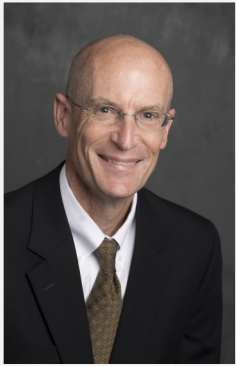


# HEALTH & KINESIOLOGY NEWS



*Healthy Ideas in Motion...*

## Note from the Department Head...

Welcome to the Health and Kinesiology Summer 2015 newsletter. We experienced another busy and productive semester on the West Lafayette campus. As our motto - *Healthy Ideas in Motion...* implies, we continue moving forward, taking advantage of exciting new educational opportunities for our students and conducting research focused on solving the

biggest challenges facing our society. In the current newsletter you will: get to know (perhaps even reminisce) about our learning environment; see examples of our leading research; likely see faces of those you know from days gone by; and hear about our yearlong 100<sup>th</sup> Anniversary celebration in 2015-16. All of this is possible through your continued support of Health and Kinesiology. After reading the newsletter, consider sending us a note, whether updates, accomplishments, comments, or anything else you would like to share with us at [HK@purdue.edu](mailto:HK@purdue.edu). And as always, please visit us in historic Lambert Fieldhouse the next time you are in West Lafayette. To find the latest in what is happening in Health and Kinesiology, visit us on the Internet at [www.purdue.edu/hhs/hk](http://www.purdue.edu/hhs/hk).

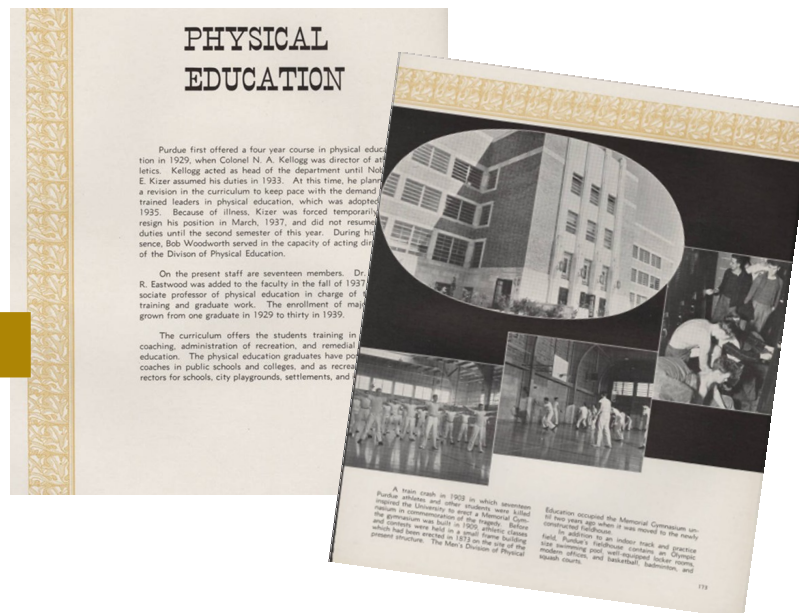
### ...by the Numbers

- Undergrad Enrollment - 696**
- Graduate Enrollment - 64**
- Undergraduate Degrees - 180**
- Master's Degrees - 10**
- PhD Degrees - 1**

### Inside this issue:

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*100 Year Celebration Details Page 16!*

