

# Pursuing Creativity



## ExCITE Center

Youngmoo Kim, Director, ExCITE Center Associate Professor, Electrical & Computer Engineering

## CURRENT RESEARCH

### How art inspires technology and technology inspires art

Human creativity is perhaps our world's greatest resource, yet it remains poorly understood and even stifled by traditional academic programs, training, and dogma. The Expressive and Creative Interaction Technologies (ExCITE) Center at Drexel University aims to stimulate creativity through multidisciplinary collaboration, enabling new pathways for students and faculty to pursue innovative work. Directed by Dr. Youngmoo Kim, the Center engages designers, scientists, performing artists, engineers, and many others, to create an environment for true collaboration and groundbreaking products like smart bio-sensing clothing, pianos that vibrato and continuously shape sound, and humanoid robots for limitless practical and personal applications. Weaving art into technology and technology into art, the Center is yielding solutions that are more broadly relevant and useful for individuals and society. Ultimately, the Center is shifting cultural paradigms in approaching real-life problems, for greater understanding, empathy, and impact.

Founded in 2012, the ExCITE Center has already facilitated new advances in truly wearable and fashionable technologies (smart fabrics), video games for education and public art, and musically-aware expressive robots. The Center has added about one faculty member per year, and aspires to encompass 20-30 of Drexel University's most innovative and entrepreneurial faculty laboratories, working together to invent and showcase the future. Currently, it has a strong collaboration with Shima Seiki, manufacturer of digital knitting machines, and the Korea Advanced Institute of Science & Technology (KAIST), where humanoid robots, or HUBOs, are designed and manufactured. Students can...

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## AFFILIATION

Drexel University

## EDUCATION

- Youngmoo Kim, Ph.D. in Media Arts & Sciences 2003, Massachusetts Institute of Technology
- M.S. in Electrical Engineering, M.A. in Music (Vocal Performance Practice) 1996, Stanford University
- B.S. in Engineering (with Distinction), B.A. in Music 1993, Swarthmore College

## AWARDS

- Genevieve Dion
- Frank Lee
- Youngmoo Kim

## RESEARCH AREAS

Technology, Computational Sciences / Mathematics, Electronics / Sensors, Robotics

## FUNDING REQUEST

At the ExCITE Center at Drexel University, researchers believe that this concentrated innovation and collaboration will disrupt the traditional relationship between research and industry, directly connecting academic advances with real products and services that improve people's lives. Your contributions will help fund an annual operating budget of \$250K, supporting diverse projects, personnel, new initiatives, infrastructure, and outreach initiatives. Partner with the team to inspire creativity!