RESEARCH PAVILION 2018 MADE OF WOOD AND BIOCOMPOSITES
Re-usable construction using bio-based materials

This is the "BioMat" research group's first pavilion, a doubly curved segment shell made of lightweight curved wood and biocomposite elements, supported by three intersecting wooden beams. All elements can be dismantled after use and re-used in new projects. The holistic geometry resembles a 3D woven fabric whose curved elements are linked in all directions by means of conjunctions. This permits the development of new aesthetic approaches made possible by using digital manufacturing technologies and data-flow management. The work is the result of collaboration between experienced architects and students from the Faculty of Architecture and Urban Planning and a number of other institutes of the University of Stuttgart and international partner institutions.

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PICTURE CREDITS: Inside: © BioMat/ITKE/University of Stuttgart, photo Kristina Balušíková. Cover © Ruofang Wang, Master's thesis 2018 "Poetry of the Mountains, Ningbo Meditation Center, China" at the IBBTE/Prof. Schürmann. This thesis was awarded the 2018 Faculty of Architecture and Urban Planning prize. Text page: left to right. © IDG, foundation course study assignments from the "Körperfelder" project by first-semester sculpture and drawing course students, photo Ben El Halawany. ©IOB, final presentation at IOB/Prof. Schwarz

DESIGN: Kerstin C. Ottmar, Ben El Halawany

ARCHITECTURE & URBAN PLANNING
architektur.uni-stuttgart.de

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Chair of Sustainability, Construction and Design
www.ibk.uni-stuttgart.de
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Chair for Building Construction, Building Technology and Design
www.ibk.uni-stuttgart.de
Prof. Dipl.-Ing. Martin Ostermann

INSTITUTE OF CONSTRUCTION ECONOMICS (BAUOEK)
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Prof. Dr. sc. tech. Christian Stoy

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Chair Biobased materials and materials cycles in architecture (BioMat)
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INSTITUTE HOUSING AND DESIGN (IWE)
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Chair Sociology of architecture and housing (IWE)
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Chair of Theories and Methods of Urban Planning
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INSTITUTE FOR LIGHTWEIGHT STRUCTURES AND CONCEPTUAL DESIGN (ILEK)
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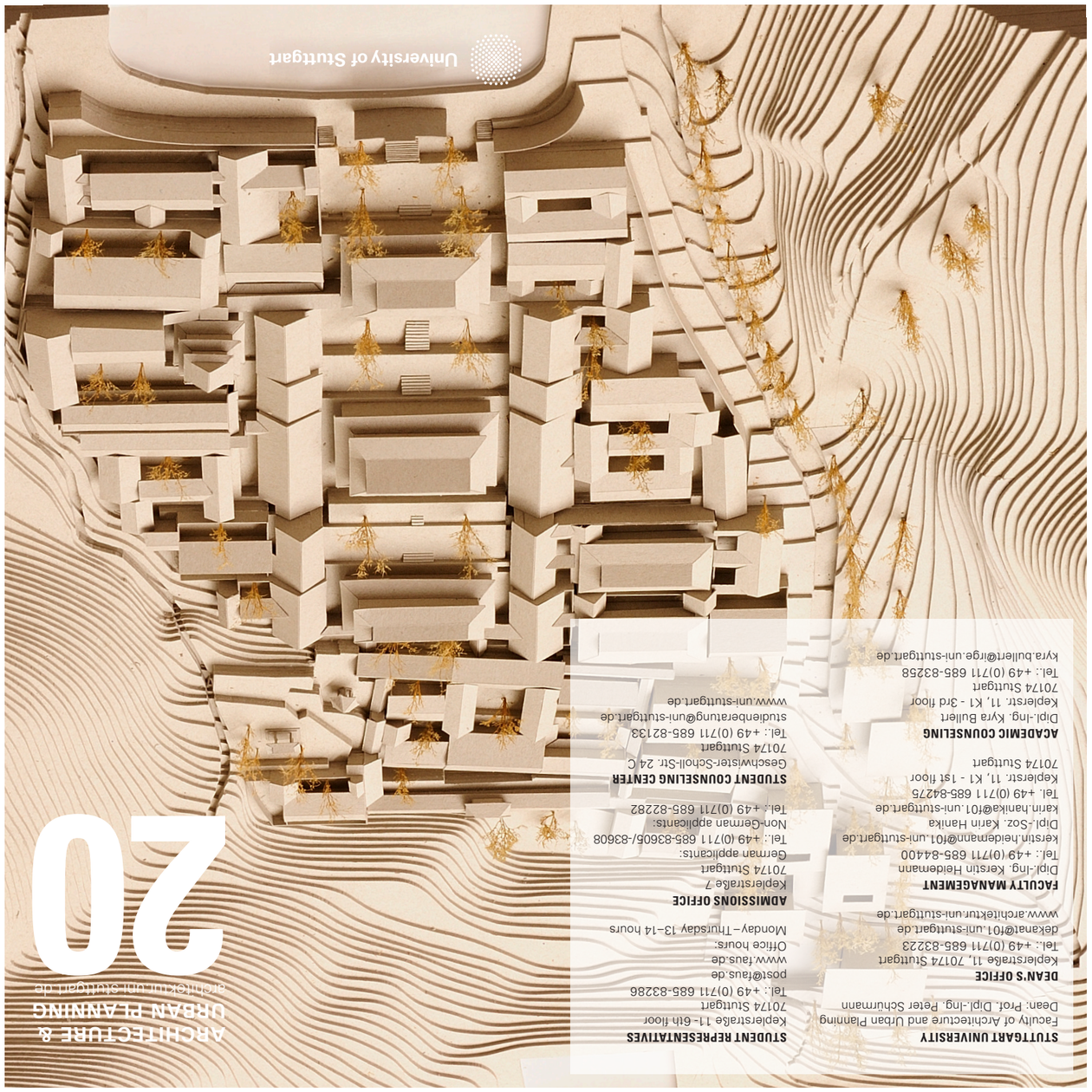