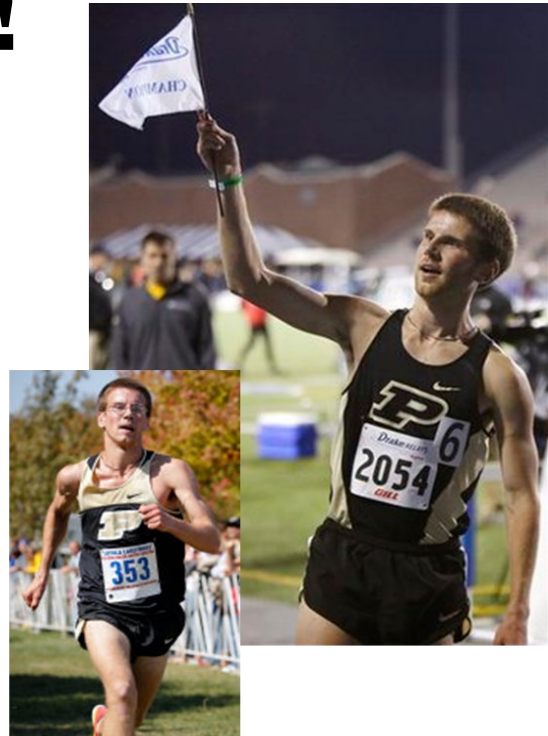


# Congratulations!

To HK Movement and  
Sports Science Student

**MATTHEW McCLINTOCK**

**2015 BIG TEN  
Outstanding Sportsmanship  
Award!**



## HK STUDENT SPOTLIGHT

### Katye Clark

*Outstanding Health & Kinesiology Senior, 2015*

**Where did you grow up?** *"I grew up in Frankfort, IN."*

**What high school did you attend?** *"I attended Clinton Prairie High School"*

**Why did you choose Purdue?** *"I chose Purdue because I was born and raised a Boilermaker, and my family bleeds black and gold. However, other than that Purdue also has an excellent Athletic Training program, so it was a perfect fit for me."*

**Who do you admire the most/who inspires you?** *"One of the staff Athletic Trainers here at Purdue, Jessica Lipssett, inspires me. She is a strong woman in the field of Athletic Training and Physical Therapy just as I wish to be. She is very intelligent and cares for athletes greatly. She leads by example and is always there for her athletes and students."*

**Are you in any extracurricular activities? Which ones?** *"My extra curricular activities include Athletic Training Club, College of Health and Human Sciences Ambassador, Pete's Pals, Physicals for PALS Camp, PUDM, and Eucharistic Minister at St. Thomas Aquinas Church"*

**What are your plans after graduation?** *"After graduation I will be attending University of Indianapolis for physical therapy school."*

**What is your career goal?** *"My career goal would be to work in a facility similar to St. Vincent Sports Performance where I would have the opportunity to work as an Athletic Trainer and Physical Therapist with athletes ranging from the high school to Olympic level."*

# HK Grad Student Achievement Awards



**Josh Liddy** was awarded the Outstanding Master's Student Award which recognizes a master's student who has exhibited outstanding ability in scholarly activities and promise for a productive career in his or her field. Josh is shown with Dr. Shirley Rietdyk.



**Ron Garner** received the A. A. Annarino Award for Outstanding Graduate Teaching. This award was established in honor of Anthony Annarino, a long-time department faculty member and former president of American Alliance for Health, Physical Education, Recreation and Dance. Ron is shown with Dr. Tim Gavin, Maggie Garner and daughter, Rosie.



**Michel Heijnen** was awarded the Carole J. Widule Award for Outstanding Graduate Scholarship. This award was established in honor of Carol J. Widule, a long-time department faculty member in biomechanics. Michel is shown with Dr. Tim Gavin.



**Merissa Hawkins** was awarded the Outstanding Engagement Award which was established to recognize excellence in service and engagement by a graduate student. Merissa is shown with Dr. Frank Snyder.



## HK Grad Student 2014/2015 Graduates

**Fall 2014:**

- Rachel Harris**, Master of Science in Motor Control & Development
- Rebecca Harrison**, Master of Science in Recreation & Sport Management

**Spring 2015:**

- Aurelie Chuong** - Master of Public Health
- Victoria Clark** - Master of Science in Pedagogy
- Haijuan Gao** - PhD in Health Promotion
- Abby Hawn** - Master of Science in Recreation and Sports Management
- Tiina Jaagosild** - Master of Public Health
- Xander Keller** - Master of Science in Pedagogy
- Amy Kendall** - Master of Science in Recreation and Sports Management
- Ryan Moran** - Master of Science in Athletic Training
- Su-Joung Shim** - Master of Public Health

## Welcome To Our New Graduate Students

**MS, Athletic Training**

- Christian Floriendo
- Gina Morelli
- Corey Smith

**MS Exercise Physiology**

- Sheelagh Evans
- Margaret O'Brien
- Brian Sullivan

**PhD Exercise Physiology**

- Kyoungrae (Raymond) Kim

**MS Motor Control & Development, Biomechanics**

- Marissa Bello
- Nathaniel Romine

**PhD Motor Control & Development, Biomechanics**

- Hye young Cho

**MS Recreation & Sport Management**

- Kristen Burks
- Corlis Gross
- Elizabeth Holmes
- Lija Krievs
- Mark Sheridan



# HK Undergrad Student Achievement Awards



**Mary Jane Catherwood Scholarship**  
Svea Nelson, Thomas Newton, Erin Weber

**F.T. "Pete" Miller Memorial Scholarship**  
Svea Nelson, Danae Rush

**Jane Maver/Ray Anne Shrader PE Scholarship**  
Megan Hubbard

**Newell-Combs Scholarship**  
Juniors: Natalie Ater, Grace Browning, Grace Connell, Lori Hann, Tanner Maksymicz, Maddie Pellikan  
Seniors: Katy Clark, Paige Creighton, Klint Dougherty, Maddie Hansen, Cameron Ortyl, Meeja Richards

