

# LIFE 360

COLLEGE OF HEALTH & HUMAN SCIENCES



## INGREDIENTS FOR SUCCESS

HHS entrepreneurs mix it up

# LIFE 360

COLLEGE OF HEALTH & HUMAN SCIENCES FALL 2015



ABOVE: The entrepreneurial spirit of Cooper's Hawk Winery and Restaurants founder Tim McEnery (HTM '99) helped him create a retail operation that has 22 locations and revenues of over \$150 million. (Photo provided)

ON THE COVER: Brad Niemeier (HTM '12) mixes it up as founder of Azzip Pizza, which has multiple locations in Indiana and is already expanding to Illinois. (Photo by Charles Jischke)

Read about McEnery, Niemeier and other HHS entrepreneurs in "Growing Business" on page 30.



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# FIRST IMPRESSIONS



It's hard to believe that the College of Health and Human Sciences (HHS) is well into its sixth year. The solid foundation we've built since we began in July 2010 positions us well for the future, along with significant and continued progress to support student success, hire incredibly talented faculty, and conduct research that directly improves the lives of people every day.

We have big plans for this year, including 25 HHS-specific study abroad programs, the launch of our expanded Public Health Graduate Program (read more starting on page 16), and acquisition of a 3T MRI scanner. The MRI scanner will support research programs led by 21 scientists from the Colleges of Health and Human Sciences, Engineering, Science, and Veterinary Medicine as well as from the Purdue Center for Cancer Research. HHS research utilizing the MRI scanner includes studies on the effects of metal toxicity on the brain, causes and treatments related to speech disorders and hearing loss, and dietary effects in tissue and bone, to name just a few. The project, funded in part by a \$2 million NIH instrumentation grant awarded to a team led by Ulrike Dydak, associate professor in the School of Health Sciences, distinguishes HHS as a campus leader in neuroscience.

By now you've likely heard about *Ever True: The Campaign for Purdue University* that was formally announced by Purdue President Mitch Daniels on October 9. The College of Health and Human Sciences seeks to increase support for both undergraduate and graduate students, grow endowments for HHS research, add more professorships, enhance facilities, introduce new programs and expand current ones. You can read more about the campaign on the next page and about HHS' campaign initiatives on page 44.

In this issue of *Life 360*, "Growing Business" (page 30) features inspiring stories about HHS faculty, students and alumni who caught the entrepreneurial spirit and turned their business ideas into commercial operations. Our "Money Talks" story (page 25) highlights a new course in personal finance designed to prepare students with practical, relevant skills to help them navigate a lifetime of financial decisions. And the "Degrees of Difference" series (placed throughout this issue) profiles HHS alumni who have achieved success in careers beyond their primary field of study and used their achievements to give back while moving others forward.

This is an exciting time for the College of Health and Human Sciences. We are truly making lives better and changing the world!

Hail Purdue!

Christine Ladisch  
Dean



## 2012-19 CAMPAIGN INITIATIVES

On October 9, Purdue President Mitchell E. Daniels, Jr., announced *Ever True: The Campaign for Purdue University*.

"As we approach the 150th anniversary of Purdue's founding, we are embarking on a campaign — *Ever True* — that will elevate our University's reputation for research excellence and intellectual achievement in a new era of accountability in higher education," Daniels said. "We invite the support of the entire Purdue family in this historic undertaking."

With a goal of \$2.019 billion raised by 2019, *Ever True* is the largest fundraising effort in Purdue history. The campaign spans July 1, 2012, through June 30, 2019, concluding in the University's 150th anniversary year.

This campaign will propel the Purdue Moves initiatives — Affordability & Accessibility, STEM Leadership, World-Changing Research, and Transformative Education — and reinforce the University's overarching commitment to keep a rigorous college education within students' financial reach. More broadly, it will unite the Purdue community around three key priorities:

**PLACE STUDENTS FIRST** — Students are the heart of the University, and fostering their talent is our highest calling. Our students will grow as leaders and global citizens who enjoy a lifelong relationship with Purdue that equips them for the future's broad, ever-changing challenges and opportunities.

**BUILD ON OUR STRENGTHS** — Intersecting with the arts, humanities, social sciences, and business disciplines, we will increase investment in areas that have the greatest potential for impact and explore innovative ways to leverage our historic strengths.

**CHAMPION RESEARCH AND INNOVATION** — Faculty research requires a nimble, state-of-the-art ecosystem that attracts and celebrates creative minds — a fusion of people, resources, facilities, and environment that spurs collaboration across disciplines, expands the boundaries of knowledge, and positions faculty for success.

The theme of the campaign, *Ever True*, springs from the lyrics of "Hail Purdue!" and speaks to the loyalty and commitment our Boilermaker family has long demonstrated.

To learn more, visit [www.purdue.edu/EverTrue](http://www.purdue.edu/EverTrue) or connect with [#PurdueEverTrue](https://twitter.com/PurdueEverTrue) on social media.

# 360° REVIEW

## CONSUMER SCIENCE

Stewart Chang-Alexander, associate professor, and his research group began a first-of-its-kind experimental study on the effectiveness of campus interventions to increase the acceptance of the human papillomavirus (HPV) vaccine in college-aged men. HPV is a serious national problem, and the vaccine is effective for men and women in thwarting the spread of this costly health concern.

Jonathan Bauchet, assistant professor, was part of a team that conducted a broad and complex applied field experiment measuring how a novel anti-poverty intervention helped destitute families come out of extreme poverty. The importance of his research, published in the *Journal of Development Economics*, is that it shows how such interventions may result in very different outcomes, depending on the setting in which they are applied.

## HEALTH AND KINESIOLOGY

The department is celebrating its 100th anniversary. Celebration events will include the Charles Cowell Lecture on April 6, 2016, and the HK Achievement Awards Reception on April 22, 2016.

Yumary Ruiz, who joined the faculty in 2014 as an assistant professor, received a 2015 Clifford B. Kinley Trust Award for \$20,000 to support her study titled "Providers, Patient, and Parent Perspectives on Contraceptive Decision-making in Latina Teens Who Have Experienced a Recent Pregnancy." Read more about her work in "Building a Healthier Society" beginning on page 16.

The A.H. Ismail Center for Health, Exercise and Nutrition, along with the Purdue Cancer Wellness Program and the YWCA of Greater Lafayette, introduced summer classes on cancer survivors' cardiorespiratory fitness, muscular strength, endurance, flexibility and body composition. The summer classes were in addition to two eight-week courses already offered in the fall and spring semesters.



Larry Leverenz, clinical professor and one of the principal investigators in the Purdue Neurotrauma Group (PNG),

studied the brains of 25 high school football players and those of noncontact-sports controls before, during and after the regular season using proton magnetic resonance spectroscopy, a medical-imaging technique. The results show changes in brain chemistry and metabolism even in players who have not been diagnosed with concussions (sub-concussive impacts) and suggest the brain may not fully heal during the off-season.

## HEALTH SCIENCES

A \$2 million National Institutes of Health grant awarded to Ulrike Dydak, associate professor, will help bring a state-of-the-art magnetic resonance imaging (MRI) scanner to Purdue's West Lafayette campus. A variety of Purdue departments and programs as well as the Office of the Executive Vice President for Research and Partnerships will provide the additional funds for the more than \$2.5 million project, which was approved by the Board of Trustees in July.

Wei Zheng, professor and head of the School of Health Sciences, received the Career Achievement Award — the highest honor given by the Society of Toxicology Metals Specialty Section — during the society's 2015 annual meeting in San Diego, California. The award recognizes distinguished scholars for their outstanding achievements as a researcher, mentor and leader in the field of metal toxicology.

Jennifer Freeman, assistant professor, received the 2014 Exceptional Early Career Teaching Award for tenure-track faculty at Purdue. She also was awarded the 2014 College of Health and Human Sciences Early Career Research Achievement Award. Her current research is focused on investigating the adverse health effects of exposure to environmental stressors on human and environmental health using the zebra fish model system.

## HHS EXTENSION

Released in April 2015, Be Heart Smart is the newest HHS Extension program and the first health and wellness program developed by Purdue Extension. With recognition that heart disease is the leading cause of death for men and women in Indiana and the United States, HHS Extension sought to develop a program to address the issue.

Be Heart Smart is a program for individuals who want to learn more about preventing heart disease by making heart-healthy lifestyle changes. The program teaches participants how to monitor risk factors for heart disease and how to make simple changes to one's daily routine to improve heart health. Visit [www.purdue.edu/hhs/extension](http://www.purdue.edu/hhs/extension) for more information.

## HOSPITALITY AND TOURISM MANAGEMENT

Professor Shawn Jang received the Michael D. Olsen Research Achievement Award at the 2015 Graduate Conference in Hospitality and Tourism Education held in Tampa, Florida.



Clinical Chef Instructor Ambarish Lulay recently won three medals in the hot and cold food categories at regional and national culinary competitions sponsored by the American Culinary

Federation (ACF). Lulay's medals include a bronze at the Midwest regional in Madison, Wisconsin; a silver at the Florida regional in Tampa, Florida; and another silver at the ACF National Convention in Orlando, Florida.

The school introduced a new course in fall 2015 called Event and Meeting Planning Management. The course is designed for students interested in meetings, expositions, events and conventions, which are among the fastest-growing segments in the tourism industry and generate millions in revenues for cities and countries. Taught by Mick LaLopa, associate professor, the curriculum focuses on best practices in event planning, including promotion, organization, coordination, budgeting and risk management.

## HUMAN DEVELOPMENT AND FAMILY STUDIES

The Center for Families (CFF) and the Military Family Research Institute (MFRI) recently celebrated their respective 20th and 15th anniversaries. Both centers focus their research efforts on the idea that families in all forms play a central role in creating resilient, vibrant communities.



At a gala anniversary celebration on April 25, Dean Christine Ladisch announced a two-year, \$3.5 million grant from Lilly Endowment to MFRI. The institute will

continue to expand opportunities for military members, veterans and their families by providing research that helps mental health providers, public policy makers, employers, and leaders in higher education better understand issues affecting the military community.

In addition, the Family Impact Institute (FII), which provides government officials and policy leaders throughout the United States with the latest research on families, has moved to Purdue and will be housed in CFF.

## NURSING

Of the 765 member schools in the American Association of Colleges of Nursing, the School of Nursing is one of only four to receive a 2015 Innovations in Professional Nursing Award. The school was recognized in the “Public Schools without an Academic Health Center” category for its curricula innovations, programs in quality improvement and systems engineering, and associated student-learning outcomes.

Sigma Theta Tau International Honor Society of Nursing named Azza Ahmed, associate professor, the recipient of the 2015 Audrey Hepburn Award for Contributions to the Health and Welfare of Children. The society also named Nancy Edwards, associate professor, as the recipient of the 2015 Amy J. Berman Geriatric Nursing Leadership Award.

School of Nursing faculty at West Lafayette teamed with nursing colleagues at Indiana University-Purdue University Fort Wayne, and Purdue Calumet to create a fully online Collaborative Doctor of Nursing Practice (CDNP) program. The post-master’s program, which capitalizes on faculty expertise at each campus, admitted its inaugural cohort of 13 students for the fall 2015 term.



Photo by Mark Simons

## NUTRITION SCIENCE

As part of its 110th anniversary celebration, the Department of Nutrition Science launched a \$16 million campaign in March 2015 to raise funds for professorships, new scholarships and research. Alumna Janice

Strauss (NUTR '69) and her husband, Ted Strauss, of South Salem, New York, provided the lead gift for the campaign, which runs through 2017.

A research study led by Distinguished Professor Rick Mattes confirms that fat should be considered the sixth taste. “The taste component of fat, which we call oleogustus, is often described as bitter or sour because it is unpleasant,” Mattes says, “but new evidence reveals fatty acids evoke a unique sensation satisfying another element of the criteria for what constitutes a basic taste.” The study was published in *Chemical Senses* and cited in more than two dozen world-wide media outlets.

Connie Weaver, distinguished professor and department head, was named to the 2015 Food and Drug Administration (FDA) Science Board, which provides advice on specific complex scientific and technical issues important to the FDA and its mission, including emerging issues within the scientific community.



Photo by Mark Simons

## PSYCHOLOGICAL SCIENCES

Jeffrey Karpicke, James V. Bradley Associate Professor of Psychological Sciences, received a three-year, \$1.5 million grant from the National Center for Educational Research to help fourth- and fifth-graders improve their study habits through a form of self-testing known as retrieval practice. The computer-based program will be evaluated in Burnett Creek Elementary School in West Lafayette and Fox Hill Elementary School in Indianapolis.

