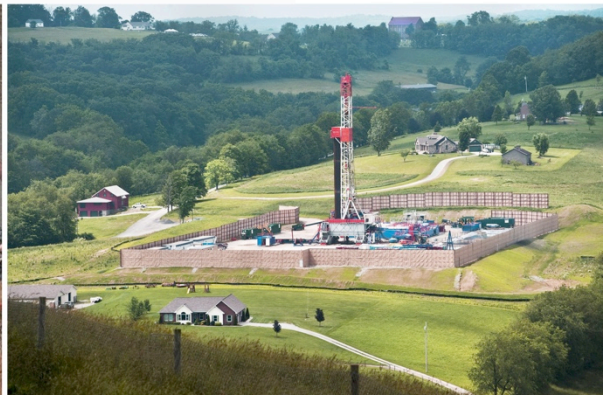


FRACKED HOMES

ADVANCED DESIGN STUDIO - FALL 2016
 PROF. ANDRES JAQUE - COLUMBIA GSAPP -
 EDUARDO TAZON, TA



IN ASSOCIATION WITH

NEREA CALVILLO

Center for Interdisciplinary
 Methodologies,
 University of Warwick

VERA SCROGGINS

Gas Drilling Watch Group



What are we addressing?

Starting in 2008, the hydraulic fracturing of Marcellus Shale (the largest volume of recoverable natural gas resource in the US) has turned the homes and farms of Susquehanna County, in Northeastern Pennsylvania, the scenario of a great controversy. The uneven confrontation of rural domesticity with massive extraction has mobilized activism and media attention, but together with that, it comprises a big deal of architectural design challenges and opportunities that this studio is determined to address. Namely:

1. What is the way architectural design can play a relevant role in the conflicts of contemporary country-site?
2. What is the way architectural design engages with Nature, at a time in which Nature has become massively transformable by men, and an equally massive source of catastrophe, risk and uncertainty?
3. What are the methodologies that can turn architectural design into a mediating force in ongoing uneven environmental conflicts?

Demarcation: Rural USA

While cities might be becoming sanitized spaces for safe and comfortable life, the countryside is progressively the place where a great number of architectural, territorial and environmental transformations are taking place. The studio explores the potential of the RURAL's emerging leadership, to redefine the focus of architectural engagement.

What are we going to design?

Studio members will design a rural farmhouse compound in Susquehanna County.

These compounds will reinvent everyday life as a response or negotiation with the gas drilling activity, and the vicinities with conflicted infrastructures related to it. Each compound will be developed as a new version of an existing farmhouse, previously visited and studied.

The design work will not attempt to resolve the existing conflicts, nor celebrate or endorse the positions confronted in it, but rather to use design as a tool to maximize the capacity of architecture to empower home dwellers to enhance their capacity to gain a stronger voice in the transformation of their environment.

IMMERSION TRIP TO SUSQUEHANNA COUNTY



The studio will engage on an intense trip to the mountainous **Susquehanna County** and its surroundings. We will study the area as an archive of energy infrastructures; visiting the **Niagara Falls** and its **hydroelectric power plants**, the so called **Anthracite Region** where we will visit the interior of remaining **underground coal mines**, and we will spend time inspecting in detail, with the guidance and support of the Gas Drilling Watch Group, the infrastructures of drilling, storing, water supply and logistics of the **County's hydraulic fracturing activity**. The trip will be consider a field work experience, in which studio members will engage in the detail accounting of **6 real cases of rural homes, in which the hydraulic fracturing activity has been related to significant daily life conflicts**, such as the mixing of its well water with shale gas –burning water phenomena- and drilling mud, the immediate vicinity of drilling facilities, the uncertain exposition to unknown particles suspended in the air or the exponential growth of logistics in remote rural towns.

