

Institut für Entwerfen
und Gebäudelehre
Institute for Design
and Architectural Strategies
Prof. Almut Grüntuch-Ernst

SoSe 2015



BIO - BERLIN



SEM15

SUMMER SCHOOL

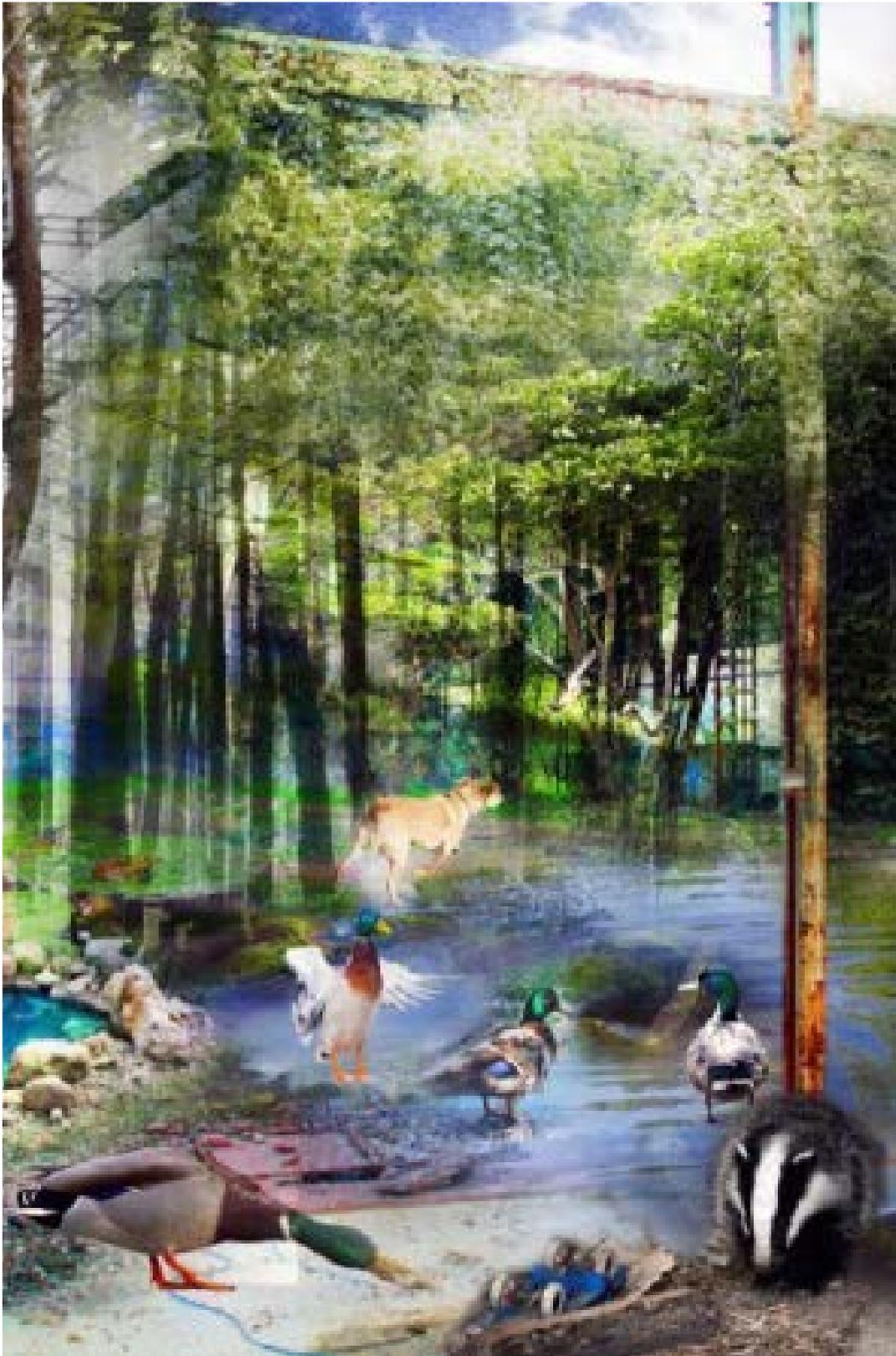


Technische
Universität
Braunschweig

Institut für Entwerfen
und Gebäudelehre
Institute for Design
and Architectural Strategies
Prof. Almut Grüntuch-Ernst

Dipartimento di Architettura
e Studi Urbani
Department for Architecture
and Urban Studies
Prof. Stefano Boeri





