

IUDeCS – INTERNATIONAL URBAN DESIGN AND COMPETITION STUDIO

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1 INTRODUCTION

The IUDeCS International Urban Design Competition Studio is a student competition jointly organized by the ISU – Institute for Sustainable Urbanism, TU Braunschweig and the Department of Landscape Studies, CAUP College of Architecture and Urban Planning, Tongji University. It brings together students from both universities to explore solutions to one of mankind's most urgent challenges: sustainable urban development. Together, we seek to investigate sustainable strategies and future-proof concepts for „Low Carbon Communities“ in Germany and China. We explore the potentials of existing sites, to propose pathways for a livable and sustainable future.

The teams from Germany and China work towards the same goal, but on sites in their own country with local university peers. After submission, an interdisciplinary jury with specialists from China and Germany will jointly evaluate the submitted proposals. Projects from both universities will be awarded. In an experimental approach, the jury will be held online so that all participants can listen in and experience the jury's discussion. This will facilitate learning across borders and cultures.

For us, IUDeCS is an open process and experiment by which we seek to explore new ways of collaborating in teaching across time zones, borders and cultures.

2 TEACHING AND LEARNING OBJECTIVES

The autonomous development of an urban design competition entry in a project team constitutes the overarching teaching and learning objective of IUDeCS.

PRACTICAL COMPETENCES

- Internal communication and work organisation of teamwork
- External, professional communication and presentation of the design work

DISCIPLINARY COMPETENCES

- Designing and visualizing practice
- Understanding of sustainable urban design in an international context

INTERCULTURAL COMPETENCES

- Differentiated approaches to global challenges
- International knowledge exchange, approaches to solutions and strategies, their reflection and further development for transfer to the respective local context

FUTURE SKILLS

- Digital-based methods of collaboration for design practice
- Collaborative, workflow-supporting tools of the AEC industry

3 CONCEPT

The IUDeCS teaching/learning format is adapting an international urban planning competition. As a basis for the success of this format, various innovative teaching/learning modules were developed using activating and design thinking methods and digital tools.

Lessons learned from previous transcontinental formats showed that different semester times and time differences are difficult obstacles to overcome for equal, creative collaboration in mixed project teams and in combination with local courses, which cannot be overcome with conventional digital tools (e.g. WebEx, Miro) alone. For this reason, each university has been conducting a course for their own students. Specific co-teaching formats as well as the final presentation brought the teaching staff and students together.

Within the project, (1) a competition platform, (2) digital co-teaching processes and (3) a collaboration environment were implemented and tested to support the teaching/learning format. Two workshops were held to introduce the digital tools: on Speckle to introduce students to the possibilities of the platform to support their design collaboration and on VR to support spatial design understanding and design communication.

(OFFICIAL) MODULE

Design seminar (14 ECTS) in the Master's programme in Architecture embedded in an urban design competition with regular consultations and an interim presentation, held in a co-teaching format between ISU and CAUP.

