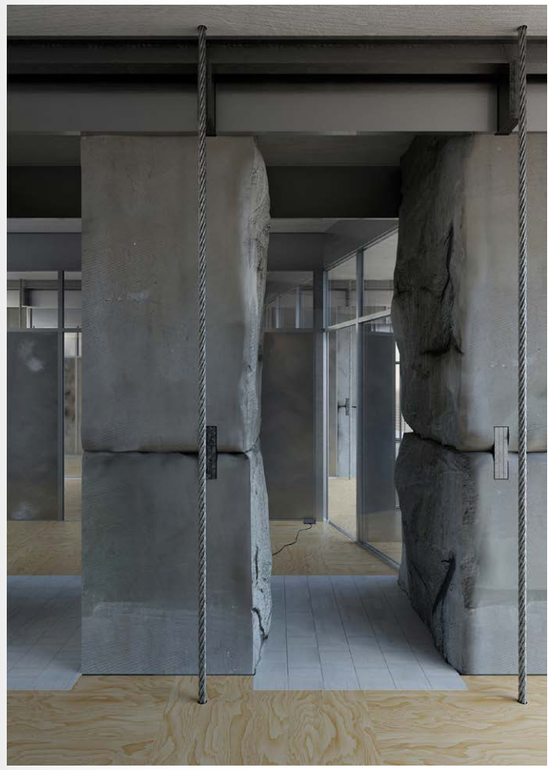
In her presentation, Elli Mosayebi talked about the potential of Swiss natural stone as a sustainable building material. She explained that stone has been used for centuries because it is strong, durable and available locally. She also showed that, while Switzerland still has many quarries, a large number have disappeared. One reason is that it has become difficult to get permits for quarrying, and another is that stone can be very expensive to extract and process. Mosayebi showed that from an ecological perspective, bigger stone blocks are better. The larger the block is, the lower its CO2 footprint. This makes it more sustainable to use big, load-bearing blocks directly, rather than cutting stones into small tiles, panels, or facade elements. Another problem is that about half of the stone taken from quarries ends up as waste, even though much of it could still be used.

Mosayebi introduced two main strategies developed at ETH Zurich to change this situation. The first strategy is to use large stone blocks with as little processing as possible. In their case studies, students designed buildings made from stacked sandstone or limestone blocks. Some projects even used digital scanning and robotic tools to fit raw blocks together without polishing, making construction faster, cheaper, and easier to reuse later.

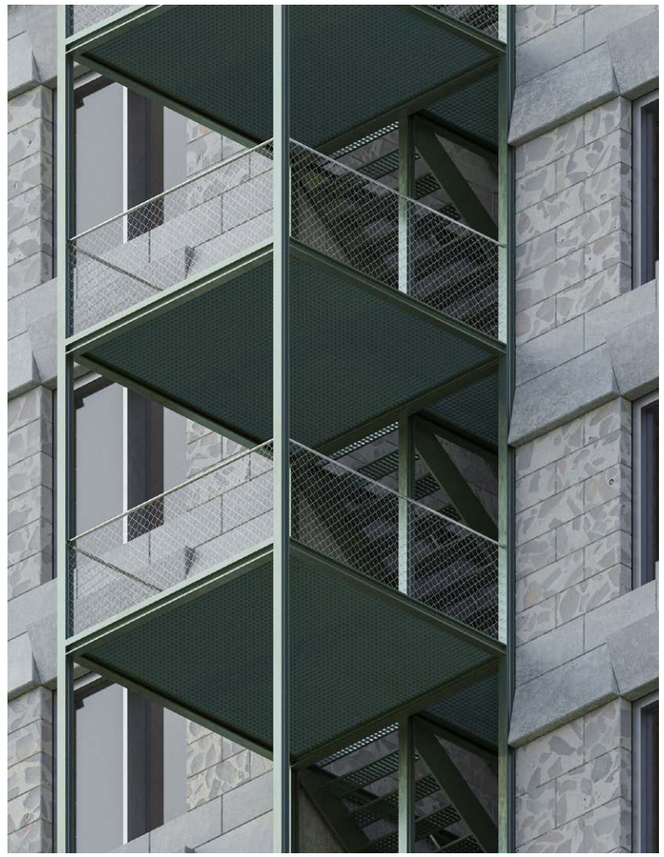
The second strategy focuses on reusing leftover stone. Smaller or irregular pieces can be combined with mortar or steel to create new building elements. Examples included casting rubble into artificial blocks or threading medium pieces onto steel cables to form structural columns and beams.

Her conclusion was that Swiss natural stone has been undervalued because it was treated mainly as a luxury decorative material. If used in a more direct and circular way, it could replace part of the demand for concrete and steel. Besides the ecological benefits, Mosayebi also highlighted the natural beauty of stone – its cracks and rough surfaces.

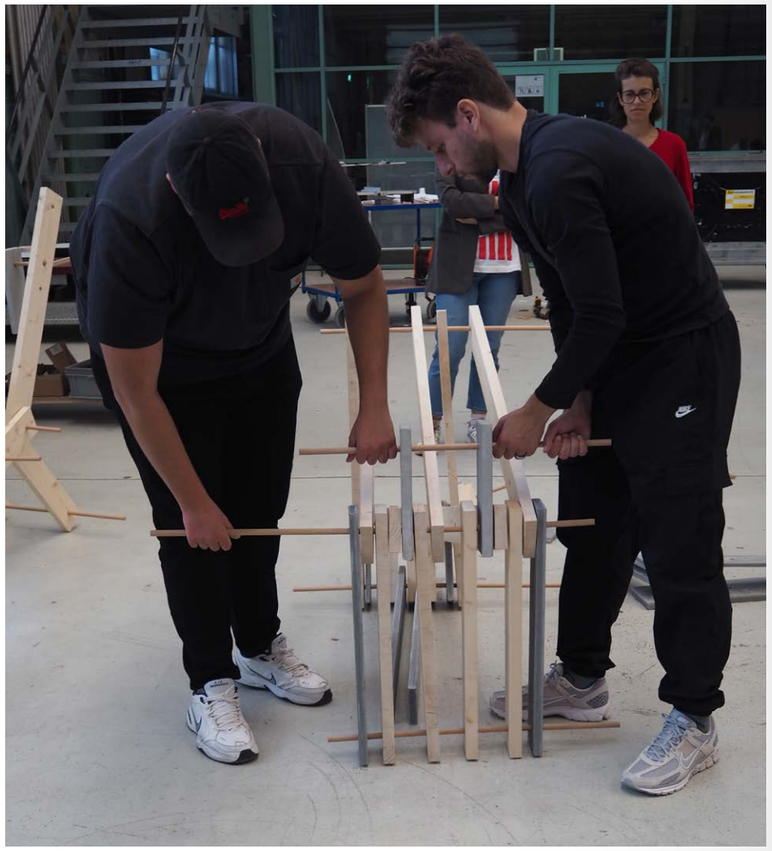
23–24 Alava Helsinki. Image © **https://www.aalto.fi/en/wood-program/alava-project-information**
25–26 Kokoon. Image © **https://www.aalto.fi/en/wood-program/kokoon-project-information**

