

space&designstrategies_research

overview ws 09/10



In 2006, *space&designstrategies*, a field of study at the Kunstuniversität Linz, established the research platform *space&designstrategies_research*.

Lead by Univ.Prof. Elsa Prochazka, *space&designstrategies* offers students the opportunity to develop cross-disciplinary skills in the fields of architecture, art, design, digital media, communication studies, and aesthetics. The associated research platform *space&designstrategies_research* operates independently of the curriculum and functions as a competence centre for research projects, for Ph.D. studies, and as a resource for independent projects. It is aimed at supporting the interdisciplinary work of students by facilitating scientific exchange with external researchers, in order to provide a broader framework for discussion, the evaluation of student work, and intensified research. In addition, we organize a series of events dedicated to specific research topics. In the year of 2009/10 research activities are specifically focused on strategies of contemporary space production within the field of art and architecture.

Following the contemporary discussion about interactivity and built-in feed-back, within an envisioned collective process of creative production we decided to address issues of self-organization and encoded development. In winter term ws 09/10, we invited the architect Claudia Pasquero, as co-founding member of *ecoLogicStudio* and teacher at the Architectural Association School of Architecture London, to conduct a three-day workshop. As an accompanying event, we organized a round table discussion including Claudia Pasquero and Oliver Bertram, founder of *different futures*, who is currently teaching at the University of Applied Arts/Vienna.

Sandrine von Klot, curator
space&designstrategies_research

Towards playful collapse



↑ throughRoom by Ecologic studio

//////////////////////SELF-ORGANIZATION

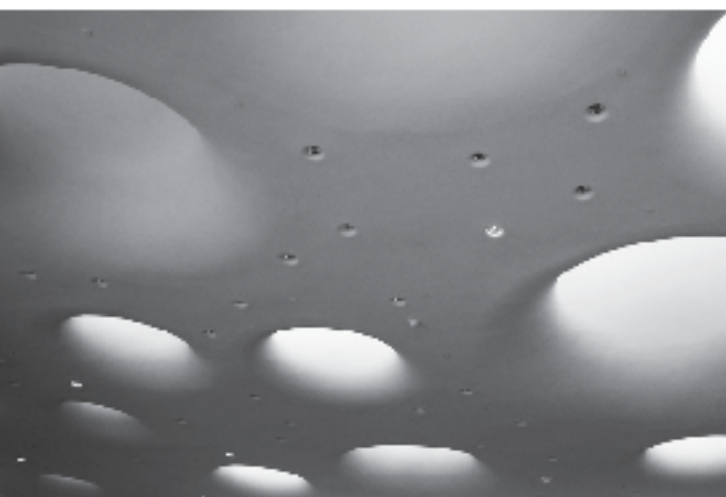
"We tend to think that everything about human society which has a certain amount of order as being the result of someone planning it. For instance, the city of Versailles was perfectly planned up to the last little detail by Louis XIV and his ministers, and that is our image of what human society is." Manuel de Landa

How close are we to some sort of a playful collapse - within our public environments, how much intelligent feed-back behaviour can we actually bear? Claudia Pasquero offers students to participate in a 3-day study about systems of dynamic adaptability and the process of generating complex form. In this context, her inquiry does not primarily point to the aesthetics of self-organized patterns, though 'beauty' may be perceived as an emergent property of semi-natural form. Rather the mathematical and procedural processes of formation itself define a set of principles, methodologies and tools for structuring a full scale form-finding inquiry through the self-organization of material behaviour.

//////////////////////APPLIED TOPICS

The workshop has the ambition to develop a new paradigm of eco-logic architecture in urban context. The meaning of the word ecology here is extended to an understanding of the urban reality as a complex dynamic system, often pushed far from equilibrium by the large flows of information, matter and energy traveling in and out of its physical boundaries. The turbulent nature of the city makes an application of the traditional codes of architecture inadequate and their linear application often produces results of contradictory nature. Studies of environmental psychology have begun to show alternative methods to operate in such complex dynamic realities; often based on direct field work and mapping they focus on urban public spaces (the urban landscape) rather than on buildings themselves. Moreover they underline the deep correlation existing between the behaviour of the urban dweller and the characterization of the urban space in which he is immersed. Finally they indicate direct responsiveness as the fundamental regulator of psychological stresses.