BIO BERLIN

Visions for non-anthropocentric cohabitation of humans, flora and fauna

How can we build cities that place the survival of the planet in the center of their becoming? Envisioning the cities of tomorrow from a „non-anthropocentric“ perspective means to bring down man from the pedestal of life and putting him at the same level with other vegetative and animal species that share the same urban realm. The workshop aims at examining the Berlin of Tomorrow imagining spaces of non-hierarchical coexistence between different species. Based on the spaces identified and imagined during the workshop, students will develop inviting spaces of co-existence that serve as a learning and observation center in the metropolitan area. This mix of wild life habitat and learning center aims at an „Hortitecture“ project, where plants and animals become an integrative part of the building.

In order to develop visions for urban cohabitation of humans, flora and fauna, master students from Politecnico di Milano and from TU Braunschweig meet at the AEDES Network Campus Berlin for a workshop. The workshop is an intensive immersion in the field lasting 2 weeks. It is accompanied by lectures, discussions and fieldwork. It will conclude with a presentation of the research work and design scenarios envisioned by the students. The aim of this workshop is to develop visions for coexistence of humans, animals and plants within the urban realm. These ideas should be placed in the field between architecture and urbanism, they can be small or large scale interventions. The lectures at the beginning of the workshop will serve to get a better insight of the topic, focusing on wildlife in cities, biodiversity and physical challenges for animals and plants in cities. Students are given 6 different sites with very different properties, which the teams can choose as a background for their proposals. It is also possible to choose a different location, if it suits the project better. The challenge is to change perspective, and to rebalance the needs of plants, animals and humans within the urban environment.

After the workshop, students from TU Braunschweig are proceeding to work on the theme in the framework of a compact design studio. The visions developed in the workshop will serve as a base for the design of an urban animal observation and learning center.



TEAM



Institut für Entwerfen
und Gebäudelehre
Institute for Design
and Architectural Strategies

Prof. Almut Grüntuch-Ernst



Ana Zatezalo Schenk, IDAS



Andre Schmidt, IDAS



Department for Architecture and
Urban Studies

Prof. Stefano Boeri



Saverio Pesapane, Politecnico



Azzurra Muzzonigro, Politecnico



Francesca Benedetto, Politecnico

SPEAKERS

“Biodiversity and Ecosystem Services”



Prof. Dr. Boris Schröder- Esselbach

Prof. Dr. Boris Schröder-Esselbach from the Institute of Geoecology, TU-Braunschweig will speak about some aspects of the research topic „Future City“ with a focus on „Healthy Livable Cities“. His extensive research interests are in: quantitative landscape ecology, landscape management & ecosystem services, ecological modeling, conservation biology, biogeography & macroecology, ecohydrology & ecogeomorphology, as well as movement ecology throughout Europe, the USA and Canada and in many other countries, too.Monday, September 7th at 15h15

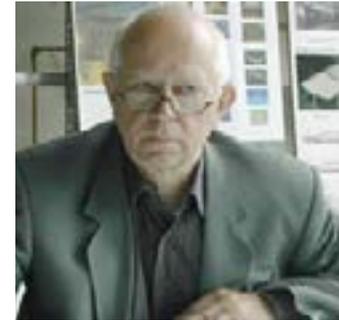
“Wildlife conservation and research”



Prof. Dr. Heribert Hofer

Prof. Dr. Heribert Hofer is a Director of the Leibniz Institute for Zoo and Wildlife Research in the Forschungsverbund Berlin e.V. His main area of research is in the evolutionary wildlife. At the Institute Prof. Dr. Hofer together with his team studies the diversity of life histories and evolutionary adaptations and their limits (including diseases) of free-ranging and captive wildlife species, and their interactions with people and their environment in Germany, Europe and worldwide Monday, September 7th at 11h30

“Adaptable and ecological architecture”



Prof. Berthold Burkhardt

Prof. Berthold Burkhardt is Architect at the Burkhardt + Schumacher Architekten und Ingenieure dwb, BDA . In the past Prof. Berthold Burkhardt used to teach and run the Institute for Tragwerksplanung at the Technical University of Braunschweig, He is a colleague of Frei Otto where he contributed projects such as German Pavilion Montreal Expo 67; 1972 Olympic Stadium roof in Munich and many more. His vast research interests are in the fields of: structural planning, light construction, risk management in nature, history of construction, construction and heritage protection. Friday, September 11th at 17h00

“Animal- Aided Design”



Dr.-Ing. Thomas E. Hauck

The basic idea of Animal-Aided Design® is to include the presence of animals in the planning process, such that they are an integral part of the design. For AAD, the desired species are chosen at the beginning of a project. The requirements of the target species, i.e. their life-cycles, then set boundary conditions and serve as an inspiration for the design.