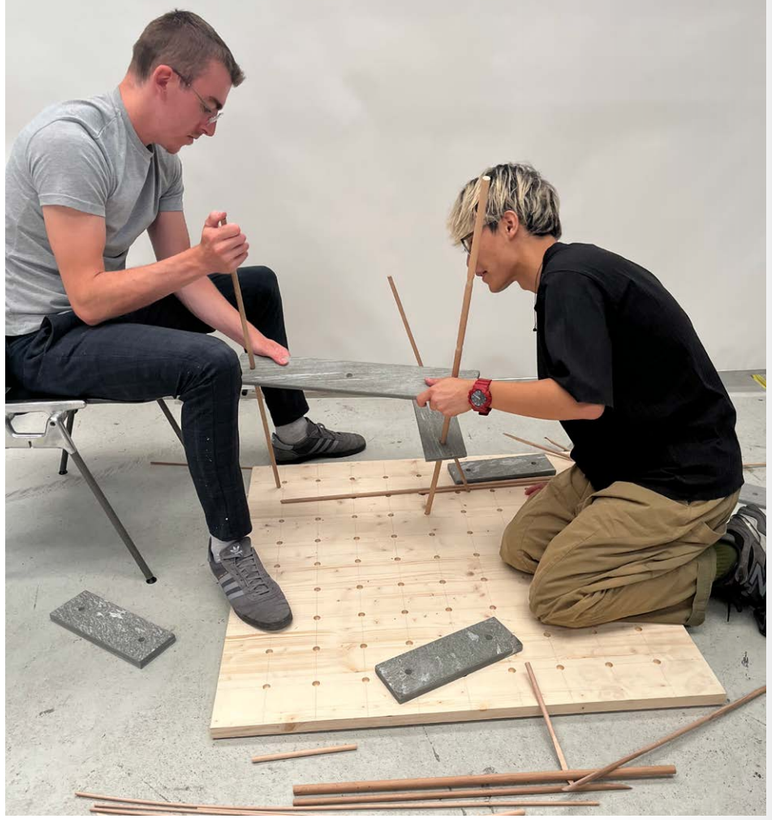


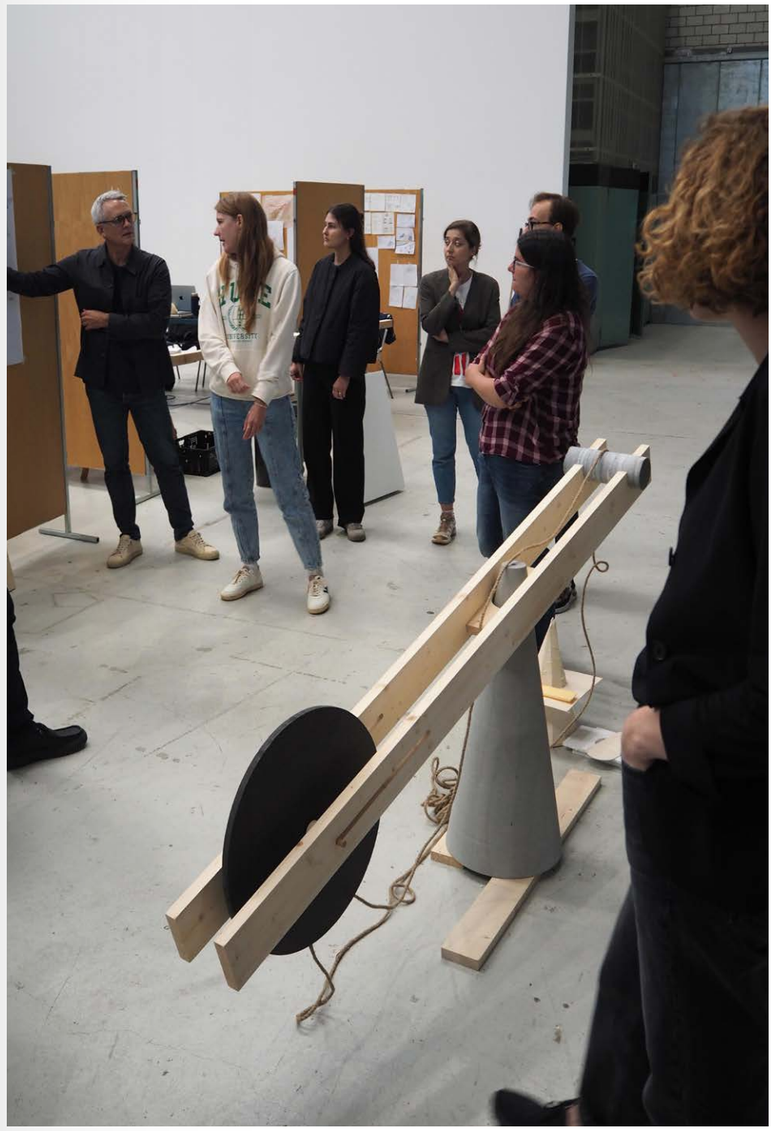
27–28 Project Archiv ETH, Professur Elli Mosayebi, Spring 2024: Jura Résistant, Case Study: Bollinger Lehholz Sandstein by Lara Biesser and Theodor Domanski



29–30 Project Archiv ETH, Professur Elli Mosayebi, Spring 2024: Jura Résistant, Case Study: Guntliweider Sandstein by Florian Hofmann and Vinzenz Leuppi







31–38 The students adopting a hands on approach, learning to shape stone and exploring timber techniques during the workshop experiences with Müller Naturstein AG and Blumer Lehmann AG.