Two faculty members were recently recognized for their teaching and research contributions: Professor Louis Tay was named the inaugural recipient of the William H. Hendrix Industrial Psychology Excellence Award, which is endowed by Purdue alumnus William H. Hendrix (MS '69, PhD '74), professor emeritus of management at Clemson University; and Professor Peter Urcuioli received the 2015 Distinguished

Contribution to Basic Behavior Analysis Award from Division 25 of the American Psychological Association.

Three faculty members recently received grants from the National Science Foundation: Ximena Arriaga, associate professor, for a project titled “Relationship Strategies and the Stability of Interpersonal Security Over Time” that will help couples reduce insecure relational dynamics and enhance attachment security; Professor Margo Monteith for a study titled “Developing Effective Strategies for Confronting Racial Bias in Interpersonal Interactions” that will help support a two-year fellowship with Purdue post-doctoral researcher Evelyn Carter; and James Nairne, Reece McGee Distinguished Professor, to investigate a recently discovered means of improving adaptive memory known as the survival processing effect.

## PUBLIC HEALTH

The launch of the college’s newly expanded Public Health Graduate Program (PHGP) in November 2015 included a symposium and reception at the Shively Club South in Ross-Ade Pavilion. Presenters addressed topical issues in the field of public health as well as the three PHGP concentrations approved by the University: Family and Community



Health, Environmental Health, and Health Statistics.

The program offers a stand-alone Master of Public Health (MPH) degree, an accelerated master’s degree (BS+MPH) and dual degrees (MS or PhD + MPH). PHGP faculty members also have received a grant from the Office of the Provost to host a spring symposium on public health and technology. For more information, see “Building a Healthier Society” beginning on page 16.

## SPEECH, LANGUAGE, AND HEARING SCIENCES

Distinguished Professor Larry Leonard is the 2015 recipient of the Callier Prize in Communication Disorders, a biennial award that recognizes international leadership in fostering scientific advances and significant developments in the diagnosis and treatment of communication disorders.

Research Professor Stacey Halum, M.D., was awarded a five-year grant from the National Institutes of Health (NIH) for her research on using patients’ stem cells to regenerate vocal folds following surgery.

Professor Michael Heinz was awarded a five-year grant from the NIH for his studies of hidden hearing loss that follows exposure to noise and creates difficulties understanding speech even when traditional measures of hearing appear normal.



DEGREES OF DIFFERENCE

# CAN-DO SPIRIT

Photo provided

The vast majority of us — nearly 73 percent, according to a 2010 U.S. Census survey — work in fields unrelated to our undergraduate majors.

That has been the story for nutrition science alumna **JANICE STRAUSS** (NUTR '69), whose career began as a food scientist at General Foods, but then took several twists that ended with her passion for both the technical and the aesthetic — antique furniture.

"It's often said that your degree will help you get your first job," Strauss says. "I helped develop new food products for the first two-and-a-half years, where I worked with the marketing and marketing research areas and learned the business side of the products I knew technically. I advanced through several marketing positions at General Foods, and later, Richardson-Merrell Inc. I loved running a business and I wanted my own."

Proving her can-do spirit, she established New Product Blueprints, serving the strategic marketing needs of large corporations.

"I could have done it forever, but the travel got to be too much. I was meeting myself coming and going," Strauss says. "I also realized that I had a real calling to do something more aesthetic."

A catalyst for her choice of a more aesthetic path was the saltbox house built in 1734 that she and her husband, Ted Strauss, bought in 1977. Located on the New York/Connecticut border, the couple's restored home is now on the National Register of Historic Places.

The house required nearly all of her free time and plenty of elbow grease, Strauss recalls. "When we bought it, it was overrun with animals and fungus on the ceilings. On weekends we would come with putty knives and paintbrushes,"

she says. "As I immersed myself in the arduous restoration of the house, I became increasingly interested in antiques, beginning our collection to furnish the house."

She later founded Janice F. Strauss American Antiques, a dealership emphasizing investment-quality 18th century furniture and decorative accessories.

It was a moment of clarity for Strauss, who found herself grateful, again, for what she learned at Purdue.

"Every time I've made shifts in my career, I would ask myself, 'Can I really do this?' And education gave me the ability to say, 'Yes, I can do that because I know how to muster the resources to make it possible.'"

Now mostly retired from her business, Strauss has more time to pursue another passion — sailing. She and her husband own a 34-foot sloop named Eagle's Wing.

Both are also passionate benefactors for their respective alma maters. In March 2015, the Department of Nutrition Science launched a \$16 million campaign to raise funds for research, professorships and new scholarships as well as to create an endowment to establish a firm foundation for the future. Strauss and her husband provided the lead gift for the capital campaign, which coincides with the 110th anniversary year of nutrition science at Purdue and runs through 2017. (See page 6.)

"We both believe that there's no better use of money," says Strauss, who attended Purdue on a University scholarship. "What else can you do that's going to have an impact on somebody else's life other than education?"

"I can't imagine what my life would've been had I not had the opportunity of my Purdue education."

— Amy Raley



Photo by Mark Simons

## SHEDDING LIGHT ON STUTTERING

### NEUROIMAGING TECHNOLOGY RECORDS BRAIN ACTIVITY IN CHILDREN



Photo by Mark Simons

#### EMERGING RESEARCHER

Although one out of every 20 preschoolers experiences a period of stuttering, the majority of children who stutter — some 75 percent — "grow out of it" with or without treatment. But what about the 25 percent who persist and grow into adults who stutter?

That question drives the work of **BRIDGET WALSH** (PhD '07), a research scientist in the

Department of Speech, Language, and Hearing Sciences. Funded by a three-year grant from the National Institutes of Health, Walsh is embarking on a new study of the neural mechanisms that contribute to stuttering in children.

"Converging evidence from nearly two decades of neuroimaging research in adults who stutter reveals subtle and diffuse differences in both the structure and function of the brain networks involved in speech production," Walsh says. "However, we know far less about neural activity for speech in children who stutter, whose brains are markedly different from adults' as they are undergoing developmental growth and refinement. We don't know if the differences we see in adults who stutter are the cause of stuttering or the result of years of persistence and compensation."

Walsh says most neuroimaging technologies are also highly sensitive to movement, making it inherently difficult to image speech production. As a result, many of the earlier studies in adults who stutter relied upon brief, unnatural speaking tasks to circumvent this problem.

"The neuroimaging technology I use for my research,

Functional Near-Infrared Spectroscopy (fNIRS), offers an unprecedented means to study brain activity during natural speech production," Walsh says.

fNIRS is a noninvasive optical imaging method that measures the relative changes in oxygenated and deoxygenated hemoglobin in the outer layers of the brain called the cortex. Similar to PET and fMRI, it provides an indirect index of brain activity; however, it is far less sensitive to motion artifact. It is safe, requires fewer trials and offers the significant advantage of recording brain activity while a person is speaking, Walsh says.

To gather more accurate data, Walsh customized leading-edge fNIRS technology by designing a 3-D printed headpiece for children that holds the sources and detectors. The sources emit a harmless amount of infrared light that penetrates the cortex. The detectors measure changes in the diffused light. "By positioning the headpiece over specific brain regions involved in speech production, we can learn if there are differences in the lateralization and timing of brain activity in children who stutter while they are describing what they see in the different pictures that I present to them," she says.

Walsh is analyzing data from trials conducted this summer in Lyles-Porter Hall with more than 35 children who do and do not stutter. Findings from this project are a critical step for future work using these noninvasive methods to identify possible neural characteristics of young children at risk for persistence in stuttering.

"We want to know if there are neurological signatures or markers that, along with other risk factors, may help us predict which children are more likely to persist in stuttering into adulthood," Walsh says.

— Eric Nelson



DEGREES OF DIFFERENCE

# GREAT OUTDOORSMAN

Photo provided

After graduating from Purdue 62 years ago, **THOMAS SMITH** (HK '53), shown above in Yosemite National Park, ventured west and spent as much time as possible in the great outdoors. And whether he was coaching collegiate athletes from the interior of an oval track or training aspiring park rangers from atop a horse, Smith has shared his love of physical education and nature with hundreds of students.

In his golden years, Smith has documented his life as a park ranger in two spirited memoirs. The first, *I'm Just a Seasonal: The Life of a Seasonal Ranger in Yosemite National Park*, details his summer job from 1981 to 1998. His most recent book is called *A Ranger Pure and Simple: The Evolution of Parks and Park Rangers in America*.

"I was just like a fulltime ranger, but I worked only from Memorial Day to Labor Day," Smith says of the 'seasonal' title. "The rest of the time I taught kids how to be rangers."

Having spent his own childhood in the shadow of the Golden Dome in South Bend, Indiana, Smith decided against following his brother (a renowned sprinter) to Notre Dame. He enrolled at rival Purdue and threw the shot put on the track and field team, learning the intricacies of coaching from Dave Rankin, a Purdue Hall of Fame athlete and coach.

"I was a lousy athlete, so I thought maybe I could be a good coach. And I think I achieved that. I had some really good teams and talented individuals," says Smith, who coached track at San Jose City College and West Valley College, where he was also an instructor in park management.

Smith still considers Purdue a special place and has maintained friendships with teammates for six decades. Like many men from his generation, Smith was drafted into the U.S. Army six months after his Purdue graduation, counting the days until his discharge — "One year, nine months, 23 days and 12 hours," he says of his time in that uniform.

Both in person and on paper, Smith looks back in awe at his time spent as a mounted ranger in Yosemite. "There were days when I would ride down Lyell Canyon, which is a very beautiful place, and think, 'God, I get paid for this?' And what I'm doing is rescuing damsels in distress and keeping people from giving their food away to the bears," he says. "There were also long days. I once spent 14 hours in the saddle looking for a lost person, which happens quite often in large parks."

For a few years, he worked as a backcountry ranger, living with his family in a cabin 14 miles from the nearest road. All of their living supplies came in on the back end of a mule. It was good training ground for the kids. His oldest son will soon retire from the California Department of Fish and Game, and a daughter ended up running a High Sierra Camp, where hikers can shower, eat and get shelter.

Through the entirety of his career, however, from teacher to coach, professor to mentoring ranger, Smith is perhaps proudest of his former students' success. "My students are what I call my psychic paycheck," he says, "something that makes you feel good that's not about money."

— William Meiners



Photo by Mark Simons

DEGREES OF DIFFERENCE

# MARCHING FORWARD

Whether serving customers in the retail industry, serving youth in nonprofit roles or serving her alma mater as a trustee, alumna **VANESSA CASTAGNA** (PSY '71) is a leader. She's also an example of the value and career versatility offered by a Purdue diploma and a role model to those who want to take service to a new level.

Castagna, who grew up near Muncie in a practical, Midwestern family, limited her college options to Indiana schools. Studying psychology and speech communication appealed to both her interests and personality. "I've always been outgoing and interested in the human mind and people's behavior, so it seemed like a natural choice," she says.

It also helped that Purdue was home to the "All-American" Marching Band and orchestra program. Castagna was a four-year member, keeping the beat as a twirler and clarinet player. "It's what I remember most vividly about my time as a student," she says.

Castagna — citing the Gallup-Purdue Index showing that students involved in extracurricular activities and organizations lead more engaged and thriving careers — counts her time in the band as formative. She remains grateful for the scholarship support, travel opportunities and experiential learning it provided.

"It gave me purpose, a sense of belonging and taught me rigor and discipline," she says. "You have to be on the right time at the right note, know your role and become part of a much larger effort than your own. I believe those same fundamentals have made me successful in my career and life."

Castagna initially planned to use her Purdue education to pursue a position in human resources or public relations, but she was on a deadline and knew how to improvise.

"My parents gave me 90 days after graduation to find a job," she recalls. "They said, 'Get out there and find something that fits you in a place you can succeed,' so I literally started knocking on doors."

One of those doors took Castagna into a major department store in Indianapolis and led to an unexpected offer to join its management executive training program and become a buyer.

"From the day I started, I loved retailing — the rest is history!" And quite a history it's been.

Castagna has held senior executive and board positions with leading retailers and brands including J.C. Penney, Wal-Mart, Target and Levi Strauss. She's been named one of *Fortune* magazine's "50 Most Powerful Women in Business" four times and made the list of *Forbes* "100 Most Powerful Women" twice. Although semi-retired, she remains in strong demand as a retail consultant and advisor to private equity and investment companies.