Thomas E. Hauck, Dr.-Ing., is a landscape architect and artist, studied landscape architecture at the University of Hanover and the Edinburgh College of Art. He founded the interdisciplinary artists' group Club Real (2000). He was an assistant professor at the Chair of Landscape Architecture and Public Space at the Technical University in Munich, Germany (2005-2014) and is now doing research and teaching with the Department for Open Space Planning at the University Kassel, Germany. He has his own practice (Polinna Hauck Landscape + Urbanism) together with Dr. Cordelia Polinna Berlin since 2007..... Tuesday, September 8th at 13h30

" The Hemiptera or true bugs - omnipresent in cities"



Dr. Roland Mühlethaler

Dr. Roland Mühlethaler, specialist for the insect order Hemiptera, is now working as research associate at Tomas Saraceno's artist's studio in Berlin. There he is responsible for the research of vibrational communication in arthropods, mainly spiders. His research interest lies in gaining of new insights through sensual contemplation of the variety, complexity and the consistencies of fauna and nature in general. In his hometown Basel (Switzerland), he was involved in several research projects of urban ecology. Friday, September 11th at 17h45

" Urban beekeeping "



Dipl.-Ing. Erika Mayr

Dipl.-Ing. Erika Mayr shifts her interest between nature and the effect of nature on people. Since 2004 she studies honeybees. Today she keeps 15 colonies, mostly on roofs in urban areas and harvest around 300 kg of honey that she commercializes at the Bar Mysliwska. Mayr also works as a gardener and tends a bar. Monday, September 7th at 10h30

"Artenschutz am und um Gebäude"



Silke Reinig, Firma SCHWEGLER

Ms. Reinig is a nature educator; she works at the SCHWEGLER Vogel- und Naturschutzprodukte GmbH and will tell us more about the SCHWEGLER Bird & Nature Conservation products. Monday, September 7th at 16h15

STUDENTS

Deng Zihe, IDAS, TU Braunschweig

Yuanmei Ji, IDAS, TU Braunschweig

Daniel Kemna, IDAS, TU Braunschweig

Lisa Streilein, IDAS, TU Braunschweig

Evangelia Lucy Mazikatzi, IDAS, TU Braunschweig

Amir Touhidi, IDAS, TU Braunschweig

Davide Biselli, Politecnico di Milano

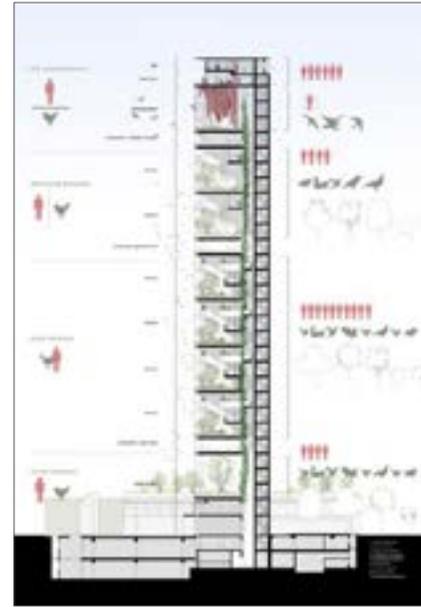
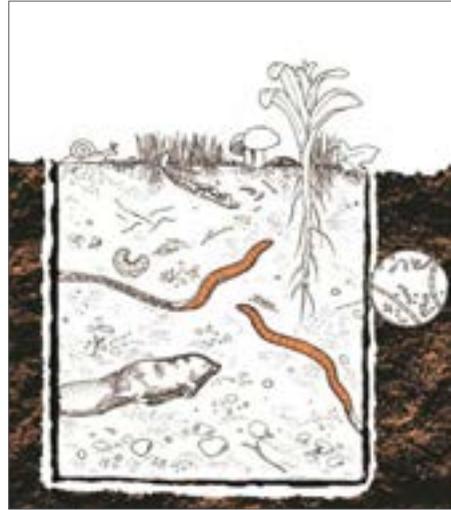
Francesca Milani, Politecnico di Milano

Francesca Orlandi, Politecnico di Milano

Ignazio Uribe, Politecnico di Milano

Flavio Premi, Politecnico di Milano

Clara Ferrari, Politecnico di Milano



Student visions, results of the workshop
"Animal City Milan", 2014



SITES

Schönhauser Allee

Schönhauser Allee in Berlin is one of the most important streets of the Prenzlauer Berg district. Schönhauser Allee reaches from Rosa-Luxemburg-Platz in the south to Pankow in the north. Many of the boulevards crossstreets have names with Nordic themes as Bornholmer Strasse and Kopenhagener Strasse. The street was named after the Schönhausen Palace in Pankow.

