

# "HYBRID DESIGN"

.161.904 SE Interdisciplinary Media Projects  
Elective Course WS22/23

ARCHITECTURE IN THE AGE OF SPATIAL  
COMPUTING  
- a hands-on introduction

(en) *This seminar will explore a new form of hybrid architecture that combines multisensory physical materials with dynamic digital information. We aim to make data touchable in space by merging digital and physical reality. The driving vehicle for our exploration will be experiments in the form of small-scale applied prototypes to investigate new functions, aesthetics and user interaction. We will test our ideas through the latest digital spatial technologies, such as Augmented Reality devices (mobile phone and HoloLens 2), Vuforia, and Unity 3D, combined with 3D printing and other digital fabrication technologies. The seminar does not require any pre-knowledge on specific technologies or programming. We will run a series of workshops introducing the technologies and processes involved.*

(bio) *Yinan Liu* is a digital artist and programmer, who graduated with a Masters of Architecture (professional) from the University of Auckland in 2017. She worked in a full-time academic position as Coordinator of the Digital Research Hub for three years, and is currently a Research Associate at the School of Architecture and Planning at the University of Auckland. Yinan started her PhD at the Institute of Architecture and Media at Graz University of Technology in 2020. Her research area is in Responsive Architecture and Creative AI. Her research is practice based in the form of architectural scale prototypes and performances to explore new design principles. Yinan has developed a number of artistic installations as part of the arc/sec Lab. Her work has been presented at the Ars Electronica Festival (Austria), SIGGRAPH Asia (Australia), Q-Theatre, and the Wallace Arts Trust in Auckland.

*Hybrid design - Architecture in the age of Spatial Computing*  
MArch. Yinan Liu  
Ass.: Kilian Hoffmann

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.Institute of Architecture and Media