In addition to serving as a trustee, Castagna has shared her success with Purdue students through the Old Masters program and other events, as well as spearheading a recent fundraising effort to create a \$1.5 million endowment of the Al G. Wright chair for Purdue's director of bands/orchestra.

She's also creating a legacy in numerous nonprofit organizations for youth, from the Children's Miracle Network and the Boys and Girls Clubs of America to March of Dimes and United Way.

"I believe that to be successful in your career and life you have to really enjoy what you're doing," Castagna advises. "Follow your heart as well as your mind."

— Eric Nelson

# SNAPSHOTS

BEYOND THE CLASSROOM



Recent speech, language, and hearing sciences graduate **DANIELA VIDAL** (SLHS '15) finished her career on the Purdue Women's Tennis team as a member of the first senior class in program history to qualify for NCAA Championships in each of her four seasons. She earned her first Big Ten Women's Player of the Week honor after wins at No. 1 doubles and singles at the University of Tulsa in February 2015 and was named the Ohio Valley Region ITA Most Improved Senior of the Year. She currently works for Purdue Intercollegiate Athletics.



**3,905**  
HHS UNDERGRADUATE STUDENTS

After sitting out her freshman season in 2012, Purdue Women's Volleyball player **FAYE ADELAJA** earned Academic All-Big Ten honors the following two seasons and put her name in the Purdue record books with a .344 hitting percentage, ranking 10th on the school season listing and 11th among Big Ten players in 2014. Now a redshirt junior, she is among the top middle blockers in the nation as well as one of the top health and kinesiology students at Purdue.

Hospitality and tourism management student **KYLE BOLAND** is involved in countless extracurricular activities, including serving as a Boiler Gold Rush team leader, mentoring incoming HHS students and serving as vice president of the Hospitality and Tourism Management Society. He's also involved in Purdue's Certificate in Entrepreneurship and Innovation Program and Pi Kappa Phi Fraternity. Over the past three summers Kyle has completed internships at hotels in both Chicago and Boston and in May studied abroad in Spain.

Beyond her pre-professional studies in the School of Health Sciences, junior **SRISHA PILLAY** serves as a BoilerMentor in the Emerging Leader Program and spent a week in Honduras in January 2015 with the Global Medical Brigade. Working from a village clinic, the group treated nearly 300 patients a day, taught local children how to properly brush their teeth and provided information to adults about safe sex. Upon her expected graduation from Purdue in 2017, she plans to earn a professional degree as a physician's assistant.



**476**  
HHS GRADUATE STUDENTS

# SNAPSHOTS

## BEYOND THE CLASSROOM



Photo provided



Those who follow HHS on Facebook, YouTube or LinkedIn may already know hospitality and tourism management student **BEN WORLAND** and nutrition science student **JESSICA SHELLHORN**, who work for the college as social media interns. Jessica also works at the Division of Recreational Sports and is a Purdue Student Health Advocate. Ben is a member of the HTM Career Day Board and serves as vice president and secretary of the Purdue chapter of the American Hotel & Lodging Association.



Photo by Charles Jischke



Fans of Boilermaker football may recognize **JULIANNA JOHNSON** as one the Silver Twins, who are among the featured twirlers for the Purdue “All-American” Marching Band. Now a junior in speech, language, and hearing sciences, she’s been twirling since she was a toddler and one day hopes to work with children as a speech pathologist. The original Silver Twins and several duos from the past were actual sisters, but in more recent years they’ve been two look-a-likes who twirl in synchronicity. (Julianna’s “twin” is Alyssa Lyzen, a senior accounting student.)



Photo by Charles Jischke



After earning her degree in consumer science in May 2015, **JESSICA RINK** is now pursuing a career in sales at PAC Bannerworks in Mishawaka, Indiana, but during her time in West Lafayette she pursued her passion for tennis as a four-year member of the Purdue Club Tennis team. She served as president for three years and in 2015 led the team to the Club Tennis national competition after beating Northwestern in the sectionals, where she also received the Midwest Leader of the Year Award.

## 40 HHS STUDENT ORGANIZATIONS



Photo by Charles Jischke



A May 2015 graduate from the School of Nursing, **LEAH STEELE** was the Purdue Men’s Basketball team’s first female manager, serving in the position for each of her four years as a Boilermaker. Leah, who was a high-school sports standout in Lapel, Indiana, also was active in the Fellowship of Christian Athletes at Purdue and is now working in her chosen field as a registered nurse in the Duke University Health System in Raleigh-Durham, North Carolina. But she still roots for Purdue over the Blue Devils!

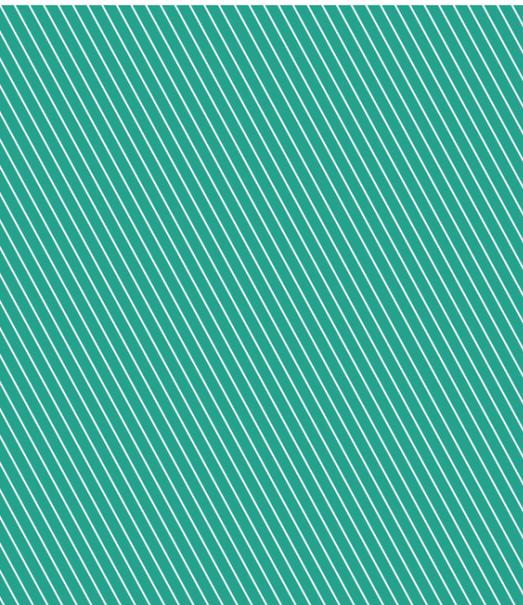


Photo by Mark Simons



Now a senior, psychology major **MAGGIE MALONE** has worked as a student caller in the annual Rally for PETE (Proud Endorser Of A Tradition Of Excellence) all four years at Purdue to express her gratitude to alumni whose donations raise more than \$2 million annually. “These gifts represent tuition for students who get to go to college when they wouldn’t have otherwise,” she says. “I feel such pride when I talk with alumni who love Purdue.”

## 25 HHS STUDY ABROAD PROGRAMS

Before graduating in May with a degree in human development and family studies, **EMILY EDWARDS** made numerous contributions outside the classroom as a team leader for Boiler Gold Rush, a member of the Asian American Association and in volunteer roles for Prevent Child Abuse America and the YWCA, among others. She capped off her senior year with the 2015 HDFFS Excellence in Family and Consumer Sciences Education award and plans to teach English abroad for a year before bringing her diverse skills to a U.S. middle school or high school classroom.



Photo by Charles Jischke



# BUILDING A HEALTHIER SOCIETY

COLLEGE-WIDE INITIATIVE TO FOCUS ON COLLABORATIVE RESEARCH AND DIVERSE LEARNING OPPORTUNITIES

*By William Meiners*

**P**urdue's earliest discussions of what a new College of Health and Human Sciences might look like included the need for a world-class university to address the critical needs of public health — to translate cutting-edge research into impactful outcomes for diverse communities, foster collaborations in pursuit of discoveries, and provide like-minded students with academic options and career paths for improving all aspects of the health care system. The college, now in its sixth year, is answering that call with the Public Health Graduate Program (PHGP) and interdisciplinary research on health care disparities.

A public health graduate degree is not new to Purdue. Originally housed in Health and Kinesiology, the program began in 2006 and matriculated its first graduates in 2007. There are many successful Boilermaker alumni with a master's degree in public health (MPH) working within the field. The college-wide initiative will expand on the training options for current and future students who pursue the degree.

Rick Mattes, Distinguished Professor of Nutrition Science and PHGP director, recalls those strategic planning sessions about the possibilities of the revamped program. "Many of the units in the new college had a health orientation," he says. "Each also had a credentialed professional, like a registered dietitian, a licensed practical nurse or a clinical psychologist. And, of course, we all had scholars generating basic knowledge in each of our own disciplines. So we were really ideally positioned for translational science — to move basic knowledge to the community."

Mattes began as director in July 2014 and the program transitioned to the college the following November. For Mattes, the opportunity to promote science-based recommendations to community needs is at the heart of the matter of public health. "The thinking was that public health would be a unifying theme, linking all of the units in the new college," he says. "So the plan now is to grow it."

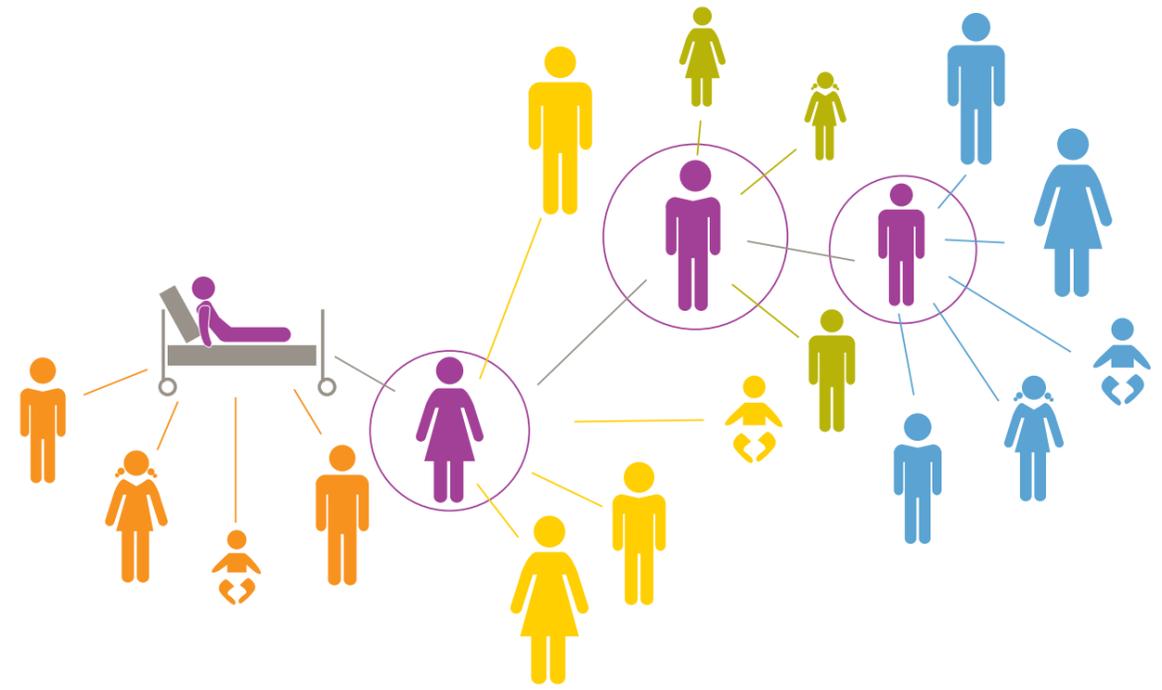
The next step is seeking accreditation, which won't happen overnight, Mattes says. In all, it's about a three-year process. However, enrollment already has increased in the program,

which offers three tracks. One is a combined degree, allowing undergrads to obtain both a bachelor's and master's at an accelerated pace — often referred to as a "4 +1" program. Highly qualified students can apply in their junior year, and if accepted, take a mix of senior-level and graduate courses in their fourth year. After a summer practicum, the students will complete their MPH work in a fifth year. That fast track effectively saves them one year while earning two degrees.

Students pursuing a bachelor's degree in the Purdue Public Health Undergraduate Program (PHUP) will have the option of earning the standalone MPH in a straightforward two-year program. Another option provides an opportunity for admitted graduate students to pursue dual degrees and earn a MPH concurrently with a master's in science or PhD from another area. Students on this track are expected to require one to two additional semesters. All three tracks are proving popular, generating numerous inquiries and applications.

In helping to orchestrate the accreditation, Mattes is working with faculty and administrators to ensure that the emerging program's quality meets or exceeds national standards for the field. "Once we achieve that milestone, we'll be able to attract the top students throughout the nation and internationally," says Mattes, who points to the international representation and solid reputation already associated with the program.

Shauna Stapleton, who earned a Purdue MPH degree in 2013, serves as the PHGP coordinator. About half of her time is spent identifying and coordinating the practicum experiences



for students, who are required to have 400 hours of work in a public health setting. She's also an academic counselor for students and has been integral to the accreditation process.

