

Tulane professors awarded grant to research water-management structures

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School of Architecture faculty members Kentaro Tsubaki and Charles Jones and Master of Architecture student Riley Lacalli are developing a studio course that investigates precast concrete structures in water-management systems. Tsubaki and Jones received a \$100,000 grant to pursue the project. (Photograph by Paula Burch-Celentano)

Tulane School of Architecture faculty members [Kentaro Tsubaki](#) and [Charles Jones](#) received a \$100,000 grant from the PCI Foundation to

develop a class-based research project investigating how precast concrete water-management structures can enhance landscapes and support resiliency in coastal cities.

The multiyear effort will focus on ways to create structures, such as levees and stormwater detention systems, which direct water while also encouraging interaction and appreciation for the substance.

The team hopes to use an architectural approach to challenge the perspective that water should be funneled out of sight and out of mind. Their research will explore opportunities for water-management infrastructure to be an accessible, useful and aesthetic community asset.

The grant will fund a paired design studio and fabrication class investigating this idea. Working around a water-related challenge, students will collectively design, fabricate and test scaled prototypes of precast concrete-based structures.

“We want to establish a strong link between a design education and research,” said Tsubaki, Favrot Associate Professor of Architecture and associate dean for academics. “This studio will create a significant research initiative within the school, combining our expertise in architectural design with the technical side of construction and the issue of water management.”

The precast method involves fabricating concrete in reusable molds housed in carefully controlled environments. This results in a more refined product with cost savings for large-scale projects.

Relationships with industry partners will ground the class learning and research in practical expertise. Precast concrete and allied industry organizations PCI Gulf South, Gate Precast Co., Lafarge Ductal and US Formliner have pledged support to the school’s efforts.

Tsubaki and Jones are working with graduate architecture students Riley Lacalli and Wei Xiao to develop the studio and fabrication course curriculum and plan to begin offering the classes in spring 2019. The team is also creating four precast concrete learning modules customized for core architecture classes.

“Our school served a vital role in community building in the post-Katrina era,” said Jones, an adjunct lecturer. “This partnership with the PCI Foundation will empower our students to also engage in one of our region’s most challenging environmental and cultural relationships — rethinking the way we live with water.”

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