// intro



ROOFscape by EcoLogicStudio

ROOFscape

In Carugate ecoLogicStudio, in partnership with Systematica spa and Dunnett Craven architects, have designed a shopping town that integrates within the surrounding countryside and that possess the benefits of an outdoor shopping street, such as natural light and fresh breeze, but filters out the unpleasant aspects such as noise and pollution, excessive heat or cold, strong direct solar radiation, rain and mosquitoes.

EcoLogicStudio

co-founded in London in 2004 by Claudia Pasquero and Marco Poletto

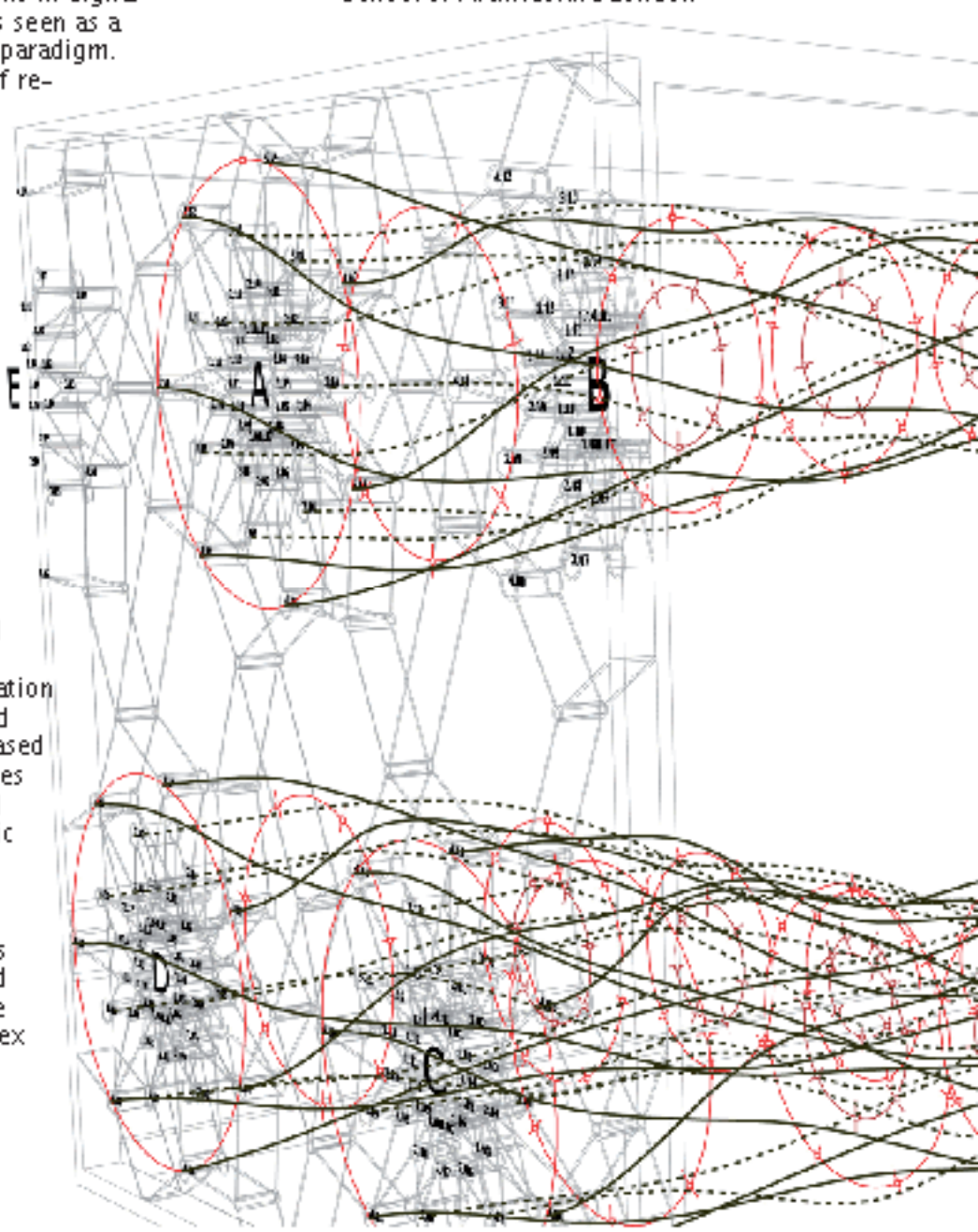
The office's work focuses on the development and application of a design method capable of exploiting the latest innovations in digital computational design. Ecology is seen as a conceptual as well as a material paradigm. It is a generative force capable of re-describing current paradigms of inhabitation and manipulation of the environment.