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»ARCHITECTURE & URBAN PLANNING« AT THE UNIVERSITY OF STUTTGART

Of all the arts architecture and urban planning are the most public.
Urban planners and architects have the complex and responsible task of designing a built environment which incorporates beauty and diversity to create a liveable future. They respond to economic, social and technical change, developing visions and plans for the world of tomorrow.Their point of departure is existing building stock; their objective is to find viable solutions which take account of all the parameters.
The creative design process is at the heart of this study program. Students are taught a wide spectrum of subjects: construction, urban design and planning, presentation and design, principles of building technology, architecture/planning history and theory, and social and economic principles.

STUDY PROGRAM

The architecture and urban planning study program generally leads to a Masters degree. This allows to further the studies in the frame of a doctoral research. It also allows the holder to be admitted to the Chamber of German Architects, an essential requirement to practise as an architect or urban planner.
Students aspiring to a career as an independent architect or urban planner must apply to the master's program. A faculty commission will decide whether the applicant has the necessary subject-specific qualification on the basis of the documents submitted with the application. The final element of the master's program consists of the master's thesis, which is generally completed in the fourth semester.
In their master's thesis students must demonstrate their ability to provide solutions within a creative design process. The basis for this will be broad-based discussion of aesthetic concepts, technical innovation and the significance of ecological and economic issues and will be laid during the first three semesters in projects and seminars to be selected by the students themselves. Students are also required to carry out one project and take one seminar in a field which has relevance to that of their master's thesis.

Applicants to the master's program must have a bachelor's degree from a university or institute of higher education.Experience abroad is also desirable; this is expressly promoted through the Bachelor [International+] at the Faculty of Architecture and Urban Planning in Stuttgart. Decisions on admissions to the bachelor's degree program will be taken by a faculty commission on the basis of the application. The first two years consist largely of lectures and exercises which will give students a sound basis for subsequent semesters. In the frame of first design projects they will also begin to acquire skills in developing solutions to complex tasks. The third year consists of largely autonomous project-based study, in fields chosen by the student. At this comparatively early stage students can thus pursue lines of study which match their own interests and skills and which can be reflected in their choice of subject for the bachelor dissertation.

INTERNATIONALITY

The prospects in the occupational field of architecture and urban planning is increasingly characterized through the evidence of international and intercultural competences. The Faculty actively encourages students to spend a semester at one of over 100 partner universities abroad and this can be incorporated into the student's individual course of study. Moreover, the faculty awards the certificate Bachelor [international+] in addition to the Bachelor's certificate to students that have conducted a design studio in the international context and studied or worked abroad during their studies.

