

# the collage

Winter 2015

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Kutztown University's College of Liberal Arts and Sciences Newsletter

## Faculty highlight



**Dr. Sudarshan Fernando**

Dr. Sudarshan Fernando, a theoretical physicist with expertise in the fields of string theory and supergravity, joined the Department of Physical Sciences at Kutztown University in 2005. He grew up in Sri Lanka, a small tropical island in the Indian Ocean, and received his bachelor's degree in physics, with first-class honors—the highest honors in the British undergraduate degree classification—from the University of Colombo, Sri Lanka. His undergraduate thesis was based on the application of Monte-Carlo techniques, a type of computational algorithms based on repeated random sampling to produce numerical results that improve the accuracy of experiments in mass spectrometry.

Immediately after completing his undergraduate education, Dr. Fernando moved to the United States to pursue graduate studies in theoretical physics. He obtained his Ph.D. from Penn State in 2004 for the work he did on the classification of plane-wave spacetimes, an important solutions type for Einstein's field equations, in ten and eleven dimensions. After graduation, he worked as a visiting faculty member in the Department of Physics at Gonzaga University in Spokane, Washington, from 2004 to 2005.

Dr. Fernando regularly teaches a combination of upper-level physics courses at KU including electricity & magnetism and quantum mechanics as well as introductory physics courses. Since joining the Kutztown community, he has worked hard to maintain and improve the high standards of the undergraduate physics curriculum. He was instrumental in creating three separate tracks within the physics degree—physics, engineering physics, and astronomy—and making many curriculum changes to better prepare students to enter the workforce after graduation. The results of the hard work of the KU physicists and astronomers are clear. In recent years, many KU physics graduates have been accepted into numerous graduate programs around the country, including several prestigious Ivy League universities. Others have been employed by private sector companies in science and technology.

As a string theorist, Dr. Fernando continues his research on finding a single theory to explain how the universe works in the small quantum

scale and the large cosmological scale. The two remarkably successful theories, quantum mechanics and Einstein's general theory of relativity, have been able to explain the universe with impressive accuracy in the small and large scales respectively, but put together have produced bizarre and incompatible results. String theorists attempt to solve this problem by speculating that all building blocks of nature are tiny one-dimensional objects called strings rather than point-like particles. These strings interact with each other by splitting and joining again. They have many different harmonics of vibrations, just like the strings of a violin, and these different vibrational modes manifest to us as different elementary particles such as electrons, quarks and photons. Investigating various properties of these strings, their consequences, and mathematical descriptions of such ideas certainly seem to provide Dr. Fernando with a fascinating intellectual journey through some of the cutting-edge research fields in physics and mathematics.

## DEAN'S CORNER

—Anne E. Zayaitz, Ph.D.—



I have had many conversations with alumni who are quick to describe how a particular faculty member was instrumental in their time at Kutztown. Faculty may reach out to help students with coursework, take the time during advisement to ensure that all requirements for graduation are taken, encourage students to participate in extracurricular activities, and discuss the balance between academics and all the other responsibilities a student may be juggling. Other faculty review internship possibilities, while others provide an opportunity for undergraduate research and then assist in developing the presentation or publication of that work. Kutztown University is a place where students acquire skills, expand their experiences, and interact with faculty who work with students as they mature intellectually and interpersonally. As Socrates wrote, 'education is the kindling of a flame.' I hope you enjoy this edition of *The Collage* and that you reflect and take a minute to thank the individuals who mentored you.

# Internship

*Carolyn Fergus graduated from KU in December 2014 with her B.A. in English. During the fall, she interned with Reese Integrated Marketing in Reading, PA, and the skills she learned at Reese helped her find a job as a Marketing and Social Media Specialist.*

Q: What were your responsibilities as an intern?

A: During my time at Reese, I was responsible for writing and editing media advisories and press releases; writing, editing, and proofing feature articles for various clients; maintaining and expanding media lists in CisionPoint and iContact; writing and scheduling social posts; assisting in the creation of digital advertising campaigns; and taking care of daily administrative duties.



**Carolyn Fergus '14**

Q: Can you explain what you did on a daily basis at your internship?

A: My supervisors at Reese were a Senior Account Executive and the Public Relations Director. They would keep lists of things they needed help with; I would report to them first thing in the morning and spend the rest of the day helping them in any way I could. Tasks ranged from brainstorming Facebook ad concepts to compiling monthly ROI reports to writing and scheduling social media posts.

