neglect  
construct  
care

ARRIVAL 09:00

OPENING 09:30
Introduction to the Topic by
Ferdinand Ludwig
Sandra Bartoli
Silvan Linden
Andres Lepik

CONSTRUCT 10:30
Session 1
Lectures + Discussion
Daniel Köhler
Verena Vogler
Harald Kraft
Oliver Schütte

BREAK 1 12:30

CARE 13:45
Session 2
Lectures + Discussion
Marie Davidová
Ines Dantas
Wilfried Middleton

BREAK 2 15:30
Espresso + Refreshment

NEGLECT 15:30
Session 3
Lectures + Discussion
Elena Ferrari
Frank Koch
Fahim Amir
Amina Chouairi

FINAL DISCUSSION 18:00

CLOSING 19:00
Our relation to nature is more ambivalent than ever. “Nature”, as that part of the world that exists independently of humans and existed before them, has been a place of desire at least since Romanticism, from which human civilization is increasingly distancing itself. And today, in the age of the Anthropocene, we have to realize that nature simply no longer exists as a counter-world to human creativity - from the global climate to microplastics in soil microorganisms, humans decisively intervene in all metabolic and life processes of the planet. On the one hand, this results in an ever-increasing responsibility for the life forms that surround us, on the other hand, it also means that humans are becoming ever more dependent on the preservation of the “natural” foundations of life.

“Environmental protection” today is no longer the preservation of a rare bird species; environmental protection has become an intrinsic human interest. The line between nature and the man-made world is blurred.

If we have long been accustomed to conceiving of the city as a manifestation of progress, in an antagonistic relation consuming all the very resources like energy, raw materials, water or food that are produced or extracted in the surrounding countryside, now the city is the place where, more than anywhere else, the transformation to a circular, resource-conserving and overall “nature positive” form of economic activity must take place. The relationship of the city and architecture to nature, of nature in the city and architecture as part of a „natural“ cycle touches on questions of a “green infrastructure”, as well as a change of consciousness in dealing with all forms of life in the city—shifting our understanding of density, control and technology.

ArchitectureNature - NatureArchitecture aims to critically gather current and retrospective views on a green infrastructure of the city. The three major fields of Soil, Water and Plants provide the thematic structure. Within each of the three thematic areas, the three fields of action Construct, Care and Neglect are intended to address contrasting and complementary principles in dealing with urban “nature“.

- Ferdinand Ludwig,
Sandra Bartoli, Silvan Linden
When does a human-constructed place go beyond the human, and how necessary is this transgression?

Sandra Bartoli
Art and Design Research Institute, HM
Co-founder Büros für Konstruktivismus, Berlin
To understand and learn from nature.

Among the many studies and models for implementing the Paris climate targets, a 2020 publication by the Federal Institute for Research on Building, Urban Affairs and Spatial Development calculates the necessary reduction in greenhouse gas emissions for the „construction and use of buildings“ at 77% by 2050. The implementation of this enormous task requires not only the consideration of the final energy consumption and raw material use of the individual building, but also its integration into the overall system of an (urban) infrastructure. Reducing the overall consumption of energy and resources necessitates the most local and robust circular economy possible, as well as the use of simple „natural“ processes. For example, decentralized rainwater harvesting with infiltration, unsealing and vegetation can make a significant contribution to reducing the ambient summer temperature – and thus the demands imposed on the „systems“ of building technology and people. A hundred years ago, it was not uncommon – as an alternative to the costly construction of an area-wide sewer system — especially in smaller and medium-sized municipalities, to maintain a municipal infrastructure for the collection and composting of human feces using the so-called „peat chair method.‖ As an alternative to the established techniques of incinerating contaminated sewage sludge, newer approaches of separating wastewater into brown and yellow water are including the participation of bacteria, microbes, and enzymes as part of a deep „green infrastructure.‖

Architecture as a cultural discipline was traditionally based on the prerogative to exploit natural resources for humans. The needs of humans for housing and infrastructure were prioritized against the needs of all other living species and the ecological consequences considered as inevitable. But this age-old working model is currently in deep crisis. We suddenly recognize that the survival of the human species becomes fundamentally dependent on radical changes. We need a new understanding of our responsibility as individuals as well as a global society. In this existential threat Architecture must legitimize and redefine itself from anew to survive as a relevant instrument for planning. It can no longer work against nature but it has to understand and learn from nature. This is why we are planning an exhibition that will present different approaches for design and planning in consensus with nature. We believe in this crisis as a chance and we would like to conceive a curatorial concept that is open-ended, participative and possibly raising additional questions. The Architecture museum needs to rethink itself as a place for alternative knowledge production and transfer.

