

# *New Paradigms for Assistive Technology and Inclusive Fitness*



*Fitness Inclusion Network*

First Annual Fit-In Conference

Friday October 11, 2013

2232 Weiskotten Hall and the Institute for Human Performance  
SUNY Upstate Medical University, Syracuse NY

<http://bbi.syr.edu/projects/fit-in>



## YOU ARE INVITED

First Annual Fit-In Conference, Friday October 11, 2013  
2231 Weiskotten Hall and Institute for Human Performance, SUNY Upstate Medical University

### New Paradigms for Assistive Technology and Inclusive Fitness

This conference will:

- 1) Bring together key stake-holders to develop an action plan for inclusive fitness in CNY
- 2) Provide state-of-the-art expertise on assistive technology for inclusive fitness
- 3) Involve high school students in a workshop to adapt toy cars for kids with disabilities
- 4) Recognize CNY United Power Soccer Team
- 5) Launch a web resource/social media for promoting inclusive fitness:  
<http://bbi.syr.edu/projects/fit-in>

For more information and *to register, please contact Regina McConnell at 315-464-7561 or [Mconner@upstate.edu](mailto:Mconner@upstate.edu)*. Participants are encouraged to share information about their organization at the conference. We are happy to include your brochures etc. with our conference materials. Contact information for all participants will be shared among attendees, to encourage networking and ongoing collaboration.



The **Fitness Inclusion Team** is a collaborative, cross-institution initiative that was launched in 2013 with support from the Upstate Foundation/Golisano Children's Hospital, SUNY Cortland Department of Physical Education, and the Burton Blatt Institute at Syracuse University. We are an interdisciplinary group of athletes, students, families, and professionals in adapted physical education, medicine, physical therapy, occupational therapy, engineering, therapeutic recreation, special education, social work, and disability policy and law.

**Our mission:** To develop innovative ways to promote and support inclusive fitness for children, adolescents and adults with disabilities in Central New York.

**Funding for this conference is gratefully acknowledged:**

Upstate Foundation/Golisano Children's Hospital  
SUNY Cortland Department of Physical Education  
SUNY Upstate Medical University Department of Pediatrics  
SUNY Upstate Medical University Department of Physical Medicine and Rehabilitation  
SUNY Upstate College of Health Related Professions, Physical Therapy Program  
Syracuse University School of Education  
FACES of Nottingham High School, Syracuse City School District

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To register please call 315- 464-7561

2231 Weiskotten Hall & Institute for Human Performance SUNY Upstate Medical University, Syracuse NY

## New Paradigms for Assistive Technology and Inclusive Fitness

9:00	Nienke Dosa MD,MPH Peyton Sefick BA	<i>Welcome</i> <b>Perspectives: Childhood</b>	
9:30	James Rimmer PhD	<i>Keynote address:</i> <b>Use of Information and Communication Technology to Promote the Health of Children with Disabilities</b>	
10:30	John T. Foley PhD	Q and A	
10:45	<i>Break</i>		
11:00	Hélène Larin PT, PhD Carole Dennis ScD, OT/L, FAOTA	<b>Tots on Bots: Infants on the Move</b>	
11:30	Cole Galloway PhD, PT, Samuel Logan PhD	<b>I Want It All, and I Want it Now: Creating Pediatric Assistive Technology that Behaves Like a Kid</b>	
12:15	Luis Columna PhD	Q and A	
12:30	<i>Lunch On Your Own on Marshall Street</i>		
2:00	Kerry Wiley James House	<b>Perspectives: Adulthood</b>	<p>2:00-4:30 "Go Baby Go!" Workshop for High School Students</p> <p><i>Institute for Human Performance</i></p>
2:30	David A. Brown PT, PhD	<b>Collaborating with Robots: Letting the Client Drive the Robot</b>	
3:15	Cathy MacDonald PhD	Q and A	
3:30	<i>Break</i>		
3:45	Timothy Davis PhD	<b>Next Steps for Central New York</b>	
4:30	<i>Walk to Institute for Human Performance</i>		
5:00	Kimberlee Garver LMSW	<b>Conference Summary: Next steps</b> Demo: CNY United Power Soccer National Championship Team Presentation of "Go Baby Go!" cars to kids <i>Institute for Human Performance</i>	