SPECIALIZATION URBAN PLANNING

Students who wish to pursue a career in urban design and planning can select urban design/planning as their special field within the master's program. This is an essential requirement for inclusion in the register of urban planners at the chambers of architects.

M.SC. »INTEGRATIVE TECHNOLOGIES AND ARCHITECTURAL DESIGN RESEARCH (ITECH)«

The ITECH masters program (M.Sc.) focuses on the science and research into new drafting methods and technologies. It is designed to appeal to architects, engineers and scientists (B.Sc.) who wish to work in a multidisciplinary international research environment.

M.SC. »INTEGRATED URBANISM AND SUSTAINABLE DESIGN (IUSD)«

The IUSD masters program (M.Sc.) enables students to specialise in international urban planning. It seeks to train experts and decision-makers who will be involved in developing holistic solutions for the ecological, cultural and social problems caused by the rapid urbanization processes and social transformations globally.

M.SC. »INDUSTRIAL REAL ESTATE MANAGEMENT (IREM)«

The IREM masters program (M.Sc.) is a four-semester postgraduate master's program. It tackles the complex planning and building challenges associated with the operation and commercial use of industrial and healthcare real estate. It is designed to meet the needs of graduates of construction-related study programs who have already gained some experience in their fields and will prepare them for leadership roles in an international environment.

»HEALTHCARE REAL ESTATE MANAGEMENT (HREM)«

The HREM masters program (M.Sc.) is the ideal platform for exploring the complexity and manifold facets of healthcare real estate, notably functional, technical and practical aspects.The teaching staff are acknowledged experts in their disciplines, also giving students insight into the practical application of the teaching content.

RESEARCH

The Stuttgart Faculty has a long tradition of research. Building on fundamental research in architectural and urban history, current research addresses the structures and manifestations of societies, urban and natural environments and how they interact – frequently in the context of interdisciplinary and international collaboration. Master's graduates can continue an academic career and go on to acquire a doctorate in engineering sciences (Dr.-Ing.) and a doctorate in philosophy (Dr.-Phil.).

For further information and dates please visit our website:
wwww.architektur.uni-stuttgart.de

FACILITIES

From day 1 students work in small groups in workshops under the individual supervision of experienced architects.This form of study perfectly complements the teaching provided in lectures, seminars and requires students to play an active role in projects.

All students are free to use:

- the Faculty library, which has a huge selection of journals and current literature.
- the »casino IT« computer pool with fully equipped computer work stations, lending facilities, training/tutorials, experimental lab, virtual reality system, virtual acoustics and plot service.
- the Faculty workshops for analogue and digital construction of architectural models, wood and metal construction, sculpturing and photography and the »RoboLab« for producing computer-generated prototypes and materials systems.

FACULTY LIBRARY
K1, Room: 5.03 - 5.09

CASINO IT CAAD LAB
Geschwister-Scholl-Str. 24 D

ANALOGUE MODEL CONSTRUCTION WORKSHOP
K1, Room: 2.03 - 2.04

DIGITAL MODEL CONSTRUCTION WORKSHOP
K1, Room: 1.01 - 1.04

ROBOLAB
K1, Room: 2.01 - 2.02

PROTOTYPE CONSTRUCTION WORKSHOP
K1, Room: 2.02

TEST LAB
Breidscheidstr. 2, Room: -1.01

METAL WORKSHOP
Breidscheidstr. 2, Room: -1.037, -1.085, -1.087

ARCHITECTURAL PHOTOGRAPHY WORKSHOP
K1, Room: 1.06 - 1.07

SALES OF MATERIALS
K1, Room: 1.04

THE FACULTY

The study of architecture in Stuttgart goes back to the 19th century. In the early 20th century the »Stuttgart School« established new standards in both innovative and conventional building. After the Faculty was re-established in 1946 this heritage was revived and realigned to explore and pursue modern developments in architecture. Stuttgart has one of the biggest and most prestigious faculties of architecture in Germany – 16 institutes, headed by prominent experts in their field, supported by a broad-based team of academics, teaching staff and visiting lecturers and guests. The Faculty provides its students with a wide spectrum of teaching with the distinctive combination of architecture and urban planning.