Workshop Experience

by Hedwig Michelle Ringeisen

After visiting the quarries and Blumer Lehmann AG, a timber company, we explored materials in both raw and processed forms. At the quarries, powerful explosions revealed the raw strength of stone, while at Blumer Lehmann AG, we followed timber from arrival to its final crafted form. These contrasting experiences laid the foundation for the workshops, fostering a true “learning by doing” approach. Each group tackled the design challenge differently, experimenting with ways to combine wood and stone. We created our own sandstone pieces—from perforated bars to structural elements and even a cone. This hands-on work was crucial for gaining a physical, sensory understanding of the materials through trial, error, and iteration. Mock-ups were central, serving as testing grounds to evaluate structural possibilities, uncover weaknesses, and refine techniques. Step by step, we moved from sketches to tangible models, deepening our understanding of turning ideas into built form. One day, the group split: half worked at Müller Naturstein AG, shaping stone with traditional and modern tools, while the others explored timber techniques using specialized tools like the Shaper. At the end, both teams reunited to assemble the final project, adapting designs to practical challenges.

Overall, the experience highlighted the value of hands-on learning, improving our ability to think critically, adapt, and design more intelligently.

Echoes of the Week: Final Presentations and Reflections

by Jonathan Allemann

On Saturday, the last day of the summer school, we came together to enjoy the final presentations and discuss the students’ work. Each project was shown on an A0 poster with a physical mock-up, supported by display boards of process photos and sketches.

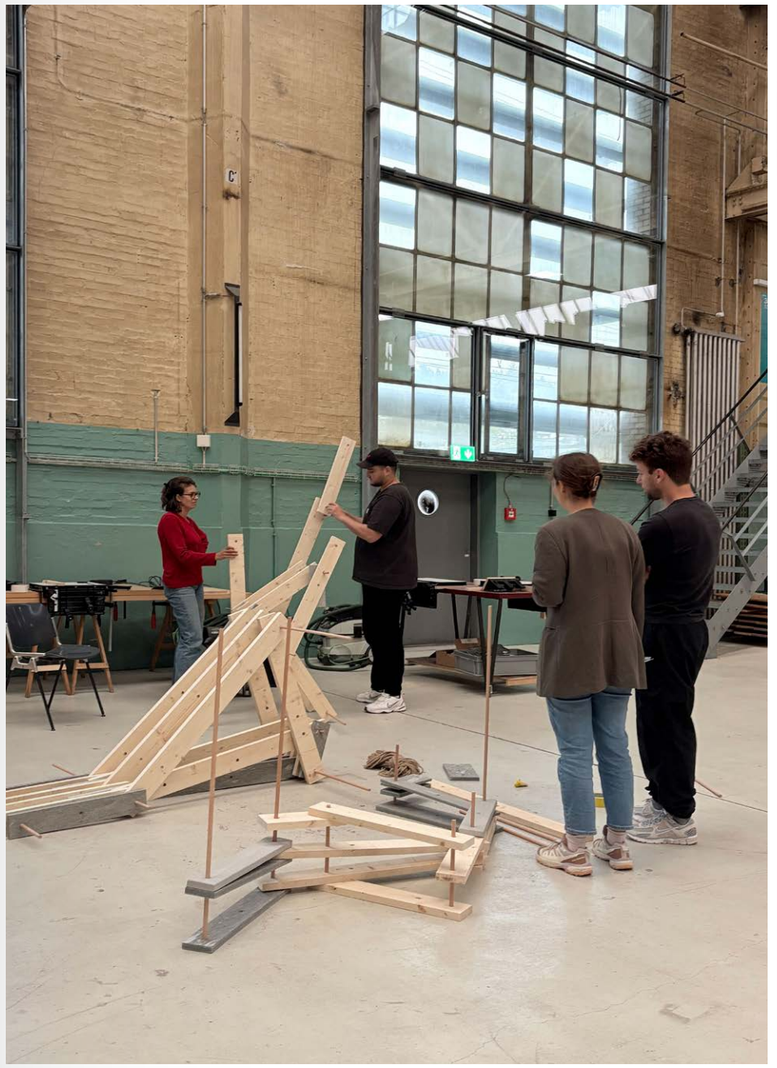
The programme combined inspiration with hands-on experience. At the start of the week, each group chose keywords to guide their project, leading to diverse outcomes. Early excursions and site visits introduced the materials and sparked ideas, while the second half focused on constructing mock-ups, moving quickly from theory to practice. Some groups went beyond the provided materials, sourcing extras or developing new ones, which encouraged creative dialogue and required quick decision-making: challenges all teams managed successfully. Valser quartzite, sandstone, and wood were consistently integrated, either as main materials or subtle details.

The main goal—to explore new ways of combining stone and wood—was achieved. Students experimented with innovative approaches, producing works that balanced creativity and practicality, reflecting the programme’s exploratory spirit.

The week concluded with a closing drink, giving everyone a chance to celebrate their achievements and mark the end of an intensive, inspiring experience for students from around the world.

39 BLAST! the process of arbitrary creation

40 Synthesis – The archaic symbiosis of wood and stone
41 LaScala – STonE and WOod (im)balance



42 Dynamics of Folding – To tip or not to tip?

43–44 Ephemeral Formations –
Dialogue between permanence and transformation

Synthesis
The archaic symbiosis of wood and stone

Wood and stone, two of humanity's earliest building materials, were used to create the first shelters, ranging from caves to wooden huts. These elements have been bound together since the dawn of civilisation, reflecting a timeless dialogue between nature and human ingenuity. This project revisits this primal relationship, offering a contemporary reinterpretation.

