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DEAN AND PROFESSOR OF
PSYCHOLOGY

WELCOME

Thoughts of summer often evoke images of sunny beaches, family outings, exciting adventures, completing overdue projects, travel, creative expression, and much needed rest to name a few. The College of Science and Health is no exception to these longings, but as with all things, our view of summer is through the lens of a scientist.



In keeping with the tenets of learning, engagement, and stewardship, CSH students, faculty, and staff navigated many waves of activity this summer and this inaugural issue of The Beacon will be your guide. Inside you will find highlights of what CSH did this summer that includes international conferences, investigative research, new initiatives, appointments to new roles and new people.

Don't delay, let's get started!

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COLLEGE OF SCIENCE AND HEALTH SUMMER HIGHLIGHTS

A New Era in Procrastination Research

Conference planning began almost a year in advance, but the participants could hardly wait. Finally unveiled on July 13-14, 2017, the College of Science and Health & its Psychology Department hosted the 10th Biennial International Procrastination Research Conference, bringing together leading procrastination experts representing countries including; India, Turkey, South Korea, Japan, Germany, Norway, Peru, Poland, and Italy.



St Vincent dePaul Professor of Psychology and international procrastination research expert - **Dr. Joseph Ferrari** served as Conference Chair. During interviews on [WTTW](#) and [WBEZ radio](#), Dr. Ferrari explained procrastination has many factors even genetics, but we should be careful not to mistake for it for other behaviors. For example, the student who waits until the last minute to write a term paper and is described as procrastinator, in fact may simply be prioritizing. Identifying procrastination isn't so simple.

Through his ongoing collaboration with international researchers, Dr. Ferrari marshalled broad conference participation, fostering discussion of current procrastination research and identifying new opportunities that move effective approaches for procrastination research from discovery to therapeutics.

Faculty and student conference presenters provided a dynamic procrastination research program, with presentations on genetic disorders, hoarding, parenting style, arousal, time management, workplace leadership and performance, academic interventions, as well as, cognitive behavioral therapy(CBT), to name a few. Without a doubt, procrastination research bridges many disciplines. A few scholars discussed intervention strategies; for example, a researcher from The Netherlands stimulated discussion with a meta-analysis of intervention programs, reporting that time management programs have little effect. She found CBT interventions were most effective and long lasting. Also, researchers from California compared identical twins and found that there is no substantial genetic basis for procrastination. In addition, a counseling researcher from Ireland presented qualitative research capturing the varied ways procrastinators view time, and a scholar from Israel discussed life regrets across domains of procrastination. CSH students and faculty also presented posters;

"The Ecology of Procrastination and Clutter: To Keep or Not to Keep"

"Character, Context, and Cross-Over Factors: towards an Understanding of the Life of Indecisives", and

"Life-Domain Regret regarding Procrastination (LDR-P): Scale Validation in the United States."



All presenters were provided the opportunity to convert accepted papers and posters for publication in the *North American Journal of Psychology* (NAJP). The conference proceedings were also mentioned in the [New York Times](#) and [New York Magazine](#). CSH researchers like Dr. Ferrari continue to gain prominence and advance global leadership in unique fields such as procrastination, as a companion to their expertise in more well-known disciplines. This breadth of faculty expertise offers CSH students a wide choice of academic research opportunities, not only during the summer but throughout the academic year.

COLLEGE OF SCIENCE AND HEALTH SUMMER HIGHLIGHTS

National Institute of Health (NIH) Grant Awarded for Fruit Fly Study

The fruit fly *Drosophila melanogaster* is often an unwelcomed visitor during the summer months, but this research study is certainly not fly by night.



Dr. William Gilliland was awarded an NIH grant of \$368,750 to support 3 years of research studies on the Fruit Fly. This project will use the fruit fly (*Drosophila*



melanogaster) as a model system to study female meiosis.

Meiosis is the specialized cell cycle that produces eggs or sperm.