**Lawrence S. Preo Scholarship**  
Morgan Deplanty

**C. Harold Veenker Health Education Scholarship**  
Kayla Ennen, Colin Quin

**C. Harold Veenker Health Education Award**  
Catherine E. Caruso

**Hilda Schwehn Award for Outstanding Female Physical Education Teacher**  
Jacqueline Ellison and Jessica Oertel

**Wellman France Award for Outstanding Male Physical Education Teacher**  
Dan Porter and Alex Serluco

**Outstanding Senior in Athletic Training**  
Paige Creighton

**Outstanding Senior in Applied Exercise & Health**  
Caleb Reiff

**Outstanding Senior in Movement & Sport Science**  
Katie Kozy

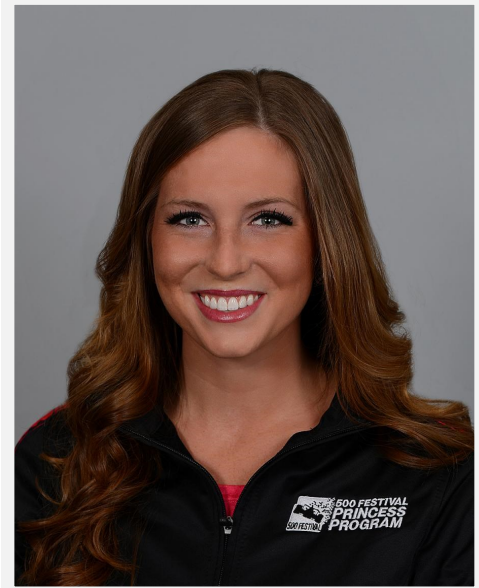
**Outstanding Senior in Public Health**  
Shelby Goodnight

**Outstanding Undergraduate Research Assistant**  
Nina Hamaker

**Outstanding Senior in Health & Kinesiology**  
Katy Clark

### HK Public Health Student is 500 Festival Queen

Congratulations to the 2015 500 Festival Queen, Ali Mathena of Whiteland. Ali is a junior studying Public Health.



### Taylor Zike Major: Movement and Sports Sciences

If you've picked up a can or bottle of Dr Pepper recently, chances are good that Taylor Zike's face was on the product. He won a nationwide contest to earn money for school. What impressed the judges most was Taylor's relationship with his brother — and how that relationship changed the course of Taylor's life. Growing up, Taylor and his older brother, Derek, were the biggest rivals. Not only did they challenge each other when it came to hockey, but the rivalry extended to their choice of schools as well. "Purdue was highly recommended by my best friends and I knew it would be

challenging," Taylor says. "But I also knew my brother was an IU fan, so that made Purdue an obvious choice."

The dynamics of Taylor's relationship with his brother changed dramatically in 2009 when, during a game of hockey, Derek suffered an injury that left him paralyzed from the chest down. Not only have the two brothers now grown much closer, but seeing the doctors work on Derek also inspired Taylor to change his career goals. "My brother has gone through one of the hardest things anyone could ever go through, and he keeps fighting," Taylor says. "He is my hero, and he's the reason I want to go to medical school so that I can help other people just as the doctors have helped him."

Taylor's mom encouraged him to submit a 60-second video for a promotion for Dr Pepper, which was offering scholarship money for students. Taylor didn't think he had much of a chance of winning but decided to submit a video anyway. In the video, he talked about his goal of becoming a doctor to help others like Derek, and possibly to help his brother walk again. As a winner of the promotion, Taylor scored \$23,000 for tuition, and his picture appears on cans and bottles of Dr Pepper. "It is just so crazy that my friends from other states started contacting me when they saw my face on Dr Pepper. I even played a prank on a store cashier and asked her if she knew who the person was on the bottle I was holding," he says.

