

Engineering course aids developmentally disabled

K-State engineers and students are developing technology to improve the health and quality of life for children with developmental disabilities. **Steven Warren** and **Punit Prakash**, professors in electrical and computer engineering, are collaborating with Heartspring Inc., a Wichita-based nonprofit group serving students, most of whom have a primary diagnosis of autism and a majority of whom are nonverbal.

The joint effort is supported by a grant from the National Science Foundation's General and Age-Related Disabilities Engineering program. The funding is used to teach senior design courses where engineering students develop these customized devices and software helping children at Heartspring:

- Smartphone tools and apps to help track and record children's behavioral, physiological and cognitive development
- Wearable sensors, photo **left**, placed in shoes or clothing to monitor self-abusive behaviors
- A musical toothbrush that tracks brushing activity and plays different songs so children know how long to brush different areas of their mouths
- Multi-touch-surface computer games that teach children how to sort items, take turns and interact with others
- Mattresses and bed sensors, photo card **front**

Read more about this project at k-state.edu/media/newsreleases/jun14/heartspring6914.html