Silvan Linden
Co-founder Büros für Konstruktivismus

Andres Lepik
History of Architecture and Curatorial Practice, TUM
Director Architekturmuseum TUM, Pinakothek der Moderne

It won’t work without microbes.
Naturlich? - an architecture of indifference and their ethical question marks.
When nature fuses with architecture, can we as architects model models to stir research? To create liveable futures, where do we begin to draw a sense of responsibility, care, and inclusion? This talks builds on an effortless architecture through AI to project environmental questions into the evolving landscapes of policy and decision-making.

AI, learning from data, unveils outcomes that feel ‘Natürlich,’ echoing our collective knowledge. However, datasets are curated, their compilation, labeling; the model's and tuning are intricately constructed by human hands. Drawing a parallel with Romanticism, we can consider their grand landscapes that inspired feelings of awe and terror as the datasets that Romanticists drew from. Despite the human construction of these landscapes, the experience of the Romanticist was often one of confronting something larger than oneself, something wild, sublime - something ‘natural’. We stand before the outputs of AI with similar feelings like a Romanticist gazing upon nature. We see AI as a force that, while originating from human activity, now often seems beyond our full understanding or control.

By engaging AI in our architectural processes we also invite a profound philosophical and cultural dialogue about our future living spaces. An architecture generated by AI, indifferent and synthetic, articulates a tangible manifestation of our collective hopes, fears, and ethical quandaries. Just as Romanticism challenged prevailing notions of the human-nature relationship and provoked a reconsideration of what was considered ‘natuerlich,’ so requires an architecture that blurs the boundaries between nature and technology us to question our entrenched habits and our assumptions about a sustainable yet livable future.
VERENA VOGLER

>Computational artificial reef design & high precision underwater monitoring strategies<

Title: Dr - Ing
University, Association or Office: R&D McNeel Europe/ Bauhaus-University Weimar
Location: Barcelona
Profession Description short: Architect & researcher in computational design
Profession Description long: Verena researches the integration of computational modelling and high precision monitoring strategies for ecosystem regeneration and leads technological research and development activities at McNeel Europe, the European office of Robert McNeel & associates, in Horizon 2020 projects funded by the European Commission.

Current Field of research or Current Project: Ecosystem-aware design approaches

construct
The tropical coral reef ecosystem, recognized as the oldest and most biodiverse ecosystem on Earth, is currently under immense threat during this era of massive extinction. It symbolically stands for destructive effects of human activities on nature. The efficiency and progress of reef regeneration projects is uncertain, primarily due to the massive extent of the ever faster progressing crisis, and secondly due to the lack of efficient artificial reef designs that can seamlessly integrate into the coral reef ecosystem in the long run. To address this pressing need for coral reef preservation, this talk introduces the new “Framework for Artificial Coral Reef Design”, which emerged as a doctoral thesis from the Chair of Computer Science in Architecture at the Bauhaus-University Weimar.

The framework’s primary objective is to provide computational strategies for designing and monitoring such “living underwater architecture” that can more effectively deal with the threats faced by the coral reef ecosystem. This entails the consideration of multiple contextual and performance parameters that address the requirements of the ecosystem and its organisms. Thus, by leveraging algorithms and computational tools, the approach enables the creation of artificial coral reef structures that are optimized for its non-human stakeholders. Furthermore, the framework highlights the importance of a meaningful connection between design and monitoring strategies in combination with real-world prototypes and their digital twins, ensuring that artificial reef structures benefit rather than harm such a vulnerable ecosystem.