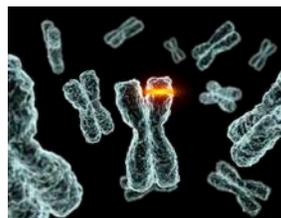
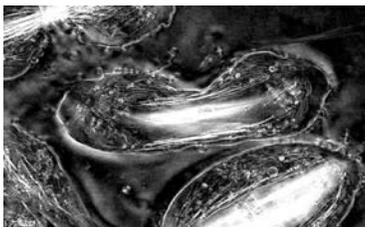
Over 90% of human aneuploidies (abnormal number of chromosomes) arise during the process of egg production, making the study of female meiosis a critical issue for human health. One step

This study is important for public health because chromosome segregation errors that occur during egg development are the single most common source of birth defects, and can cause diseases such as Down syndrome.

found in most species is **congression**, where the cell lines up its chromosomes in preparation for division. Using a technique called **RNA interference (RNAi)**, the first aim of this project is to identify genes that are required for normal congression. A collection of RNAi constructs, each targeting a single gene, will be screened to determine if they lead to defects in congression. Also this project will examine two previously identified genes - *mustard*, a component of the innate immune system required for chromosome segregation, and *nuf2*, a component of the outer kinetochore possibly important to the ooplasmic binding filaments, to determine their role in meiotic errors.

Meiosis is evolutionarily derived from the normal mitotic cell cycle, so many of the genes required for meiosis are also required for mitosis, which means that the functions of those genes are also essential for viability or fertility.

Both undergraduate and M.S. student researchers in his lab will participate in this work, as well as present their work at scientific conferences. To learn more about Dr. Gilliland and this exciting work visit http://condor.depaul.edu/wgillila/Gilliland_Lab/Lab_Home.html



The LaMontagne Lab receives 200K NSF Grant for Population Ecology Research



The National Science Foundation (NSF) awarded Assistant Professor of Ecology, **Dr. Jalene LaMontagne**, a 2 year \$200,000 grant to study *Individual variation in mast seeding patterns*. A common reproduction strategy of perennial plants is called "mast seeding", the synchronous production of highly variable seed crops by a population of plants. It occurs in a variety of species, including coniferous and deciduous trees, such as spruce, pine, and oaks. The rare and high reproduction "mast years" have cascading effects on food webs within ecosystems, as seeds are a food source for a variety of bird, mammal, and insect species.

There are a variety of hypotheses as to why this phenomenon occurs, from evolutionary responses to satiate seed predators, or to increase pollination efficiency; or it could be produced as a result of resource-matching.

Individual variation has impacts on population and community stability, and individual variation in mast

seeding has relevance to forest regeneration and higher ecological levels of organization. In this study, field data will be collected on annual cone production from ~900 white spruce trees in MI, WI, and MN, extending an existing dataset to eight years. Cones from a subset of trees will be assessed for cone size, seed number, and germination success to test fitness consequences of reproductive patterns relative to when high reproduction occurs locally. Resource allocation and mast seeding will also be examined in the context of surviving an insect attack.

Growth and reproduction of individual

trees leading up to an outbreak of spruce budworm will be measured to test if individuals that allocated energy differently from the population have a higher likelihood of survival. Recent research has shown that spruce budworm is attracted to regions where there is a mast year, and this research will address if being out of sync with the population confers an advantage to individuals.

Dr. LaMontagne and student researchers in the LaMontagne Lab will provide empirical data, new insights, and a novel approach into understanding the magnitude of individual variation and its consequences in a mast seeding system.



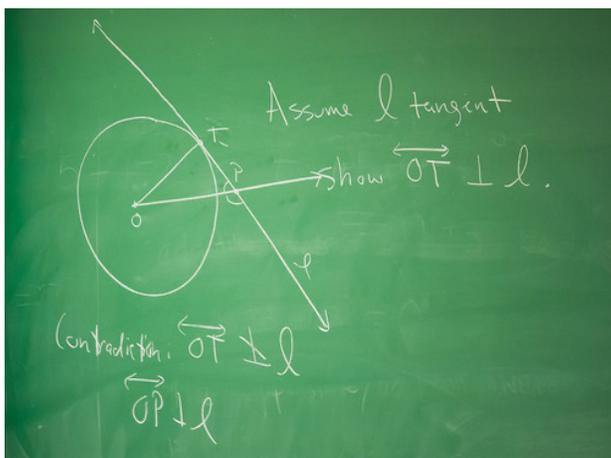
COLLEGE OF SCIENCE AND HEALTH SUMMER HIGHLIGHTS

CSH Department of Mathematical Sciences collaborated with the [Academy of Inquiry Based Learning](#) to host a four-day workshop on Inquiry Based Learning (IBL) in mathematics.