Over the boulevard the subwayline U2 pass by on high elevated bridges.

The Schönhauser Allee is one of the leading seven north and east radial arterial roads, from the historic center of the city, essentially from Alexanderplatz out.

The avenue begins at the junction gate corner Rosa-Luxembourg-Straße, the former Schönhauser Gate of Berlin Customs Wall, on the border with the district of Mitte as an extension of the Alte Schönhauser Straße. In approximately three kilometers in length it runs in a northerly direction through the entire district of Prenzlauer Berg, overcoming more than 14 meters.

Address:

Schönhauser Allee, 10437 Berlin

More Information:

<http://www.visitberlin.de/de/ort/schoenhauser-allee>





Eisfabrik

In the Köpenicker Straße in the Berlin-Mitte is located a historical building of the former ice factory. It belongs to the oldest ice factories in Germany and is the last building reminiscent of the times of the ice cream industry.

Many historic ice factories were destroyed by fire and war. The North German ice factories, including the site of the Köpenicker Str. 40/41 were by far the largest Natureisproduzenten in Germany.

Today the Spree is recognized in this area as an attractive location, and you could do as an owner supposedly much profit, if, yes if this monument would not

The ice factory in Berlin-Mitte is a listed building so question of how to deal with old buildings and the value of history is crucial.

Through years of vacancy of the factory site the owner has indeed created conditions in order to make the preservation of most of the buildings in question can, however, still is the state of the building is not too bad. In addition are plenty of other examples of the receipt of such formerly important objects.

As the ice factory is located on the River Spree (then were waterways to build the city and the trade still very important), also raises the question of how to deal with the banks of the Spree.

Not least, it is also about the use and design of the apartment building on the street side, which is to be maintained.

Address:

Köpenicker Str. 40, 10179 Berlin

More Information:

https://www.youtube.com/watch?v=_oXWawrjHOE



Kulturforum

Since the 1960s, the cultural forum grew into an internationally renowned ensemble of buildings, which includes inter alia the famous Philharmonic Hall and the Chamber Music Hall, the New National Gallery and the New State Library (Stabi). As the newest building at the Kulturforum, the New Art Gallery was opened in 1998. The exhibitions and concerts at the Cultural Forum, the changing role of the site in the history of the 20th century and, not least, today encountered here significant architectures of Mies van der Rohe, Hans Scharoun, Hilmer and Sattler make the Forum an important landmark in Berlin.

The Cultural Forum is an important document of post-war history. Comparable to the promotion of the City West (Ku'damm shopping mile with Europa Center, Memorial Church, etc.), the Cultural Forum was as a commercial showcase of the former West Berlin then developed as a cultural center: right on the Berlin Wall and more peripheral to the West Located -Berliner City should be set with the Cultural Forum as a counterpart to the Museum Island, a clear sign of a culturally vibrant West Berlin. Since then, here are the most important cultural and scientific institutions at home. The urban design still complies with the requirements of the architect Hans Scharoun in the 1960s. A visit to the Cultural Forum is therefore in addition to the many attractions and an interesting walk in the footsteps of history.

Address:

Potsdamer Straße, 10785 Berlin

More Information:

http://www.kulturforum-berlin.de/engl_index.html





Monbijoupark

The Monbijoupark is a park in Berlin Mitte opposite the Museum Island. The park is about 3 hectares. Here, locals and tourists alike meet under old trees for a chat with wonderful panoramic views over the Spree and the Museum Island. Restaurants and cafes line the Aerial. From the park will take you directly to the Hackescher Markt with its numerous restaurants and bars and the well-known and popular with tourists popular Hackesche courtyards that also offer a lot of entertainment venues.

Address:

Oranienburger Str., 10178 Berlin

More Information:

<http://www.monbijou-theater.de>

<https://de.wikipedia.org/wiki/Monbijoupark>





Tempelhofer Feld

The Tempelhof Field was many things: military sites, recreation, airport, concentration and labor camps. Today it is a living laboratory for a new relationship: nature, pioneering projects and various sports and leisure activities in one place in the middle of Berlin.

