

## Robotics expert Pranav Bhounsule says to look to the future



Pranav Bhounsule



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By [Connor McBrearty](#)

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(Nov. 19, 2014) -- Meet **Pranav Bhounsule**. One of UTSA's new faculty members, Bhounsule joins the College of Engineering as an assistant professor of mechanical engineering. And he wants his students to learn about the impact robots can have on humans.

Bhounsule's research interests focus is on motion control of humanoid robots, particularly legged locomotion. His dissertation research ultimately led to a new world record in 2011, when his bipedal robot walked 40.5 miles (65 Km) around an indoor track without stopping or recharging. This feat was accomplished in about 31 hours using only 6 cents worth of electricity. The record remains unbeaten.

Bhounsule explains that most land-use robots designed today come equipped with wheels. Wheels provide the robot with easy mobility and balance; however, the range of tasks it can perform and its self-efficiency are limited. Developing robots with the ability to walk, unaided, is very challenging, but it's a challenge Bhounsule embraces: "I want robots to be able to walk just as well, if not better, than their human counterparts."

Bhounsule's interest in robotics was a delayed discovery. His focus while a student in his home country of India was directed toward more conventional aspects of mechanical engineering. However, in the early stages of his doctoral work at Cornell University, he met a professor who completely converted his interests.

From 2012 to spring 2014, Bhounsule was able to put his robotics expertise to use as a postdoctoral researcher at

Disney Research Pittsburgh. At Disney, he developed automation tools for entertainment robots, also called Audio-Animatronics figures, that entertain people at various Disney theme parks around the world.

Beyond their entertainment value, Bhounsule is fascinated with the impact robotics can have on the social, medical and economic aspects of modern humanity. This wave is already attracting investors like Google and changing the game for fields as predictable as automobile manufacturing and as surprising as psychological therapy. Already, robots are being utilized in the therapy of children with autism. It's Bhounsule's goal to show his students the important role robotics will play in the years to come.

"I want to show my students the practical applications of what they can do with robotics," he explains, "I want them to look beyond the present, and look to their role in the future."

When he chooses to take a break from his research, Bhounsule enjoys training for marathons and triathlons. He hopes to one day to complete an Iron Man triathlon. This enthusiasm for endurance sports was inspired by his dissertation robot's own athletic accomplishments.

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