

Kinesiology is
Movement
SCHOOL OF KINESIOLOGY **M** UNIVERSITY OF MICHIGAN

SUMMER 2012

Sport



Sport venues and urban development

Management

SHARP Center to focus on women and sport

@ Michigan



Books by Fort, Rosentraub, Szymanski and Winfree

FROM THE DEAN

Innovation & Impact

Two concepts with tremendous meaning for the School and helping to define its future.

I was fortunate to be invited to speak at the March 2012 Regents meeting. As I began to collect my thoughts about the presentation, I knew I wanted to simply, yet fully convey the ground-breaking research and programs happening at the School—I decided to encapsulate those ideas by focusing on innovation and impact.

Kinesiology is on very solid academic ground, which allows the School to continue to accelerate our growth, development, and societal impacts. Our rich history is steeped in tradition and excellence, and our future is dynamically changing with every advancement we make in the lab and the classroom.

With our program being ranked fifth overall nationwide, we are building an environment that not only encourages, but generates success. While success can be defined in many ways, I believe we can define success at the School through our impacts and innovations.

We are making a difference. In the linked areas of physical activity and pediatric obesity, we are part of active research collaborations with the School of Public Health and Medical School that will change personal health and wellness landscapes with keen understanding of the causes, consequences, and treatments of obesity, and obesity-related disorders. We are also going one-step beyond just targeting the treatment of obesity, and looking at cancer treatment and prevention, neurological disorders, cognitive function, and healthy aging.

The School is leading the way with advances in robotic technology—referred to as Rehab Robotics—and clinical neuroscience. Our researchers are expanding the development of machines that are improving function and mobility in individuals with disabilities ranging from spinal cord injury to traumatic brain injury.

We also are turning our attention to sport, health, and athletic performance to understand and maintain physical health and wellness throughout the lifespan. We have major research going on in this area including the Sports, Health, and Activity Research and Policy Center for Women and Girls (SHARP)—a partnership between the national Women's Sports Foundation, Kinesiology, and the Institute for Research on Women and Gender. The Center is focused on shaping public policy of sport, health, and physical activity related to women and girls and celebrated the 40th Anniversary of Title IX this past May.



Photograph by KGT Photography.

We are partnering with adidas to evaluate the biomechanics of sport maneuvers and the performance advantage afforded by new technologies and reducing the risk of impact-related injuries. There is also very important concussion and injury prevention research underway—developments in this area will help elite athletes and weekend warriors prevent injuries and achieve optimal health, mobility, and quality of life. This work is so vital that the NCAA recently awarded a large grant to a consortium led by U-M to study long-term concussion outcomes, which we anticipate will aid efforts to promote safe, competitive environments into the future.

Lastly, the work we do with economic and urban development with sport is fast-tracking us to becoming leading experts on urban planning strategies anchored to sports, entertainment, culture, and real estate development. It's a rapidly expanding and evolving field of study, and we are committed to becoming the national and international leader in this field.

Time and time again, we have demonstrated our commitment to developing the leaders and best by providing the most valuable and comprehensive education and curriculum possible. Our focus is making immediate impacts on society. This is Michigan Kinesiology.

Once again, on behalf of the entire School, thank you for your support and enthusiasm and—**GO BLUE!**

Ronald F. Zernicke
Dean

Features



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SUMMER 2012



University of Michigan
School of Kinesiology

Energy, Progress, Positive Change

In all its definitions, the word movement describes the dynamic state of kinesiology today. Movement encompasses the scientific study of human motion, the importance of activity on growth and development, the role of sport in society, the exploration of new directions, and emerging trends. **Movement** brings you research findings and thoughtful insights on developments in kinesiology, as well as continuing updates on faculty, students, and your fellow alumni.

Let us know what you think

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2012

HOMECOMING

Join us back on campus for the
School of Kinesiology Homecoming 2012!

On Friday, October 12 have lunch with the Dean and reconnect with your fellow classmates. Spend the afternoon in faculty lectures, hear from students and join us for the All Class Alumni Awards reception and dinner.

Saturday, October 13 is all things Maize and Blue with the 36th Annual Go Blue Homecoming Tailgate and the Michigan vs. Illinois football game.

Friday, October 12

Complimentary lunch and State of Kinesiology with Dean Zernicke

11:30 a.m.–12:30 p.m.
Central Campus Recreation
Building (CCRB)

Choice of Faculty lectures and interactive student panel

- 12:30–2:00 p.m.
- **Dare to be 100** with Vic Katch, professor of Movement Science
 - **Almost everything you ever wanted to know about concussion** with Steve Broglio, assistant professor of Athletic Training
 - **Great Ballparks and Arenas: What Sports Management Really Means For Teams and Cities** with Mark Rosentraub, The Bruce and Joan Bickner Endowed Professor of Sport Management
 - **Childhood Obesity: The Role of Culture and Family** with Rebecca Hasson, assistant professor of Movement Science
 - **Voices of the students** interactive panel with current Kinesiology students

All Class Alumni Awards Reception

5:30–6:00 p.m.
Michigan Union

All Class Alumni Awards

6:00–8:00 p.m.
Michigan Union

Saturday, October 13

36th Annual Go Blue Homecoming Tailgate

12:30 p.m.
Oosterbann Field House

Michigan vs. Illinois Football game

3:30 p.m.
Michigan Stadium

**For more information
and to register, go to
www.kines.umich.edu/homecoming**

New faculty member brings national expertise in concussion consequences

Dr. Steven Broglio, A.T.C.