Her own path to the MPH degree reflects how younger people can learn about the larger issues of public health. "As a Purdue undergrad, I was interested in health and science," says Stapleton, who earned a BS in entomology in 2009. "I was introduced to the world of public health as a senior in a medical and veterinary entomology course. I realized medical care was only one small component of healthy communities."

After graduation, a two-year teaching stint in Teach for America opened her eyes to major health disparities associated with urban America. The return to Purdue to pursue the advanced degree changed both her outlook and career path. "Combining my scientific background, passion and experience has led to a promising and impactful career," she says.

PHGP students will choose from three concentrations. Family and Community Health will draw from the Department of Human Development and Family Studies for the first concentration, as well as Purdue's robust Extension Service and



**NUTRITION SCIENCE PROFESSOR  
HELPS SHAPE NATIONAL DIETARY GUIDELINES**

It's been said that six-pack abs are made in the kitchen, not carved in the gym. From a health standpoint, what we put into our bodies is as important as — perhaps even more important than — the exercise paces we put our bodies through.

Wayne Campbell, professor of nutrition science at Purdue, has been studying the effects of food and exercise on adult health for much of his career. Over the course of 15 years, Campbell has relied on more than 1,000 community volunteers to participate in lab experiments designed to understand how protein nutrition and exercise affect health as people age. He also has collaborated with researchers from most of the other units in the College of Health and Human Sciences and elsewhere throughout campus.

In 2013, Campbell was one of 14 scientists from around the

country selected to serve on a U.S. government committee that reviewed and advised the latest nutrition research that is helping to shape the 2015 Dietary Guidelines for Americans. To be released this fall, these are the federal recommendations about what we should be eating.

Focusing on issues like obesity and physical activity (or lack thereof), the scientists looked at nutrition across the life span. "Our report was specifically focused on children age 2 and above all the way through elderly adults," says Campbell, who believes the health benefits derived from a moderate change in diet and increased physical activity can work wonders. "The biggest change from previous reports is that instead of focusing on specific nutrients or foods, the emphasis should be on choosing a variety of foods within certain categories that are known to be health promoting."

Along with that promotion for a diversity of healthy foods, Campbell says the guidelines emphasize the development of smart nutrition and physical activity early in childhood. The transition period from childhood to adulthood is critical in determining lifelong health profiles. And just as there are many different ways to achieve a healthy diet, there are also many more ways to eat a really terrible diet.

"Ideally, you want to make sure that each eating occasion is packed full of nutrients," Campbell says. "Though the cup of coffee and a doughnut at breakfast loads you up with calories, it is really a wasted eating occasion when compared to eating higher-quality, nutrient dense foods. Whether you prefer to eat two or five times daily, my encouragement is that with every meal you take advantage of consuming healthy foods and beverages."

the Center for Families, and the Military Family Research Institute. A second concentration in Environmental Health will dovetail with the college's School of Health Sciences, the Department of Entomology and several disciplines from the College of Engineering that have an ecological focus. Finally, Health Statistics will benefit from a close tie to the Department of Statistics and faculty across campus with expertise in epidemiology and information technology.

### Tracking disparities

Cleveland Shields, professor of human development and family studies, along with researchers at the universities of Rochester and Michigan, obtained a \$2.7 million grant in 2011 from the National Institutes of Health (NIH) to study patient and physician communication. The goal is to help improve the interactions of physician visits, reduce disparities in service and increase patient involvement.

"The NIH study looks at patients who are very ill," Shields says. "We're using actors who are portraying patients. The physicians, who have signed a consent form, know they are going to see a 'fake' patient sometime. They just don't know when."

In unannounced and recorded visits (obtained through hidden audio devices), the researchers gain insight into improving patient-centered communication. Improved interactions between clinicians and all patients, regardless of their age, gender, ethnicity and personality characteristics, are critical for improving health outcomes.

With funding from the National Institute on Drug Abuse, Shields and Marianne Mathias, an adjunct faculty member at Indiana University-Purdue University Indianapolis, recently began examining physician-patient communication with non-cancer chronic pain patients at risk for abusing opioids.

Shields, also the director of the Center on Poverty and Health Inequities in Purdue's Regenstrief Center for Healthcare Engineering in Discovery Park, served on the curriculum committee for the evolving program. In 2016 he'll teach a course on health intervention methodology. By continuing to publish research and disseminating information through conferences and his work with the American Academy on Communication in Healthcare, Shields keeps those communication lines open.

Since he arrived at Purdue in 1988, David Rollock, associate professor of psychological sciences, has examined how minorities considered outside of the "American mainstream" have negotiated various social structures, including health care. As a member of a clinical program that produces some of the nation's top academic work, he is eager to collaborate with peers who complement his expertise.

"The opportunities for improving health among ethnic and cultural minorities are greatly expanded by a public health focus," he says. "Many of the issues that infringe on the health of ethnic minority communities, mental health in

particular, have to do with factors that often aren't considered in direct service — matters like acculturation or exposure to discrimination. Better science informs better interventions, and we do science better when we understand human behavior in all of its particularities."

Rollock believes the diversity of the concentrations can entice young learners. Underrepresented students, for example, might be interested in health issues but not direct service. Or students could be interested in policy, systems of care or the legal issues related to health care.

Like Rollock, Yumary Ruiz (PhD '06), assistant professor of health and kinesiology, looks at health disparities across racial and ethnic lines, specifically migrant populations and its effects on Latino youths and their families. While earning her doctorate in health promotion and disease prevention, Ruiz taught MPH classes at Purdue and then joined the public health program at New York University.

Since returning to Purdue, Ruiz has embraced cross-disciplinary collaborators in social science research to explore methods for improving the human condition. She's eager to see how her work brings focus to the bigger picture.

"The thing you have to understand about public health is that we need to look at it from different spheres," says Ruiz, who thinks the opportunities could be even better. "As graduate students are exposed to faculty beyond a single department, those professors become phenomenal resources."

Elliot Friedman, William and Sally Berner Hanley Associate Professor of Gerontology, found his way to Purdue's College of Health and Human Sciences in 2012 and received a \$1.2 million grant from the National Institute on Aging in 2013 to

"The opportunities for improving health among ethnic and cultural minorities are greatly expanded by a public health focus."

DAVID ROLLOCK  
Associate Professor of  
Psychological Sciences



Elliot Friedman, William and Sally Berner Hanley Associate Professor of Gerontology, joined Purdue's College of Health and Human Sciences in 2012. (Photo provided)

examine why some older adults living with two or more chronic medical conditions fare better than others.

Friedman is also interested in the disparity of care. "The people at the low end of the socioeconomic hierarchy get sick sooner, get sick more severely and die sooner," he says. "It's worth looking at the patterning of health at the population level to see what's contributing to those outcomes."

Friedman says there are both social determinants of

health, like socioeconomic status, and medical determinants of health, such as access to quality care. An area for graduate exploration is the examination of the different influential levels of how disease and health are distributed to the population.

Prevention also can help revolutionize health care. Barbara Stefanska, assistant professor of nutrition science, is exploring the exciting world of epigenetics, which examines DNA makeup and how genes express themselves outwardly. If someone is genetically predisposed to developing breast cancer, for example, certain foods, such as sugars, could determine whether a gene becomes an active cancer-forming agent or remains dormant. The good news: Those genes might be able to turn themselves on or off based on dietary intake.

She also has demonstrated how having a MPH degree helps her examine research from a broader perspective. "Communicating our results with the general public through outreach activities increases awareness and shapes health-maintaining behaviors," says Stefanska, who looks to foods such as grapes, soybeans and green tea that could prevent cancer at the cellular level. "Our research will help

individuals, especially people at risk for cancer development, by creating individualized dietary plans rich in cancer preventive compounds."

Another area of her research looks to establish biomarkers of cancer risk prediction. "These markers would save lives across the globe by allowing us to identify individuals at higher risk for cancer development," Stefanska says. She believes these and other cutting-edge discoveries could have tremendous impact on cancer epidemiology and public health, including early detection and the chance to introduce preventive strategies.

The chance to make an impact globally also motivates students. "That's what public health professionals should be trained to do," Mattes says. "They need to deeply understand the science and be capable of promoting change."

David Whittinghill (BS '95), assistant professor of computer graphics technology and computer information technology, has three Purdue degrees from two decidedly different areas. In addition to an undergraduate degree in psychology, Whittinghill earned a master's and PhD from the College of Technology and uses his psychological training to parlay his expertise in both the social and technical sciences.

Whittinghill and his team of graduate students designed an interactive, Xbox Kinect video game called Burnie that helps children with cerebral palsy keep up their exercise therapy at home. In what is essentially a bird simulator, the children see themselves as a bird on the screen tasked with different challenges such as flying and finding worms. Throughout the game, they exercise through the arm flapping, balances and various lifts they're asked to perform.

"The point was to find a different motivation structure to get kids to do their therapy," says Whittinghill, who worked with physicians from the Peyton Manning Children's Hospital in Indianapolis. "It was some of the most fulfilling work I've done in my whole life. We had a solution looking for a problem, and they came to us with a problem."

That synergy of coincidence and success is the scientific push behind the idea of multidisciplinary work — and one of the best-case outcome scenarios for public health. "The real mantra in the field is translation," Mattes says. "It's not do your science, publish it and leave it there. We have to translate new knowledge out to the public." 🌟



Photos provided

DEGREES OF DIFFERENCE

# COMMUNITY BUILDER

Alumnus **RALPH TAYLOR** (HK '69) played on one of the greatest teams in Purdue basketball history. In his senior year, the Boilermakers beat their Indiana University Hoosier rivals 120-76 in the season finale and made it all the way to the NCAA Tournament championship game, losing to a UCLA team led by Lew Alcindor (the future Kareem Abdul-Jabbar).

Although basketball opened numerous doors for him, Taylor also wants to be remembered for being a difference maker in his professional life and through volunteer work and civic engagement. Based on the many awards he's received, he has accomplished that goal.

Basketball taught Taylor a valuable lesson. "Basketball teaches you not only the importance of recognizing the strength in individual differences and skill sets, but it also teaches the importance of having a common vision," Taylor says. "Everyone may not like each other, but with the same common goal, much can be accomplished."

Taylor has brought that team-based approach to many different professional positions, often trying to get people to recognize the similarities in their apparent differences. Throughout his professional career, he has helped organizations and people adapt and succeed in their endeavors.

In his volunteer role as liaison to the Immigrant Center in Indianapolis, Taylor serves as an advocate and voice for some of the city's newcomer communities. He has received awards for his work from the Chin Community of Indiana, an organization that serves refugees from Burma, as well as from Exodus Refugee Immigration Inc., the African Center of Indianapolis, and Grantmakers Concerned with Immigrants and Refugees.

Former coach Bob King recruited Taylor to Purdue from Indianapolis Washington High School, where he had led his team to the 1965 state championship. Taylor arrived on a campus of 25,000 students where fewer than 100 were African American. Before he graduated, in days long before Twitter handles and Facebook pages, Sam Jones, a fellow student, created a Ralph Taylor Fan Club that boasted nearly 1,000 members. In 1995 Taylor was named one of the four all-time fan favorites of Boilermaker basketball.

Though he thought his connection to Purdue might end after graduation, Taylor has remained close to his alma mater, becoming a lifetime member of the Purdue Alumni Association, as well as a John Purdue Club member, and serving on the Athletic Advisory Committee, the College of Health and Human Sciences Alumni Board and Purdue's representative on the Big Ten Advisory Committee. This year, he'll begin his 10th year as radio color analyst for Purdue Men's Basketball. "I've had the great opportunity to work with Larry Clisby and Rob Blackman," says Taylor, who points to a course called Advanced Public Speaking that helped enhance his extemporaneous skills.

Elected president of the Indianapolis Rotary Club, one of the 10 largest Rotary Clubs in the world, as well as president of the Indiana Basketball Hall of Fame Board of Directors, Taylor is always quick to point out his Purdue affiliation. He encourages young people to be positive and embrace change. "Be prepared to work in an area that you never thought you might work in," he says. "Whether it's in our personal life, family life or business life, change is always going to happen."

— William Meiners



Photo by Mark Simons

EMERGING RESEARCHER

In March 2014, the Centers for Disease Control and Prevention reported the highest incidence of autism in U.S. history, citing that one in 68 children nationally — one in 42 boys, and one in 189 girls — has the disorder.