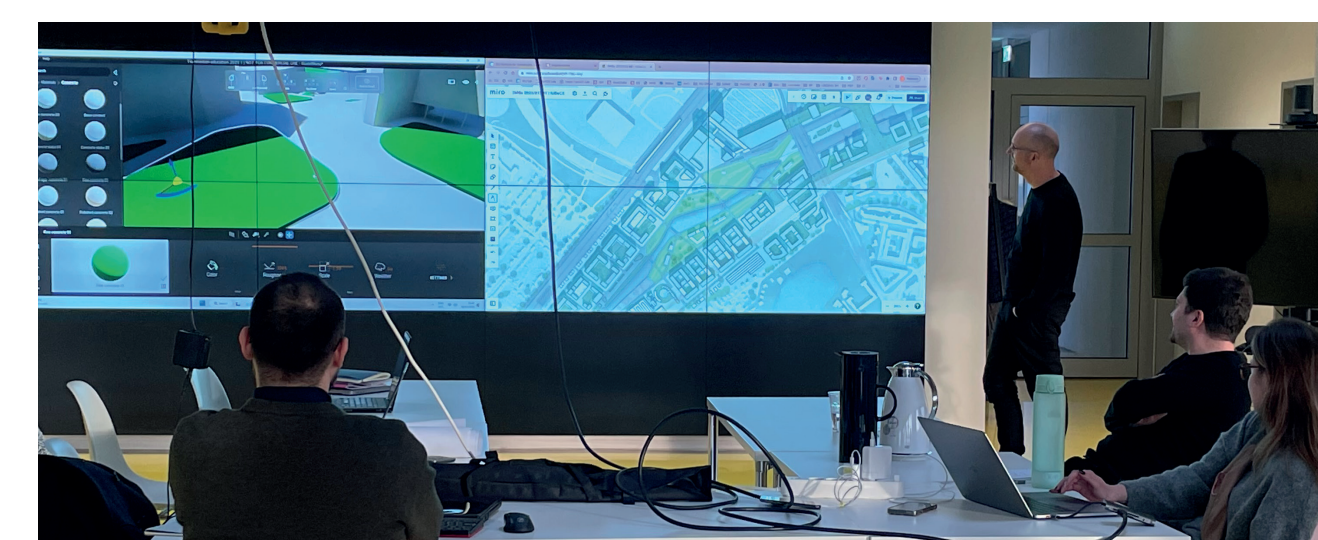


Fig. 1: IUDeCS Kick-Off and VR Workshop

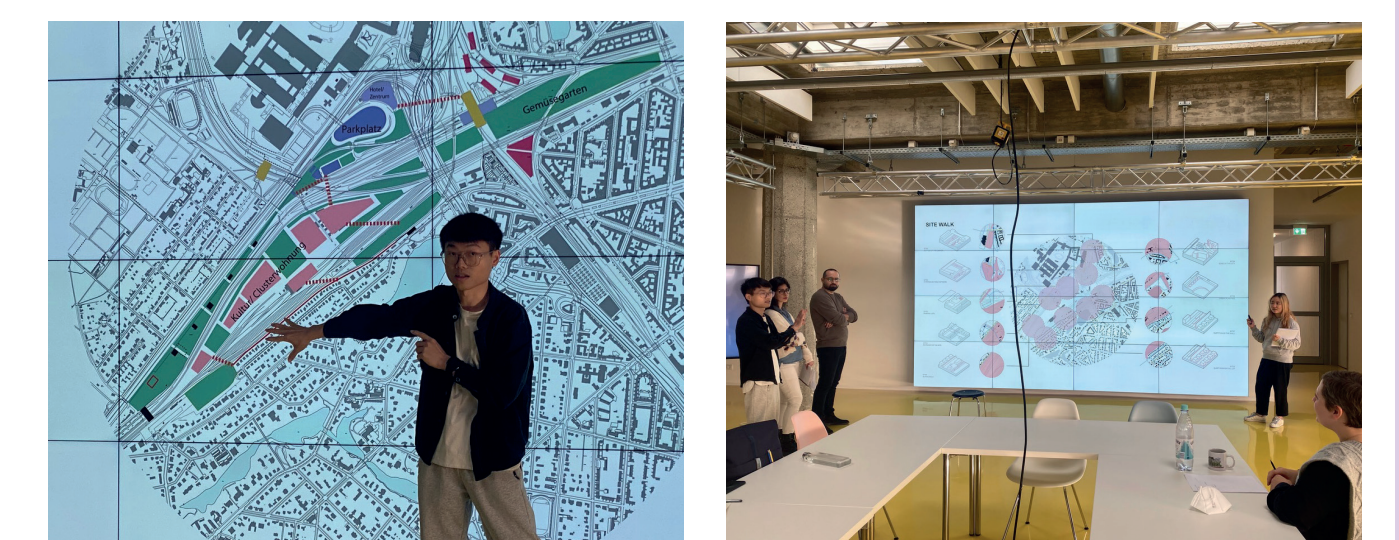