By Pat Materka



"The changes occur decades after the trauma, and there may be a genetic component to this. We are just beginning to ask why this happens and what we can do to prevent it."

IF 1.2 MILLION TEENAGERS WERE BEING ROUTINELY EXPOSED TO A CANCER RISK, wouldn't parents be up in arms? Wouldn't health care officials be dashing to take action?

Dr. Steven Broglio, A.T.C., assistant professor of Athletic Training, draws that analogy to the 1.2 million high school athletes going head to head during football season. He has been studying the short- and long-term effects of concussions for over 12 years, since his undergraduate days at the University of North Carolina.

"Interest has exploded in recent years, largely because of research findings on retired National Football League (NFL) players. Athletes who sustained multiple concussions across their careers showed higher rates of mental and physical impairments and depression," he reports.

In another study, autopsies of retired athletes who experienced multiple concussions and other forms of head injury showed an accumulation of tau protein,

which Broglio likens to scar tissue in the brain. These tau proteins block brain pathways and may contribute to memory loss, confusion, depression, and other symptoms of dementia, he says.

"The changes occur decades after the trauma, and there may be a genetic component to this. We are just beginning to ask why this happens and what we can do to prevent it," he explained.

Broglio, who joined Kinesiology last year as an assistant professor and director of the Neurotrauma Research Laboratory, primarily studies high school athletes. "While the NFL is an attractive subject, there are only 1,500 players a year compared to 1.2 million high school kids who play football. So to me, it's the younger teenaged population who pose the larger public health challenge."

Concussions are a large enough concern that even government agencies are giving it serious attention. The Centers for Disease Control and Prevention describe brain injury as a silent epidemic, estimating that 1.6 to 3.8 million injuries occur during sports and recreation annually—more than eight times the number of new breast cancer cases—with annual medical costs exceeding \$60 billion. Broglio believes that states as well as local school boards should provide funding for medical coverage of practices and games—not only to deal with concussion, but other emergencies such as broken bones or heat exhaustion. He urges schools

should have a certified athletic trainer present at practices and games.

Broglio brings no personal history to his research. His pastime is cycling, a decidedly non-contact sport. But on Friday nights, you'll find him on the sidelines of the field at Ann Arbor's Skyline High School. The players will be equipped with specially-designed helmets carrying sensors that measure the location and magnitude of impact during a tackle. If someone gets hit in the head, Broglio will see the results in real time on his laptop computer. "There are so many questions to be answered," he says, "and generations of young people who may benefit."

Several states have passed legislation requiring that any player who has suffered a concussion cannot return to the game the same day and must be cleared by a medical professional before resuming play.

KINESIOLOGY TO BE KEY PARTNER IN NCAA CONCUSSION STUDY

Dr. Broglio will be part of a multi-collaborative U-M concussion study funded by the NCAA. The grant will provide \$400,000 to the National Sport Concussion Outcomes Study Consortium to examine the effects of head injuries in contact and noncontact sports in both genders through the course of a college career. For more on the story, turn to page 10.



Dr. Broglio displays the equipment that is used to record real-time concussions on the playing field.

Sport Management at Michigan expands its image and impact

By Pat Materka

Sometimes it only takes one word to define an evolution.

"SINCE 2005, SPORT MANAGEMENT HAS EXPANDED ITS FOCUS FROM THE BUSINESS OF SPORT TO BUSINESS THROUGH SPORT," says Program Chair and Assistant Professor of Clinical Practice, Physical Education and Sport Management, **Dr. Thomas George**. "Sport has a unique and powerful place in society that gives corporations and other organizations the leverage to advance projects and accomplish their goals."

Urban planning, economics and finance, and sport consumer behavior are just some of the strengths that distinguish Michigan's Sport Management program from its peers across the country. While there is no "official" rating system, several on-line college guides rank the School of Kinesiology's program at or near the top among curriculums in the country.

Michigan Kinesiology has always been a trailblazer, initiating one of the first programs of its kind in 1985. The program, called Sports Management and Communication (SMC), was a response to students' growing interest in such areas as facility management, sport marketing, and corporate fitness. SMC was an outgrowth of Leisure Studies, which prepared students for careers in sports and recreation. The early curriculum was a hybrid of social sciences, history, and sports business.

"We are still teaching about how sports organizations work, and our graduates are still finding jobs in places like major league franchises or the front offices of the National Basketball Association. But now we're helping students understand how sports can be used by corporations, charitable foundations, and other organizations to promote issues and projects they care about," George relates.



Using sport to build communities

Dr. Mark Rosentraub, the Bruce and Joan Bickner Endowed Professor of Sport Management, is an urban affairs specialist who studies the integral role of sports in the design and planning of cities. Rosentraub knows sports facilities, along with attractive housing, supermarkets, retail stores, and cultural centers, are what draw people to an area and make it a more desirable place to live.