In summary, the framework is a combination of multiple discrete methods and sub-techniques applied in a way in which many are cross-valid and integrated into one system that is offered as a solution to address the complex challenges of designing artificial coral reefs. It leverages computational design principles, regenerative design principles, and insights from marine conservation to create a unified system that is greater than the sum of its parts. This integration of disparate elements enhances the research’s potential as both theoretical and practical background – not only to foster the design of artificial coral reefs technically but also to provide essential criteria and techniques for conceiving them.

The ongoing Horizon 2020 research project ECOLOPES brings together TU Munich, McNeel Europe, and other academic and industry institutions. Unlike the framework for artificial reef design, ECOLOPES integrates a computational ecological model within a CAD system. The integration in ECOLOPES seeks to reveal correlations between form and ecological performance, as well as establish design rules for multi-species urban building envelopes.
HARALD KRAFT

>Sponge City: Claim and Reality<

(01) Title: Dipl. Ing.
(02) University, Association, Office: Ingenieurbüro KRAFT, water resources management engineering consultants
(03) Location: Berlin
(04) Profession Description short: Civil Engineer water resource management
(05) Profession Description long: Managing director and consultant of national and international projects of infrastructure development, urban and rural water supply, storm water drainage and sanitation systems, wastewater water resources management / Research and application of root zone treatment technology for the purification of sewage and surface runoff for hygienisation and reuse for groundwater recharge.
(06) Current Field of research or Current Project: Development of infrastructure for autarchic and sustainable settlements as zero-runoff settlements, applying ecological sanitation

construct
The way to Sponge city was very long for us. As a young student in the 70s and 80s in the international new city project of AUROVILLE in South India, we were confronted with the effect of heavy rains of 300 mm/d up to month long droughts. The design of a Water management concept for a city of 50,000 inhabitants near the coastline and the effect of saltwater intrusion in the groundwater posed a substantial challenge.

In the university there was an intense discussion for a new approach of Water resource management, the reduction of water supply and the reuse of waste water. The IBA 1987 (International Architecture Exhibition) in Berlin opened the first time the chance to demonstrate with IBA BLOK 6, successful new technologies to achieve this goal. Further demonstration projects had followed, Berliner straße 88 (1991), Schweriner Hof (1994), Marzahn Landsberger Tor (2000) who focused on stormwater runoff management and infiltration.

In 1992 we developed a water management concept for the city of AUROVILLE where the entire city could survive when it manages the stormwater on its premises and reuses the treated wastewater. Based on this demonstration private capital (Canadian investors) dared to design a 27 ha zero runoff settlement in Teltow Mühlendorf, Berlin (1998) following the Auroville-Water management concept.

The legal basis for these projects were the Federal Water Act (§ 5 WHG) and (§ 55 clause 2): “precipitation water shall be infiltrated or discharged through a sewer system directly into a waterbody without being mixed with waste water”.

In 1994, the Berlin House of Representatives requested the decentralized stormwater management, where the runoff from public roads should be infiltrated through living topsoil, (§ 36a Berlin Water Act, BHG). The main improvement on the stormwater management started in Berlin after August 2001 with the Rainwater exemption regulation (NW Frei V); § 36 b (Berlin Water Act BWG). The main impact on the planning of stormwater management started step by step with the orders from the Berlin House of Representatives from July 2017 and after the big rain in 2018 with “Hinweißblatt” and finally the BReWa-BE 2021.

The discharge from the premises was limited to 2 l/s.ha or 10 l/s.ha with priority to infiltration and use as well as the exclusion of the discharge into combined sewers. All new “Development Plans” must provide a “Expert report”.

According to these extended regulations most of the new developments in Berlin follow the new policy on Water management. The following projects are a few examples:

a) DAS NEUE GARTENFELD ; 60 ha former industrial zone
b) TXL-DAS SCHUMACHER QUARTER ; 30 ha
c) TXL-THE URBAN TECH REPUBLIC; out of 425 ha, west 36 ha, east 33 ha
d) BUKOWER FELDER; 16,2 ha
e) KUNSTHOCHSCHULE WEIßENSEE; 1,7 ha
f) URBANE MITTE SÜD; 0,8 ha
From the no footprint house to regenerative development