The studio work deploys digital technologies as a means of developing hyper-realities, regimes of intense exchange between the artificial and the natural, the designed and the accidental methodologically it thrives to develop a new design equation where technological progress equals an intensified symbiotic engagement with natural forces, processes and ecosystems.

more information on:
www.ecologicstudio.com

CLAUDIA PASQUERO

- graduated from Turin Polytechnic
- finished in 2000 AA EE Master Program
- co-founder of ecoLogicStudio
- currently unit master of Inter10 at the Architectural Association School of Architecture London



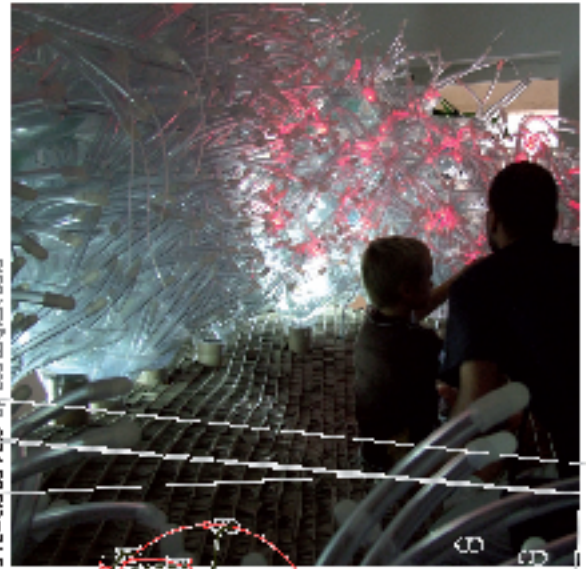
FIBROUS ROOM

Fibrous Structures is an investigation into the emergent properties and potentials of complex cement based structures defined as assemblages of single 3D filaments organized in space via parametric geometric rules and structuring logics / techniques. The project was conceived as a design research process based on the continuous feedback between the digital and the material realms, between the parametric exploration of complex fibrous assemblages and the large-scale physical prototyping of the resulting configurations.