"Economic development is driven by human capital, and by that I mean highly skilled workers and middle and higher income families who bring productivity and vitality to their neighborhood," says Rosentraub. "Sports facilities—not just arenas

and stadiums, but bike paths and playgrounds—are among what attracts these residents. Both spectator and participatory sports are important.”

Rosentraub will be exploring the synergies between sports facilities and urban economic development in two seminars. Both the graduate and undergraduate level courses ask the same key question: Can, why, and how do sports facilities contribute to the economy and vitality of cities? “This is not just a North American phenomenon,” he notes, pointing to some of the spectacular arenas built recently in Munich and Portugal. Rosentraub went on to explain, “Nor is it a modern trend—the ancient Greeks and Romans built coliseums throughout areas they dominated. These courses help students gain valuable insight into the role of sports and sports facilities in urban design and economic growth.”

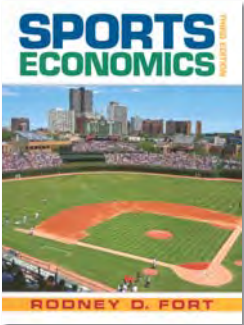


Advancing gender-related research

Kinesiology’s long-time commitment to equal opportunity in physical activity and sports for women and girls was showcased in a national conference celebrating

the 40th Anniversary of Title IX. Associate Professor of Sport Management **Dr. Kathy Babiak** organized the event and is co-director of the newly established Women’s Sport, Health and Activity Research and Policy (SHARP) Center for Women and Girls. The Women’s Sports Foundation selected Michigan as its research partner after a year-long search among more than 20 universities, citing Kinesiology’s excellent faculty and history of support for women’s health and fitness among the reasons for choosing U-M.

“The objective is to generate interdisciplinary research on a wide range of topics, from legal and economic issues to psychology and self esteem, to injury prevention,” Babiak says. “Ultimately our goal is to create an international network of researchers, policy makers, advocates and practitioners to make a positive impact.”



Expanding expertise in sports economics

Kinesiology’s strength in the financial side of sports is evidenced by a number of new textbooks, including **Dr. Rodney Fort’s**, professor of Sport Management, third edition of *Sports Economics* (Prentice-Hall.) Fort is also completing (tentative title) *Busting Sports Myths: The Top 20 Most Misunderstood Issues in Sports* (Stanford University Press) with

Dr. Jason Winfree, associate professor of Sport Management—as well as a book on the economics of big time college football.

Winfree and Rosentraub are co-authors of *Sports Finance and Management: Real Estate, Entertainment, and the Remaking of the Business* (CRC Press). “The book gives students a core understanding of the financial management issues specific to the sports industry,

especially as teams are becoming part of large corporations related to entertainment, real estate, and the media,” Winfree reports. Released last August, the book covers topics ranging from stadium revenues, to team valuations, to ticket pricing and salary caps.

Two new senior level faculty joined the School this fall.

Dr. Stefan Szymanski, the Stephen J. Galetti Collegiate Professor of Sports Management, is known throughout the UK and Europe for his work with international sports federations, sport history and culture, and sport governance. **Dr. Ketra Armstrong** brings an African-American perspective to her expertise in sport marketing and sport consumer behavior. A former Division I basketball player, coach, athletic administrator and award-winning journalist, she is also a past president of the National Association for Girls and Women in Sport.



Supporting social causes

The Women’s Sports Foundation (WSF) was founded in 1974 by tennis legend Billie Jean King to advance the lives of women and girls through sports. It was an early example of what Babiak sees as a growing trend toward philanthropy among professional athletes.

“Over the past 10–15 years, we’ve seen an increasing number of athletes from a variety of sports choosing to support social causes they care about. Many partner with existing charities and non-profits, while others start their own foundations,” she says. “They are branding themselves as more than just an athlete.”

Babiak’s background spans organizational theory, strategic alliances and relationship marketing. Essentially, she is interested in sports impact on society. “The theme is, how does sport make society a better place, either through an athlete’s philanthropic donations, or a team endorsing a charity event, or a community outreach that offers sports and fitness opportunities to disadvantaged kids?”

Sport management at Michigan focuses on more than sports and business. It looks at sports and life. Babiak said, “Sport has the unique capacity to capture people’s imaginations and bring them together.”



The SHARP Center Executive Leadership Team (from left to right): Dr. Michelle Segar, Dr. Carol Boyd, Dr. Marjorie Snyder (WSF), Dean Ron Zernicke, Kathryn Olson (WSF), Dr. Kathy Babiak, and Dr. Donald Sabo (WSF).

Leaders & Best

2011 Scholarship Student Award Winners

Several academically outstanding freshmen have enrolled in Kinesiology thanks to funding and generosity of alumni, family and friends who support scholarships at Kinesiology.