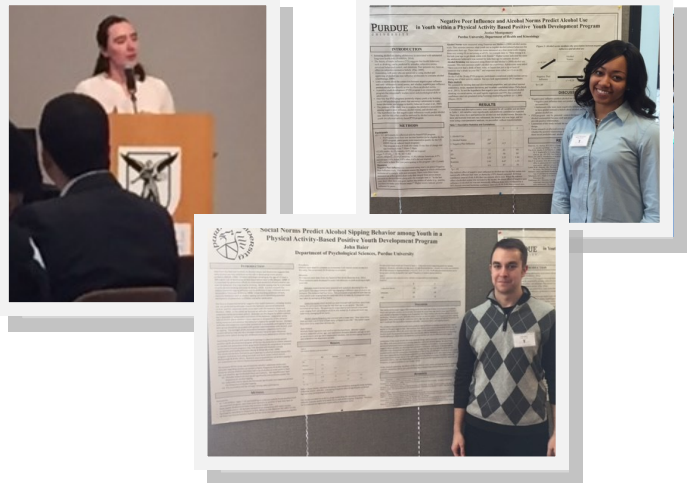
Taylor's academic program keeps him very busy, but he still makes time to help others and have fun. He took classes to become an emergency medical technician and also serves with Timmy Global Health in Indianapolis — an organization that helps improve worldwide access to health care. Taylor also finds time for another passion — hockey. He plays as part of an intramural team at the Co-Rec.

## 2015 Midwest Sport and Exercise Psychology Symposium

On February 27-28, 2015, the sport and exercise psychology group travelled to Muncie, IN for the 25th annual Midwest Sport and Exercise Psychology Symposium, hosted by Ball State University. Faculty member Dr. Meghan McDonough, graduate students Shaina Riciputi and Lindley McDavid, and undergraduate students Justice Montgomery, John Baier, Arie Teeter, and Shannon Freedom attended the conference. Shaina Riciputi gave an oral presentation of her research, "Participant perspectives on how they are affected by character concepts taught in a positive youth development program." Justice Montgomery gave a poster presentation on her work, "Negative peer influence and alcohol norms predict alcohol use in youth in a physical activity-based positive youth development program" and John Baier presented a poster on "Social norms predict alcohol sipping behavior among youth in a physical activity-based positive youth development program." Meghan McDonough also participated in a professional panel on "Working toward an integrated future in sport and exercise psychology."



Justice Montgomery, Shannon Freedom, Arie Teeter, John Baier, Shaina Riciputi, Meghan McDonough, and Lindley McDavid.

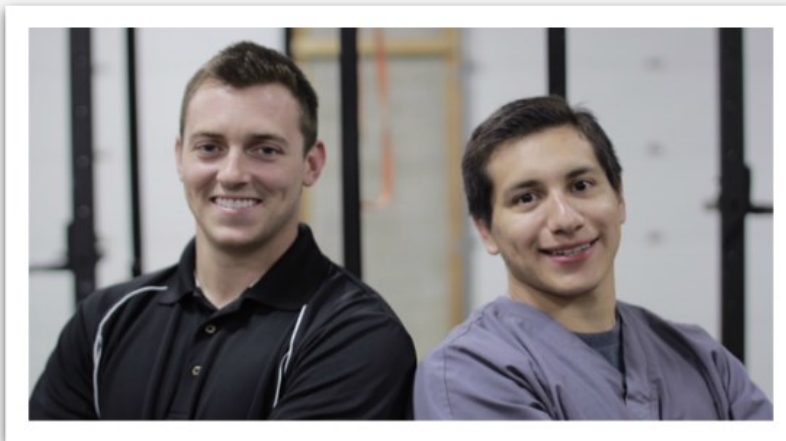


## HHS Study Abroad Photo Contest

Angel Avina, an HK senior in Public Health Promotion, won third place in the HHS Study Abroad Photo Contest with this beautiful picture taken outside Notre Dame in Paris, France. Purdue's Study Abroad program is a great way for students to learn about other cultures and broaden their horizons while developing self-reliance, resourcefulness, and the ability to collaborate within diverse groups.



## HK ALUMNI IN THE NEWS



Steven Salinas- Doctor of Physical Therapy & Craig Barry- Post Rehab Trainer, Purdue Alum



On April 20th, the Department of Health and Kinesiology hosted our first entrepreneurial presentation series supported by The Coleman Foundation . **Purdue alumnus, Craig Barry** [Post Rehabilitation Trainer], and his business partner, Steven Salinas [Doctor of Physical Therapy] discussed the experiences of opening their business, Restart Performance, as entry level professionals in the field of Health, Fitness, and Rehabilitation. Twenty five students from various majors attended the presentation. Together, with the Department of Health and Kinesiology and The Coleman Foundation, this is the first of many outreach efforts to help educate students in the College of HHS on translating education to successful entrepreneurship.

### HK Alumni Craig Voll

was inducted into the Indiana Athletic Trainers Association (IATA) Hall of Fame, an honor bestowed previously on Purdue University Alumni: Harold Cordell, David Craig, Bud Miller, John Schrader, and Bob Shriner; and HK Faculty: Larry Leverenz, Denny Miller, and Pinky Newell. Voll, who recently joined the faculty at the University of Indianapolis, is a former IATA president and current president of the group's district/regional association.