In nature, trees and stones are not merely scenery; they are materials capable of forming new landscapes. Observing what lies before us, utilising what exists around us and creating something through minimal processing represents the most fundamental and historical approach of humanity. Our ancestors knew how to use natural materials and build with minimal intervention. This design adopts the same ethos, respecting the natural form of each material, minimising processing and using gravity as the sole method of cohesion.

The structure consists of a solid stone slab - an inhabitable surface - supported by three elements: a vertical stone cut directly from its source to suggest growth from the land; a wooden trunk exposing its inner grain and structural strength; and a hybrid element where wood and stone interlock to reflect the partnership that has shaped architecture for thousands of years. There are no adhesives or metal fittings - just balance, weight and interdependence.

This project does not aim to create a fixed object. Depending on the scale and context, the structure can function as a table, a shelter or even be part of the landscape. Neither is it just a design, but a stance - a quiet proposal to build with humility, to reinterpret what we see and to reconnect with the materials of the natural world.

Group 1: Jonathan Allemann, Marina Bosch, Yulan Imhasly, Giovanni Origlia, Declan Park, Jasmin Peter
Wood and the City – ZHAW Summer School 2025

04.1
Final Student Work
Synthesis
The archaic symbiosis of wood and stone

Jonathan Allemann, Marina Bosch, Yulan Imhasly, Giovanni Origlia, Declan Park, Jasmin Peter

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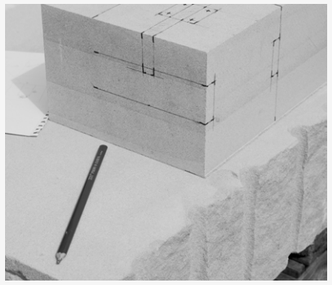
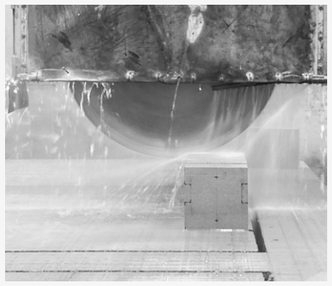
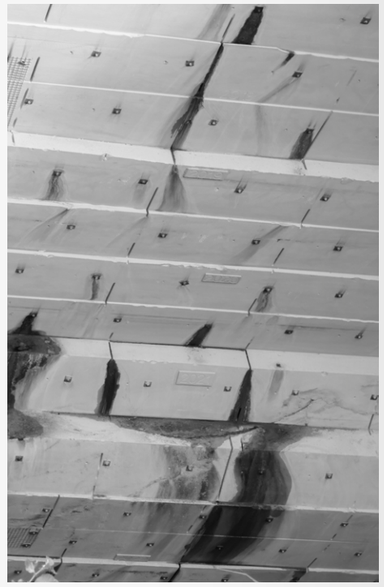
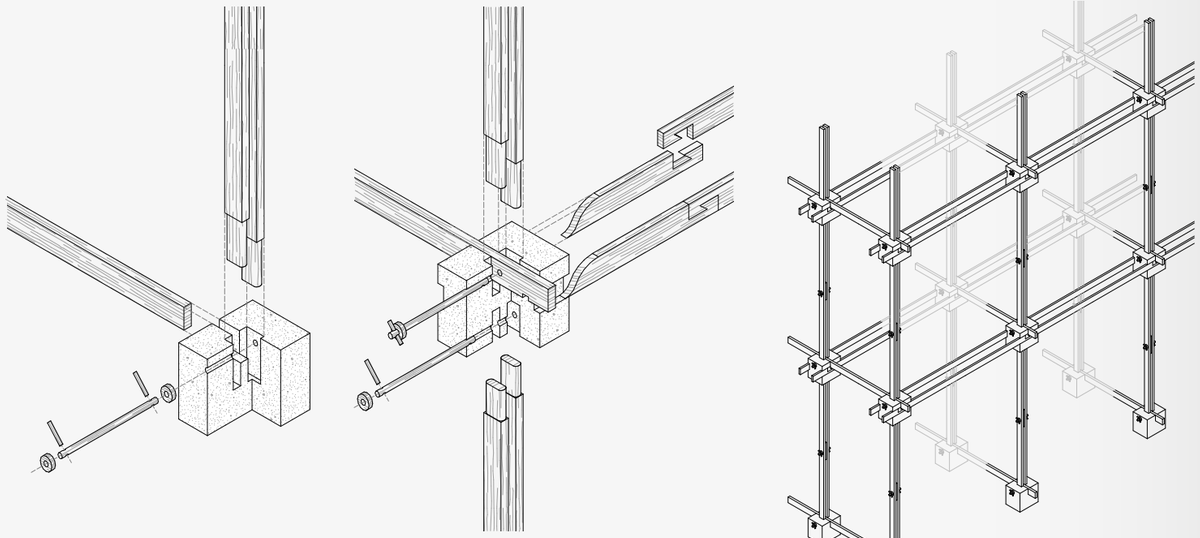
Ephemeral Formations

Dialogue between permanence and transformation







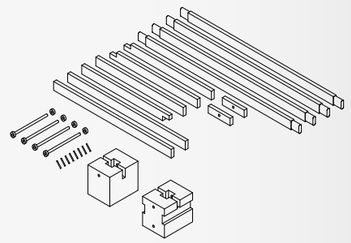


The stone acts as a memory core, holding fragments of time. Wood becomes a life layer, a material that cracks, expands, and ultimately decays in response to its context. The joint turns into a dialogue between permanence and transformation, where the node is the point at which multiple wood pieces interlock. A modular system that relies on gravity, friction, and precision. Temporality emerges as a tension between the fixed anchor versus the adaptable element.

Stone, permanence, memory, endurance.
Wood, growth, change, impermanence.