Nicole Jimenez ①

Sammamish, Washington
Athletic Training
Stamps Scholarship

Trevor Denton ②

Chesaning, Michigan
Movement Science
Stamps Scholarship

Zachary Paiva ③

Roseville, California
Sport Management
Bernard "Pat" Maloy Scholarship

Anna Li ④

Ann Arbor, Michigan
Movement Science
Shipman Society Scholarship

Douglas Yang ⑤

Ann Arbor, Michigan
Movement Science
Sidney J. and Irene Shipman
Scholarship

Joshua Gage ⑥

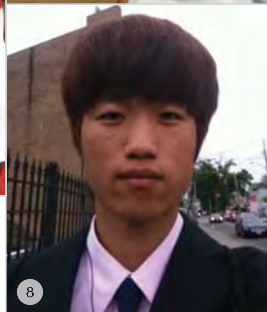
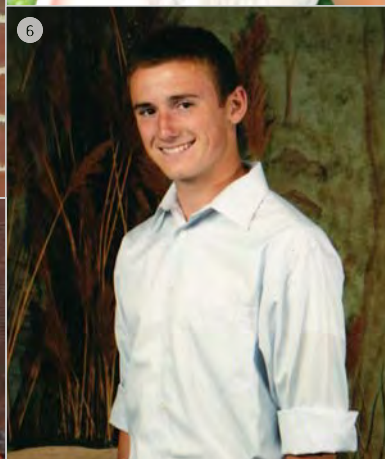
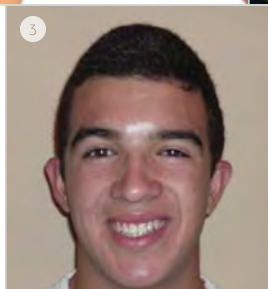
Northville, Michigan
Movement Science
Sidney J. and Irene Shipman
Scholarship

Albert Simon Karschnia ⑦

St. Clair Shores, Michigan
Sport Management
The Stephen and Jeannine
Galetti Scholarship

Sung (Aaron) An ⑧

Bayside, New York
Sport Management
The New York Family Scholarship



London calling

Students were up close and personal for the 2012 Olympics

GoGlobal!

By Sandra K. Wiley

LONDON CALLING! Twenty-six sport management students participated in an exciting new course to study in London with **Dr. Thomas George**, assistant professor of Clinical Practice, Physical Education and Sport Management and **Dr. Bruce Watkins**, associate professor of Sport Management. The brand-new course, "Behind the Scenes at the London Olympics" was funded by the Center for Global and Intercultural Study's Global Course Connections program. Additional funding was provided by a grant from the U-M International Institute's Experiential Learning Fund.

The students met George and Watkins in early May in London and got an up close and personal look at the extensive planning that goes into preparing Olympic Games. As part of the course, students visited Olympic Park and Olympic Stadium, Lord's Cricket Grounds, and Wembley Stadium. Students were able to interact with many Olympic stakeholders including the Minister of Olympic sport, the London Organizing Committee for the Olympic Games, the British Olympic Association, the BBC, the Daily Telegraph and two Olympic corporate sponsors—Visa and Deloitte. Students also were able to hear first-hand from executives from IMG and Octagon Worldwide, two of the largest sport management firms in the world. The program also included a day trip to the campus of Loughborough University,

where students toured the training facilities of Team Great Britain, and met with Dr. Ian Henry, director of the Centre for Olympic Studies & Research.

George noted, "We had several goals in offering the 'Behind the Scenes at the London Olympics' study abroad program. First, the program was intentionally designed for and directed at sophomore level students. Many of these students have never travelled outside of the U.S., so London is an excellent destination for a first international experience. The program provided broad exposures to the variety of components that make up the Olympic Games. The Games are much more than 17 days of sporting events. The Olympics are an amazing global event that intertwines the sport, business, political, and cultural segments of society. Our Sport Management program prepares students for both the business of sport and business through sport and the Olympic Games fully embody both of these approaches."

The U-M School of Kinesiology and the School of Sport, Exercise and Health Sciences at Loughborough University developed an undergraduate exchange partnership in 2008. The agreement allows students at either university to apply to study at the exchange partner university and earn credit in their major.

Congratulations to the 2011–2012 GoGlobal! Travel Award Winners

Winter 2012

Tyler Hooper (SM): University of Loughborough, England
Carl A. and Joan C. Kreager Endowment
Josh Kruger (MVS): University of Queensland, Australia
Andrew Ricci (MVS): Prague, Czech Republic

Spring/Summer 2012

Micah Aaron (MVS): GIEU Kenya
Kathryn Brown (MVS): GIEU Philippines
Carl A. and Joan C. Kreager Endowment
Adrienne Lefevre (MVS): GIEU Philippines
Beverly Ulrich International Initiatives Endowment
Nicole Parmann (MVS): GIEU Tanzania
Carl A. and Joan C. Kreager Endowment
Keyana Thompson (SM): Global Course Connections "Behind the Scenes of the London Olympics", International Institute Experiential Learning Grant
Emily Martin (SM): Global Course Connections "Behind the Scenes of the London Olympics", International Institute Experiential Learning Grant

GoGlobal! Travel Awards are available, through a competitive application process, to undergraduate kinesiology participants students in U-M and non U-M sponsored programs of study, research, service, and internships abroad. For more information, please contact International Program Coordinator Jan Afonso at jafonso@umich.edu



New Faculty

The School of Kinesiology is pleased to welcome new faculty members **Dr. Stefan Szymanski** and **Dr. Ketra Armstrong** as professors in Sport Management and **Dr. Steven Broglio** as an assistant professor in Athletic Training and **Dr. Kathy Clark**, MS '83, PhD '90 as a lecturer.