Share your news! [Purdue.edu/hhs/alumni/update\\_record](http://Purdue.edu/hhs/alumni/update_record)

## HK496 Undergrad Research Fall 2014

At the end of each semester, students in the HK 496 class; Individual Inquiry in Movement and Sports Science, host Research Presentation Night. At this event, students present results from research they conducted with faculty and graduate students

throughout the semester. The HK 496 course is designed to provide a “hands-on” learning experience for the students in the Movement and Sports Science major and fosters an appreciation for and knowledge of research common to the field of Kinesiology.

These students frequently continue on to PT/OT school, medical school, or graduate school. Following are pictures from this past semester’s event.

Picture 1:

**The differences in postural sway in high risk versus low risk infants for autism spectrum disorder.**

Adrienne Cramer, Maddie Hinen, Danielle Maxson, Sarah Nungster, & Brittany Ormiston

Faculty Mentor: Dr. Laura Claxton

Graduate Mentor: Rachel Harris



Picture 2

Picture 2:

**Fitts' Law performance at low difficulty tasks correlates with performance at high difficulty tasks.**

Laura Beckmann, Allison Longgood, Rachel Mentzel, & Joe Sharaya

Faculty Mentor: Dr. Howard Zelaznik



Picture 3

Picture 3:

**Does  $VO^2$  max influence predicted submaximal downhill running speed in women.**

Maggie O'Brien

Faculty Mentor: Dr. Darlene Sedlock

Graduate Mentor: Jennifer Kruse Hockemeyer





Picture 4



**Picture 4:**  
**Relationship between gait in the lab and fall risk in everyday life in young adults.**

Macall Twaddle, Danielle Kurasz, Elizabeth Kozak, and Nina Hamaker.

Faculty Mentor: Dr. Shirley Rietdyk

Graduate Mentors: Michel Heijnen, Sam Potecorvo & Brittney Muir

Picture 5



**Picture 5:**  
**Head impacts in high school Athletes.**

Brian Fabriès

Mentor: Dr. Larry Leverenz

Picture 6



**Picture 6:**  
**Assessing the reliability of the NeuroCom EquiTest.**

Lauren Ashenbrenner, Trey DeHart, Jonathan Stewart, & Shane Mikesky

Mentor: Dr. Jeffrey Haddad

Graduate Mentor: Joshua Liddy

Picture 7



**Picture 7:**  
**Arm positions of newly standing infants when holding onto toys.**

Alex Collignon, Priscilla Gaona, Stephanie Smith, & Rhiannon Sheets

Faculty Mentors: Dr. Laura Claxton

Graduate Mentors: Amanda Arnold

## HK Faculty Awards & News

### Thank You Roseann!

Professor Roseann Lyle, PhD has retired from Purdue University after 29 years as a faculty member in Health and Kinesiology. Roseann came to Purdue as a graduate student and we were fortunate to have her join the faculty in 1986 after the completion of her studies. A small celebration was held April 8<sup>th</sup> to recognize her many career accomplishments and dedication to students; and to wish her all the best in her future adventures. She will be missed by students and colleagues alike. Given her many pursuits, we hope she will find pause to think of us every so often and find time to update us on her adventures.



### Kinley Trust Award Winner

Yumary Ruiz, PhD received a 2015 Clifford B. Kinley Trust Award for \$20,000 to support her work "Providers, Patient, and Parent Perspectives on Contraceptive Decision-making in Latina Teens Who Have Experienced a Recent Pregnancy." Dr. Ruiz's scholarly and teaching interests are in the area of health disparities among racial, ethnic and migrant populations with a particular emphasis on Latino youths and their families. Yumary joined our faculty as an Assistant Professor in Fall 2014, having spent the previous 8 years at New York University. She received her PhD in Health Promotion and Disease Prevention from our program in 2006.

### Fitness Tip:

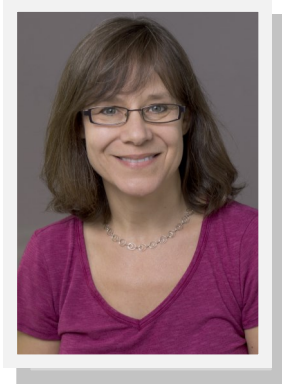
**Sarcopenia**, or the loss of skeletal muscle that occurs with normal aging, can negatively affect one's functional capacity and quality of life. An appropriate resistance-training program may aid in the delay of this aging process.