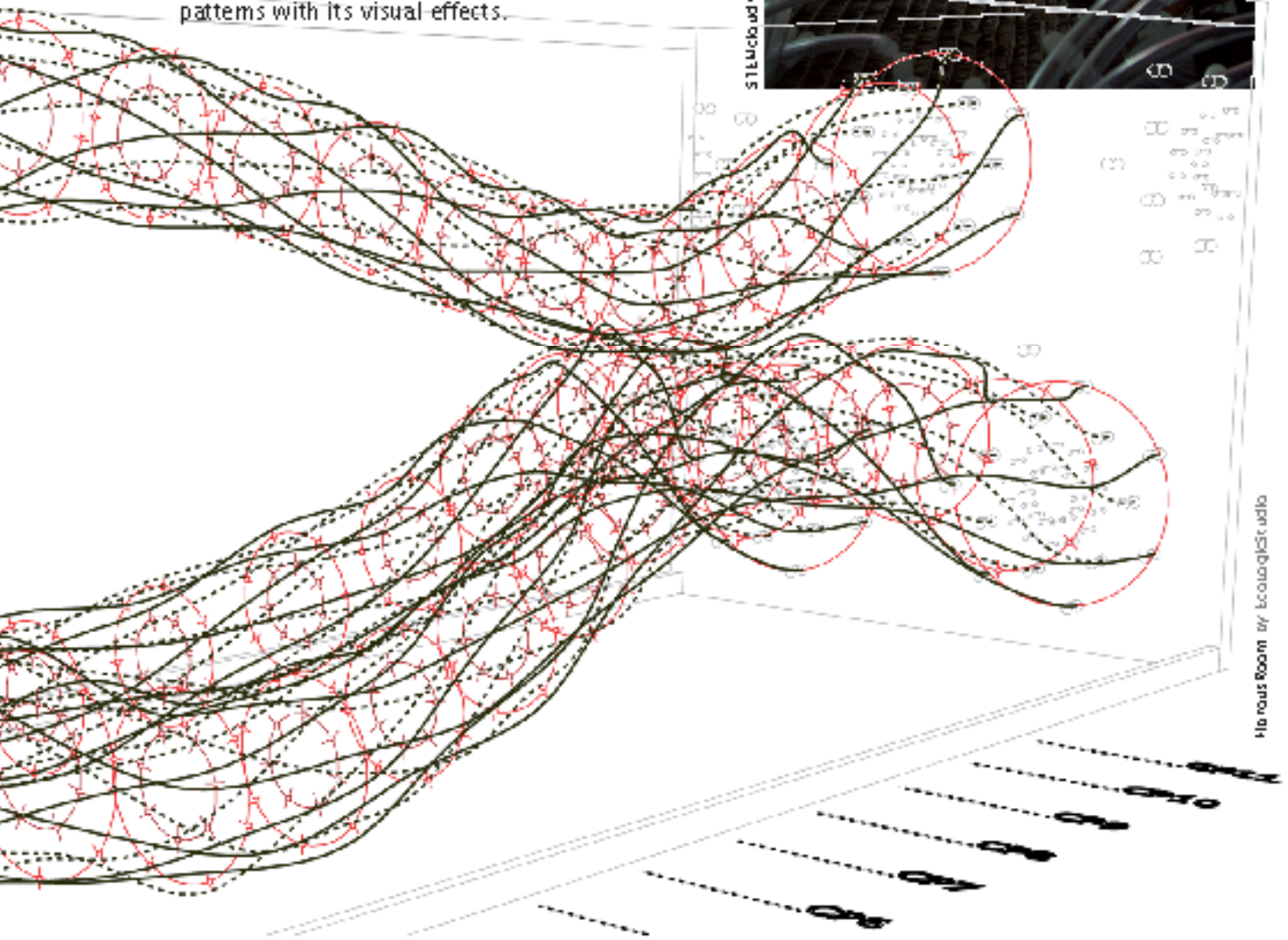
"When the matter of architecture is freed from the essentialist conception that considers it as a formless entity regulated by transcendental geometric rules, forms and proportions, it suddenly acquires potential of self-organization and becomes generative. In this state matter can go far beyond the resolution of structural or constructive problems as it provides models for dealing with the complex feedbacks that occur between multiple (and often contrasting) forces, like the ones operating in dense urban contexts."

////////////////////STEMcloud v2.0

The STEMcloud v2.0 proposes the development and testing of an architectural prototype operating as an oxygen making machine. The transparency and porosity of the architectural system allows the process to be visually and materially exposed and interfere with the microclimate of the gallery. The public will feed the colonies present in the river water with nutrients, light and CO₂ and as a result oxygenate the gallery space. A growth process will be triggered by patterns of interaction with the public and in turn will affect these patterns with its visual effects.