Dr. Stefan Szymanski

came to the School last fall from Cass Business School, City University London and is the Stephen J. Galetti professor of

Sport Management. He noted, "I've worked all of my career in Europe so the chance to join Michigan is a way to open my horizons. Sports is one of the few activities in which globalization is a reality rather than a slogan, and most of my work has been about comparing how sports work in Europe and the USA. There's a lot to learn on both sides—for example the Bowl system in college football faces many of the same problems as the European Champions League. I can see lots of exciting research opportunities in the coming years." Szymanski earned his doctoral degree from the University of London, Birkbeck College.



Dr. Ketra Armstrong

came to the School last fall, from California State University, Long Beach. She said, "Prior to my arrival

at U-M, I spent the past eight years on the Pacific Ocean with no desire to re-venture the winter wonderlands of the Midwest! Well that was until I visited U-M. My primary research focus is on sport marketing and the social psychology of sport involvement, noting the impact of race/ethnicity and gender. I am delighted to be a member of such an 'All-Star' team in Kinesiology. While I am no longer physically located and employed at 'The Beach'... I am working in paradise!" Armstrong earned her doctoral degree from the Ohio State University.



Dr. Steven Broglio,

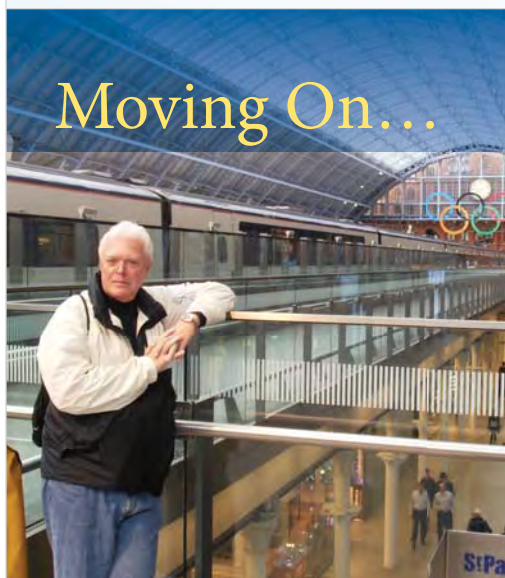
A.T.C. came to the School from the University of Illinois—

Urbana. He said, "I came to U-M because I saw real potential to work with world leaders in kinesiology, biomechanics, and medicine in a way that would not only be personally challenging, but take my research to a level that could influence health policy. That is what it is all about; looking at a problem, finding a solution, and then influencing policy in a way that protects the health and well-being of others." Broglio earned his doctoral degree from the University of Georgia.



The School also welcomed **Dr. Kathryn Clark** as a movement science lecturer. Clark's research interests are in exercise physiology, musculoskeletal and neuromuscular adaptations. She is the former International Space Station Senior Scientist and Chief Scientist for National Aeronautical Space Administration's Human Explora-

tion and Development of Space (HEDS) Enterprise. Clark is a past chair of the board of Michigan Technological University as well as a member of the Board of Visitors of Embry-Riddle Aeronautical University and the National Marine Sanctuary Foundation.



SPORT MANAGEMENT ASSOCIATE PROFESSOR BRUCE WATKINS IS RETIRING AFTER 32 YEARS AT U-M.

Watkins began his career in 1979 as an assistant professor in the Communications Program at the University of California, San Diego.

It was in 1980 that he made his way to U-M as an assistant professor in the Department of Communication. He then joined what was then the Division of Kinesiology in 1987 and has been with the School of Kinesiology ever since.

Watkins expertise was well sought after, landing

him a position as a Congressional Science Fellow for the Society for Research in Child Development, U.S. House of Representatives Subcommittee on Telecommunications, Consumer Protection and Finance. By the mid- to late-90s, he had served as the interim director of the Division of Kinesiology, was a visiting associate professor of Psychology for the Indiana University—Institut Teknologi MARA Joint Program in Shah Alam, Selangor, Malaysia, and was a senior Fulbright Scholar in Mass Communications at the Universiti Teknologi MARA, Shah Alam, Malaysia.

He received his B.A. in Psychology/Sociology from St. Cloud (MN) State University, M.A. in Experimental Psychology and Ph.D. in Developmental Psychology from the University of Kansas.

The school extends a heartfelt thank you to Dr. Watkins for his passion, commitment to excellence, and service to all of the students, peers, staff, alumni and friends at the University of Michigan and the School of Kinesiology.