*Healthy Ideas in Motion...*





## HK Faculty Awards & News



### Shirley Rietdyk, PhD

Five Purdue University researchers received nearly \$150,000 from the Trask Innovation Fund to further develop their technologies. **Shirley Rietdyk**, Professor in Health and Kinesiology and a faculty associate with Purdue's Center on Aging and the Life Course, along with Babak Ziaie, Professor in Electrical and Computer Engineering and Weldon School of Biomedical Engineering, received \$20,000 to advance SmartGait: A Device to Assess Gait Parameters and Predict Falls. (See page 14 for the full story on Shirley's research) The technology modifies a smartphone to measure a person's walking gait to help prevent falls in those with compromised balance, such as the elderly or people with Parkinson's disease.

### Health & Kinesiology Outstanding Undergraduate Faculty Teacher

### Tarra Valencic, MS

Tarra is a Clinical Assistant Professor whose interdisciplinary approach to education offers students an opportunity to establish a comprehensive proficiency in their area of study while also emphasizing the personal and social skill sets that impact others in a supportive, motivational, and individualistic way. From 2003-2008, Tarra was the Assistant Director of Fitness/Wellness for Purdue University's Division of Recreational Sports promoting health, wellness, and physical activity on campus for over 40,000 students, faculty, and staff. Since 2008, Tarra's responsibilities within the Department of Health and Kinesiology have focused on development and implementation of a four-year degree program that reflects practical and knowledge based learning outcomes in the applied exercise and health field. Tarra is currently certified through the American College of Sports Medicine as a Health Fitness Specialist as well as holding certifications through the National Academy of Sports Medicine as a Youth Exercise Specialist, Senior Exercise Specialist, and Corrective Exercise Specialist. Tarra received Purdue's Teaching for Tomorrow Award in 2014.



### Health & Kinesiology

### Outstanding Graduate Faculty Teacher

### Gerry Hyner, PhD

Gerry joined the Purdue Health & Kinesiology faculty in 1982. He has taught courses in the areas of Human Diseases, Health Behavior and Research Methods. He developed graduate seminars for the Public Health degree now offered by the College of Health & Human Sciences. He has authored or coauthored scientific papers in journals such as: Health Education Research, the American Journal of Health Promotion, Family and Community Health, the Journal of the American Medical Association, the Journal of Occupational Medicine, and Methods of Information in Medicine. As President of the Society of Prospective Medicine (1999-2001) he contributed to the Handbook of Health Assessment Tools and also coauthored textbooks on health promotion and disease prevention. His research has focused on the use and effectiveness of computerized health risk appraisals as a means of influencing health-promoting behavior and lowering health care costs. He has examined the effects of risk reduction strategies in occupational settings and is currently examining models for planning and evaluating noninvasive health assessments in both healthy and at-risk subjects.



## Dr. Catherine Sabiston, 2015 Charles Cowell Lecture Speaker

### Improving mental health in cancer survivors: one step, ride, or stroke at a time.



Catherine M. Sabiston, PhD and 2015 Cowell Lecturer discussed her program of research on physical activity, sedentary behavior and mental health among cancer survivors, and insights she has gained through numerous observational, longitudinal, and physical activity intervention studies, primarily with female survivors of breast cancer. Her work has led to several novel approaches to promoting health active lifestyles in ways that account for the perspectives and needs of survivors. Dr. Sabiston is an Associate Professor of exercise and health psychology at the University of Toronto. She holds a Canada Research Chair (Tier II) in Physical Activity and Mental Health, and has received numerous career awards for her work in sport, exercise, and health psychology. This lecture and award reception is dedicated to Charles Cowell. He was an internationally distinguished scholar, teacher, public servant and Professor of Physical Education at Purdue University from 1947-1963.



## *Introducing*

### **Brant Patz New Director of Development for HHS**

Hello, I am Brandt Patz and I am the new Director of Development for the College of Health and Human Sciences (HHS). I oversee development and fundraising activities for the Purdue University's Department of Health and Kinesiology. I came to HHS in June of 2014 after spending three years in the development office of my alma mater Manchester University. Prior to my development career at Manchester, I was a financial processor for Lincoln Financial Group in Fort Wayne, IN.

Why is the Department of Health and Kinesiology important to me? Like most athletes who have experienced an injury during a game or practice, my playing career was impacted greatly from the care our school's athletic trainer provided. She not only helped me rehab from my fractured ankle, but she educated me on how my ankle was impacted by my injury and steps I can take to prevent it from happening again in the future.