The stone piece, chiseled to 20 × 20 × 20 cm, is developed in two typologies: the foundation and the joint. The main incisions, standardized by the circular saw, allow the wood pieces to be placed and interlocked at specific positions and distances. In the beams, the interlocking occurs between wood and wood, connecting two axes. Vertical and horizontal stability is secured with dowels designed to pass through the block.

The modular structure is conceived as an assembly within the quarry, responding to the continuous extraction of stone. As the quarry is carved year by year, the structure can expand vertically and horizontally, growing with its context. An ephemeral character that allows the structure to disappear and reappear.



Group 2: Eleonora Lushchyk, Severin Marti, Vanessa Calderon, Philipp Brune, Kevin Rampa
Wood and the City – ZHAW Summer School 2025

Ephemeral Formations
Dialogue between permanence and transformation

Eleonora Lushchyk, Severin Marti, Vanessa Calderon, Philipp Brune, Kevin Rampa

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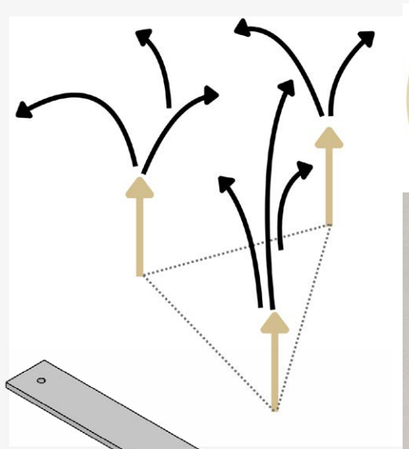
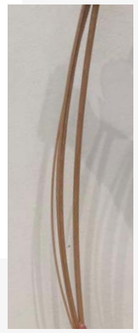
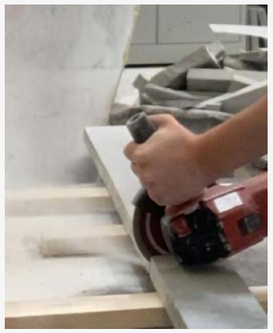
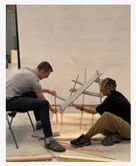
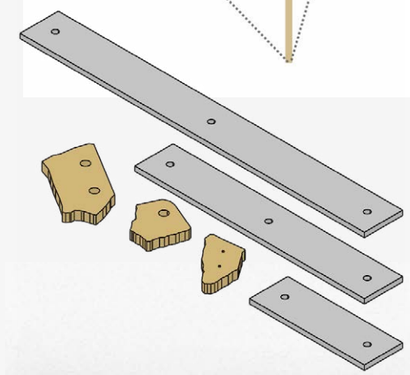
BLAST!
the process of arbitrary creation











Arbitrary is not chaos. It is the space where control and accidents coexist; where the outcome is never fully planned but discovered This sculpture is an exploration of contradiction.

The story begins with the explosion of the dense and rigid Valser stone, which acts as the anchor point —not as a static mass, but as a surface of possibility. In these stone openings, wooden rods then flow and bend, according to chance, weight, and the invisible hand of gravity, instead of order and symmetry.

In this constellation, wood is no longer a framework of stability but a body in motion; bending, shifting, and reacting to every adjustment in the stone. Stone, unexpectedly, is released from its usual characteristics as heavy and immovable. It begins to hover and float. It explodes outward and suspends in a fragile choreography that urges it to push it back to its own nature. In this choreography, what should fall, appears to fly.

This blast of wood and stone exposes the potential hidden in the properties of the materials when freed from expectation. To invert the logic of permanence and invite instability, to let disorder become the form. This structure relies on the balance, friction, weight, and placement of both wood and stone, resulting in something fragile yet resilient holding itself through tension.

The result is not an object, but rather a proposition; a moment caught between the explosion and the fall. It asks: What if we design not to control, but to listen and let the wood and stone speak in their own unpredictable language?

Group 3: Lilian Hostettler, Zewei Feng, Yasmeen Tabbakh, Melissa Bauer, Brandon Nadler
Wood and the City – ZHAW Summer School 2025