Best wishes from the entire School of Kinesiology!

adidas partners with Kinesiology to improve sport performance and reduce injuries

ADIDAS, A GLOBAL LEADER in the sporting goods industry with brands built on a passion for sports and a sporting lifestyle, recently awarded the U-M School of Kinesiology a significant grant to gain insights into how innovative wearable technology can improve sport performance and reduce the risk of injury.

School of Kinesiology, College of Engineering, and Medical School researchers, in collaboration with U-M Athletics and the adidas Innovation Team, is using cutting-edge techniques to analyze and develop the next generation of performance products for athletes.

Researchers are conducting studies with U-M varsity football and basketball athletes to evaluate the biomechanics of sport maneuvers and the performance advantage afforded by new technologies. Additionally, research seeks to optimize the design of protective equipment to reduce the risk of impact-related injury.

Also, innovative, state-of-the-art approaches are being used to answer sports and movement science questions. This collaboration provides adidas with industry leading information

that will assist the company in designing and developing products to enhance athletic performance and injury prevention at all levels of competition.

“U-M has a very unique team approach with theoretical and experimental expertise in the areas of biomechanics, engineering, sports medicine and human performance, and we are eager and passionately excited to partner with U-M and tap into their extensive knowledge base,” said Roland Seydel, innovation explorer for the adidas Innovation Team.”

Researchers are conducting the studies at locations in the School of Kinesiology, College of Engineering, Bone and Joint Injury Prevention and Rehabilitation Center, MedSport, and U-M athletic facilities. School of Kinesiology **Dean Ron Zernicke** said, “This research is important to develop sports technology that will keep athletes healthier and enable weekend warriors stay more physically active across their lives.”

Groundbreaking, Long-Term Study of Head Injuries among Athletes Kicks Off with NCAA Grant

A GRANT FROM THE NCAA will kick off a groundbreaking, long-term study of concussion and other head injuries among athletes, led by University of Michigan researchers and their colleagues around the country.

The NCAA will provide \$400,000 to begin to fund a longitudinal study by the National Sport Concussion Outcomes Study Consortium, a new group that includes three founding members from the University of Michigan: **Jeffrey Kutcher**, M.D., associate professor of neurology

and director of Michigan NeuroSport; **James T. Eckner**, M.D., assistant professor in physical medicine and rehabilitation; and **Steven Broglio**, Ph.D., A.T.C., assistant professor of kinesiology.

With the NCAA grant, the Consortium will study more than 1,000 male and female college athletes who compete in 11 sports at three schools. Researchers hope to track those athletes throughout their lifetime to monitor long-term effects of head injuries.

Broglio and his colleagues believe the data the study collects

will provide a more comprehensive understanding of concussions. At this time, no one really knows for sure if one or even two concussions have any long-term impacts (such as cognitive decline). He said, “The short-term effects of concussions have been examined for several years. As our study progresses, I am most interested in seeing whether or not there are long-term cognitive risks, and designing interventions to lessen those risks.”

Photograph by Daryl Marshke.

RESEARCH ON THE MOVE

Kids with Down syndrome who bike ride are less sedentary overall

By Laura Bailey

CHILDREN WITH DOWN SYNDROME WHO LEARNED TO RIDE A TWO-WHEEL BIKE were less sedentary overall and had less body fat one year after learning to ride compared to those who did not participate according to a study conducted by **Dr. Dale Ulrich**, professor of Movement Science and Physical Education.

Results showed that 56 percent of the 61 study participants in the U-M School of Kinesiology Down syndrome bike training study learned to ride a two-wheel bike unassisted after 75 minutes a day of individualized training for five consecutive days. After a few tweaks, subsequent bike camps showed even more success, with 65 percent learning to ride.

Though the study focused on kids with Down syndrome, bike riding has big implications for all kids with learning constraints, including those with autism. Bike riding helps counteract the higher

levels of social isolation and health problems kids with Down syndrome and other disabilities face.

"Rather than trying to teach everything, you've got to be a lot more selective and identify activities that their peers are doing that will benefit them in many different ways," Ulrich said. "Bike riding, swimming, martial arts, dance, those are all activities that I think are just perfect with individualized instruction."

The current results are from bike camps in 2006–2007 in Grand Rapids and Ann Arbor. A new three-year study that began in 2009 monitors the frequency of riding after leaving camp and follows the activity of participants, as well as measuring socialization and community participation.



Dale Ulrich

Research as I know it: A lab experience

By Pat Materka

NOT EXACTLY YOUR TYPICAL SCREENING QUESTIONS FOR BECOMING A U-M RESEARCH SUBJECT. I volunteered to take part in a study called "Relationships between Handedness, Age, Motor Cortex Symmetry and Interhemispheric Communication." It is looking at how the right and left hemispheres of the brain control and coordinate hand movements, and how the two sides of the brain communicate with each other.

"Tattoo ink and metallic devices might interfere with the transcranial magnetic stimulation (TMS) we'll be applying to the brain region that controls your fingers," explains **Brett Fling**, a doctoral candidate in Kinesiology's Neuromotor Behavior Laboratory who is conducting the research. **Dr. Rachael Seidler** is principal investigator of the study, which compares the abilities of adults aged 18–30, and 65–80. At 65 and tattoo-less, I just made the cut.