My experience with my school's athletic trainer helped me realize how important a quality education is to the fields of Athletic Training, Applied Exercise and Health, Movement and Sport Sciences, and Public Health. Through the Department of Health and Kinesiology, students are becoming leaders who improve health and quality of life every day. It is easy to see why I enjoy finding ways to help take the Department of Health and Kinesiology to the next level through personal philanthropy and corporate partnerships.

## Quantifying the Mobility of People in their Seventies and Eighties



Ms. Brittney Muir, a PhD candidate working with Drs. Shirley Rietdyk and Jeff Haddad and fellow PhD candidate, Mr. Michel Heijnen, recently had a manuscript published in *Gait and Posture*. The purpose of the research was to examine the mobility of people in their twenties, versus people in their seventies and people in their eighties. Falls are the leading cause of accidental death in older adults, and the majority of falls in older adults are caused by trips, so it is important to study people as they step over obstacles. People in their seventies adopted strategies to minimize risk of tripping by increasing the horizontal distance between the foot and the obstacle, and these strategies were more prevalent in people in their eighties. However, these strategies resulted in larger, more abrupt movements which may compromise whole body balance. Thus, there appears to be a trade-off between risk of tripping and stability. These findings will lead to improved mobility interventions for older adults. This research project was completed with the help of the following undergraduate students: Alex Brunk, Keith Cox, Emily Fithian, Britt Foster, Amy Hill, Emily Hudspeth, Jin-Soo Kim, Tony Martin, Ellen Stuerzenberger, Aaliyah Taylor, Dan Wouters, Tina Yang, and Nick Zaleski.



Muir BC, Haddad JM, Heijnen MJH, Rietdyk S. (2015). Proactive Gait Strategies to Mitigate Risk of Obstacle Contact are more Prevalent with Advancing Age. *Gait and Posture*, 41(1): 233-239. doi:10.1016/j.gaitpost.2014.10.005

**PURDUE**  
UNIVERSITY

**CYFAR** Children, Youth and Families At Risk Program



HK Faculty; **Frank Snyder, Meghan McDonough, Bonnie Blankenship**, in collaboration with Dr. Renee McKee, Assistant Director and Program Leader, 4-H Youth Development, Purdue University are incorporating the PALS program with CYFAR and local 4H programs.

### 4-H Pals

Indiana 4-H is excited to begin a new Children, Youth & Families At-Risk Grant in Indiana! This new award will partner with an existing Purdue University program to create a year long health living experience for youth at two schools in the Lafayette School Corporation.

Located in the Department of Health & Kinesiology, PALS, or Purdue Athletes Life Success, will partner with the 4-H program to create a year long connection for youth in the traditionally summer-only PALS program. You can learn more about PALS [here](#). Through afterschool 4-H club programming, youth will be able to continue the fun and learning of PALS all year long!

The CYFAR program is funded by the United States Department of Agriculture - National Institute of Food and Agriculture.



United States Department of Agriculture National Institute of Food and Agriculture

# Entrepreneurship in Health and Kinesiology: SmartGait

**Dr. Shirley Rietdyk** collaborated with colleagues in Electrical and Computer Engineering at Purdue, Dr. Babak Ziaie, Mr. Albert Kim and Mr. Justin Kim, to develop a new device to quickly and easily assess mobility. The ability to walk depends on adequate muscular strength, coordination, cognitive ability, cardiovascular health, respiratory health, and other systems. Thus, a gait assessment reflects the individual's health and fall risk. Falls are a major public health issue and the leading cause of injury-related death in older adults. Falls can lead to chronic pain, disability, loss of independence, and high financial

burden. Identification of those with poor mobility and who are at risk of falling allows interventions. However, comprehensive gait analyses are difficult to obtain. Drs. Rietdyk and Ziaie developed an accurate and inexpensive gait tracking device to meet this critical need. The collaborators have recently published a manuscript that describes and validates the device, and have received funding from the Trask Innovation Fund to support commercial development of SmartGait. The following undergraduate students were instrumental in participant recruitment and data collection: Emily Albright, Nina Hamaker, Matt Hebda, Elizabeth Kozak, Danielle Kurasz, Jing Tian, and Macall Twaddle.

**PURDUE UNIVERSITY**  
**Discovery Park** **IMPACT STATEMENT**

NEED

Falls are a major public health issue and the leading cause of injury-related death in older adults. Falls can lead to chronic pain, disability, loss of independence, and high financial burden. Most falls occur during walking, and gait analyses have been used to predict those who are at greatest risk of falling. Higher risk of falling is associated with slower gait speed, increased stride time variability, increased step length variability, and increased step width variability. Identification of those at risk of falling allows interventions. Comprehensive gait analyses are difficult to obtain. An accurate and inexpensive gait tracking device is critically needed.