STEMcloud v2.0 by EcologicalStudio



Hydrous Room by EcologicalStudio

//workshop

//////////////////**TROPICAL PLAYGROUNDS**
conducted by Claudia Pasquero, London
nov 17 -19 2009

//////////////////**OUTLINE**

The workshop seeks to breed models by developing 1:1 scale material organizations that operate as analogues computers subjected to specific sets of structural and organizational principles, programmatic regimes and urban stress fields. Students will look more into detail at the how specific "architectural machines" can generate "playfulness"; we will define the nature of playfulness in relationship to specific urban environmental stresses and design "playgrounds" capable of tuning passive acceptance of urban pressures into novel opportunities of engagement and exchange; within this paradigm communication can evolve in time and give rise to novelty or, in linguistic terms, to a conversation, and, in our terms, to playfulness.



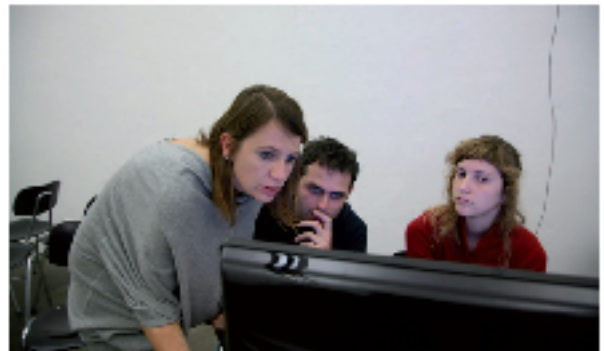
//tropical playgrounds

////////////////////PROGRAM

The workshop will start with a group exploration of muscular systems as found in heliotropic or insectivorous plants. We will extract 3 levels of observation leading to parallel experiments in structural/organizational terms:

////////////////////KINETIC

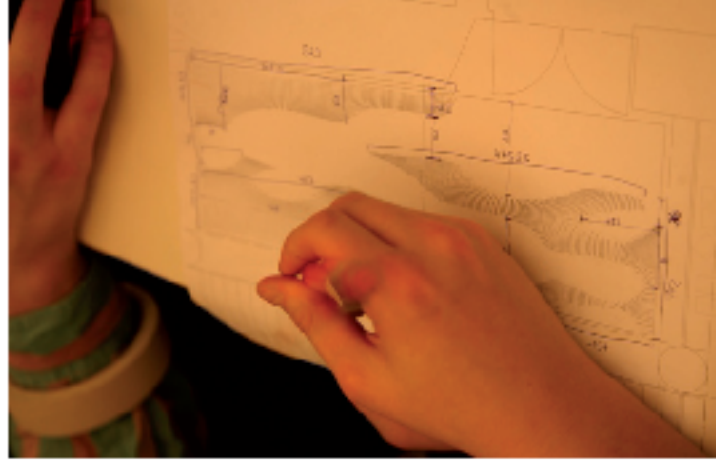
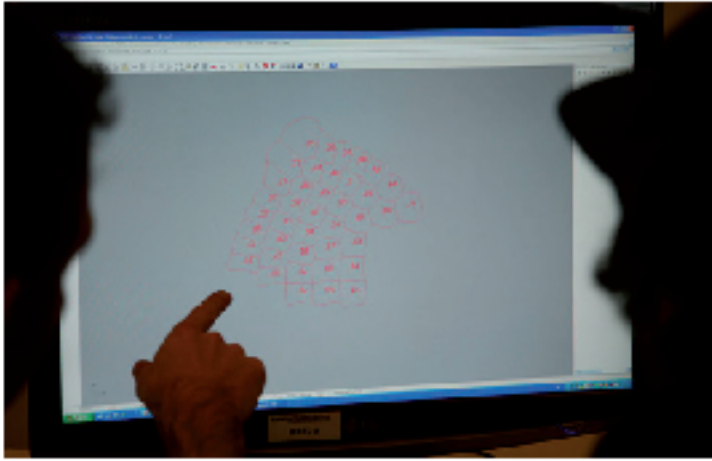
modelling the geometric logics of the fibrous filaments that constitute muscular systems and that support kinetic response