(01) Title: Dipl. Ing.
(02) University, Association or Office: A-01 (A Company / A Foundation)
(03) Location: San José, Costa Rica
(04) Profession Description short: Enthusiast for interdisciplinary system thinking
(05) Profession Description long: Breaking the boundaries of a single professional perspective in order to allow for a holistic approach that defines our projects
(06) Current Field of research or Current Project: Developing the No Footprint House and No Footprint Community in the context of integral sustainability and regenerative development
In Costa Rica, we have worked on the development of projects and concepts to redefine the boundaries of nature and the built environment. In 2010 we presented a proposal for decarbonizing the country as a whole. Based on that proposal, we created a series of case studies to understand what a decarbonized may imply for the daily lives of the local population. One of these case studies is the multi-award winning No Footprint House (NFH), which translates to a modular building system that allows for the design of multiple residential typologies. After concluding a first prototype in 2019, we have continuously worked on new material propositions to gradually improve the performance of the project. Motivated by the global success of the first NFH prototype, we have engaged in dialogue with the local building industry in Costa Rica to develop alternative building materials that are based on local and regenerative resources, which we can now include in what we call the NFH toolbox for sustainable construction. New and circular economies have been created. Moreover, we have started a learning program with the national government and local academies to teach local builders in applying the new building techniques.
The Systemic Approach to Architectural Performance (SAAP) looks at an ecosystem as a more-than-human community and searches for its synergy. It is integrating Systems Oriented Design (SOD) and its tool giga-mapping methodology for multi-stakeholders and multi-disciplinary cocreation amongst humans, a ‘real-life codesign laboratory’ with more-than-human stakeholders and reflection. These appear in feedback loops. SAAP focuses on more-than-human edible and habitable landscapes in urban environments and their social and generative agendas. Therefore, it is using tools such as prototypical urban interventions such as insect hotels, etc., their DIY recipes and mobile applications to introduce a more-than-human economy, bridging the interventions, their DIY recipes and more-than-human social engagement.

Therefore, a community member can be paid for reproducing a DIY recipe of an insect hotel, as well as the insect can be paid for its ecosystemic performance, such as pollination. Artificial intelligence is being used to recognise such performance for associating value. This should generate resilient communities of Post-Anthropocene where humans and nonhumans coperform in synergy. We are all dependent on the overall ecosystem. However, recent economic models and our urban environments do not reflect it. Therefore, we are facing Anthropocene Extinction which is of course, also destructive to humans.
Title: Dr.
University, Association or Office: Cluster of Excellence IntCDC, University of Stuttgart
Location: Stuttgart, Germany
Profession Description short: Systemic designer, urban designer, architect
Profession Description long: Marie Davidová is a systemic and urban designer, designer and architect fighting for social and environmental justice. She specialises in urban transition towards Post-Anthropocene.
Current Field of research or Current Project: COLife: More-than-Human Perspective to CoDesign, Enacting Gregory Bateson’s Ecological Aesthetics through Design
Green spaces and trees have been approached in their capacity to help cities cope with the urgent environmental challenges of climate change. Additionally, I consider that the unique performative qualities of trees – which include their spatial complexity – trigger processes of architectural and urban imagination. Recent initiatives and programmes of greening cities mainly highlight the practical benefits of trees. However, besides practical considerations, trees in the urban space carry a speculative potential. In my work there are practical and speculative modes to approach trees and the urban landscapes they compose, exploring modes of spatial experimentation. Analytical and narrative accounts are complemented by hybrid design modes and uses of technology in multiple architectural engagements with urban trees. The design modes range from architectural drawings to alternative material outputs, performative exercises and terrestrial three-dimensional scanning. I use three-dimensional terrestrial scanning beyond its measurement abilities, to explore aesthetic, spatial and narrative aspects of the design process. My use of this technology allows the exploration not only of the trees’ spatial complexity but also of the landscapes they create through the interplay with their surroundings. I introduce design modes, site-specific engagements and a fictional character who inhabits a point cloud of urban contexts with trees, building upon their speculative narrative potential. The hybrid design process opens the path to an architecture that establishes spatial and metaphorical relationships with trees in urban contexts as an argument for a profound integration of the ‘natural’ and the ‘urban’ in the future design of cities.
Architectural Engagements with Urban Trees