SMART-GAIT™

**INITIATIVE**  
Professor Babak Ziaie of the School of Electrical and Computer Engineering and Professor Shirley Rietdyk of the Department of Health and Kinesiology have developed Smart-Gait™, a low cost and accurate gait assessment system. Smart-Gait™ consists of a smartphone with a 90-degree tilted wide-angle lens and a special app to record and calculate gait information; i.e., step length, width, time, speed, double support, and trunk motion. The smartphone is worn on the waist and records a person's gait by monitoring the motion of foot fiducial markers affixed on the shoe. Smart-Gait™ is a simple tool that health care professionals can send home with patients to get a thorough assessment of gait pattern in a natural environment. The gait data can then be downloaded and analyzed in order to initiate preventive measures such as exercise, physical therapy, or vision correction. Professor Ziaie conducts research in Discovery Park's Bindley Bioscience Center and Birck Nanotechnology Center and Professor Rietdyk has been a Fellow in Discovery Park's Entrepreneurial Leadership Academy.

Over 20,000 older adults die from fall injuries each year, and over 2 million fall-related injuries are treated in emergency departments. The direct medical cost, adjusted for inflation, was \$30 billion in 2010.

**IMPACT**  
According to Dr. Peter Allenburger, PhD, Physical Therapist, Co-Chair Department of Physical Therapy, Indiana University School of Health and Rehabilitation Services: "The ability to assess gait parameters while patients are in their own homes will improve knowledge of the impact of disease and disability on everyday activities. Further, this information can be used to more fully assess the efficacy of rehabilitation."






Scan to view a video about SmartGait technology.

<http://www.purdue.edu/discoverypark>

NT14 May 2014

# Taking Capitol Hill in the Name of Increased Physical Activity

On March 4<sup>th</sup>, Health and Kinesiology Professor and Head Tim Gavin, a Fellow of the American College of Sports Medicine (FACSM), visited Capitol Hill advocating for congressional support for increasing physical activity. As a member of the ACSM Health and Science Policy Committee, Dr. Gavin along with colleagues from the Sports & Fitness Industry Association (SFIA) and famous personalities from the world of sport, walked the hallways of the U.S. Capitol to reach out to our elected officials. The annual event is an excellent opportunity to build relationships and legislative support leading to increases in physical activity.

### Indiana Physical Activity Facts (Source: CDC)

Only 44% of adults meet the recommended 150 minutes per week of aerobic exercise and only 25% meet muscle strengthening guidelines;

25% of adults report no physical activity in the last month;

Less than 25% of adolescents are physically active every day.

Being physically active increases life expectancy and lowers the risk for heart disease, stroke, type 2 diabetes, depression, and some cancers. Physical activity improves academic achievement in students.



Showing pride in being the #1 Physical Activity Advocacy team on Capitol Hill are: Dr. Tim Gavin; Mr. Mike Gugat, Senior VP of Sales and Marketing at U.S. Continental; Ms. Carly Braxton, Senior Manager at SHAPE America; and Mr. Ken Harvey, currently of Electronic Transaction Systems Corporation and formerly of the Washington Redskins.



## Health & Kinesiology 100th Anniversary Celebration!

HK will be celebrating its 100 year anniversary during the 2015-2016 academic year, and we want to get you involved!

The kickoff event will be on football's Family Day, September 19, 2015 on the West Lawn of Lambert Fieldhouse. We are also hosting an event on Homecoming, November 7, 2015. The year will be capped off with an Inaugural Alumni Achievement Awards Banquet in the spring of 2016. We want to hear from you...

Send us photos of your time at Purdue in HK (please also include names, locations, and a description). We're putting together HK history slide presentations and would love to include photos from our alums!

Send us nominations of HK grads who have made a difference and/or made the world a better place. Be sure to include a description of your nominee's accomplishments.

You can send these via email to [hk@purdue.edu](mailto:hk@purdue.edu) or via mail to 800 W. Stadium Ave, West Lafayette, IN 47906-2046.

We look forward to hearing from you and reconnecting with our HK alum!



## Sample of Recent Publications...



McDavid, M.L., **McDonough, M.H.**, Smith, A.L. (2015).

An empirical evaluation of two theoretically-based hypotheses on the directional association between self-worth and hope. *Journal of Adolescence*, 41, 25-30.

Robinson, M.E., Shenk, T.E., Breedlove, E.L., **Leverenz, L.J.**, Nauman, E.A., Talavage, T.M. (2015).

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