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Office of the Vice President for Community Services

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College of Engineering

Engineering students team up with The DoSeum for STEM outreach

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UTSA engineering students alongside their professor helped children build paper toys at the DoSeum. (From left to right) Ali Zamani, Christopher von Brecht, Eric Sanchez, Christian Trevino, Pranav Bhounsule, Abhishek Bapat, and George Nall.



Toy creator Christian Trevino holds the Rowdy Walker. Photos: Deborah Silliman

In November 2015, students in Pranav Bhounsule's Robotics and Motion Laboratory taught children at the DoSeum, San Antonio's museum for kids, how to make a paper walking toy that could race down an inclined platform. Graduate student Christian Trevino, who developed a 3D-printed version of the toy, led the one-day workshop.

"We wanted the children to learn about science at our workshop, and we wanted them to have fun!" Trevino said.

Trevino developed the toy for her undergraduate thesis. She named the toy Rowdy Walker because her design was inspired by UTSA's mascot Rowdy the Roadrunner.

Trevino created a paper version of the toy because teaching children science requires simple yet innovative tactics. The toy was utilized by the DoSeum children taking part in the Inventor's Workshop.

Trevino's ingenuity helped the young participants learn the basic principles of mass, momentum, and energy.

"The toy walks by periodically shifting its body weight by swaying its body back and forth." said Bhounsule. "However, during the process of shifting of weight, the legs collide with each other and the toy loses some energy. But this loss of energy is made up by the potential energy that is gained by walking downhill."

The Inventors' Workshop is a new biannual public program at the DoSeum in which high school, college students, and STEM industry professionals create hands-on activities designed to engage kids in STEM topics.

College students from Texas A&M University and San Antonio College also participated in the Inventor's Workshop.