04.3
Final Student Work
BLAST!
the process of arbitrary creation

Lilian Hostettler, Zewei Feng, Yasmeen Tabbakh, Melissa Bauer, Brandon Nadler

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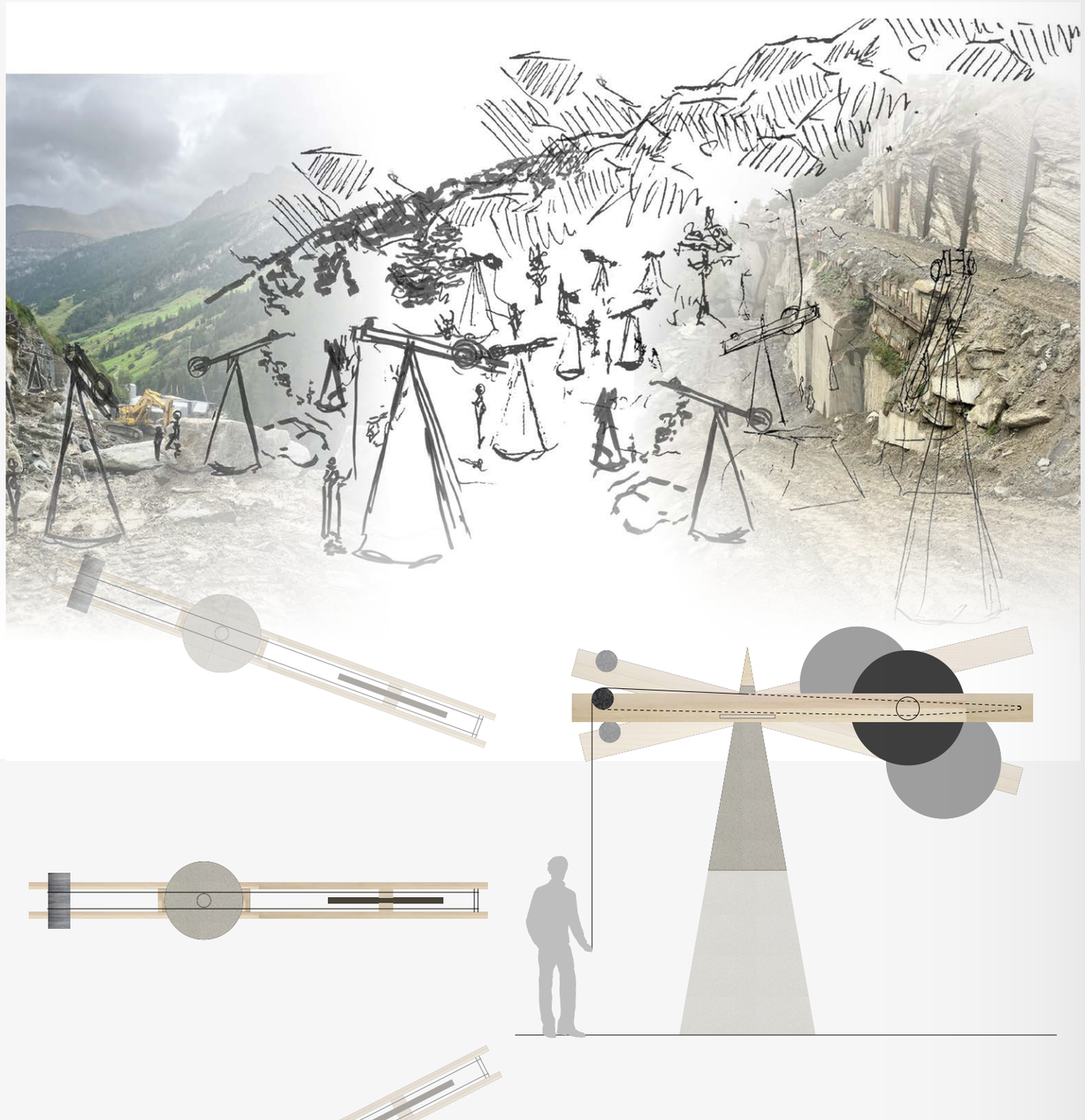
LaScala
STonE and WOod (im)balance



Our concept is based on simple geometrical shapes that form a structure that visually represents different stages of equilibrium and allows for change and adaptation by its user. Each element fullfills a function according to its material properties. The stone's mass is used as a column to carry the structure and a counterweight to keep the equilibrium. The counterliver arm made out of a double wooden beam acts as structural counterpart and relies on its flexural force. Stone and wood complement each other and are structurally interpendent, keeping everything in balance. All the connections are mechanical and can easily be dissassembled.

In the process of interpreting equilibrium, we did not approach it as a rigid or unchangeable system. Instead, we understood it as something dynamic, fluid, and open to transformation. The idea of balance revealed itself not as a static condition, but as a living process one that unfolds honestly and transparently within the entirety of its system. When translating this principle into our own system, we assigned each Element a constructive function that is not fixed but flexible. These Elements can be shifted, altered, allowing the overall appearance to change continuously. In this way, equilibrium becomes an active and creative principle rather than a final or predetermined state.

The individual is invited to engage with this structure directly, to interact and form connections in a playful, almost experimental manner. This interaction highlights the tension between opposites, between form and weight, between stability and movement, between the seen and the felt. It is precisely in this play with contradictions that a deeper understanding of equilibrium emerges, showing balance not as an end point but as an ongoing dialogue between forces.

Group 4: Fabienne Keller, Michelle Ringeisen, Luana Bearth, Edmond Gashi, Giovanni Böwer
Wood and the City – ZHAW Summer School 2025

LaScala
STonE and WOod (im)balance

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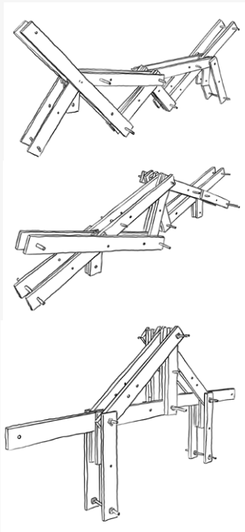
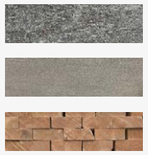
Location: Vals

Sketches



Materials

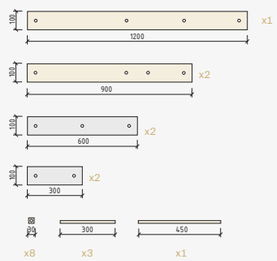


Vals stone
Valser quartzite

Sand stone
Bollinger

Timber

Components



Variations

Option 1

Option 2

Option 3

Details

Wooden bracket

Wood & Stone connection

Wood connection

Dynamics of Folding

To tip or not to tip?

Our design investigates the interplay of material, movement, and function. Wooden and stone elements of varying lengths, linked by slender rods, form a flexible and adaptable system. Through folding, tilting, and reconfiguration, it transforms into shifting constellations. Each arrangement generates new possibilities, producing spatial situations that blur the line between sculptural presence and functional use. The modular principle allows applications across different scales, from intimate furniture pieces to larger architectural interventions.

"Tipping" marks the decisive moment of transition – between stability and instability, openness and enclosure, object and space. Tilting becomes a conscious design gesture: a seat may act as a screen, a canopy as a partition, a surface as a sculptural gesture or dynamic façade. Every position reveals new potentials and invites users to engage, touch, and participate in the unfolding transformation.

Material is understood not as static mass but as an active participant, shaped by its inherent properties. Wood conveys lightness, flexibility, and organic growth, while stone embodies weight, density, and permanence. Each contributes differently – stone predominantly as support, wood as stiffening structure – creating a dialogue of contrasts that anchors the system yet allows it to move.
Rod connections ensure mobility, bear loads, and create a fragile openness that simultaneously challenges and defines the whole. This interplay gives rise to atmospheres that oscillate between enclosure and permeability, order and improvisation.