To preserve this uniqueness and foresight to develop further the goal of the participatory resulting development and maintenance plan. The basis of the common plan is the law for obtaining the Tempelhof Field.

The thematic workshops developed from May to July 2015 guidelines and policy measures. The current interim results discussed in texts EPP until the end of August 2015 annotated and supplemented. Create with!

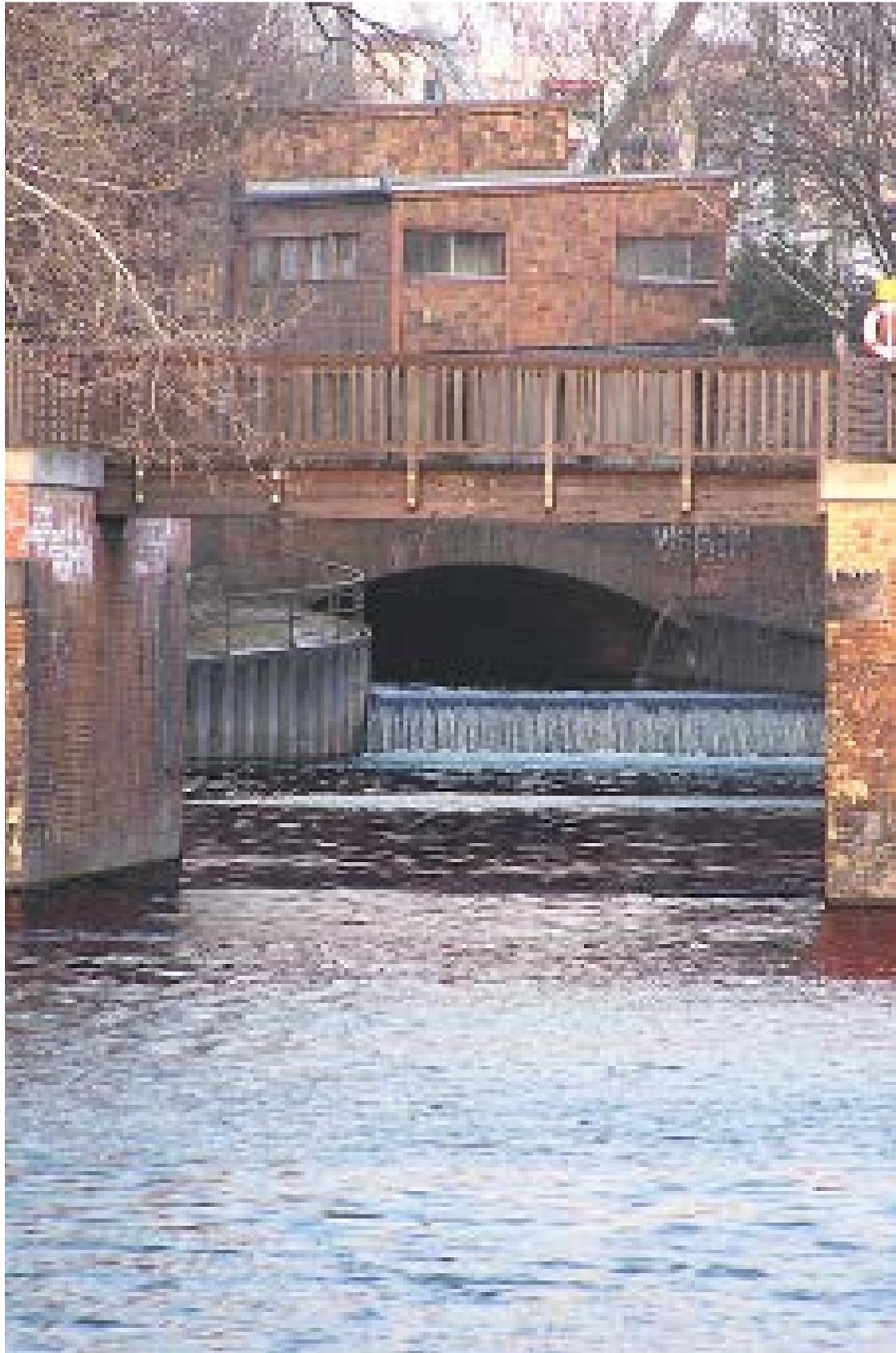
Address:

Tempelhof, 12101 Berlin

More Information:

<http://www.tempelhofer-park.de>





Nordhafen

More Information:

[https://de.wikipedia.org/wiki/Nordhafen_\(Berlin\)](https://de.wikipedia.org/wiki/Nordhafen_(Berlin))

http://www.stadtentwicklung.berlin.de/planen/stadtplanerische_konzepte/heidestrasse/

The North Harbour in Berlin is a former river port on the Berlin-Spandau Ship Canal. It lies at the intersection of the districts Mitte, Moabit and Wedding of the district center, where the docks completely belongs to Moabit. Panke estuary at North Harbour.