//workshop



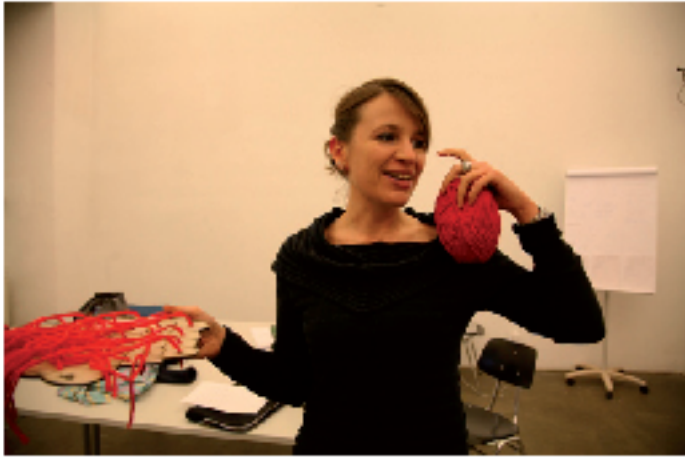
//tropical playgrounds

////////////////////CYBERNETIC

diagramming the flows of information that regulates cybernetic feedback in muscular response to environmental stimuli

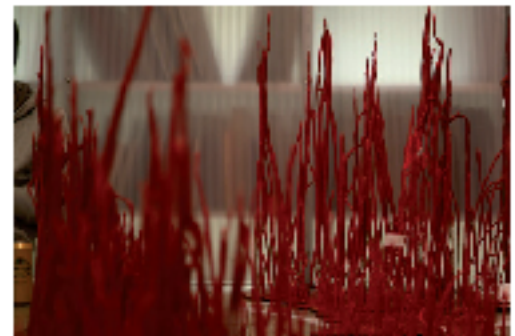
////////////////////MOLECULAR/MATERIAL

experimenting with the hybrid material composites that characterizes muscular assemblages



//workshop

We will then formulate our artificial muscles as fibrous systems where performances and behaviours are the non-linear product of the coordinated affects of thousands of single fibers. In such redundant systems qualities and behaviours can be bred and differentiated in relationship to environmental fields and specific programmatic regimes through iterative interactive processes. We will engineer this processes by developing specific mechanisms of production and fabrication as well of sensing and computation; we will learn how to manipulate thousands of entities and to record and manage the emergent qualities of the assemblages.

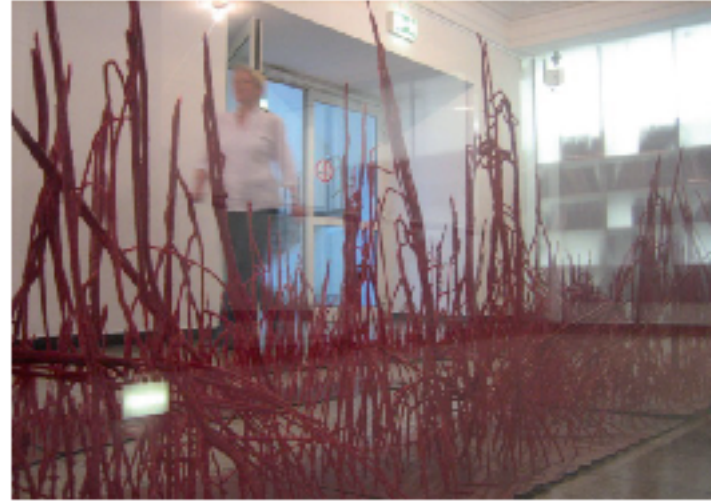
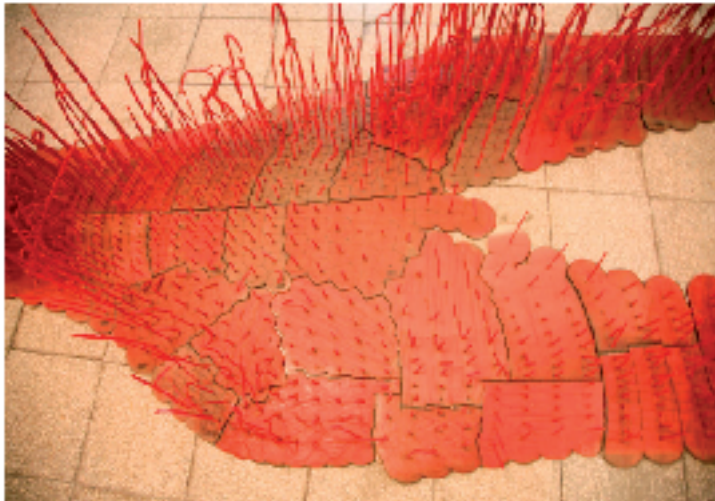