(01) Title: Dr.
(02) University, Association or Office: WUDA* Architects/ PhD (UCL) / TUM
(03) Location: Munich, Germany
(04) Profession Description short: Architect, Researcher
(05) Profession Description long: Architect, co-founder at WUDA* Architects, holds a PhD by Design (University College London) and teaches at Technical University of Munich.
(06) Current Field of research or Current Project: Urban Green Networks
Vernacular architecture can provide integrated solutions to complex problems involving culture, geography and ecology. Meghalaya’s living root bridges grown from Ficus elastica aerial roots stabilise soils through water retention, are earthquake-resistant, provide a range of ecosystem functions and are embedded in local heritage. Europe’s laid hedges are densely grown barriers that are especially good habitats for nesting birds and mammals and locally reduce windspeeds. While vernacular solutions are often specific to local complex problems, certain aspects of those problems are found elsewhere. By finding ways of translating vernacular architecture to new contexts, architects can have access to multifaceted solutions to contemporary problems.

One significant barrier has been the adoption of technologies necessary to understanding vernacular architecture. Through long time-frames, organic materials and ecological integration, they are often quite complex structures. Understanding the growth of aerial roots; the density of growth resulting from planting or manipulation; or the changing use of historic buildings require (spatially or temporally) precise documentation. Using recently advanced technologies, designers can work with vernacular practitioners to utilise their wealth of knowledge. Understanding aerial root growth requires both the bridge-grower’s knowledge and documentation of ficus elastica in a range of settings; growing dense hedges involves precise capture of hedgerow density and knowledge of the planting and pruning of the hedge-layer; periodic photogrammetry can supplement a historian’s view of a building’s tangible and intangible heritage. Spreading the vernacular to new settings can rejuvenate otherwise struggling practices that make up a vital part of the architectural-cultural landscape.
Contemporary tools for vernacular approaches in engineering design
Hybrid Urban Landscapes: A Project of Street Trees Soil Testing in Berlin

(01) Title: PhD
(02) University, Association or Office: PhD in Urbanism (Iuav University); freelance landscape architect
(03) Location: Berlin
(04) Profession Description short: Urbanist, landscape architect, researcher
(05) Profession Description long: Elena Ferrari currently works as a freelance landscape architect. She concluded her doctoral research (Iuav University) in September 2022.
(06) Current Field of research or Current Project: Elena Ferrari is interested in the interconnection between humans and nature in cities. Her research focuses include marginal urban landscapes, urban gardens and citizen science. She is a co-creator of 'Open SoilAtlas', a counter-mapping project of Berlin's urban soil run by citizen scientists.
Permeable soils and vegetation in the street environment play a key role in the design of liveable cities and their management is becoming an essential question in urban agendas. In some Berlin neighbourhoods, small roadside areas — such as tree pits — are managed by citizens through hands-on everyday activities that include working with soil, plants and supporting urban animals. Despite the manifold benefits of citizen engagement in the maintenance of streetscapes, this phenomenon is poorly regulated and often neglected in urban strategies. This contribution explores citizen care practices performed in liminal street spaces from two angles. The first emphasises from a theoretical perspective how civic engagement influences and sustains broad public concerns on greenery management. The second relies on the street soil testing, employing the methodology developed within the framework of a soil counter-mapping project led by citizen scientists (Open Soil Atlas).

As part of the presentation, the results of a survey conducted along a street in the Berlin-Neukölln district will be presented, illustrating a positive correlation between topsoil qualities and citizen care practices in certain areas. The study unfolds around a multi-perspective investigation of the street soil, as a lens for discussing the unity of social and ecological matters. It further outlines how citizens’ work can influence the protection of street natural assets and could suggest new design trajectories.
Biodiversity of the Traffic-islands in Berlin - Monitoring of the insect diversity on Berlin's center roadsides

(01) Title: Dr.
(02) University, Association or Office: Museum of Natural History Berlin, Leibniz Institute for Evolution and Biodiversity Science
(03) Location: Berlin, Germany
(04) Profession Description short: Entomologist
(05) Current Field of research or Current Project: Biodiversity of the Traffic-Islands in Berlin

neglect
Urban greenspaces such as roadsides are often not considered as valuable habitat for biodiversity. Yet, roadsides can offer habitat as they are isolated between the roadways and therefore well protected from pedestrians and their pets. Thus, roadsides may be unique habitats for biodiversity. Over a period of six years (2017-2022), we investigated the insect diversity of center roadsides of selected main roads of Berlin, Germany, with plans for long-term (10 year) monitoring. We found that the vegetation of the study areas is more or less ruderal origin, and is periodically mown. Additionally, the vegetation is strongly affected by salt solutions in the winter and the exhaust gases by the heavy traffic throughout the year.