## Our Keynote Speaker



**James H. Rimmer, Ph.D.**, is a Professor in the School of Health Professions and the first Lakeshore Foundation Endowed Chair in Health Promotion and Rehabilitation Sciences at the University of Alabama at Birmingham. He currently serves as director of the UAB-Lakeshore Foundation Research Collaborative and directs two federally funded centers, the **National Center on Health, Physical Activity and Disability** or **NCHPAD**, which has been funded by CDC since 1999, and the **Rehabilitation Engineering Research Center on Interactive Exercise Technologies and Exercise Physiology for People with Disabilities** or **Rectech**, which has been funded by the National Institute on Disability and Rehabilitation Research since 2002. For over 30 years he has been developing and directing health promotion programs for people with disabilities aimed at reducing obesity, increasing physical activity and improving nutrition in youths, adults and seniors with disabilities. Since 1997 he has provided leadership in the development of interdisciplinary research programs in disability, physical activity and health promotion at the University of Illinois at Chicago and now at the University of Alabama at Birmingham (UAB). He has received 20 consecutive years of federal funding and was recently appointed to the President's Council on Fitness, Nutrition and Sports Science Board.

## Hands On Workshop for High School Students

### “Go Baby Go! “

**High School students will learn how to adapt toy cars into power mobility assistive technology for kids with disabilities**

*Cole Galloway PhD, PT & Sam Logan PhD, with Jim McGinty, Brian English & the Nottingham High School DECA Club.*

High dose movement and mobility is a hallmark of life for typically developing children and their families. It is also the gold standard to judge the effectiveness of Movement- and Mobility-related Assistive technology (MMAT). Too often pediatric MMAT are smaller hand-me-down technology from adult rehabilitation. The workshop will introduce the rationale for and provide examples of a new generation of developmentally-inspired AT. It will focus on three categories of AT (power wheelchairs, exoskeletons/orthotics, and body weight support systems) to show how a paradigm shift is needed in the design, fabrication, funding and accessibility of MMAT. This shift can and should deeply involve clinicians, researchers and families in collaboration with industry. We will inspire participants to both advocate for a paradigm shift in AT and feel empowered to participate in the creation of the research and development of a new generation of Assistive Technology.



## Demonstration of Power Soccer at the Institute for Human Performance

### ***CNY United Power Soccer Team***



### **2012 National Champions**

Power soccer is a sport played by athletes in power wheelchairs. Athletes use the agility of the chair and their driving prowess, along with teamwork to systematically move an oversized soccer ball down a gym court with skill and speed.

Jim Sefick of Baldwinsville, NY started the program in 2006 and they have played at a competitive level ever since. CNY United is part of the United States Power Soccer Association. In 2012 CNY United won the Champions Cup. CNY United Power Soccer offers both competitive and recreational opportunities to power chair users of all ages.

CNY United will be showing some basics of the game. Athletes will interact with onlookers and perform soccer moves such as the “spin kick.” Because power soccer is such a team sport, there will be cooperative drills to show how a typical game would flow.

#### ***How to Join:***

If you or someone you know is interested in power soccer feel free to contact the head coach, Jim Sefick at 315.345.1941 or by email at [seffam@yahoo.com](mailto:seffam@yahoo.com). You can also contact the team representative and captain Peyton Sefick at 315.546.3706 or by email at [peytonsefick@gmail.com](mailto:peytonsefick@gmail.com)





## Guest Speakers

**David A. Brown PT, PhD** is a Professor in the Departments of Physical Therapy and Occupational Therapy, Program Director of the PhD in Rehabilitation Science Program, with adjunct faculty positions in Biomedical Engineering and Neuroscience at University of Alabama at Birmingham. He also holds an Adjunct Professor position at Northwestern University and was a co-founder of Kinea Design, LLC ([www.kineadesign.com](http://www.kineadesign.com)). He obtained his BA in Physics and Astronomy from University of Rochester in 1981, and an MS in Physical Therapy from Duke University in 1983. He then obtained his PhD in Exercise Science from University of Iowa in 1989 and worked as a Research Health Scientist at the VA Palo Alto Health Care System until 1998. He combines his clinical background as a physical therapist with his extensive academic preparation in his role as an educator and a scientist. Dr. Brown is a named inventor on four patents, including the Kineassist Walking and Balance System, and has authored many articles in peer reviewed journals, such as Brain, Journal of Neurophysiology, Experimental Brain Research, Stroke, and Physical Therapy. He has received research funding for research by National Institutes for Health, Department of Education, Department of Veterans Affairs, American Heart Association, and Foundation for Physical Therapy. An expert in neurologic impairment following stroke he has delivered numerous scientific presentations and continuing education courses on motor control of patients with neurologic disorders throughout the United States. His research interests include factors related to locomotor disability and is currently developing new techniques and technologies for evaluation of locomotor dysfunction and new interventions designed to ameliorate dysfunction.