The very name autism spectrum disorder (ASD), which is associated with myriad weaknesses and strengths, speaks to the challenge it presents to those trying to understand it. Those at one end of the spectrum can be described as very high functioning — even brilliant about specific things — while those at the other end can have significant difficulty communicating and assimilating into society. Despite such differences, individuals along the spectrum share one ASD label.

An autism cartographer of sorts, **BRANDON KEEHN** has embraced the challenge. He studies and maps the brain activity of infants and children, charting differences that distinguish ASD brain activity from that of typically developing children.

Keehn began working to understand ASD as an undergraduate at the University of Washington and continued his work as a graduate student at the University of California, San Diego, and as postdoctoral fellow at Boston Children's Hospital and Harvard Medical School. He joined the Purdue faculty in 2014 as an assistant professor of speech, language, and hearing sciences and psychological sciences.

"What attracted me to the study of autism most is that, as an undergrad working with children in the lab, I saw how each kid was just so different," Keehn says. "I wanted to understand what linked all of them together."

Most recently, Keehn published a study in *Autism Research* focusing on how brain responses to faces reveal disparities between infants at high risk for autism — those with an older sibling with ASD — and low-risk infants with no family history of ASD. His findings build on earlier research showing that those with ASD have deficits in a skill needed for social interaction — processing people's faces.

He found that the brains of high-risk infants, when tested at six months and again at 12 months, show increasing brain-network activity in the left hemisphere during face processing, when such brain activity in the low-risk, typically developing infants' brains happened where it was expected, in the right hemisphere.

"Our study can't say why high-risk infants develop face-processing impairments," Keehn says. "But we did show that these impairments emerge over the first year of life and are associated with atypical connectivity of the network responsible for face processing."

Infants at risk for ASD, particularly those who receive a later diagnosis, showed the greatest atypical lateralization of the face-processing network, he says. The next step is to investigate whether there are genes that can be mapped to this atypical brain specialization, which could be used as a marker for potential early diagnosis.

Keehn also is studying superior abilities among those with ASD. Some children on the spectrum, for example, have been shown to excel at finding objects hidden within a number of distracting items.

"If we understand the mechanism for this better performance, that may be important for understanding how the brain develops differently in children with ASD," he says.

— Amy Raley



Photo provided

DEGREES OF DIFFERENCE

## ADOPTION SPECIALIST

From Howe High School through two Purdue degrees, **MELITTA PAYNE** (SLHS '69, MS '70) has never strayed too far from her Indianapolis roots. As the coordinator of international services for Bethany Christian Services, however, Payne has helped bring adoptive families together with children from across the globe for nearly 30 years.

Payne, shown above during a 2010 visit to a child care center in South Korea, says her pull to the adoption field was a natural progression. "I was an adoptive mother of four — one through domestic adoption and three through international adoptions. I became very active in support groups with other adoptive parents. The agency eventually offered me a position as an adoption specialist."

That personal experience is critical in helping families navigate the environment of international adoption. But her education in speech, language, and hearing sciences is something she constantly relies on. "Purdue prepared me well for what I'm doing," Payne says. "As both an undergrad and graduate student I was exposed to a lot of child development and language development. With international adoptions, we know language is going to be a major adjustment for a child."

Earning an endorsement in learning disabilities, Payne says she also acquired supervision and counseling skills that she uses on a daily basis. Often placing children with special needs, she has continued her education through courses focusing on cleft palate, cerebral palsy, hearing loss and Down syndrome, allowing her to better prepare families for the children they're adopting.

Before joining Bethany Christian Services, Payne worked as

a speech therapist in public schools. She also spent several years as part of a multidisciplinary team working with children with autism and developmental delays. Her role as a teacher and her love of lifelong learning have served her well both in educating families about adoption and in teaching fellow staffers.

Through her experiences, Payne has helped hundreds of families with international adoptions, which have changed significantly since she adopted three children from South Korea. In those days, an escort brought each child to Chicago. Now, adoptive parents are required to travel, allowing them to visit the birth countries of their children.

Though Payne has helped lead homeland tours to South Korea, she does not travel regularly. Instead, she considers herself an advocate for adoptive families. "I understand the questions and concerns the families have," she says. "I discovered in a very natural way how important it is to preserve and honor a child's birth heritage."

Purdue, she says proudly, played a pivotal role in her own career path. Her youngest child, Jonathan Payne (BS '05), even followed in her Boilermaker footsteps, earning an honors degree in economics from the Krannert School of Management before landing a job on Wall Street. "His Purdue education provided a wonderful foundation," she says.

Payne advises anyone who wants to parlay an education into both a career and a passion to be open to possibilities and learn from experience. "Every experience I've had has prepared me for something in the future," she says. "My children led me to my career."

— William Meiners



# MONEY TALKS

SETTING A COURSE TOWARD AFFORDABILITY THROUGH FINANCIAL LITERACY

By Chris Adam

**L**eaving home for the first time to attend college can be an overwhelming experience for young adults. Aside from the sheer cost of tuition, one challenge that many freshmen face is how to handle their finances. From understanding student loans to opening lines of credit to budgeting for everyday expenses, unprepared students can encounter a sharp learning curve and many pitfalls.



Jonathan Bauchet, assistant professor of consumer science, says freshmen year is the best time to teach students how to manage their finances. (Photo by Mark Simons)

A new course being offered in fall 2015, CSR 103 (Introduction to Personal Finance), is intended to provide students with many of the basic principles that are useful in managing and planning personal financial matters, as well as key tools needed to avoid common mistakes.

“Freshman year is a great time to equip students with practical tools they need to manage day-to-day finances and longer-term financial plans,” says Jonathan Bauchet, assistant professor of consumer science, who developed the course with continuing

lecturer Michael Roe, extension specialist David Evans and other colleagues in the Department of Consumer Science.

Roe says, “It’s clear that many students could benefit from an introductory course like this, especially so they don’t make mistakes now that could take years to fix.”

### Crushing debt

One of the goals of the new course is to help students understand the different ways to finance large items and to manage any debt, both of which are key to making college more affordable.

According to *Forbes* (August 2013), college debt is becoming a serious issue for many families: Two-thirds of students graduating from U.S. colleges and universities have some level of debt; the average debt for students with debt is \$26,600; and student loan debt reached a new milestone in 2013, crossing the \$1.2 trillion mark in aggregate.

According to Purdue’s Division of Financial Aid, about 45 percent of Purdue students graduating in 2012-13 had some level of debt. That’s among numerous reasons that increasing the affordability and value of a college degree are key components of President Mitch Daniels’ Purdue Moves initiatives.

Bauchet says, “We want to help students understand the different ways to take out loans and identify potential problems when applying for loans and managing credit. That means helping students learn to compare interest rates and familiarize themselves with common loan conditions.”

Roe says, “We want to show students how to make more responsible financial decisions and take ownership of those decisions.”

## PAYING IT FORWARD

Recent Purdue graduate Nicholas Lertola (CSR ’15), who as an undergraduate was the first recipient of the Robert Wright Legacy Fund Scholarship, is a prime example of why it’s important to support and encourage students interested in financial planning careers.

Lertola, a financial counseling and planning alumnus from Elkhart, Indiana, earned Dean’s List and semester honors during his time as a student. He also served in leadership positions in the Purdue Collegiate Financial Planners Club, participated in a study abroad internship in Australia and served the community through Habitat for Humanity. He is planning to focus his career on financial planning.

The Robert Wright Legacy Fund was

established to honor and recognize the tremendous impact Bob Wright had on so many people, especially his clients and financial advisors. Wright, who was president of Wright and Company, a financial planning company in Lafayette, believed very passionately in lifelong learning.

Wright participated in and spoke to numerous professional organizations. He also was the catalyst of several professional study groups and a co-founder of the Pinnacle Study Group Inc., which he continued to serve until his death in October 2013.

“From what I know, Bob Wright was a remarkable man who had significant influence on many people in the industry as well as having a prominent impact on the industry itself,”



Photo by John Underwood

Lertola says. “He was the kind of person who could inspire young minds and serve as a role model.”



## MILITARY MATTERS

**M**anaging money and finances can be a challenge for any family. For military families, the concerns are often greater: Deployments can bring unexpected costs; frequent relocations can make it difficult to maintain civilian career paths; and some lenders engage in questionable practices. The resulting costs can rise even to the point where financial issues threaten security clearances and military careers.

Regulations are in place requiring military members to receive training about personal finance, and trainers are employed at installations across the country to help ensure that financial problems for military families are minimized.

But how well are those financial training programs working? That’s the question the Military Family Research Institute at Purdue is trying to answer with help from the Department of Defense and the Department of Agriculture. MFRI, along with Michael Roe and Jonathan Bauchet from the College of Health and Human Sciences, wrote a successful proposal in the summer of 2014 to fund the evaluation of financial training programs in the Army and the design of similar programs in the Navy.

“It’s great that financial literacy is being provided, but we agree that there is no point in giving training unless it’s

effective,” says Shelley MacDermid Wadsworth, director of MFRI. “We are eager to work with the Army and Navy to help make sure that they are achieving their goals.”

MacDermid Wadsworth says these types of projects are in line with MFRI’s overall mission to ensure that military families have the support they need to do their work efficiently.

“We want to do all that we can to make sure that financial problems do not interfere with family life for military members,” she says.

## Practical solutions

The new course will include two lectures and one recitation session each week. The lecture topics will include budgeting; calculating and filing for income tax; managing credit; investing wisely; managing risk; taking advantage of employee benefits; planning for retirement; and learning about financial planning careers.

“We are going to provide students with a solid foundation of basic financial knowledge and very practical solutions and tools to help them better manage their personal finances,” Bauchet says.

Roe, who has decades of experience as a financial advisor, says the real-world exercises in the course will empower students to make financial decisions in an informed manner. Those decisions could include buying a house, planning for retirement or choosing among benefits provided by an employer.

In addition to the practical financial tools, the course also will examine what Bauchet calls the “psychology of money management.”

“This part of the course will look at how our thought processes impact our financial decisions,” Bauchet says. “Sometimes we get attracted to things that are new, pretty or shiny, and make decisions that are not in our best long-term financial interest. We want students to better understand the psychology of financial decision making so they can avoid some common mistakes that could seriously hurt their finances, now and later on down the road.”

## Supportive alumni

Kathleen Longo (CSR '92), president and founder of Flourish Wealth Management, believes the course is a great first step for students to learn how to handle their finances in a responsible manner.

“It is especially helpful to have tools early as the knowledge builds at each of life’s stages and empowers good financial decision making,” Longo says. “They will better be able to understand how short-term decisions can have long-term impact on their overall finances and life goals and will realize the value of savings and starting early.”



Michael Roe, a continuing lecturer in consumer science who helped develop the course, has decades of experience as a financial planner. (Photo by John Underwood)

Rosella Bannister (HE '55), who served as director of the National Institute for Consumer Education at Eastern Michigan University, says the course also serves as a platform for Purdue’s efforts to produce new graduates who are ready to move the world forward with their education.

“Purdue graduates will be prepared to take active roles as citizens in promoting fairness on societal issues that affect the financial well-being of individuals and households — issues such as access to affordable higher education, health care, employment and income equity,” she says.

The new course also will briefly explore career options in the financial planning sector. Longo says, “For those in this class who discover that they are drawn to this profession, they will find that it is a rewarding profession that is expected to grow.”

## ASKED, ANSWERED

### ALUMNA HELPS CLIENTS ENJOY RETIREMENT THROUGH FINANCIAL PLANNING

How will I get an ice cream cone? That simple question is one of the key starting points for Melissa Acher (CSR '99) in dealing with clients. She uses that question to help clients understand that a point will come during retirement when they may not be able to get around on their own.

It’s just one of the tools Acher uses as a financial advisor — a role she considers her dream job. In that same spirit, *Life 360* questioned Acher in a recent interview to elaborate on her career.

#### Q: What is your current position?

A: As a financial advisor at CUNA Brokerage Services located in the Purdue Federal Credit Union, I help individuals and families identify goals and the most efficient means of handling their financial households. I serve as both a planner and advisor for my clients.

In addition, I work with people to help them understand how transitions in life will impact their finances. I also work with them on aging with dignity. That means understanding the personal side of what is important to an individual and family and then helping them understand how those aspects may fit as they move into the various stages of retirement. I will use a set of three simple questions to help individuals understand retirement. First, who will change the light bulbs? Second, how will I get an ice cream cone? Finally, who will I eat lunch with? These questions look at mobility and social issues impacted by aging and retirement that also affect finances.