Calendar:

Week 01, 02: Discussing Fracking (1), Contemporary Rural US (2) and Current

Domesticity (3). The studio members will collect articles, reactions, activisms, images, design projects related to 1, 2, 3. The studio will work as an observatory where the public discussion around 1, 2, 3 can be restituted and the participation of design in it, can be registered.

Week 03: TRIP TO SUSQUEHANNA COUNTY AND SURROUNDINGS

Field work trip to both recognize the Marcellus Shale region as an archive of ways to architecturalize the relationship between daily life and natural resources, and to study in detail six cases of fracked rural domesticity in Susquehanna County.

Week 04: Reconstructing the Studied Farmhouses

The studio members will discuss, and model the studied fracked homes, including the invisible underground realities they participate on and the dependencies and associations they develop with other distant or close architectures.

Week 05: New Versions

The studio members will develop new versions of the Fracked Homes that maximize the capacity of architecture to mediate in the conflicts the homes are part of.

Week 06: Midterm

Week 07-09: Development

The studio members will make their new versions evolve as a reaction of the midterm discussions.

Week 10: Consultancy

The studio members will have the opportunity to maintain meetings with experts that will help them develop the technical aspects of their work as well as refine their design arguments.

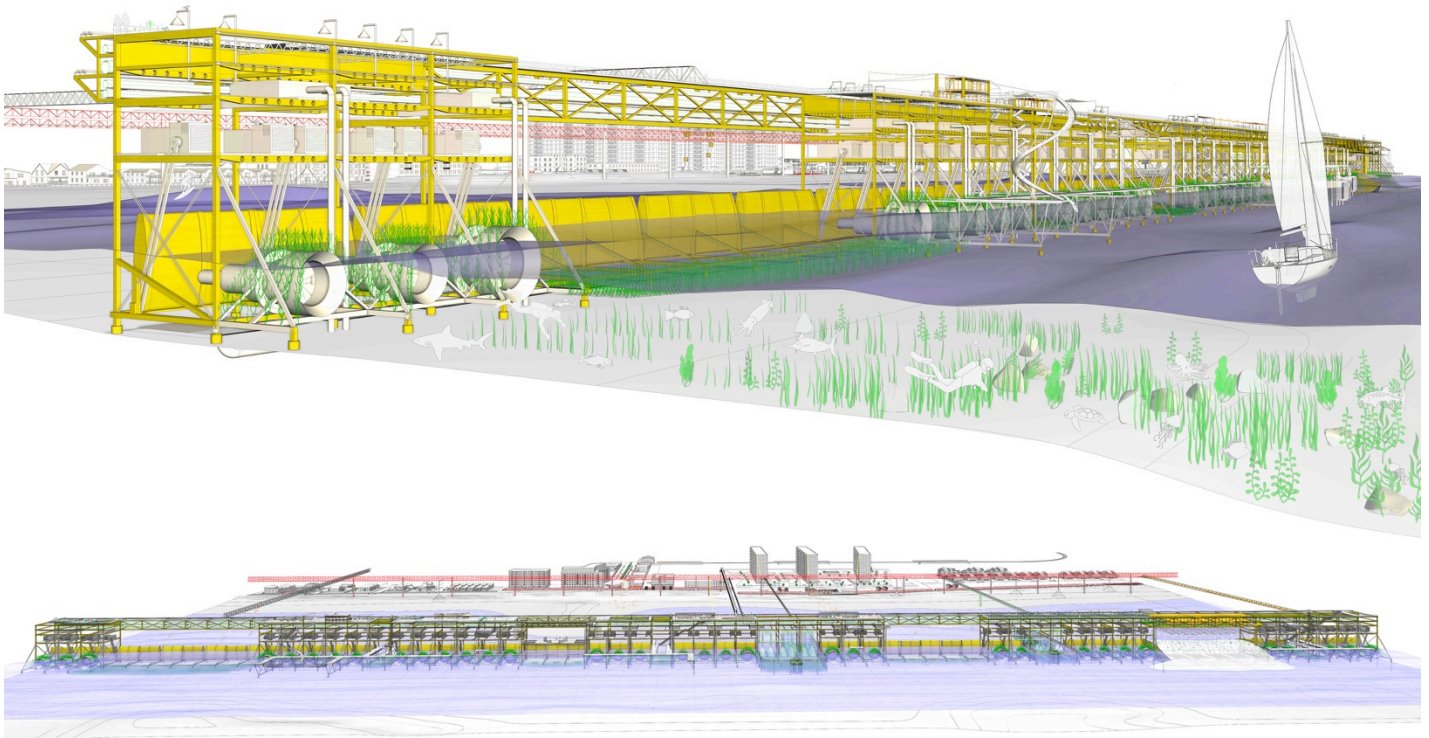
Week 11: Edition

Edition of the work to maximize its capacity to travel to external to the studio discussions as well as to be presented both in the studio members portfolio and final review.

Week 12: Final Review

Exhibition of results in public exposition

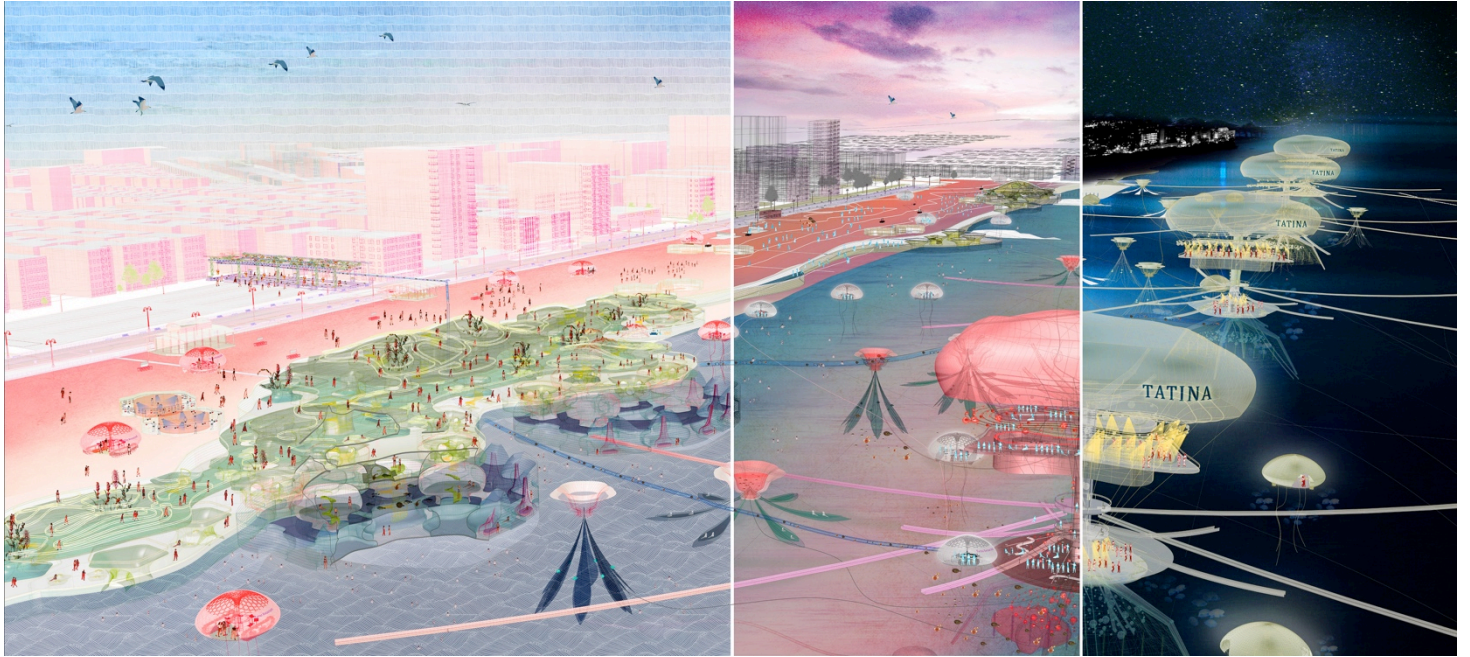
Previous works developed in the studio:



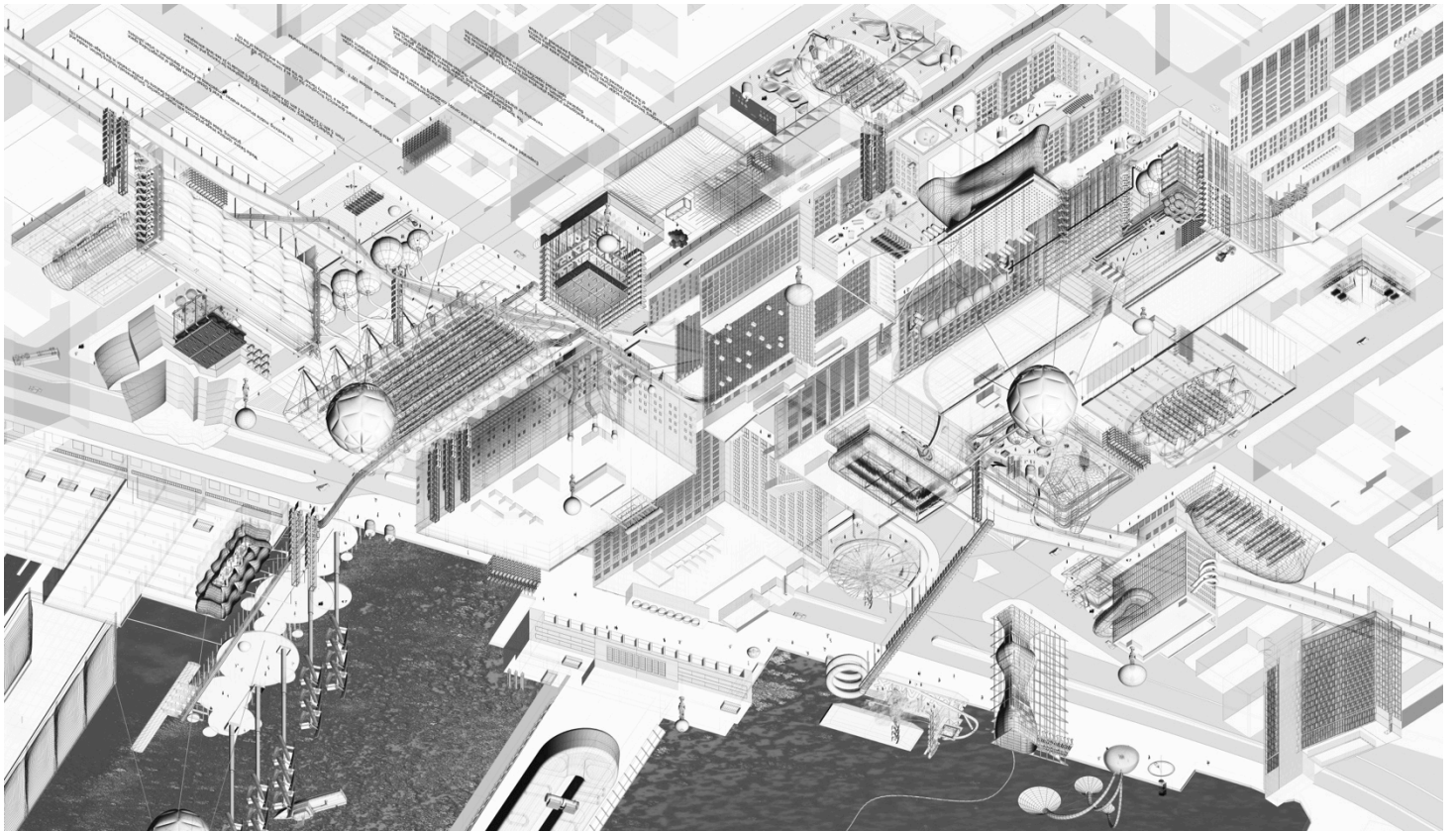
Jacobo Mingorance



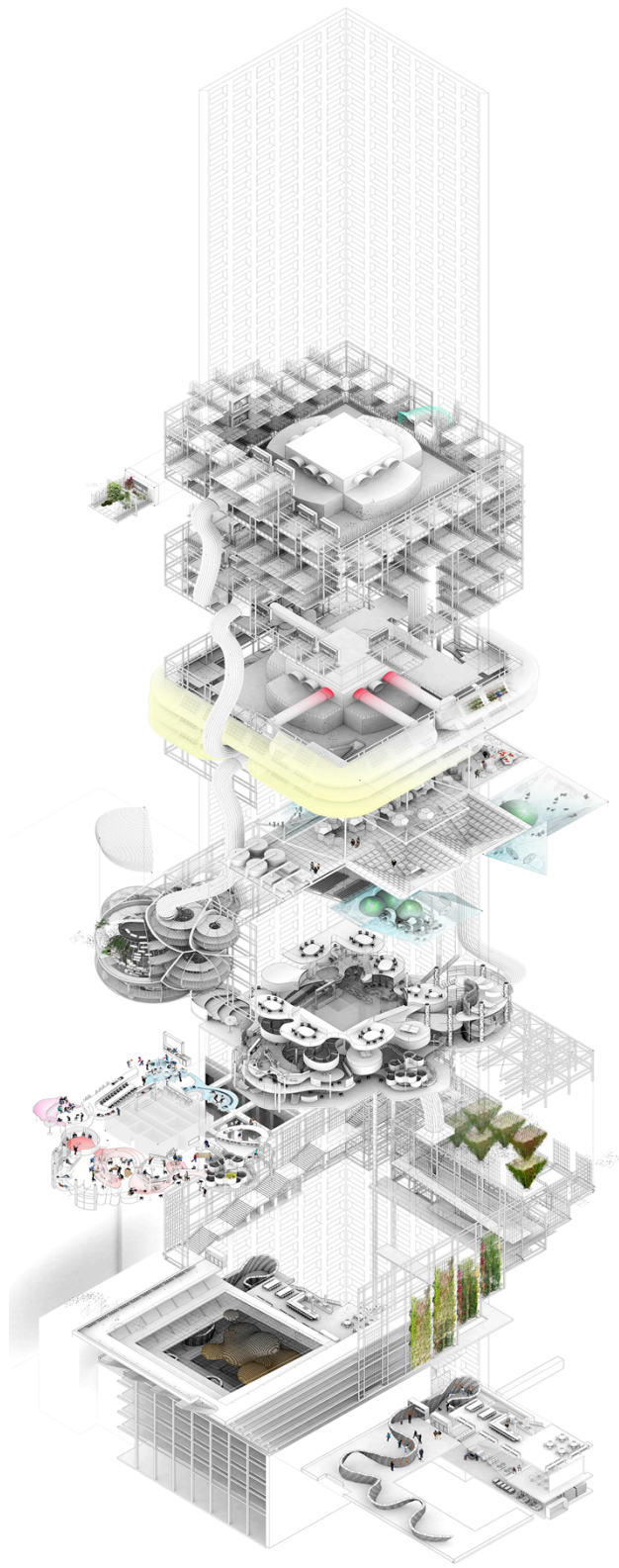