Q: Where are you working now?

A: I was lucky enough to be hired right after graduation on the strength of the skills I picked up while working at Reese. I am the Marketing and Social Media Specialist at North Wales Running Company/All Kinds of Fast Phoenixville. I ran track & field and cross country when I was at Kutztown, and I'm very passionate about the sport of running, so it is really a dream job for me.

Q: Did your internship prepare you for the job you have now?

A: Writing and editing social media posts for various clients was one of my biggest responsibilities at Reese, and that experience has helped me immensely in learning how to juggle my own social schedule. Less specifically, reporting to an office every day for my internship and dressing and acting like a professional really helped ease the transition from college classes to a full-time job.

# Student highlight



**Tanajsia Mason**

Psychology major Tanajsia Mason intends to apply to graduate schools in the fall semester after completing her undergraduate studies at Kutztown.

Tanajsia transferred to Kutztown University in 2012 from Harcum, where she took her first psychology course and fell in love with the subject. Her advisor saw her potential and pushed her to apply to a



four year university. Once she transferred to KU and declared her major, her advisor, Dr. Gross, also saw her potential and encouraged her to join different organizations that would help her reach her goals. "I didn't know I had all this potential... He was the impetus for everything [I accomplished at KU.] I didn't know I had [it] in me until he encouraged me to pursue all of this."

Two years ago, if you told Tanajsia she would be involved in all the organizations she is now, she probably wouldn't have believed you. "I was really in my shell." She is the president of Psi Chi, the International Psychology Honor Society; the Secretary of Alpha Kappa Delta, the International Sociology Honor Society; and the event coordinator of FMLA. She is also a member of Allies and is involved with the women's center. She is thankful for the valuable communication and leadership skills she has learned from working with these organizations.

Tanajsia enjoys research, and it shows in the different projects she's been involved in. Over the summer, she interned at a clinic in Philadelphia, where she worked with a wellness group that dealt with chronic diseases; Tanajsia facilitated weekly discussion groups where members shared challenges and solutions.

Last semester, Tanajsia conducted an independent study that focused on how the media affects the self-concept of sexual and gender minorities. Her study dealt specifically with the underrepresentation, misrepresentation, and objectification of these groups in positive and negative ways and how these factors affected their self-esteem and self-identity. She found significant results and presented her research this past February to the Eastern Sociological Society and has submitted her abstract to the Association for Psychological Science for review.

Tanajsia also worked with Dr. Ryan as a research assistant and learned how to run experiments and collect data. "I feel like that experience will prepare me with going forward because she taught me a lot of tricks and tips with analyzing software that most people don't know till grad school, and I really appreciated that."

After she graduates from KU, Tanajsia hopes to earn her Ph.D. in Social Psychology and Counseling from Lehigh University, the only program she's found in the "Tri State" area with that degree. She hopes to one day become a counseling psychologist, focusing on self-identity issues in members of social minorities.

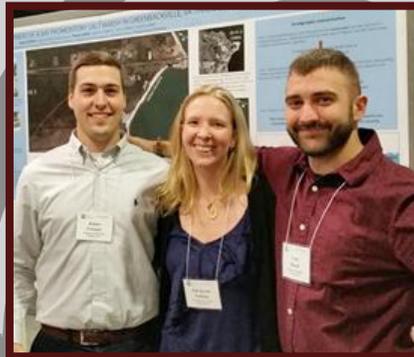
# KU STANDOUTS



During their winter break, KU students (from left, first row) **Sara Wert, Madison Hiel, Katie Adams, Anna Rivera,** (from left, second row) **Danielle Sienko, Kristine Hernandez, Melissa Aikey, Samantha Heck, Rachel Lawes, Laurel Brandt, Joey Coco, and Robert Matthews** studied Personality and Culture in London, where they interacted with individuals who immigrated to England from Malaysia, Egypt, Pakistan and the U.S.



**Laura Bieber**, Public Administration major and Political Science minor, is one of the 13 students selected to participate in The Harrisburg Internship Semester program for the spring 2015 semester. She will gain experience working in different areas of state government, complete her own research project, and earn a semester's worth of credits.