#### Q: How did Purdue prepare you for your career?

A: I came to Purdue thinking I would become a pharmacist, but I disliked the chemistry and just about everything else involved in the medicinal side of pharmacy. After taking some career tests and talking with the dean of students, I decided to try financial counseling and planning. It was a perfect fit. One facet I absolutely loved is that the program incorporated behavioral and psychological studies into the financial counseling curriculum. Financial advising is not just about numbers — it’s really about the personalization of financial programs for individuals and families.



Consumer science alumna Melissa Acher uses a Q&A approach to help her clients think about financial planning. (Photo by Mark Simons)

Purdue provided a solid foundation of development for my career. I find everything I do continues that process. I never stop learning. I would encourage current students in the financial counseling and planning area to take a critical look at other areas of HHS and see how they might be incorporated into their own studies.

#### Q: What is your greatest reward in working in this area?

A: I truly enjoy walking through various aspects of finances with people and coming alongside them to provide support and guidance. I am passionate about my work. Purdue inspired that passion. I have clients who tell me they can clearly see my passion. I am excited about helping them.

#### Q: What is your top financial advising tip?

A: You’ve got to keep it personal. Your situation is different than your co-worker’s situation. You need to identify what’s important to you personally and your goals. There’s no one-size-fits-all approach to financial planning.

— Chris Adam



## GROWING BUSINESS

STARTUP SAVVY ALUMNI, FACULTY AND STUDENTS FROM THE HHS COMMUNITY ARE WINNING AWARDS, STARTING BUSINESSES AND COMMERCIALIZING IDEAS THAT IMPROVE THE QUALITY OF PEOPLE'S LIVES.

*By Marti LaChance*

**E**ntrepreneurs are a special breed, blending native curiosity with intensive research — and a drive to make the world a better place to live. It's no surprise that Purdue's College of Health and Human Sciences generates more than its share of individuals with this inventive attitude.

Alumnus Tim McEnery, founder and CEO of Cooper's Hawk Winery and Restaurants, says risk and planning are key to starting a business. See page 33 for more. (Photo provided)



Photo by Charles Jischke

## SLICE OF LIFE

ENTREPRENEURS PUT NEW TWISTS ON TRADITIONAL THINGS

Brad Niemeier would know. In 2014, less than two years after earning his degree from the HHS, he launched his own pizzeria, Azzip Pizza, in his hometown of Evansville, Indiana.

His concept: custom pies with unusual and fresh, healthy toppings — like locally raised chicken and baby spinach — served in under 5 minutes. Niemeier (HTM '12) also creates his own pizza sauces.

He opened a second location in nearby Newburgh, Indiana, and this year he's opening two more stores, including one near the University of Illinois. And he isn't stopping there. Niemeier expects to have 10 locations by the end of 2016.

Niemeier enjoys talking to customers and hearing how much they like the food, and reminding himself, "And it

came from something I thought of, something I created."

Niemeier earned Purdue's Certificate in Entrepreneurship and Innovation and won the 2012 Burton D. Morgan Business Plan Competition for his idea. But starting his business required more than a good plan and capital.

"The biggest hurdle was mental, deciding to go for it," he says. "To jump from thinking 'this is a good idea,' to actually acting on the idea — that was the hardest thing."

Niemeier encourages young people to act on their inspirations. "When you're younger in life, you've got less to lose," he says. "It's a great time to give it a shot."

And keep your eyes open when visiting Purdue. He hopes to one day open a location near the West Lafayette campus.



Photo provided

## PLANNED SUCCESS

ENTREPRENEURS TAKE CALCULATED RISKS

"Having a detailed business plan is — by far — the number one reason we could be successful," says Tim McEnergy (HTM '99), founder and CEO of the popular Cooper's Hawk winery-and-restaurant chain.

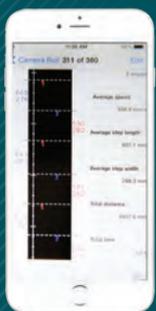
After nearly five years of planning, this hospitality and tourism management alumnus launched his unusual and risky enterprise in 2005. The first location opened in Orland Park, a Chicago suburb, where it grossed \$5 million its first year. Today, McEnergy oversees 22 Cooper's Hawk locations in seven states. Cooper's Hawk is expected to do over \$150 million in business this year.

"In the plan, I thought out every aspect of the business, including potential hurdles," McEnergy says. "When something went wrong, I had already considered it. I had a 'plan B' for dealing with it."

Long-term planning also translated to working long hours in the industry, mastering its intricacies. "People have to be willing to spend the time it takes to learn. Like Malcolm Gladwell says, you need those 10,000 hours," McEnergy adds.

McEnergy loves his job. "If it works, it's the best gig out there. It's tough, but incredibly rewarding."

## APPLIED KNOWLEDGE



### SMARTPHONE DEVICE ASSESSES GAIT

HHS inventors apply their expertise to product development.

An expert on the mechanics of walking, Shirley Rietdyk, professor of health and kinesiology, helped design SmartGait, a device for health care professionals to assess gait patterns in people at risk of falling, typically older adults.

"Gait is a vital sign. It reflects an individual's overall health," Rietdyk says. "Gait patterns are a key predictor of mortality."

A modified smartphone, SmartGait clips on the patient's waistband. It's fitted with a downward-facing wide-angle camera that homes in on colored markers attached to the tips of the wearer's shoes.

Unlike conventional equipment for gait assessment, typically in the \$10,000 to \$100,000 range, SmartGait is inexpensive, does not require training to use, and is portable.

"It's simple to set up, and it provides objective data quickly and easily," Rietdyk says. SmartGait's data has been validated against the existing clinical tools.

Rietdyk and her team are in the beta testing phase, collecting input from researchers and clinicians and making final adjustments to the application. Her collaborators in

Purdue's School of Electrical and Computer Engineering are Professor Babak Ziaie, PhD student Albert Kim, and Justin Kim, now a master's student.

"As an academic, I was brand-new to the process of running a business," she says. She credits Purdue's Office of Technology Commercialization and the Purdue Foundry for helping develop a business plan, do market research and navigate the patenting process.

Rietdyk, who serves as chief science officer of the company formed by her team, looks forward to taking the product to market next year. And she's already working on another invention: an app for assessing balance.



### NURSING STARTUP ASSISTS NEW MOTHERS

Sometimes, an invention works like an intervention.

That is definitely the case for Azza Ahmed, associate professor of nursing, who wants to extend the time mothers breastfeed. "Mothers often discontinue breastfeeding within the first two months after hospital discharge," she says.

So, Ahmed designed LACTOR, a mobile app for new moms. Nursing mothers use it to enter breastfeeding data and receive immediate feedback. The software can recognize patterns indicating difficulties and then alert a lactation

## PROTECTING LIVES

### ENTREPRENEURS ARE NATURAL PROBLEM SOLVERS

While interning at a manufacturing plant, Purdue environmental health student Eric Ward (BS '12, MS '13) noticed workers duct-taping and clipping their air-quality sampling equipment to their belts. It was a clumsy procedure; the dangling tubes were a hazard, and worse, it led to inconsistent readings.

"I saw a gap there. I knew exactly what was needed," Ward says.

His innovation is an all-in-one vest with pockets and channels for the air-sampling gear, as well as Velcro and counterweights to ensure the garment fits properly. His vest, called the OneTouch IH, is now carried by SGS, a multinational industrial testing firm — which now employs Ward as a consultant. He's currently completing his PhD in industrial hygiene at Purdue, after which he'll start full time at SGS.

And he's already working the next model. "It's a living vest," he says. "The sensors are integrated and linked with RFID [radio-frequency identification], so you get real-time data." Ward's ideas don't stop there. He envisions an even more streamlined, Google-Glass-like product that will enable



Eric Ward wears the latest version of his innovative safety vest used for air-quality sampling. (Photo by John Underwood)

users to visualize data as it's happening, such as real-time spikes in contaminants.

"Being in health and safety is like being a detective, a policeman. You figure out what's wrong and you protect people's lives," Ward says.

## NONPROFIT ENTREPRENEURSHIP

### STARTUPS ENABLE ALTRUISM

For senior apparel design and technology major Emily Mishler, starting her own business meant supporting worthy causes. Her company, Get Involved—Be the Change Inc., recently launched its 2015 summer collection of scarves.

Mishler's online startup raises funds for nonprofits. Every season the fashion company works with a different charity, such as the American Heart Association or Girls on the Run. Since forming in September 2014, the company has donated more than \$5,500 to eight different charities.

To help her make a difference, Mishler recruited fellow Purdue fashionistas: Award-winning designer and seamstress Blake Reifers (BS '13) works on production and sourcing and HHS junior Kayla Bacon does product photography and marketing.

"Purdue has provided a foundation for everything we do — from designing products, creating samples, defining and targeting markets, building production efficiency, to providing resources and mentors like the Foundry," Mishler says. "We plan to maintain our current level and quickly scale up."



Emily Mishler recruited fellow HHS students to help launch a nonprofit company that sells seasonal scarves to raise funds for charities. (Photo provided)

## APPLIED KNOWLEDGE

consultant, a real person who provides timely, tailored personal guidance.

"In our survey of mothers, we found a significant difference in breastfeeding outcomes between mothers using LACTOR and those who relied on friends and family for support," Ahmed says.

The free application runs on the iPad, iPhone and Android devices and is available at the Apple App Store and on Google Play. It's being tested in a Spanish language version.

Ahmed hopes to recruit a computer scientist to help develop the next iteration of the application — which will be available for hospitals to use.

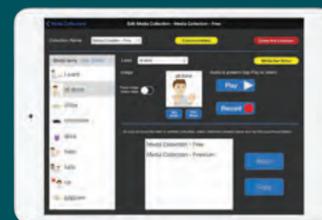
### TEACHING AUTISTIC CHILDREN TO SPEAK

The rewards of entrepreneurship take many forms.

For Oliver Wendt, assistant professor of speech, language, and hearing sciences, a research focus in augmentative and alternative communication has bloomed into a life-changing tool for individuals with severe, nonverbal autism.

In 2012, Wendt released an iPad application that uses graphic symbols to teach children with severe autism to construct — and speak — simple sentences. Dubbed SPEAKall!, the app has been tremendously successful.

"Mostly by word-of-mouth marketing, the autism community has embraced SPEAKall! very quickly, and it's had a very strong



impact," Wendt says. Kids with severe autism not only learn to speak, they use the app to learn social interaction — even play games like Bingo with their families and teachers. Wendt regularly hears stories of children previously considered beyond hope finally learning to communicate.

More than 12 universities and autism clinics around the world have adopted SPEAKall! in their clinical practices, and the app has been downloaded nearly 30,000 times.

In late 2013, with assistance from Purdue's Office of Technology Commercialization, Wendt founded SPEAK MODalities LLC, which enabled him to commercialize SPEAKall! in premium versions with advanced features and multi-user capabilities.

The iPad version of the app is available for download through iTunes. The Android version will be released on Google Play this summer.

Currently, Wendt is developing a companion app called SPEAKmore! "It uses graphic symbols to teach advanced language concepts, enables learners to create more complex messages," Wendt says. It is slated for release in early 2016.

"We've been running our company out of the garage, on top of doing our university jobs," he says. Throughout the process, the startup experts at the Purdue Foundry assisted him and his team. "They did a great job helping us get this technology out of the research lab and into the world," he says.

# SPEAKING OF PARKINSON'S

## ENTREPRENEURSHIP IS A PROCESS

That's certainly true for Jessica Huber, professor in the Department of Speech, Language, and Hearing Sciences. Huber, who won the 2014 Outstanding Commercialization Award for Purdue University Faculty, has come a long way in the startup process.

Her invention, SpeechVive, is a behind-the-ear device that enables people with Parkinson's disease to speak more loudly and communicate more clearly. The device, which has been available for two years, is on the market in 18 states; nearly 100 speech pathologists have been trained to fit patients with the device.

Huber, who is also CTO for SpeechVive Inc., is pushing the product toward profitability.

"We're in the middle of raising our round B of funding," she says. "After this we project that SpeechVive will be self-sustaining, based on sales of devices." With this second influx of capital, the company is looking to widen the distribution

network and increase market share, particularly in Veterans Affairs medical centers — and update the device so it can be set remotely.

"I think people think starting a business is easy, that managing the amount of work and time involved is easy," she says. "But it's not. And it takes years to build a company that's profitable." In the case of SpeechVive, Huber reckons it will be 11 years from initial idea to profitability.

