# Postdoctoral Research Fellowship in Pediatric Gait Rehabilitation Using Visual Feedback – New Jersey, USA

Applications are now being accepted for a position within the Postdoctoral Fellowship Program in Pediatric Mobility offered jointly through Children's Specialized Hospital and Kessler Foundation. The position is located in northern New Jersey, USA, and will involve work at research and clinical sites in West Orange, NJ, Mountainside, NJ, and New Brunswick, NJ. The two-year program prepares biomedical scientists, including engineers, biomechanists, kinesiologists, and those in related fields, for a career in rehabilitation research. All fellows participate in an extensive training curriculum and didactic offerings.

The fellow will work under the mentorship of lead investigator Peter Barrance, Ph.D. and with a multidisciplinary team of clinicians, scientists and engineers in research on the use of visual biofeedback to enhance retraining of gait deviations in pediatric populations. The successful candidate will contribute to the development and initial testing of a next generation system to assist in addressing gait deviations occurring in children and teenagers with cerebral palsy (CP). Dr. Barrance directs Kessler Foundation's Musculoskeletal Biomotion Research Laboratory (MBRL), The MBRL has brand new laboratory space equipped with dedicated motion analysis equipment and a research dedicated treadmill. It is housed within the Center for Mobility and Rehabilitation Engineering Research, which possesses extensive further laboratory space and equipment. The excellent staff and facilities at Children's Specialized Hospital are available for testing of the system with clinical populations.

Qualifying candidates must have an earned doctorate in engineering (e.g. biomedical, mechanical), biomechanics, kinesiology, or a related field. Strong candidates will have prior experience in performing research studies in human subjects, graduate level training in human biomechanics and/or engineering mechanics, as well as some history of publication and presentation of original research. Applicants with specific interests and/or experience in design and development work, wearable sensor technologies, application coding (particularly Matlab), motion analysis systems, and motor learning theory are highly encouraged to apply. Other skills and experience that are strongly desired include excellent written and spoken communication skills and knowledge of statistical data analysis.