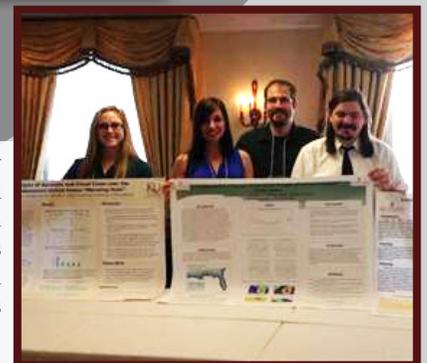


At the beginning of November 2014, **Adam Cooper**, Geography/Environmental Science, **Thomas Bond**, Marine Biology, and **Dr. Adrienne Oakley** presented the results of their research at the Restoring America's Estuaries National Summit in Washington D.C.



**Alex Spielman** (right), Physics major, and **Sebastien Treciak** (below), Geology graduate, were featured in the December 2014 issue of FastTIMES.

Alex is working with several organizations to prevent streamflow loss from West Creek. Sebastien also worked on this project, as well as two others involving surveying local cemeteries and mapping glacial deposits.



Three Kutztown University Geography students presented their undergraduate research posters at the Middle States Division of the Association of American Geographers meeting on October 25, 2014. From left: senior **Rebecca Kovalik**, senior **Lauren Ickes**, **Dr. Michael Davis**, and senior **Chris Harding**. Chris was also selected to represent the Middle States Division Geography Bowl trivia team at the Association of American Geographers Annual Meeting in Chicago this April.

After graduating from high school, Dr. Holoviak obtained a full scholarship to King's College (Holy Cross Fathers) in Wilkes-Barre, where she earned her bachelor's degree, double majoring in Government and Politics and French with a minor in English. After graduation, she received a fellowship for graduate study at the Pennsylvania State University, where she completed her Master of Public Administration in 1987. She worked for several years as an administrator in the nonprofit sector. During this time, she served as the curator for the Wyoming Historical Society and as a freelance researcher for the Pennsylvania Historical and Museum Commission. She later worked in educational administration as a program coordinator for continuing education at what is today DeSales University. After teaching government courses at local community colleges and receiving encouragement from her college mentor, Dr. Donald Buzinkai, Dr. Holoviak began her doctoral work at the State University of New York in Binghamton in 1990.

Dr. Holoviak joined the KU community as a temporary faculty member and was hired in December 1994 as a tenure track professor in the Department of Political Science at KU after she was awarded her Ph.D. in public policy. She has served as the Program Coordinator for the Master of Public Administration in the department for nearly 20 years, helping to modernize the program and train hundreds of public managers. She also developed an active research agenda on the topic of rural communities and economic development. As a result of her discipline and

determination, she has received numerous grants and has published two policy studies through the Center for Rural Pennsylvania. Her recent study, "Visiting Pennsylvania: An Evaluation of Strategies and Finances of the Rural Tourism Industry," focused on the impact of the hotel room tax monies in rural counties across PA. She is currently under contract with Pennsylvania State University for her first book, *Pennsylvania Politics: Unlocking the Keystone State*, co-authored with Dr. Thomas Baldino.

Dr. Holoviak works with many other organizations in the anthracite coal regions of Northeastern PA. This area is important to her, not only because she was born, raised, and still lives there today, but because of her family history. Both of her grandfathers were miners and her grandmother and mother were employed in the local garment industry. She has served as the President of the Pennsylvania Political Science Association and of the Northeastern Political Science Association, where she is currently the secretary and webmaster. She is also the chairperson of the Pennsylvania Policy Forum, which is dedicated to researching issues relevant to Pennsylvania's policy makers. Her dedication to the Ukrainian American community has led her to cofound and direct the Kazka Ukrainian Folk Ensemble, which focuses on the preservation and performance of Ukrainian folk dance, song, and instrumental music. She also is an assistant instructor for children's Ukrainian folk dance, St. Mary's Traditional Ukrainian Dancers. In addition, she is treasurer and grant writer for

## Faculty highlight



**Dr. Paula Holoviak**

the Ukrainian American Heritage Foundation of the Lower Anthracite Regions, which runs folk dance camps and cultural programs for the community. She also serves as cultural delegate to the Central Executive Committee of the Organization for the Rebirth of Ukraine and is a Commonwealth Speaker for the Pennsylvania Humanities Council on the topic of Ukrainian immigration to the anthracite coal regions.