Motor control signals are sent along fibers which, like other parts of the brain, degenerate with age. So step one is to collect images from a magnetic resonance imaging (MRI) machine for 40 minutes. "Are you claustrophobic?" Fling asks.

Next comes some two-handed dexterity exercises including shoe-tying and coat buttoning (while timed by a stopwatch). Also included is a fun test that requires transferring a stack of metal bolts and washers, piece by piece, from one wooden peg to another, in correct order, as quickly as possible. Seeing how many pegs I've left empty is a humbling experience.

Finally, Brett introduces the transcranial magnetic stimulation (TMS) protocol which

happens in session two a week later. He positions a magnetic coil on top of my head in the region that directly controls my fingers. "The coil will send a magnetic pulse causing your hand to twitch," he explains. "We'll reduce the intensity to find your threshold—the lowest intensity from the stimulator that will create a muscle response."

I feel the stimulations—which don't hurt at all—during the next series of tests. Basically I'm pressing one or both index fingers against a surface, causing a line to appear on a computer monitor. The goal is to apply pressure so that my line matches the jagged yellow line on the screen. It seems impossible. "Excellent, excellent," Fling insists.

Across the room, he's watching my muscle activity, and it shows a split second interruption with each TMS. "Believe it or

1.) Do you have any metal implants in your head, including in your mouth?

Yes ☒ No

2.) Do you have permanent eye liner or any tattoos above the neck?

Yes ☒ No

3.) Have you ever had brain surgery?

Yes ☒ No

not, that tiny disruption is what's important to us," he explains. "It shows how your brain is sending information from one side to the other, and how that information is relayed down to your muscles."

The information the lab is collecting from young and aging adults will help to develop interventions for stroke victims, people with multiple sclerosis and other degenerative diseases, and people whose brain pathways have deteriorated, but with help may still be improved. For example, the lab is developing modified drum sets, where a research participant practices drumming with both hands, one hand tapping fast, the other slow.

From my perspective and having just participated, if you live near a college or university, consider volunteering as a research subject. It's fun, highly informative, and you're advancing the cause of science. You'll gain surprising new insights in return.

Meet the Sport Management Advisory Board

THE SPORT MANAGEMENT PROGRAM MAINTAINS AN EXTERNAL ADVISORY BOARD

to develop and nurture connections with leaders in the sport industry. The advisory board contributes to our vision of achieving excellence in undergraduate sport business education. The board serves in an advisory role to the Sport Management faculty, providing critical input related to the program's curriculum to ensure that undergraduate students are prepared for the changing and emerging demands of sport business and related industries. The board also provides important links to the sport business community, facilitating internship and employment opportunities for Sport Management students.



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Dean Zernicke welcomes T.J. Truskowski as director of advancement

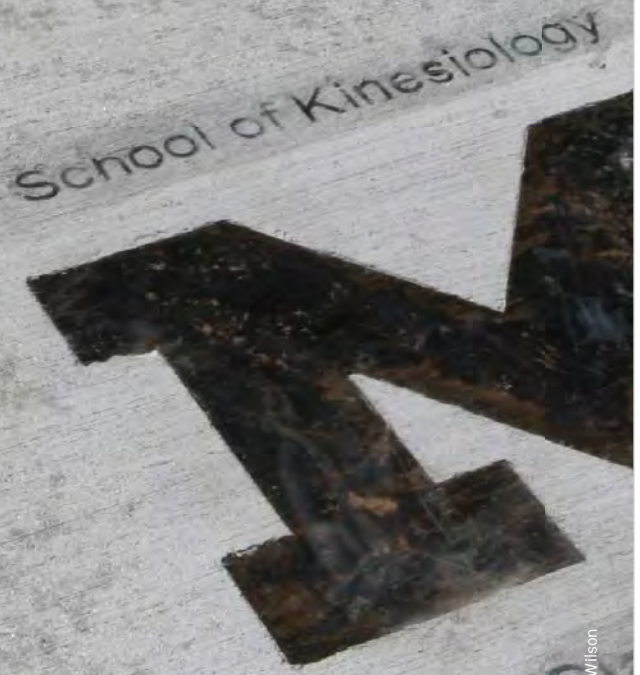
LAST FALL, DEAN ZERNICKE FORMED THE OFFICE OF ADVANCEMENT, merging together communications and marketing with development and alumni relations. At the same time, Zernicke welcomed **T.J. Truskowski** as the director of advancement. “This new model (advancement) effectively blends development and alumni relations with marketing and communications, improving how we interact and engage with our alumni, donors and friends of the School from around the world,” said Zernicke.

Truskowski came to Kinesiology from U-M’s College of Engineering (COE) where he worked as a regional gift officer since 2007. While at the COE, Truskowski partnered with the Center for Entrepreneurship and helped direct a fundraising plan for a 60,000-plus square-foot addition to the George Granger Brown Building for the Department of Mechanical Engineering.