// tropical playgrounds

////////////////////WORKSHOP PARTICIPANTS

Nizar Aguir
Florian Aistleitner
Nina Bammer
Miha Cojhter
Ramona Ehrle
Gita Ferlin
Vytautas Gecas
Mignon Grube
Christine Gunzer
Désirée Hailzl
Dominique Hölzl
Thomas Huemer

Daniel Mandel
Wolfgang Novotny
Anna Pech
Elisabeth Pfeffer
Sonja Pizka
Sarmite Polakova
Eva-Maria Pribyl
Marija Puipaitė
Tatjana Schinko
Elena Silaeva
Felix Vierlinger



// // round table



//////////**ROUND TABLE WS09/10**
nov 19 2009 at 7 pm
Hörsaal A, Hauptplatz 8
Kunstuniversität Linz
moderation: Sandrine von Klot, s&d_research

//////////////////////////////////////GUESTS

Claudia Pasquero
co-founder of **ecologicStudio**

Claudia Pasquero graduated from Turin Polytechnic and finished in 2000 the AA EE Master Program.
Her office took part in the London + Venice Architectural Biennale exhibiting the installation project STEM. She has been teaching/lecturing at East London University, Turin Polytechnic, The Kingston University (London), UDLA (Puebla, Mexico City), IAAC (Barcelona), ITU (Istanbul), Bilgi University (Istanbul). Currently, she is unit master of Inter10 at the Architectural Association School of Architecture London, tutor on the MA sustainable design at UEL and visiting professor in Turin at the Polytechnic.



Oliver Bertram
founder of **different futures**

The focus of Different Futures extended the formal approach to Design into a broader cultural field and into the direction of brand representation and brand development. Since now he was able to work for some of the most successful brands all over Europe.
In addition Oliver Bertram created the research network AMM - a collaborative database for Architects, Designers, CAD and CNC specialists as well as material experts in the fields of architecture and design. AMM functions as a database, connected through a semantic web interface of collected articles, addresses and links to contemporary techniques and technologies.
He was lecturing and giving seminars for architectural representation, experimental design, design research and different other topics at the University of Applied Arts and as guest lecturer at numerous Universities such as TU Innsbruck, KU Linz, TU Kassel and on independent symposia.
He is currently teaching with Greg Lynn at the University of Applied Arts in Vienna.

more information on:
www.diffe.net or www.s&d.com



LATTICE tower by different futures

// issues



////////////////////////////////////ISSUES

We aim for a discussion about the topological source for structural form within material processes. Referring to leading structural experiments in the 70s, issues such as minimum surface tension and minimum bonding energy (following German architect and engineer Frei Otto), get related to genetic algorithms, useful at multiple scales. Design as iterative process, responding to changing environmental pressures, seeks to develop behavioural patterns in relation to its context. Sensual, atmospheric experiences are being provided and adapted to varying surrounding conditions. Where do we locate true creative impact today - do we still refer to the individual, creative act - or do we rather trace creativity as a means of unconscious collective behaviour, along trajectories of social and political agenda?



space&de sign strategies_research
<http://www.strategies-research.unlq.ac.au>

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curator

MSc. Lara Kurban, PhD Student, s&d
assistance

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