Dr. Holoviak is a member of Holy Trinity Orthodox church in Wilkes-Barre PA where she assists in directing the parish choir and teaches the high school level Sunday school classes. She is married to Peter Holoviak, CEO of Holoviak Church Supply, Inc. and is the mother of two boys, Vladimir, age 12, and Alexander, age 6.

## Alumni highlight



**Lisa Prendergast Swanger '09**

From childhood to adulthood, Lisa Prendergast Swanger has always been passionate about Marine Biology. Her parents fostered this interest and helped her gain more experience in the field through trips to the beach, internships, and summer camps. When Lisa was younger,



she didn't know what area she wanted to focus on within Marine Biology. After working in several different zoos

and aquariums, she realized humans play their own part in marine conservation. This inspired her to learn about the impact human knowledge, motivation, and action has on the environment in relation to marine resource management. "I wanted to better understand what might contribute to one's willingness to engage in conservation behaviors and support science-based decision making, such as the influence of attitudes and social norms."

After taking Intro to Sociology when she first came to Kutztown, she knew this would be her major. She graduated with her B.S. in Sociology in 2009 and went on to earn her M.S. in Marine Resource Management from the College of Earth, Ocean, and Atmospheric Sciences at Oregon State University. Her degree focused on marine education, outreach, and program management, which emphasized oceanography and bridged the gap between science and policy.

Following graduation from Oregon State, Lisa worked for multiple organizations in the Pacific Northwest. She has recently relocated across the country to begin her position as the Coastal Waccamaw Watershed Education Programs Coordinator at the School of Coastal and

Marine Systems Science at Coastal Carolina University. "I feel very fortunate to be where I am today and able to directly apply my degrees towards promoting healthy coastal and marine ecosystems that humans depend on."

Lisa is grateful for the relationships she built at Kutztown University. Dr. Todd Underwood and Dr. Diane Johnson were influential in guiding Lisa towards her career goals. Though only a few years have passed between graduation and now, Lisa is proud of how much she has accomplished, professionally and personally, in a short period of time.

"Living in the Pacific Northwest has impacted my life more than I could have ever anticipated. The vast amount of environmentally conscious community members and natural beauty throughout the state rooted my passion for the environment and dedication to practicing sustainable habits throughout my daily life. This directly applies to my professional life as well, and I am excited to have the opportunity to promote collaborative stormwater and watershed education and outreach in South Carolina. All rivers lead to the ocean after all!"

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# Positive Feedback



**Natalie Yuengel '14**

Students are often frustrated with the language requirements for their degree because they do not see value for these courses in their field. But Natalie Yuengel, Kutztown University alumna '14, has had a different experience after graduation. While here at KU, she took 4 semesters of German for her language requirement only because she took German in high school—she didn't know these classes would eventually pay off at her current job as a Communications Specialist for Styron. Though the office is based in Pennsylvania, they have many German employees. "With my German Language background, I've had the opportunity to translate documents, talk to coworkers in their native language via telephone or email, and engage with our German customers over social media... I wanted to share my experience... and motivate more students to continue studying different languages. You never know when it will be a big factor in helping you land your dream job."

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Carolyn Wasser, History and Library Science major and International Studies and Pennsylvania German minor is currently interning at the Pennsylvania State Archives in Harrisburg. History has always been her passion. In 9th grade she interviewed a curator at the Smithsonian; after the interview, when he showed her artifacts that were being prepared for an exhibit the following month, she decided to become a curator.

Carolyn was awarded a grant by the Dailey Foundation to rehouse and process segments of the Fall Brook Coal Company and Fall Brook Railway Company records. These documents form one of the most complete collections of any railway industry in the U.S. After Carolyn organizes the information, the documents will be available for research by rail, labor, and coal industry scholars throughout the United States.

Until Carolyn started her work unboxing these papers, they hadn't been looked at for 150 years. They are currently stored in acidic boxes, are tri-folded, and are sometimes covered in coal dust. Carolyn's job is to read through each handwritten document, take notes on what is written, write a description, and organize the documents by month in new, non-acidic boxes. This process takes about two days per box. "My job is to unfold the documents and flatten them. Once flattened, I arrange the documents chronologically and place the collection in

acid free folders and boxes. As I do this, I am creating a folder-by-folder spreadsheet of the inventory and creating narrative descriptions for the series. These descriptions will be placed on the Archives webpage and made available to researchers."