Zhe Cao and Rui Guan



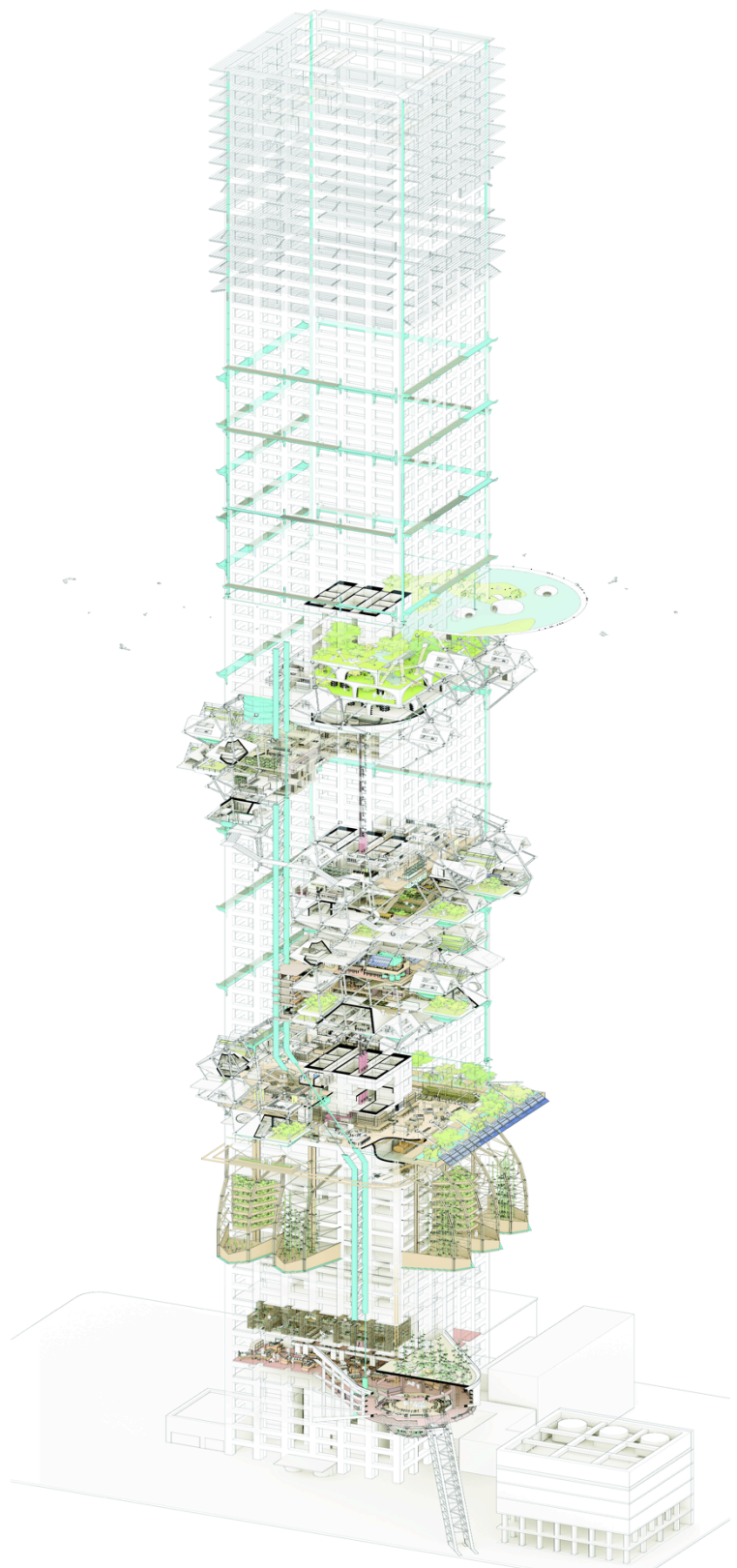