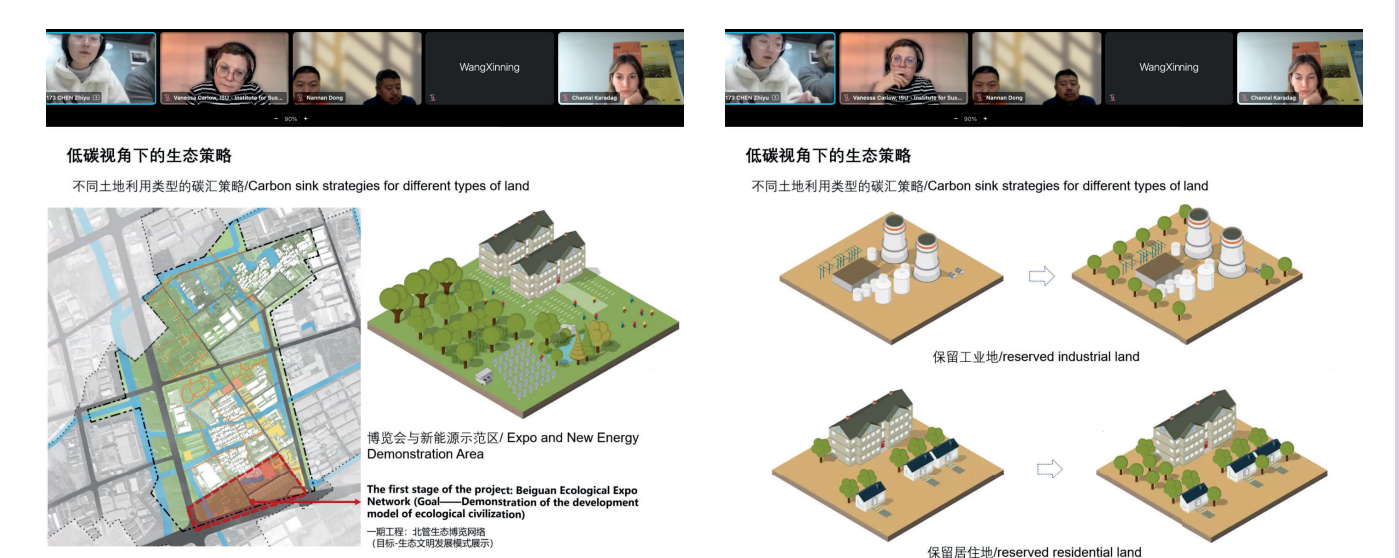


Fig. 2: Co-Teaching: Interim Presentations at Tongji University and TU Braunschweig