"Which is fast compared to a drug or an implanted device — which require FDA approval," she says.

For fellow faculty entrepreneurs, Huber highly recommends Purdue's Entrepreneurial Leadership Academy at the Burton D. Morgan Center for Entrepreneurship. The sessions helped her learn the ins and outs of entrepreneurship, including networking, business planning and tech-transfer processes. 📌

## APPLIED KNOWLEDGE



### EASING PATIENT CARE

It's no surprise that many HHS entrepreneurs are in health care fields.

Caitlin Dougherty, for instance, earned her degree in 2010 in youth, adult and

family services, and she now works as a certified child life specialist at the Riley Hospital Burn Center. Each day, multiple times, she helps children cope with the painful procedure of having their burn-dressings changed.

"Distraction is a crucial tool," Dougherty says. And she couldn't help noticing how much her young patients loved

playing with her iPad during their procedures. So, with the blessing of the unit's medical director, she started designing an iPad application specifically for kids in the Riley burn unit.

Called "My Burn Journey," the app introduces kids and their parents to the different rooms and procedures in the unit. Dougherty wrote the script and provided key input for her software developer.

Dougherty is not your typical entrepreneur. In fact, designing an app has changed the way she views her work. "If an idea comes to me, I'll be more willing to act on it, she says. "I think the app really helps the kids we're serving. We've upped our game."

A Spanish language version is in the works.

# BOILER STARTUPS

## INVENTORS START EARLY

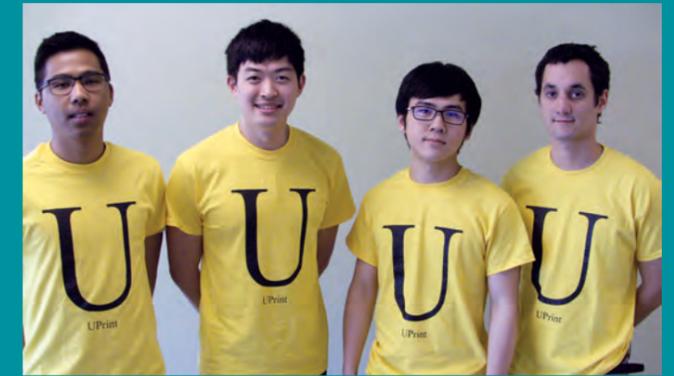


Two consumer science students were finalists in the 2015 Boiler Mini-Accelerator Competition, an intensive, eight-week event sponsored by the Anvil co-working space and known as "the Boiler." Working with local mentors, Boiler teams formulate a business plan, hone their products, and prepare their "pitch." This year's teams vied for up to \$10,000 in startup funding.

First-year master's student Lukas Ingersoll co-founded "Adeptee," an application for connecting curious people to subject matter experts. "I wanted to apply my understanding of consumer behavior to the technical world," he says.

Ingersoll's team made the Boiler top five, and he learned a lot about starting a business. His advice? "Take your new project seriously, but not too seriously. And if something doesn't work out, don't give up." Ingersoll's next idea: a tech startup consulting firm in Latin America.

Consumer science major Rick Li was another Boiler contender. Li is CEO for UPrint, a student-run company whose



Consumer science student Rick Li (second from left) was part of a team that created a mobile printing app called UPrint. (Photo provided)

popular app lets students print to any campus printer from their mobile phone.

Li joined UPrint as a marketing expert. "I packaged UPrint for the public," Li says. "I showed the programming team ways to connect with students." So far, more than 2,000 people have signed up for UPrint, and users printed more than 10,000 documents last semester. UPrint placed third in the Boiler competition.

"In August, we'll push out our premium model," Li says. "And currently we're beta testing at the University of Illinois at Urbana-Champaign."

# A WINNING IDEA

## WINNING A BUSINESS COMPETITION CAN KICK-START A CAREER

Just ask Rachel Box (CSR '15), who as a senior in apparel design and technology won the \$20,000 first prize in the 2015 Burton D. Morgan Business Plan Competition. Her company, "Guarders," designs women's undergarments with strategic pockets for unobtrusively stashing necessities such as a phone, key, credit card and driver's license.

With her winnings Box plans to hire a sales team, develop marketing materials, and complete the patent and trademarking process. She'll debut the product in a January 2016 Kickstarter campaign, where she hopes to reach 20 million prospective customers.

As CEO, Box is involved in every aspect of the business. "Starting your own company is definitely for people who don't want to sit in an office every day," she says.

She advises student entrepreneurs to take advantage of their university network. "People love to help students," she says. "Be confident. Never apologize for your degree in a creative field."



Rachel Box presents her idea for an apparel company in the 2015 Burton D. Morgan Business Competition. (Photo provided)



DEGREES OF DIFFERENCE

## LATITUDINAL ADJUSTMENTS

**DEREK DELP** (HTM '95) will see his 75th Jimmy Buffett show this fall. Fitting since Delp, a longtime Parrot Head, had a Buffett classic in mind — “Changes in Latitude, Changes in Attitude” — when he moved to Las Vegas in 1998. With one connection, a cousin, he landed a job in the booming hotel business. With a few more assists from Purdue connections, he successfully transitioned from hospitality to real estate sales.

Delp believes his undergraduate degree in hospitality and tourism management prepared him well for his Southwestern leap of faith. From the robust internship programs to the many career fairs at Purdue, he says, “I really learned how to talk to and engage with people.”

The Boilermaker brand also travels well, he says, opening many doors. While he made great money as a bellhop and valet, Delp wanted to embrace his entrepreneurial spirit and joined the Purdue Alumni Club to meet more people. A fellow member encouraged him to pursue real estate sales.

Delp, now a successful residential sales agent for Re/Max, says communication skills can determine success. “Being trustworthy is huge, and you have to adjust your communication style to your client,” he says.

In a business that’s all about connections, Delp can trace a majority of his contacts to within six degrees of Purdue. As the president of his alma mater’s alumni club in Las Vegas for nearly a decade, he says it’s not uncommon for people to both ask for and extend favors. “It’s normal for Purdue alumni to help one another.”

Though casinos, nightlife and lavish shows may fill the imaginations of those less acquainted with Las Vegas,

Delp says it offers much more. He and his wife, Michele, who also works in real estate, live in Summerlin, one of the largest and best-selling master communities in the country. The neighborhood itself — about 20 minutes from the strip — might shatter the sin city stereotype. “We have great communities with great homes, beautiful golf courses and wonderful restaurants,” he says. “You can go hiking in Zion National Park. Los Angeles and the Grand Canyon are both about three hours away. And there are a lot of easy day trips.”

As for the trip that took him from the Midwest to Las Vegas, Delp has few regrets. He encourages young graduates to pursue careers that match their passions and not be afraid to switch fields if needed.

He also suggests getting to work early and not shortchanging anyone. One story of his good karma comes from working several years ago with a burgeoning buyer who wanted to purchase low-cost investment homes. In real estate that means less commission for the agent. Nevertheless, Delp worked within the budget and befriended the young man, Jonathon Scott, who now stars as one of the twins who buys and flips homes in the reality TV series *Property Brothers*. Delp appeared in a recent episode.

Succeeding in a business of commission sales, Delp isn’t overly nostalgic about the road he’s taken. But the optimism he felt when he changed latitudes still resonates in the lyrics of Jimmy Buffett: “Yesterdays are over my shoulder, so I can’t look back for too long. There’s just too much to see waiting in front of me, and I know that I just can’t go wrong.”

— *William Meiners*

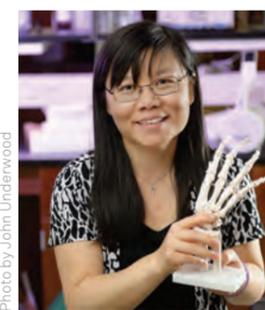
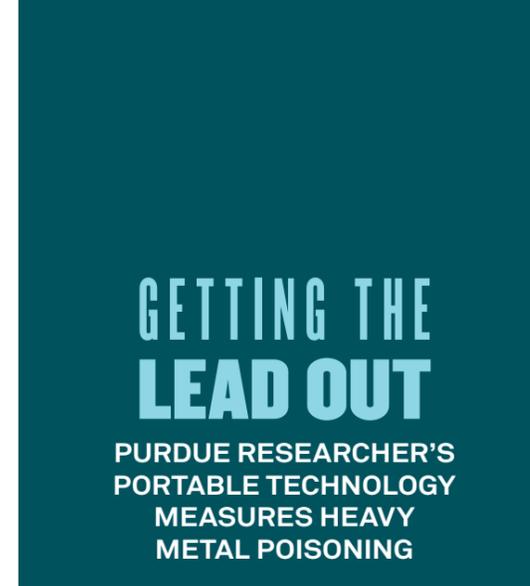


Photo by John Underwood

EMERGING RESEARCHER

Although exposure to lead and other poisonous heavy metals like manganese has been reduced in the U.S. since the passage of the Clean Air and Clean Water acts in the 1970s, the Centers for Disease Control and Prevention estimates that children in at least 14 million households are being exposed to high levels of lead.

Lead and similar chemical elements also remain a significant environmental toxin globally, particularly in China and other countries where industrialization is occurring.

**LINDA NIE**, associate professor of health sciences, says the effects of lead poisoning in children are particularly well-documented, ranging from lower intellectual quotient and deficits in neurobehavioral performance to decreases in auditory sensitivity, visual motor performance and learning ability.

Despite increased awareness, testing and controls, there are many unanswered questions regarding excessive exposure to heavy metals, Nie says. Progress also has been slowed by limitations in traditional testing methods.

Blood lead, for example, the most commonly used biomarker for assessment, has a half-life of just 30 days and reflects only short-term exposure, Nie says. In contrast, bone lead has a half-life of several years to decades, making it a better marker of cumulative or long-term exposure.

“X-ray fluorescence (XRF) is less invasive than blood testing and has been used to measure lead in bone for more than 20 years, but few research institutions possess the technology because of infrastructure demands for the detection

system and the need for a specialist to operate it,” Nie says. “A more accessible technology to measure bone lead would have numerous benefits.”

To address the issue, Nie and her team developed portable X-ray fluorescent technology to measure lead in vivo, or within the body, with minimum radiation harm. Funded by a reciprocal travel grant from the Chinese Visiting Scholars Network, Nie first put her innovation to the test on a 2014 visit to Shanghai Jiaotong University’s Xinhua Hospital in China, accompanied by PhD student Aaron Specht and faculty colleagues Wei Zheng and Ellen Wells.

In addition to validating the portable bone lead measurement system developed in Nie’s lab at Purdue, the research team gathered data from more than 200 field measurements of lead levels in children’s tibias to show that cumulative exposure to the toxic metal is highly correlated with bone lead concentration and to test the efficacy of the treatment of lead poisoning for these children. Specht returned to Shanghai in August 2015 to finalize the study before presenting the group’s findings to the International Society of Exposure Sciences.

Meanwhile, Nie and her team, together with her collaborators Zheng and Wells, prepared to field test another new technology called in vivo neutron activation analysis (IVNAA) that for the first time measures manganese in bone. Like lead, manganese has serious neurological effects but is difficult and expensive to test, Nie says.

“Chronic manganese exposure is prevalent in Chinese industry, which is rapidly growing,” Nie says. “People who work in mining, welding and steel production are especially at risk.”

— *Eric Nelson*

DEGREES OF DIFFERENCE

# HIGHER CALLING



When she joined Purdue as a professor after earning a master's degree in plant physiology from the University in 1980 and a PhD in foods and nutrition in 1984, **APRIL MASON** never expected to become a higher education administrator. Now, 31 years later, she's provost and senior vice president of Kansas State University — a job she owes, in part, to her former Purdue colleagues.

Mason counts Avanelle Kirksey, who became the second female distinguished professor at Purdue and is honored each spring through the Department of Nutrition Sciences' Kirksey Lecture Series, among her earliest mentors. Kirksey, who retired in 1994 after 33 years on the faculty, encouraged Mason to attend the 1989 HERS (Higher Education Resource Services) Summit.

The annual event — dedicated to the creation of women leaders in higher education — altered Mason's career path.

"I wasn't sure I wanted to go into administration, but that experience convinced me," she recalls. "One of the exercises was to fill out a map that tracks your career until the age of 65, and mine led to being a provost. I'm already here!"

