

## Gulf Coast Green 2017 - Student Competition

### Design with the Sun

Gulf Coast Green 2017 invites currently enrolled students of architecture and related fields to participate in a design and performance charrette. The focus of this year's conference is the Science of Sustainability in Architecture, a theme that inspires design excellence and challenges stereotypical perceptions of Architecture being exclusively an Art or exclusively Engineering. Architecture is understood as the convergence of the two and this competition is striving to merge solar/daylight performance and innovative design. By providing a solution to a single design question, students are expected to come up with design ideas, prove their aesthetic, cultural and performative value and exhibit their prototypical solution on the day of the conference.

#### THE TASK

Participants are given a base model in 3ds format that is assumed to be located in Houston TX and has a predefined orientation. Students are then asked to propose a holistic shading solution for all glazed areas of the given model. The proposed designs should respond to certain performance requirements: eliminate direct sunlight during all year in order to prevent glare while at the same time maximize daylight availability within the space. The students can choose any modeling software they want and they are strongly encouraged to use computational simulation software in order to optimize their designs. Such software could include, but should not be limited to: DIVA, Ladybug/Honeybee, Sefaira, Revit Daylight, IESVE, Lightstanza.

#### THE EXHIBIT

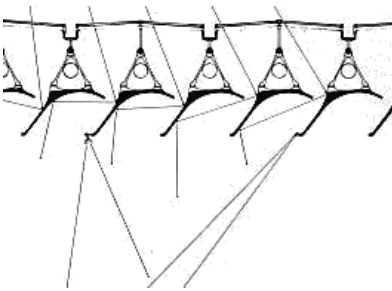
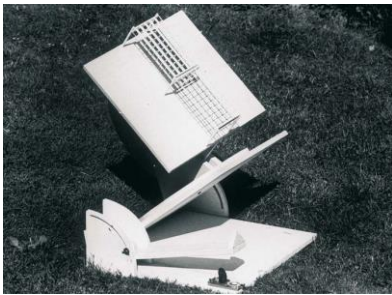
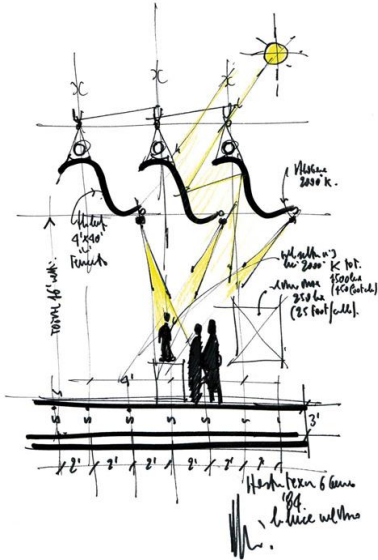
Students are expected to be at the conference from 10 am to 2 pm exhibiting their solutions on maximum two boards 24"x36" accompanied by a physical model. The exact content of the boards is on the participants' discretion, and they are expected to demonstrate design development, final visuals of the designs, technical drawings with dimensions and solar and daylight performance images that support their design. The physical model of the shading solution will then be tested during the charrette using a Heliodon provided by the conference and the students will be given the opportunity to further optimize or comment on their solution before judging time. More information regarding the dimensions of the model and other procedural details will be distributed to registered participants.

#### REGISTRATION

The competition will take place during the Gulf Coast Green conference at the Health Museum in Houston, TX from 10 a.m. to 2 p.m. on Monday, March 27, 2017. Participants in the student competition will receive free admittance to the conference. The deadline for registering for participation in the competition is **March 6, 2017**. Students can register in teams of one to three participants. Designate a primary contact person to register the team via email at [GCGStudents@aiahouston.org](mailto:GCGStudents@aiahouston.org). Please include each team member's name and email address in your registration email.

#### JUDGING AND PRIZES

Designs will be judged by invited industry professionals. The jury names will be announced two weeks before the event. The judging criteria will be focused on innovative thinking that





demonstrates consistent, creative, sustainable solutions. Performance criteria and design innovation will be equally taken into account.

Prizes for the competition are as follows:

1<sup>st</sup> Place: \$1,000

2<sup>nd</sup> Place: \$400

3<sup>rd</sup> Place: \$100

Prize money must be split between team participants.