Inquiry-Based Learning (IBL) is the name for a collection of student-centered active learning techniques. A great deal of research in recent years indicates that various active learning techniques, including IBL, lead to measurably superior student outcomes for students when compared to (non-active) lecture techniques. The National Science Foundation (NSF) has provided funding support for IBL workshops to change the face of college mathematics teaching in the United States, with a \$2.8 million dollar grant.



Mathematicians, mathematics educators, and researchers are joining forces to lead inquiry-based learning workshops across the nation. **Dr. Kyle Petersen**, Associate Professor in Mathematics, hosted one such IBL workshop, June 20-23 at DePaul's Lincoln Park campus.



The DePaul IBL workshop was led by a team of four facilitators, including Dr. Petersen, Danielle Champney of Cal Poly San Luis Obispo, Gulden Karakok of the University of Northern Colorado, and Brian Katz of Augustana College. There were 26 participants representing over 20 different colleges and universities from around the US (and one from Toronto). One of the participants was Sarah Bocking-Conrad, one of the newer members of CSH and the Department of Mathematical Sciences. Participants learned about IBL techniques and philosophy through a variety of activities and videos of IBL classrooms. They also prepared materials to help implement IBL in their own classrooms at their home institutions.

Important to mathematical science and research, IBL provides a learning framework for students to create questions, gather supporting evidence, explain that evidence, connect that explanation to knowledge, and create an argument and justification for the explanation.

While feedback from the DePaul IBL workshop is preliminary (surveys and other instruments will measure outcomes over the next two years), the level of participant excitement and buy-in is highly suggestive that this summer was a great success. A highlight of the week came near the end when a panel of students who had completed IBL courses (including three from DePaul) joined the participants for lunch. Our CSH students were very articulate, both sharing the benefits of IBL and personalizing the IBL experience. CSH plans to host another workshop at DePaul University next year.

In addition to NSF funding, this event was also made possible through the support of Victoria Simek in the STEM Center, and the generosity of Dean Gerald P. Koocher.



COLLEGE OF SCIENCE AND HEALTH SUMMER HIGHLIGHTS

CSH Leadership in a National Organization and Conference



In her role as President of the Society for Community Research and Action, Division 27 of the American Psychological Association (APA), **Dr. Susan D. McMahon**, Vincent dePaul Professor, Associate Dean, and Professor of Psychology delivered her Presidential Address at the national/ International conference in Ottawa, Canada June 22, 2017 entitled, *Schools as Vehicles to Assess Experiences, Improve Outcomes, and Effect Social Change*. In this address, she identified several key issues and directions for the field of community psychology and described some of the ways in which her work has contributed to these key issues over the past 20 years. In general, her work has spanned grades K-12 in the US, focused on both at-risk populations and national samples, and has incorporated multiple perspectives across multiple levels. Dr. McMahon drew her findings from 4 projects: 1) violence prevention for at-risk African American youth; 2) teacher-directed violence; 3) school climate and neighborhood factors in relation to academic outcomes; and 4) school transitions for students with disabilities. In reviewing findings, she presented ideas to build upon community psychology theory, research, practice, and policy.

Dr. McMahon explained, "In order to maximize the effectiveness of our school-based work and to move the field forward, we need to expand our ecological focus, improve school climate, and work with schools to effect change. Our focus on schools to date has primarily been with students, and we need to expand our ecological focus to the entire school system, including students, teachers, parents, staff, administrators, school systems, and educational policies. Diverse perspectives inform our assessment and interventions and promote more effective and culturally relevant change."

There has been a resurging interest in school climate, and it is associated with many psychological, social, and academic outcomes, and yet many schools lack the climate necessary for students and teachers to feel good about their settings and excel to their potential. Context matters, so it's important to attend to it. Often too much reliance is given to individual approaches to measurement, and it can be helpful to assess contextual influences at the systems' level.

Collaborative work with schools can foster change. Dr. McMahon calls for action, "We need to translate our research into practice and share our findings in ways that teachers, administrators, parents, school districts, and policy makers can use. We have incredible opportunities to positively affect youth, teachers, and administrators, and by working through schools, we can effect social change".



SCRA
SOCIETY FOR COMMUNITY
RESEARCH AND ACTION

International Expertise



Applied abstract analysis is typically a topic embraced by only a select few, but CSH Mathematical Sciences faculty bring a new level of insight and understanding to these complex topics.