Truskowski counts the U-M’s network of impassioned alumni high on the list of things that make working at Michigan special. He said, “I always tell people how rewarding my job is. I get to build relationships with people who care deeply for Michigan often times helping them achieve their personal goal of making a difference in someone’s life. The School of

Kinesiology is a great place. I continue to be amazed by the faculty and students who are so accomplished and always looking for ways to improve society through the important work they do. I’m inspired by our students, faculty, and alumni and look forward to the future.”

The Office of Advancement is committed to fostering lifelong relationships with alumni and friends to secure resources to achieve the mission of the School—to be an international leader in education and research in physical activity, health and wellness, and sport management. Truskowski commented, “I know I speak for the entire advancement team when I say that we look forward to working with our alumni, donors and friends to achieve this goal.”



Photograph by Kendall Arbogast-Wilson

The Office of Advancement



T.J. Truskowski
Director of Advancement



Christina Camilli-Whisenhunt
Associate Director, Marketing
& Communications



LaToya L. Singletary
Assistant Director,
Advancement



Leslie Mader
Manager, Advancement
Services and Annual Fund



"A smile," it's been said,
"is a curve that sets everything straight."

Jamie Reynolds BS '96

By Pat Materka

DR. JAMIE REYNOLDS, BS '96, IS IN THE PRACTICE OF SETTING THINGS STRAIGHT—NAMELY TEETH, AND THEREBY CREATING THOSE SMILES.

As a partner with Spillane and Reynolds Orthodontics in Novi, Michigan, Reynolds has changed the look—and in many cases, the lives—of more than 7,000 patients over the past nine years.

Like many Kinesiology graduates, Jamie's career path started in sports. "I played football and basketball and ran track in high school," he relates, "which introduced me to the field of athletic training. That's how I came to choose Kinesiology, where I had the opportunity to work with the hockey and football teams as a student trainer. Early on, I imagined becoming an athletic trainer for professional football."

But watching the procedures used to treat injured players raised his interest in orthopaedic medicine. He enjoyed the health science courses required for pre-med, and might have become an orthopaedic surgeon, when a family friend convinced him to consider orthodontics. "The more I learned about it, the more it attracted me," he recalls. "The emphasis on facial aesthetics was

"I liked the prospect of helping people in a way that raised their self-esteem and improved their outlook on life."

intriguing. I liked the prospect of helping people in a way that raised their self-esteem and improved their outlook on life. And the idea of working with kids really appealed to me. I think I'm really a big kid at heart."

So he shifted from bodies to faces; from bones to teeth.

After graduating from U-M's Dental School and finishing his residency, Reynolds joined Dr. Lawrence Spillane in Novi, Michigan. Their practice, MyAmazingSmile.com, now has 18 employees and a second office in Rochester Hills. They've been named to Top Orthodontists List in the Detroit area by *Hour* magazine for four years running and are top ranked in an annual readers' poll by the *Novi News*. Last year, Reynolds was a finalist for "40 under 40," recognizing

outstanding young dental professionals.

"I feel very fortunate," he says, referring to the honors as well as to his chosen career. "It's exciting to watch the personality change in young children as they lose their self-consciousness. We see adults whose families couldn't afford braces, and now that they're grown up and earning an income, have decided to invest in themselves. We notice they're wearing new clothes or trying a new hair cut. Their whole self-image is changing, along with their confidence."

And it's never too late. Reynolds recalls an 87-year-old patient who came in with a denture on top and only eight remaining bottom teeth. "She told me she was going to live 20 more years and she was tired of her teeth being crooked. We gave her braces and straightened her eight remaining teeth and she couldn't have been happier."

While uplifting, orthodontics is demanding, placing considerable pressure on the neck, back and shoulders. "You need to know how to strengthen the right muscles," Reynolds notes. "I appreciate my training in Kinesiology, which helped me understand the human body and how to take care of it."

A club volleyball player at U-M for four years, including two years as captain, he now volunteers as volleyball coach for his local high school. He is in the process of putting together a charitable foundation which will provide braces for underprivileged children in Oakland County Michigan. Jamie and his wife Dawn have a son, Walker, and a daughter, Reese.

He is excited by the emergence of new technology such as invisible custom braces, which offer options to patients of all ages. "What used to take two or three years to treat can now be treated in a year or less, with much more aesthetic options. Two generations ago most people's teeth would be lost by late adulthood. With the advent of fluoride, a lot of problems with decay went away. But teeth still need to fit together properly. It's like a car: If the parts of the motor don't work together efficiently, the car may still run, but it will wear out much sooner."

"In this day and age, your teeth should last a lifetime. The most rewarding part of this job is being able to have a positive impact on people's lives," Reynolds concludes. "Our job is focused on smiling. And people smile because they're happy."

Wolverines
in the



Friday
September 21

7:05 pm

Comerica Park, Detroit

Hey Wolverines!

Get a group of your fellow students, alumni, family, friends and fans and show your Michigan pride as the Detroit Tigers take on the Minnesota Twins for "Wolverines in the D" game night!

Tickets are for anyone who wants to show their U-M pride and support a great cause!

Tickets are \$22 per person and \$5.00 from every package benefits the Pat Maloy Scholarship Fund.

For more information, visit www.tigers.com/um



WOLVERINES in the 