Ruosen Du and Yijung Wang



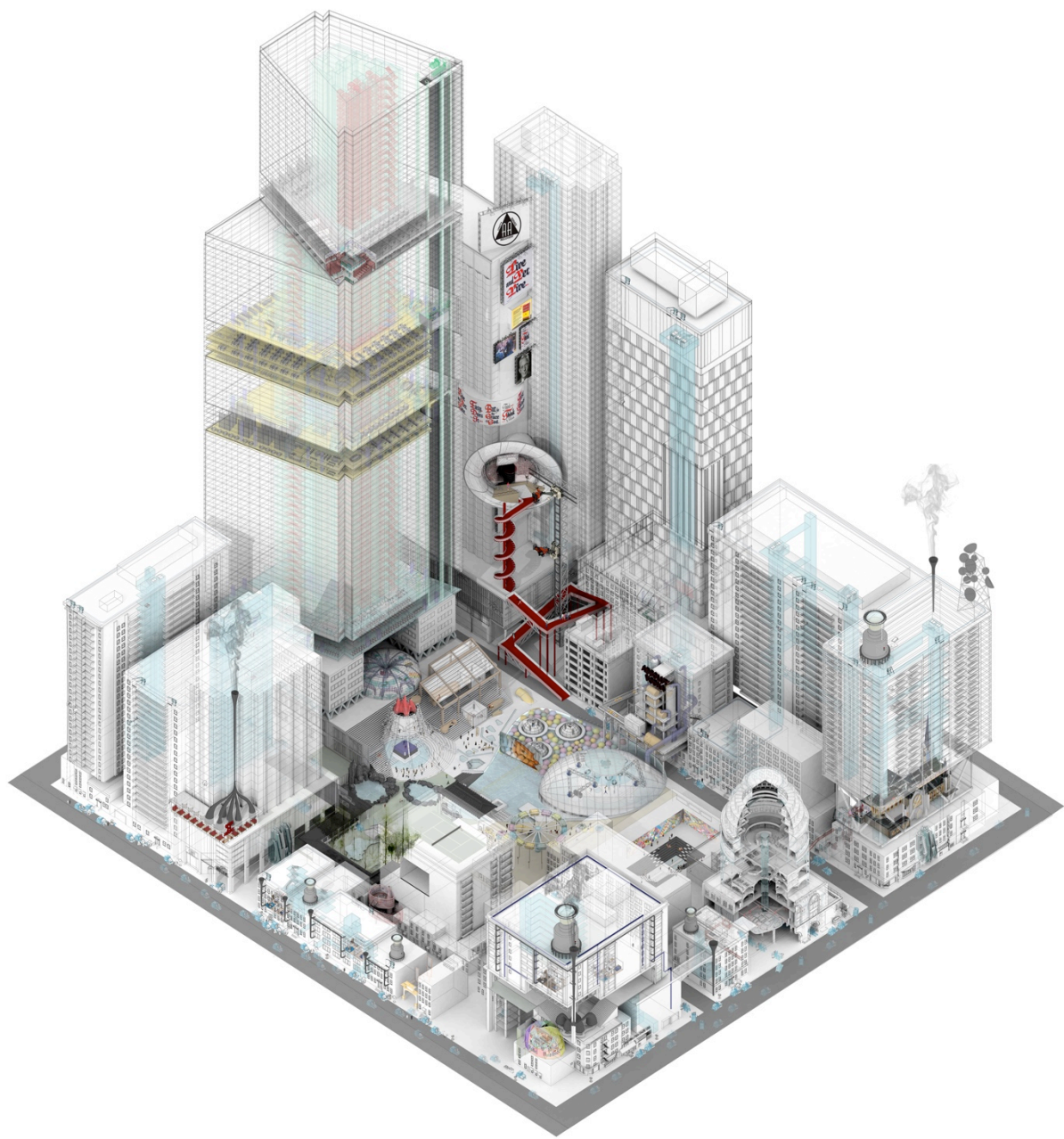
Javier Bidot



Owen Yoon



Yannan Chen, Jiaying Fan, Dihua Yan



Lina Gao, Jialin Yuan, Jiaying Fan