By searching through years of historical documents, Carolyn is learning about our nation's history from a different approach. "Each day that I am at the archives I find something new. Each new box contains treasures of the past that reveal how present-day politics, economics, and day-to-day life came to be. I am seeing how railroads transformed the world and sparked a revolution with their network of expanding tracks and big business practices. I am seeing how the nation shifted to a customary, fast-paced, modern day society." She never knows what to expect until she looks inside the box she is working with that day. The documents range from memorandums to correspondence to documentation of operations of the railway. However, some of the documents bring more excitement than others: "There are documents in this collection from businessmen, such as Carnegie, Vanderbilt, and J.P. Morgan, from a time when they were not yet known for their philanthropy. The documents from these businessmen, who today we considered 'robber barons' or 'captains of industry,' tell a different story not told in history books—a story of trial and error and risk."

## Internship



**Carolyn Wasser**

Before she started her internship, Carolyn didn't know a lot about document preservation and archival procedures, but she learned quickly from the hands-on experience. She knew there was only so much she could learn in the classroom, and her internship has enabled her to put that learning into practice. "I am learning so much as I go through the collection. I have to make decisions for myself as I move through the boxes and learn the best way to preserve the history."



# Student highlight



**Nicholas Wade '14**

Nicholas Wade graduated from KU in December 2014. While he was a student, he used what he learned in his Geography classes to excel in multiple internships and projects.

Nick didn't start his college career at KU, nor did he know what he wanted to study as a freshman. He transferred to Kutztown his sophomore year and remained undeclared. He didn't know what field he wanted to go into, but that changed

when he took a lower level Geography class as an elective. It wasn't long after that he declared his Geography major.

Though he enjoyed Geography more than anything else he'd studied, he didn't specialize in GIS until he took a class on the subject by chance. "When I realized that it was not only an excellent tool but a viable career option, I made sure that I took every GIS course available." After taking several GIS courses, he applied his knowledge of mapping data to different internships, a map for "Christmas in Kutztown," and his senior thesis.

His first internship was at the Borough of Lansdale, where he spent most of his time turning paper maps into GIS maps. This involved scanning the maps and using georeferencing to mark accurate geographic locations. Along with gaining experience in an office, Nick was able to do some fieldwork, using GPS technology to gather field data.

His second internship was for the College of Liberal Arts and Sciences here at KU as a GIS student researcher. He "used ArcGIS's spatial analyst toolset to interpret student distribution and other demographic data." His work here prepared him for his senior thesis, for which

he also used ArcGIS. He created a model in the program that used climate data from the present to show the potential spread of an invasive plant, Japanese Honeysuckle.

Nick designed the map used for the "Christmas in Kutztown" celebration this past December. He plotted points on the map that represented the location of small, local businesses, as part of the Shop Small campaign, and used a legend to differentiate the types of businesses.

Initially, Nick transferred to KU because it was close to home. He didn't expect to find a subject he enjoyed that would lead him to a career. "I received an outstanding education from KU and am very happy that I was able to be a part of the Geography Department at Kutztown University." He is thankful for the guidance of the professors in the Geography department during his years as a Geography student. Being able to combine his education with hands on learning is the best experience he could have asked for.

When he's not mapping data, Nick enjoys outdoor activities, such as hiking and biking, and exploring different ways to brew coffee.

## 2014 CHAMBLISS LECTURE



Dr. Kim Shively, Associate Professor of Anthropology and Sociology, delivered the Chambliss Faculty Research Awards lecture on Monday, November 3, 2014. Her lecture, "Investing in the Afterlife: Charity and Salvation in a Turkish-Muslim Religious Movement," focused on the Hizmet's movement to bettering this world in relation to potential afterlife rewards.

Shively is nationally and internationally recognized as an expert anthropologist, particularly in the areas of religion, gender and power, Islam, and the Middle East. Her research has been published in several academic journals including *Anthropological Quarterly* and the *Journal of Middle East Women's Studies*. Most recently, her article "Defining (and Enforcing) Islam in Secular Turkey" was published in the reader *Anthropology of the Middle East and North Africa*. Additionally, she had a second article, "When Domestic Violence is not 'Intimate Partner Violence': Cases from Turkey and Elsewhere," published in *Practicing Anthropology*.

The Winter 2015 edition of *The Collage* was designed and written by Olive Pegler '15, professional writing major, under the supervision of the CLAS Dean's Office.