The construction of the canal was carried out since 1848 in order to relieve the boat traffic on the river Spree. The construction of the Northern Port was started in 1856 and on 24 October 1858, he was put into operation. The North Harbour is located between the Fennbrücke in the northwest and the Kiel bridge in the southeast. The main arm of the Panke flows into the southeast area of the port. About the port the North Harbour Bridge runs.

The North Harbour initially served particularly the supply of municipal gasworks in Wedding and the industrial area around the hamburgers and Lehrter Bahnhof. The basin encompasses a length of 250 and a width of 130 meters with a water surface of 35,000 m². Since 1886, the city of Berlin was responsible for the operation of the port. 1923 went the sponsorship on the BEHALA over who in 1937 converted into a self-operation of the city. [3] During World War II the port was heavily damaged. Also wore - in addition to the aforementioned difficulties when deleting - the situation on the sector border to the fact that you're in the post-war period finally decided to close down the port. After 1952 on the east side of the operation was set to finally put 1966 on the west bank of operating quietly. The former port facilities have been converted into green areas.



VISITS

Museum für Naturkunde

Leibniz-Institut für Evolutions- und Biodiversitätsforschung

Tuesday, September 8th at 9h30 (arrive 5 minutes earlier)

Address:

Invalidenstraße 43

10115 Berlin

Deutschland

U-Bahnhof Naturkundemuseum, U-Bahnlinie 6

Guided Tour of 45 min by Mathias Zilch.

Price: 2€ Tour + 1,50€ Entrance



Fledermauswanderung durch den Düppeler Forst

Adress:

Zehlendorf, S-Bhf Wannsee, 14109 Berlin,

Meeting point: Stahnsdorfer Damm/Ecke Potsdamer Chaussee

Entrance S-Bahnhof Wannsee (S1, S7, Regionalbahn, diverse Buslinien, F10)

Price: € 2,50

Stadt der Tiere

Wednesday, September 9th at 10h00

Address:

Tierschutzverein für Berlin und Umgebung Corporation e.V.

Tierheim Berlin

Hausvaterweg 39

13057 Berlin

Tel. 030 / 76 888 0

Price:



Artenvielfalt auf dem Dach

Address:

Wilmerdorf, Teufelsseechaussee 22 - 24, 14193 Berlin

Entrance: S-Bahnhof Grunewald

Price: free



VENUE

ANCB The Metropolitan Laboratory Aedes Network Campus Berlin

For over three decades, Aedes Architecture Forum has been exhibiting and publishing internationally acclaimed and pioneering architecture alongside its urban environment. When Aedes was founded, it was the first time that contemporary architecture was introduced for public consideration as the product of a thought process.

Building upon the gallery's history and expertise, founding directors Kristin Feireiss and Hans-Jürgen Commerell created Aedes Network Campus Berlin in 2009. ANCB The Aedes Metropolitan Laboratory was established as a physical and intellectual space focused on the inseparable interplay between urban form and social life. It has become a cultural brand, constantly and substantially contributing to the broad discourse of national and international architecture, urban design and culture.

Since its official launch in 2009, ANCB has brought together a broad range of students, researchers and practitioners from the fields of architecture, urban planning and related disciplines. Together, we have facilitated design studios and public debates on a diverse range of subjects relevant to the city; generating valuable exchange between local and international students, policy makers, as well as industry and design experts.

ANCB IS:

- A Public Urban Platform for collective observation and discussion around critical issues facing the city.
- A place for Alternative Urban Education for students and academics from universities worldwide.
- A trans-sectoral Urban Think-Tank for joint enquiries about urban and architectural topics.
- A broad International Urban Network established and upheld by leading pioneers in the fields of architecture education and practice, urban design, construction and product industry, urban governance and art.



HOSTEL

citystay Hostel
Rosenstr.16
10178 Berlin-Mitte
Tel: +49 (0)30 23624031

Cost per Student: EUR 10,00 / night = Total EUR 120,00

Includes hostel accomodation, BVG ticket and workshop location fees.