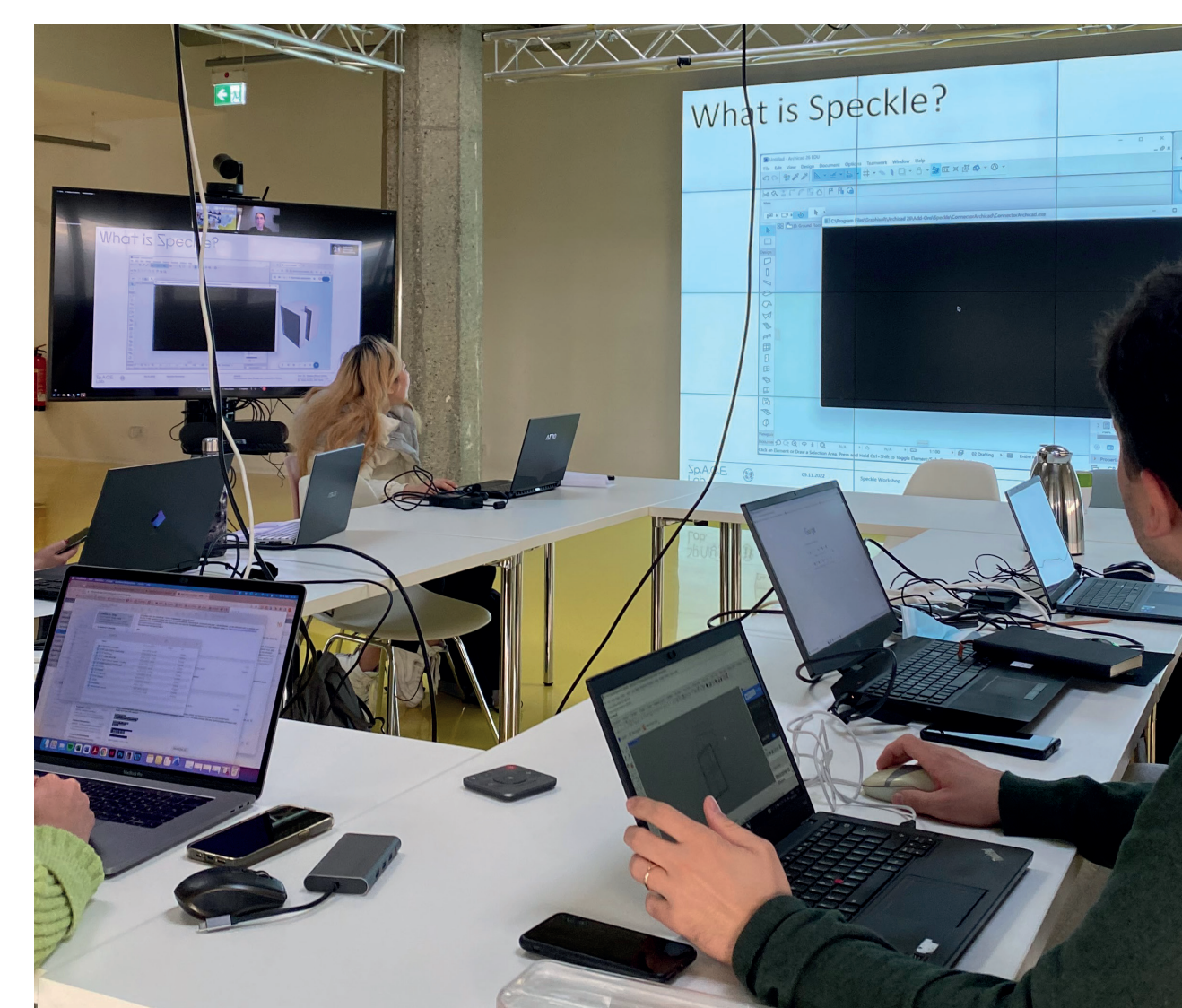


Fig. 3: Hybrid Speckle Workshop: Singapore - Braunschweig

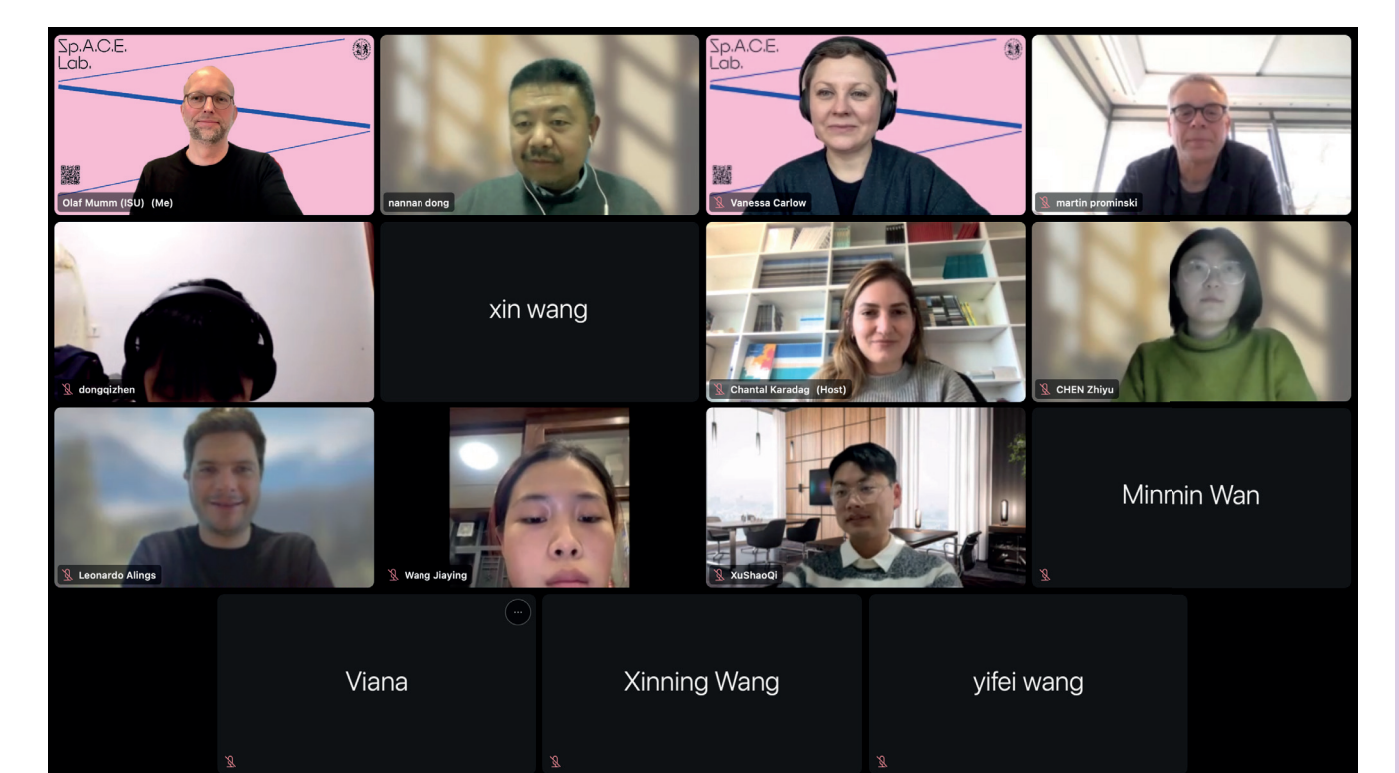


Fig. 4: Public Jury Session

4 REFLECTION

IUDeCS is designed to impart the competences for a major area of architectural practice: Competitions. Besides the necessary skills for developing a convincing design proposal, working in a team, complying with regulations, communicating the project in an understandable and compelling way, time management and also organising files and their consolidation are essential. In the course of the project we explored different formats - conventional as well as experimental such as individual consultations, group work, workshops with dedicated topics or support knowledge platforms. The establishment of a digital collaboration environment was intended to address the challenges encountered in design teams, in which students possess different skills and knowledge in software complicating team workflows and the exchange of data and information. The public jury session was an inspiring and rewarding experience for all involved. The advantages of collaboration platforms such as Speckle become more apparent with increasing team size and complexity. Due to the small group size, we therefore decided to substitute a second Speckle workshop with Virtual Reality (VR). The spatial experience proved to be extremely useful to students to support the spatial understanding of urban designs. For the teaching of necessary technical skills, supplementary formats such as online tutorials must be established and the course schedule adapted. In the continuation, we will add new content / go into greater depth, for topics such as team and time management.

Based on the positive results and lessons learned of this joined endeavour, we will continue with IUDeCS and are planning to open IUDeCS to more universities in coming years. Stay tuned at our designated collaboration platform: [iudecs.org!](http://iudecs.org)

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