What emerges is an architectural play: a hybrid principle of assembly that continually reinvents itself. It is a statement on

Group 05: Aleksandra Zakharova, Erson Kadrija, Jasmin Angst, Louisa Weitz, Luka Šeparović
Wood and the City – ZHAW Summer School 2025

04.5
Final Student Work
Dynamics of Folding
To tip or not to tip?

Aleksandra Zakharova, Erson Kadrija, Jasmin Angst, Louisa Weitz, Luka Šeparović

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05
Students, Faculty and Contributors

During the International Summer School, we benefited from the input and support from expert guests and partners. These collaborations came from diverse fields, including natural sciences, architecture, manufacturing and building industry. Their contributions offered multiple perspectives and approaches that enriched the projects and discussions.

Experts

The first block of experts, as described in the following, provided inputs in the form of lectures and open discussions.

Guillaume Habert, Prof. Dr.

Guillaume Habert has been Professor of Sustainable Construction at ETH Zurich since 2012. Trained in biology and geology at the École Normale Supérieure in Paris, he earned a PhD in structural geology in 2004, with fieldwork in the United States and Greece. His early research focused on exploring how natural pozzolans and industrial by-products could replace cement, including a postdoctoral position in Brazil on the reuse of ceramic waste in earth construction. He also developed sustainable concrete and advanced environmental assessment methods. Guillaume has published over 100 papers and contributed to the development of start-ups for integrating sustainability into design. His talk will address material diets, the role of stone, and its relationship to timber in sustainable construction.

Stefan Holzer, Prof. Dr.

Born 1963 in Erlangen, Bavaria. 1982–1987 studies of Civil Engineering at TU München (Munich). 1992 doctorate on a topic of numerical mechanics, followed by a postdoctoral year in the USA and two years of professional practice in one of Germany's leading construction companies at Frankfurt. 1995–2001 associate professor, University of Stuttgart, 2001–2016 full professor of Engineering Mathematics at the University of the Federal Armed Forces Munich. 2001–present increasingly involved in topics of analysis and preservation of historic monuments with particular attention to construction. Numerous national and international, interdisciplinary journal publications on these topics, as well as five monographic books since 2008. Practical activities as consulting engineer in conservation, including major monuments. Since 2016 Professor of Building Archeology and Construction History at ETH Zurich. Research focus on the architecture of the Middle Ages, the Early Modern period and the 19th century, on historical timber and masonry construction.

Elli Mosayebi, Prof. Dr.

Elli Mosayebi is an architect and co-founder of the Zurich-based architecture firm Edelaar Mosayebi Inderbitzin, which she has led since 2004 together with Ron Edelaar and Christian Inderbitzin. The office focuses on housing and urban design, with numerous competition wins highlighting this emphasis. From 2004 to 2008, she was a research assistant at the Chair of Architectural Theory under Prof. Dr. Ákos Moravánszky at ETH Zurich. Her doctoral dissertation explored the work of Milanese architect Luigi Caccia Dominioni. From 2012 to 2018, she was Professor of Design and Housing at TU Darmstadt, where she conducted a comparative study on post-war European housing. In 2017, she co-led the design studio "Ruins and Machines" at ETH Zurich with Ron Edelaar and Christian Inderbitzin. Since 2018, she has been an Associate Professor and, since 2021, a Full Professor of Architecture and Design at ETH Zurich. Her work and research focus on housing and the current transformations in ways of living.

Pekka Heikkinen

Pekka Heikkinen is a Professor of Wood Architecture at Aalto University. He is the Director of the Wood Program, an international master's level architecture program exploring the ecological, technical, and architectural properties of wood. His work has received numerous awards, including the Schweighofer Innovation Prize, the World Architecture News Award, and the Rose of Construction.

Laura Zubillaga

Laura Zubillaga is a Lecturer in Wood Architecture at Aalto University. She teaches in the Wood Program, where she has led over ten experimental design-build projects. Her expertise lies in timber construction, prefabrication, and environmental impact assessment, complemented by a solid background in the wood industry, gained through experience in both South America and Finland. In addition to her teaching role, Laura is currently pursuing a Ph.D. focused on sustainability in wood architecture education.

Partners

As part of our program, we have visited two stone quarries and one wood construction firm.

Truffer AG
Vals, Grison

Truffer AG is a family-run business that has been operating since 1983 and employs over fifty people year-round. It was founded by Pia and Pius Truffer. The production site is located south of the village of Vals, in the "Jossagada" area on the way to Zervreila. Here, Valser quartzite is quarried and processed on-site into a wide range of end products. The entire value chain – from raw material extraction to the finished product – takes place at the Vals location.Since its founding in 1983, the company has been continuously developed and expanded. Today, it is considered one of the leading stoneworks for the extraction and processing of high-quality natural stone. Products made from Valser stone are used in a wide variety of projects around the world.

Müller Naturstein AG
Neuhaus, St. Gallen

Müller Naturstein AG stands for sustainable natural stone craftsmanship from the Zurich Obersee region. For decades, Bollinger sandstone has been extracted here – a material that has shaped Zurich's architectural identity and is now used wherever longevity and authenticity are valued. Formed around 20 million years ago, this sandstone is known for its durability, warm tone, and strong regional character. It is used in both historic restorations and contemporary architecture. The entire production process – from quarrying to finishing – is carried out in-house. This ensures top material quality, environmentally responsible practices, and short supply chains.

Blumer-Lehmann AG
Gossau, St. Gallen

Blumer Lehmann AG is a leading company in the timber industry and in wood and silo construction. The company harnesses the full potential of wood as a material and plays a key role in advancing timber technology on an international level. Around 500 employees work at the company's headquarters in Gossau, Switzerland, as well as at locations in Germany, Austria, and Luxembourg, and on projects around the world. Since its founding in 1875, a deep fascination with wood has shaped the company's mindset and approach. Blumer Lehmann processes this natural raw material within a closed, sustainable value chain into innovative products, buildings, and services. Each year, approx. 170'000 m^3 of Swiss round timber are transformed in the company's own sawmill, planing mill, and finger-jointing plant into a wide range of sawn timber products for the construction industry.