**Carole W. Dennis, ScD, OT/L, FAOTA** received her bachelor's degree in occupational therapy from the University of New Hampshire, her master's degree in Special Education for Infants and Toddlers from the University of Connecticut, and her doctorate in Therapeutic Studies from Sargent College of Boston University. She is Professor in the Occupational Therapy Department at Ithaca College. She has extensive clinical experience working with infants and children with motor delay, and has advanced training in neurodevelopmental treatment and sensory integration. Dr. Dennis has published and presented nationally and internationally on issues related to participation in children with disabilities. Her current research with the Tots on Bots team at Ithaca College is focused on the development of robotic mobility systems to improve developmental outcomes for infants and very young children with motor impairment.

**James C. (Cole) Galloway PhD, PT**, is the Director of the Infant Behavior Lab and Professor of Physical Therapy, University of Delaware. Dr. Galloway began focusing on young children following a Postdoctoral Fellowship with Dr. Esther Thelen. Dr. Galloway's research focuses on how multiple biological, psychological and environmental factors contribute to the emergence of exploratory behaviors. Current projects focus on advancing the technology and training to

assist children in maximizing their daily exploration – specifically combining low tech and high tech into ‘Go Tech’. Dr. Galloway's lab has enjoyed funding from the National Institutes of Health and the National Science Foundation, the toy and AT industry, and the Foundation for Physical Therapy. He was awarded the APTA’s Outstanding New Academic Faculty Member (2005) and the Pediatrics Section’s Research Award (2009).

**James R. House, III**, earned a Bachelor of Science degree from Palm Beach Atlantic University in Physical Education with concentrations in Exercise Science and Athletic Training. James is a Certified Functional Movement Specialist; Certified ISSA, AMFPT, YMCA, APEX Personal Trainer First Aid, CPR, and AED Certified. With more than 20 years’ experience coaching and training others, some of his most rewarding experiences have included volunteer work with organizations such as: The Special Olympics, The Rehabilitation Center for Children and Adults, Triumphant Trotters Therapeutic Equestrian Program. James has also been featured, written, and co-authored a number articles, published by the National Center on Health, Physical Activity and Disability (NCHPAD).

**Hélène Larin, PT, PhD** is Associate Professor and Chair in the Department of Physical Therapy at Ithaca College. She has a broad expertise in the field of neuro-pediatrics. She has collaborated in studies that addressed topics associated with children with physical disabilities, such as sleep and family needs, motor learning in therapy, bone density and standing program, and more recently robotic mobility for very young children as a member of the Tots on Bots research team at Ithaca College. She has contributed related peer-reviewed publications and presented at professional national and international conferences.

**Sam Logan PhD** joined the Infant Behavior Lab in 2012 as a Post Doctoral Fellow. He has training and experience in early childhood education, psychology, exercise science and kinesiology. His research has focused on assessing and advancing motor learning and coordination in typically developing children as well as those with special needs. His current projects at UD focus on quantifying the role of mobility and socialization in early childhood as well as directing the Racecar Project. He was awarded the Outstanding Doctoral Student at Auburn University in 2012.

**Peyton Sefick BA** recently earned an undergraduate degree in psychology from Le Moyne College . He has been highly involved in power soccer for the past decade. He was selected to play on Team USA, which won the 2012 FIPFA World Cup. He is the team captain for CNY United, which won the 2012 Champions Cup. Peyton has been highly active in the spread of power soccer, traveling as far as Paris, France to connect with athletes and to strengthen programs.

**Kerry Wiley MSW** earned a Masters of Social Work from the State University of New York at Albany and has worked in the disability field in Grants, Research, and Program Development for over 18 years. Ms. Wiley is also an adult living with Spastic Cerebral Palsy (CP). For the last 7.5 years, Kerry has worked with many systems partners and Mobility, Health, Fitness, and Wellness Professionals to develop a customized fitness program to deal with the development of secondary physical conditions that resulted from her CP. She made the choice to develop her own program when the current service framework did not completely address her needs. Her personal story presents some of the systemic issues that people with disabilities face trying to achieve and maintain a healthy and active lifestyle.