Not included:

Travel to and from Berlin, all meals and other fees such as entrance fees where required.



BIBLIOGRAPHY/ FILMOGRAPHY/ LINKS

Alterity/Animality

Bailly, J.C., 2007, *Le versant animal*, Paris, Bayard.

Bailly, J.C., 2012, *Le parti des animaux*, Paris, Seuil.

De Fontenay, E., 1998, *Le Silence des bêtes, la philosophie à l'épreuve de l'animalité*, Paris, Fayard

Derrida, J., 2006, *L'animal que donc je suis*, Paris, Galilée.

Frisch, K.V., 1970, *The Dancing Bees, An Account Of The Life & Senses of the Honey Bee*, Methuen-University Paperbacks.

Frisch, KV, 1974, *Animal Architecture*, Harcourt.

Haraway, D., 2003, *The Companion Specie Manifesto: Dogs, People, and Significant Otherness*, Prickly Paradigm Press.

Manchey, B., 'La liberté sauvage. Hypothèses pour une politique animale' in *Lignes n.28 Humanité/Animalité*

Urbanism/Space

Boeri, S., 2008, 'Down From The Stand: Arguments In Favor Of A Non-Anthropocentric Urban Ethics'. In: Turan, N., *New Geographies*.

Boeri, S., 2011, *L'Aniticittà*, Editori Laterza, Bari.

Boeri, S., 2011, *Biomilano*, edited by Brunello M., and Pellegrini S., Corraini Edizioni, Mantova.

Boeri S., 2010, 'Arguments for a planetary garden' in *Derive*, vol. 40-41, p. 143-145

Branzi, A., 2006, *Weak and diffuse modernity. The world of projects at the beginning of the 21st century*, Skira, Milan.

De Cauter, L., Dehaene, M., 2008 'The space of play' in *Heterotopia and the City: Public space in a post civil society*. Dehaene, M., & De Cauter, L. Oxon: Routledge.

Dodington, E., 2013, *How to Design with the Animal*, Animal Architecture Press.

Dodington, E., & McDonnell, M., 2011, *Urban Aeries/Purch*.

Foucault, M., 1977 'Of other spaces: Utopias and heterotopias' in *Rethinking Architecture ad*. By Neil Leach, Routledge, London.

Genocchio, B., 1995, 'Discourse, Discontinuity, Difference: The Question of 'Other Spaces' in *Sophie Watson and Katherine Gibson (Ed.): Postmodern cities*. Oxford and Cambridge, MA: Blackwell

Perec, G., 1974, *Espèces d'espaces*, Paris, Galilée.

Rutherford, J., 1998, 'The Third Space. Interview with Homi Bhabha' in *Identity: Community, Culture, Difference*. London: Lawrence & Wishart

Sibley, D., 1995, 'Geographies of Exclusion', Routledge, London

Stavrvides, S., 2006, 'Heterotopias & the experience of porous Urban Space' in *Loose Space: Possibility and Diversity in Urban Life*. Routledge.

Stavrvides, S., 2010, 'Towards the City of Thresholds' Creative Commons, Professional Dreamers.

Zanini, P., 1997, 'Significati del Confine. I limiti naturali, storici, mentali' Bruno Mondadori. Milano.

Ecological/Landscape Urbanism

Beevers, R., 1988, *The Garden City Utopia, A Critical Biography of Ebenezer Howard*, Olivia Press

Clement, G., 2004 *Manifest du Tiers paysage*, Editions Sujet/Objet, Quodlibet

Clément, G., 1991, *Le Jardin en mouvement*, Paris, Pandora.

Hagan, S., 2014, *Ecological Urbanism: The Nature of the City*, Routledge, NY.

Mostafani, M., & Doherty, G., 2010, *Ecological Urbanism*, Lars Müller Publishers

McDonough, W., & Braungart, M., 2002, *Cradle to Cradle. Remaking the way we make things*, North Point Press.

Rifkin, J., 2011, *Third Industrial Revolution: How Lateral Power Is Transforming Energy, the Economy, and the World*, Palgrave MacMillan.