The insects were collected two times per month from April to September, only by hand net. In the laboratory the specimens were pinned, labeled and identified.

In turn, we found that the diversity of the insects on the study areas is considerable between a control area and an area with soil exchange and planted urban stress resistant plants. Furthermore, we are also investigating how insect diversity relates to the succession of the plant societies especially on these new created sandy areas.

Currently, this “biological archive” contains more than 400 insect species of six orders, and we found first records of south European bee and digger wasp species for Berlin. Some other species are reported in the Red List of endangered insects. The insect material is deposited in the collection of the Museum of Natural History Berlin.
Against the shallow romanticization of urban nature: Gandana in Vienna
More than 500 community gardens have grown across Austria in the last 15 years alone, and they are often praised as places of social innovation. In scholarly discussion, meanwhile, the contrast between idealizing romanticization of community gardens as „places of radical hope“ and structural-functionalist demonization as surrogates of participation has given way to greater engagement with their intermingled socio-ecological histories and implications.

Amir follows this new focus in his investigation of practices and aesthetics of transcultural co-habitation of an urban garden in Vienna, cultivated primarily by Afghan war refugees. Of special interest are the entangled social topologies and material-semiotic economies surrounding a specific plant grown here: Gandana - a species of Afghan leek, that seems to resist industrialization but could harbor hope. In his presentation Amir will reflect upon methodological aspects of transculturality as a way to conceptualize the dynamics of cultures towards questions of non-human life. Drawing upon his research about the aesthetics and politics of nature Amir will present questions and perspectives of his current field of research and situate them in relation to the necropolitics of war and eco criticism.
AMINA CHOUAIRI

Natura Humana: Limits and Contradictions of Brackish Marshlands Restoration Projects in the Lagoon of Venice

(01) Title: Ir.
(02) University, Association, Office: School of Doctorate Studies, Università Iuav di Venezia
(03) Location: Venezia, Italy
(04) Profession Description short: Landscape Architect and PhD Student
(05) Current Field of research or Current Project: Natura Humana: Limits and Contradictions of Brackish Marshlands Restoration Projects in the Venice Lagoon

neglect
While wetlands are internationally recognized to play the most crucial role in the current climate crisis, their area continues to decline. Considering their recognized relevance but neglect status together with the limits and complexities of ecological restoration projects, the proposed contribution seeks to investigate the recent emergence of ongoing small and medium-scale practices in the Venice Lagoon. The goal is to understand and potentially identify these testing projects as exercises of “survival on a damaged earth”, making kin within a climate emergency to benefit people, the planet, prosperity and peace, because we – as humans, care. In such a contested territory, the current climate crisis overlaps with an emergent creative crisis. Narrowly, the city of Venice has been too often addressed for its exceptionality; as an “ideal urban model” and a “model for the future”, a “laboratory” and a “laboratory for the future”, a “planetary metaphor”, and the “world sustainability capital”. However, it is not about Venice alone, but the Venice Lagoon – “Venezia è Laguna” - “not just a city in history but a place in an estuary”, opening up new possibilities for another Venice. To proceed with the recon of a “city-in-a-landscape”, emerges the necessity to “un-think” and “re-think” looking for coherent coexistences between completed hard-engineered objects and soft landscape infrastructures, moving from logics to systemic design. By looking at ongoing or recently completed projects, the research identifies these practices as crucial and urgent to tackle such crises. The study of contexts, systems, matters and flows, addressed through a design-activism perspective, must be accompanied by the restoration of the intrinsic agency of design being a direct form of activism. While perfecting ideas of coexistence in light of the urgent climate and environmental issues, the goal is to imagine new situated models of coexistence and design new collective landscapes.
SYMPOSIUM
Architecture Nature - Nature Architecture

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