Still, Mason's transition began at Purdue, where she served on the faculty for 20 years and became associate dean for discovery and engagement in the former College of Consumer and Family Sciences (CFS). She joined Colorado State University in 2004 as dean of its College of Applied Human Sciences, which recently followed Purdue's lead and renamed it the College of Health and Human Sciences.

Mason, who accepted her current position at Kansas State

in 2010, thrives on the variety of challenges and experiences that come with being a university administrator. "Beyond my primary responsibilities as provost, I get the opportunity to broaden my appreciation of so many other things," she says.

Appreciating a variety of learning experiences is a theme that resonates across Mason's life. She was born in Ohio and attended the Overseas School of Rome in Italy before returning to her home state to earn a bachelor's degree in biology from Mount Union College. With degrees in three different fields of study, Mason is as versatile in an administrative role as she is in her academic disciplines.

Although there are days she misses her faculty roles, Mason says that being provost allows her more freedom to interact with students in an advisory role, particularly those who hold leadership positions in student organizations. She also enjoys thinking about and planning for the future of higher education. "Post-secondary education is so important to the future of our world," she says.

Mason returns to the Lafayette-West Lafayette area frequently and was most recently on campus in February to be recognized as one of Purdue's 2015 Distinguished Women Scholars. "It was a very special, happy day," she says fondly.

With her 25-year career map already completed, Mason could be poised to advance even farther than originally planned. For now, though, she continues to make the most of the trajectory she began at Purdue. "I love what I'm doing and where I am in my life," Mason says. "It's been an exciting journey."

— Eric Nelson and Jamison Stoike

# GENERATIONS

IN EACH ISSUE OF *LIFE 360* WE PUBLICIZE THE PROFESSIONAL ACHIEVEMENTS OF HHS ALUMNI. PLEASE SHARE YOUR NEWS WITH US AT [WWW.PURDUE.EDU/HHSUPDATE](http://WWW.PURDUE.EDU/HHSUPDATE).

## 1950s

**HELEN WALTMAN-PEASLEY, HE '50**, retired 31 years ago from VOHMZ Corporation and is now living in a senior community in Missoula, MT.

**THOMAS SMITH, HK '53**, San Jose, CA, is a retired professor of park management from West Valley College, Saratoga, CA. He recently published the book *A Ranger Pure and Simple*. The book is available on amazon.com, and you can read more about Smith's career on page 10.

## 1960s

**DR. JANET (MARSH) JOHNSON, HE '63**, Roanoke, VA, was recently honored as a 2014–15 inductee into the Virginia Tech College of Agriculture and Life Sciences Hall of Fame. She is dean emeritus of the College of Liberal Arts and Human Sciences at Virginia Tech and has been active in the Department of Human Nutrition, Foods, and Exercise since her retirement.

**THOMAS SPEAKER JR., HK '63**, West Lafayette, IN, published the book *Here Come the Pennsylvania Dutch*. The book is available on amazon.com.

## 1970s

**DR. KATHLEEN (STARK) WILLIAMS, SLHS '70**, recently authored *Phonological and Print Awareness Scale* and a companion book, *Building Early Literacy Skills*. She is also the author of the Expressive Vocabulary Test co-normed with the Peabody Picture Vocabulary Test and the OWLS Reading Comprehension Scale.

**BOB HOLDA, HTM '75**, has authored *Respite Tourism for Family Caregivers*, making him a sole contributor from the United States to an international academic population. Part of the Advances in Hospitality, Tourism, and the Services Industry book series, this publication offers a succinct discussion on the niche topic of patient mobility and new opportunities for health services across borders. Bob lives in Lafayette, IN.

**NANCY BURGE ALARCON, SLHS '77**, has been promoted to principal lecturer and director of clinical education in speech and hearing sciences at the University of Washington. She was awarded the 2013 University of Washington David B. Thorud Leadership Award as a faculty member.

**DIANE (CARROLL) DANCHI, RD, LDN, NUTR '78**, has worked as a wellness dietician at Rex Wellness Centers in the Raleigh, NC, area for more than 10 years. Her position includes one-on-one nutrition counseling, teaching classes, blogging, public speaking and the occasional TV appearance. She was appointed to the North Carolina Board of Dietetics and Nutrition by Speaker of the North Carolina House of Representatives, Thom Tillis, in 2012 and is currently serving a three-year term.

## 1980s

**ANN (BURFORD) BILODEAU, SLHS '82, MS SLHS '84**, Indianapolis, IN, is now a faculty member and clinic director of the Butler University Speech and Language Clinic. She was recently appoint-

ed by Governor Mike Pence to serve on the Indiana Speech-Language Pathology and Audiology Licensure Board.

**DR. J. MARK DAVIS, PHD HK '82**, Columbia, SC, was named to the Aegis Shield Expert Panel. The panel will work with Aegis Sciences Corporation to provide insight on programs and education to protect athletes from inadvertently consuming banned substances in dietary supplements, over-the-counter drugs and prescription medications.

**KATHLEEN (BOHM) PRECHTEL, NUTR '83**, has been selected as a 2015–2016 co-chair for the Purdue Parent and Family Advisory Board. She has been working as a registered dietician since 1984.

**CAPT. DAWN RICHARDSON, HTM '83**, retired from the U.S. Navy in 2014 and opened the Mermaids' Porch Bed and Breakfast in Portsmouth, VA.

**STEPHEN LEIST, HTM '84**, was named a 2015 Power Broker by *Risk & Insurance* magazine for his knowledge and services provided in the entertainment/hospitality industry in Louisville, KY.

## 1990s

**DR. REGINA "JEAN" ECKRICH, PHD HK '90**, Hopkinton, NH, was honored with the Nancy Beyer Opler '56 Award for Excellence in Advising. She is professor and chair of exercise and sport sciences at Colby-Sawyer College.

# GENERATIONS

**KRISTINA (GREER) SERRA, HK '93**, West Lafayette, IN, received the 2015 Greater Lafayette Commerce Golden Apple Award which recognizes the area's most outstanding teachers in grades K-12. Serra teaches physical education and computer lab at St. Mary Cathedral School.

**ANNETTE (BECK) FEERST, PSY '94**, Clovis, CA, received her master's in counseling from University of California at Fresno in May.

**JENNIFER (PETERS) LAMARCA, HDFS '95**, has been promoted to assistant clinical director at Little Star Center in Carmel, IN.

**CHRISTINA (LA PAN) DOWNEY, PSY '99**, Noblesville, IN, is an associate professor of psychology at Indiana University and is being inducted into the Faculty Colloquium on Excellence in Teaching (FACET), which has the goal of promoting and sustaining excellence in teaching among IU faculty.

## 2000s

**CASEY (COX) DEXTER, HTM '01**, is director of donor relations and events for the College of Health and Human Sciences in West Lafayette, IN.

**AMY BOARDMAN PATTEN, NUR '01**, is a Family Nurse Practitioner (FNP) and consultant at The World Bank Group in Washington, D.C.

**BETH RIEDEMAN, HDFS '02**, is now the Indiana Non-Formal Child Development Associate (CDA) project coordinator for the Indiana Association for the Education of Young Children. The Non-Formal CDA project assists child care professionals across the state in obtaining their CDA credentials.

**JESSICA (BUTCHER) EISENBERG, CSR '04**, is meetings and events manager at Snowsports Industries America in Washington, DC.

**ABBEY HARPER, CSR '05**, has recently been promoted to strategic account executive for CVS Health in Scottsdale, AZ.

**MEGAN (GARRITY) MUSSANO, SLHS '09**, Hoffman Estates, IL, recently co-authored "Practical Strategies for Increasing Communication and Success for Students with Exceptional Needs" in the February/March 2015 issue of *Closing the Gap Solutions*, a national magazine that focuses on how to incorporate assistive technology into the lives of persons with disabilities.

## 2010s

**RACHAEL (GRIFFIN) SHEWMAKE, SLHS '10**, Oak Lawn, IL, a Dona-certified doula, has founded Tender Loving Doula, offering doula services to pregnant women.

**VICTORIA LOONG, PSY '14**, currently serves as the inaugural interim director of the Asian American and Asian Resource and Cultural Center (AAARCC) at Purdue University.

Though their conferred degrees may have come from departments named differently at the time, the alumni listed in Generations are matched with the academic units by the current names.

- CSR CONSUMER SCIENCE**
- HK HEALTH AND KINESIOLOGY**
- HSCI HEALTH SCIENCES**
- HE HOME ECONOMICS**
- HTM HOSPITALITY AND TOURISM MANAGEMENT**
- HDFS HUMAN DEVELOPMENT AND FAMILY STUDIES**
- NUR NURSING**
- NUTR NUTRITION SCIENCE**
- PSY PSYCHOLOGICAL SCIENCES**
- SLHS SPEECH, LANGUAGE, AND HEARING SCIENCES**



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## FROM THE BOARD

A goal of the College of Health and Human Sciences (HHS) Alumni Board is to establish a meaningful relationship between the college and its alumni. By participating in activities like Homecoming and Life Inspired, or by serving on the alumni board, you can gain a better understanding of the amazing people and programs that make up the College of Health and Human Sciences.

Serving as a board member is a rewarding experience, with opportunities for student engagement as well as professional and personal networking. We'd love for you to join us! Information about our events, as well as the alumni board, can be found at [www.purdue.edu/hhs/alumni](http://www.purdue.edu/hhs/alumni).

The HHS Alumni Board is enthusiastic about the direction and future of HHS. It has been my privilege to serve as your 2014-15 HHS Alumni Board President.

Boiler Up!

**Stacy Payne Miller (HHS '94)**  
Past President, HHS Alumni Board

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# LIFELINES

PLEASE CONSIDER SUPPORTING OUR EVER TRUE CAMPAIGN INITIATIVES.



Make a profound impact at Purdue University by partnering with the College of Health and Human Sciences. Through *Ever True: The Campaign for Purdue University*, we seek to increase unrestricted bequests and to grow endowments for HHS research, professorships, and graduate and undergraduate education. Together, we will make lives better and change the world!

## STUDENT SUPPORT

Needed support for undergraduate students includes **undergraduate scholarships (\$25,000+)**, the lifeline for the nearly 50% of HHS students who require financial assistance in order to attend Purdue; gifts to the **Global Learning Fund (\$25,000+)**, which will provide more cultural immersion opportunities so that, within the next four years, one in three students (up from one in five) can study, intern, or travel abroad; and contributions through the **Purdue Research Foundation Targeted Scholarship Match Opportunity (\$25,000-\$1,000,00)**, which offers matching funds up to \$1,000,000 per scholarship to support underrepresented minorities and women undergraduates. **Graduate student support**, one of HHS's greatest needs, provides not only funding to graduate students but also opportunities to work alongside researchers and professors in the classroom to help shape them professionally.

## FACULTY

**Endowed and Distinguished Professorships (\$1,000,000+)** are the hallmark of a world-class university. HHS's goal is to establish at least one professorship in each of its nine departments in order to recruit and retain the most talented faculty. An endowed **Named Deanship (\$3,000,000)** for HHS will provide the dean supplemental funding to address priority areas such as learning, discovery and engagement; distinguish the College and the dean as preeminent at Purdue and among peers; and expand the College's research enterprise by leveraging external funding.

## PROGRAMS

Emerging programs offer the opportunity to address healthy aging, public health, chronic disease detection and prevention, health and wellness, and critical health issues for children such as autism.

## FACILITIES

Our facilities initiatives include the **Purdue Professional Selling Laboratory**, which connects companies with students from all disciplines who are interested in a career in professional selling (gift amounts up to \$1,000,000); the **playground for children with communication disorders**, housed in the Department of Speech, Language, and Hearing Sciences in Lyles-Porter Hall, which will provide a training laboratory and treatment facility to treat children with a wide range of communication issues (gift amounts up to \$500,000); and infrastructure support of the College's **first magnetic resonance imaging (MRI) research equipment**, which will advance research being done across the College (gift amounts up to \$1,000,000).



## ADMINISTRATION

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**Thomas Berndt**, Senior Associate Dean for Academic Affairs and Administration

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**Dorothy Teegarden**, Associate Dean for Research and Graduate Programs

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**Comments?** Contact Denise Buhrmester, Director of Communications, [dmbuhrmester@purdue.edu](mailto:dmbuhrmester@purdue.edu), 765-496-3663.

**Moving?** Send change-of-address notices to Development and Alumni Information Services, Purdue University, 403 W. Wood St., West Lafayette, IN 47907.

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