Filmography

A resident of the city, Adham Elsherif , 2011

<https://vimeo.com/116585653> (full movie)

Bear71, Leanne Allison and Jeremy Mendes, 2012

<http://bear71.nfb.ca/#/bear71> (interactive web documentary)

Grizzly Man, Werner Herzog, 2005

<https://www.youtube.com/watch?v=q8MjDyfcMmU> (full movie)

Leviathan, Lucien Castaing-Taylor and Véréna Paravel , 2012

<https://vimeo.com/45252172> (movie trailer)

Roar, Noel Marshall, 1981

https://www.youtube.com/watch?v=0kqw17_npAE (movie trailer)

The Birds, Alfred Hitchcock, 1963

<https://www.youtube.com/watch?v=eHh6bwuPShw> (excerpt from movie)

White god, Kornél Mundruczó, 2014

Links

<https://www.upress.umn.edu/book-division/books/wildlife-in-the-anthropocene/>

<http://www.thenatureofcities.com/2013/06/16/valuing-urban-wildlife-critical-partners-in-the-urban-system-or-scary-disgusting-nuisances/>

COMPACT DESIGN STUDIO

Based on the visions developed in the workshop, the same or a different site should be selected to turn the ideas into an architectural project. The projects of all students can be seen as a cluster of observation and learning units, which together form a greater network within the city of Berlin.

So the workshop will be the kick-off for the architectural design of a "nature learning center" as a network of classroom pavilions creating a learning environment.

The aim is to react to and engage with the specific site and provide solutions that address the needs of the different species in an unusual architectural project.

TERMINPLAN

30.06.2015 10:00 Uhr	Information
03.07.2015	Bestätigung und Eintragung in Liste
<hr/>	
01.09.2015 14:00 Uhr	Einführungsveranstaltung
07.09.2015 bis 17.09.2015	Workshop mit Politecnico di Milano
<hr/>	
18.09.2015 12:00Uhr	Resumé Workshop und start Weiterbearbeitung als Kompaktentwurf
28.09.2015 05.10.2015	Testat
15.10.2015	Abgabe & Abschlusspräsentation

ABGABELEISTUNGEN

WORKSHOP

Konzept	Skizzen, Piktogramme, Diagramme und Text zur Erläuterung der Leitidee und Konzeptherleitung
Zeichnungen	Lageplan, M 1:500 Darstellungen zu Städtebaulicher Einbindung Einbindung von Mensch, Flora und Fauna Nutzungs- und Erschießungskonzept
Andere Medien	Es werden auch andere Darstellungsformen zugelassen. Eine Videodokumentation oder auch Präsentation ist ebenfalls möglich, ggf. Außenmodell
Atmosphären	min. 2 räumliche Darstellungen - Außenraum+Innenraum mit Aussagen zu Außenwirkung, Raumqualität, Atmosphäre
Sonstiges	Erläuterungsbericht DIN A4 Entwurfspräsentation für Beamer (als .ppt/pdf) CD mit sämtlichen digitalen Daten (als .tiff/ .eps/ .pdf)

KOMPAKTENTWURF

Konzept	Skizzen, Piktogramme, Diagramme und Text zur Erläuterung der Leitidee und Konzeptherleitung
Zeichnungen	Lageplan, M 1:100/ M 1:50 Alle für das Konzept notwendigen Grundrisse, Schnitte und Ansichten, M 1:200 (entwurfsabhängig Teilbereiche auch größer) Darstellungen zu Städtebaulicher Einbindung Einbindung von Flora und Fauna Nutzungs- und Erschießungskonzept
Atmosphären	min. 2 räumliche Darstellungen - Außenraum+Innenraum mit Aussagen zu Außenwirkung, Raumqualität, Atmosphäre
Modelle	Präsentationsmodell, M 1:50 Modelleiste mit Vorstufen
Abgabe und Format	Erläuterungsbericht DIN A4 Planverkleinerungen auf DIN A3 Entwurfspräsentation für Beamer (als .ppt/pdf) CD mit sämtlichen digitalen Daten (als .tiff/ .eps/ .pdf)
Krankschreibung	Eine Krankschreibung entbindet nicht von der gemeinsamen Abschlusspräsentation. Die Abgabe der Leistung verlängert sich um die Dauer der Krankschreibung.

IDAS
Institut für Entwerfen
und Gebäudelehre
Institute for Design
and Architectural Strategies
Prof. Almut Grüntuch-Ernst

Ana Zatezalo Schenk
Andre Schmidt

Technische Universität
Braunschweig
Pockelsstraße 3, 15. OG
D-38106 Braunschweig

Telefon
+49 (0)531 391-94400
Telefax
+49 (0)531 391-94409

E-Mail
idas@tu-bs.de
Internet
idas.tu-bs.de