Team ZHAW

The International Summer School 2025 was co-organized by a team of architects and designers.

Yves Ebnöther

Yves Ebnöther, Industrial Designer, MAS CAAD/ARC ETH, has been developing "Potential Products" since 2002, through which he explores the possibilities of digital design and manufacturing methods. Studied product design at Central Saint Martins College and Ravensbourne College in London. Co-founder of Fablab Zurich. Engaged in research and teaching as a Lecturer at the Lucerne University of Applied Sciences and Arts (HSLU) and, from 2017, as a Full Professor of "Computer Generated Object Design" at the Nuremberg Institute of Technology. Since 2021, Lecturer in "Digital Technologies in Design and Fabrication" at Zurich University of Applied Sciences (ZHAW) and independent designer and studio owner in Zurich.

Carla Ferrer

Carla Ferrer is an architect and urbanist, with degrees from the Harvard GSD and ETSAB. She is a founding partner of ITER, a Milan-based architecture and urban design studio, and co-author of Touch Wood. Material, Architecture, Future. Her work has received recognition including the IKEA Swiss Foundation Grant and a Real Colegio Complutense Scholarship. Since 2023, she has collaborated with Mass Maderaat the Institute for Advanced Architecture of Catalonia, promoting timber construction in Spain. Her research was shown in the Spanish Pavilion at the 2025 Venice Architecture Biennale. She currently works on urban and housing projects in Italy, Spain, and Switzerland.

Thomas Hildebrand

Thomas Hildebrand is an architect and the founder of HILDEBRAND in Zurich. He studied at the Architectural Association, School of Architecture in London and at the Bern University of Applied Sciences. Since founding his practice in 1999, he has been exploring the use of timber in architecture. His work has won awards such as the North American Wood Design Award and the German Design Award. Hildebrand is committed to a sustainable, people-oriented, open architecture. After many years of teaching at the ETH Zurich, he now teaches at the ZHAW Winterthur at the Institute of Urban Landscape.

David Jenny

David Jenny is a practicing architect and designer with a strong background in digital fabrication and computational methods. He holds a BSc in Architecture from the EPFL and a MSc in Architecture from ETHZ, where his diploma project on algorithmic methods for housing design was awarded with the sia master price. He has worked in architectural offices in Switzerland and Japan and as a researcher at the Future Cities Laboratory in Singapore. From 2015 to 2021 he was part of Gramazio Kohler Research, responsible for courses in the Master of Architecture curriculum and since 2016 leading the teaching projects of the post-graduate programme MAS ETH in Digital Fabrication. Currently he is a lecturer and senior research associate at the Institute for Building Technology and Process at the Zurich University of Applied Sciences with a focus on digital technologies for design and fabrication with the goal to develop sustainable constructive systems.

Celina Martinez-Cañavate

Celina Martinez-Cañavate is an urbanist and architect. She studied at the Architectural Association, School of Architecture in London and at the ETSAM in Madrid. Prior to joining the board of directors of HILDEBRAND, she worked for several years at ETH Zurich and the University of Liechtenstein, where she earned a PhD in architecture and planning. Throughout her career, she has given seminars and curated exhibitions, including the Future Cities

Laboratory international conference hosted by the Singapore-ETH Centre for Global Environmental Sustainability (SEC), the Venice Biennale of Architecture, and the Kunstmuseum Liechtenstein.

Alexander Walzer

Alexander Walzer is a trained architect, now researcher and lecturer at ZHAW and FHNW, examining industry-relevant questions such as how to set up construction projects contractually from the get-go with technology and sustainability in mind. He is also involved in projects that utilize digital twins, automation technology, and human-machine interfaces. He recently obtained a doctoral degree in Construction Management from ETH Zurich, with a focus on research in industrial economics, user experience, and entrepreneurship, specifically examining the areas of construction robotics and 3D printing of concrete.

Participants

A heterogeneous group of students from all over the world came together for the Summer School of ZHAW School of Architecture, Design and Civil Engineering.

Jonathan Allemann, CH
Jasmin Angst, CH
Luana Bearth, CH
Melissa Bauer, DE
Marina Bosch, CH
Philipp Brune, CH
Giovanni Böwer, DE
Vanessa Calderon Martinez, PE
Zewei Feng, JP
Edmond Gashi, CH
Lilian Hostettler, CH
Erson Kadrija, CH
Fabienne Keller, CH
Eleonora Lushchyk, UA
Yulan Imhasly, CH
Severin Marti, CH
Brandon Nadler, CH
Zahra Naseri, IR
Giovanni Origlia, IT
Declan Park, KR
Jasmin Peter, CH
Michelle Ringeisen, CH
Kevin Rampa, CH
Luka Šeparović, BE
Yasmeen Tabbakh, JP
Louisa Weitz, DE
Aleksandra Zakharova, RU

“We saw that some materials you cannot force them into certain ways you want them to be, [...] they tell you how they want to be and prepared and how to use them. But you can always test the limits and test your way of thinking [...] and use them in an unconventional way.”

“I will in future think more about how the things are made and be conscious that there are people behind our ideas that actually make what we imagine.”

“My main discovery, from an architectural point of view, was that some materials, stone at first, can be used in the contemporary architectural scene, and that experimentation in that field is promising (and fun too).”

“The inputs that influenced me the most were at the quarries and in the factory. It was great to speak to the people that work every day with the materials on site.”

06
Student Voices
What will you take away from the Summer School experience?

“The summer school gave me a lot of insights and ideas for the future to construct a reasonable and sustainable way in stone and wood.”

“I learned how important it is to connect internationally and learn about different work methods and work ethics.”

“It was a super great experience [...] especially the excursions to the production sites, we gained a lot. I also gained a lot of new friends from all over the world, with whom I hope to keep in touch.”

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ZHAW Summer School 2025
Final Report, October 2025

Zürcher Hochschule für Angewandte Wissenschaften
Architektur, Gestaltung und Bauingenieurwesen

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