For example, **Professor Ahmed Zayed**, Department of Mathematical Sciences, gave a mini-course on “Fractional Integral Transforms and Their Applications” July 2-7, 2017 at Tallinn Technical University, Estonia. The course was sponsored by the Estonian Doctoral School of Mathematics and Mathematical Statistics, and was partially funded by the European Regional Development Fund. The course was attended by 20 Ph.D. students from Europe and the US.

The methods connected to integral transforms highlighted in his talk are very useful in mathematical analysis, particularly when applied to solving differential equations, studying special functions, and computing integrals. These integral transforms are functionally important to the applications for business, economics, and science, in particular optics and signal processing.

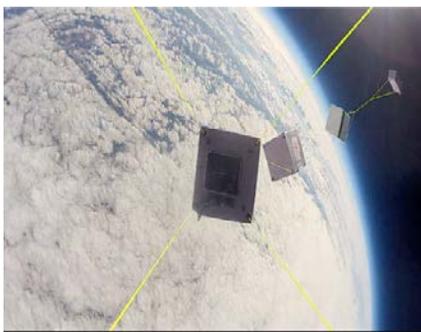
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|-------------|---|--|----------------------------|
| Impulse | $f(t) = \begin{cases} 1 & t = 0 \\ 0 & t > 0 \end{cases}$ | | 1 |
| Step | $f(t) = 1$ | | $\frac{1}{s}$ |
| Ramp | $f(t) = t$ | | $\frac{1}{s^2}$ |
| Exponential | $f(t) = e^{at}$ | | $\frac{1}{s-a}$ |
| Sine | $f(t) = \sin(\omega t)$ | | $\frac{1}{\omega^2 + s^2}$ |

A typical conference includes several levels of participation such as: a high-profile *keynote speech*, intended to be of interest to everyone at the conference; *invited speakers*, invited to give a talk by the organizers of the conference; *contributed speakers*, persons who applied for participation (and were accepted); and *poster presenters*, who present a poster instead of giving an oral talk. During the summer, Dr. Zayed delivered several types of conference presentations in multiple countries:

- 1) “A New Two-Dimensional Fractional Fourier Transform,” at the Mathematical Congress of the Americas, Montreal, Canada, July 24-28. (Invited talk)
- 2) “Sampling Theorems for Fractional Fourier Transforms and Series,” at the 12th International Conference on Sampling Theory and Applications, Tallinn, Estonia, July 3-7. (Contributed speaker)
- 3) “An Energy Concentration Problem Associated with the Special Affine Fourier Transform,” at the Munich Technical University, Munich, Germany, June 29. (Invited talk), and
- 4) “A New Two-Dimensional Fractional Fourier Transform,” International Conference on Aspects of Time-Frequency Analysis, Turin Polytechnic University, Turin, Italy, June 5-7, 2017 (Invited talk)
- 5) “Fractional Transforms and Time-Frequency Representations,” Ecole Polytechnique Federale de Lausanne, Lausanne, Switzerland, June 2, 2017. (Invited talk)

COLLEGE OF SCIENCE AND HEALTH SUMMER HIGHLIGHTS

DePaul's STEM Center and the Physics Department takes Eclipse Viewing to New Heights



An October 2016 image of Earth and instruments attached to strings from a DePaul University high altitude balloon. (Photo courtesy of Bernhard Beck-Winchatz)

High altitude ballooning is a tool of enormous promise for science education at multiple levels. While offering a platform for science and engineering research across many fields, ballooning at DePaul has been used in courses and experiences for a range of students. Undergraduate science majors, students in general education courses, K-12 students and their teachers, and M.S. students in the Science Education Program have all had the opportunity to take these courses.

Ballooning allows students to design their own experiments and send them into the unique environment of the stratosphere. Technological advances are lowering the cost of and expertise levels required to make launches and analyze data. This heightened accessibility is enabling the scientific curiosity of students and facilitating better design and building of experimental payloads.



DePaul's high altitude balloon (foreground) in the process of being released on Aug. 21, 2017 (Photo courtesy of Michaela Winchatz)

When Galileo needed a device wanted to view the stars he built a telescope. Today CSH continues that same spirit of functional discovery and systematic hands on learning.

Three DePaul faculty members, **Bernhard Beck-Winchatz** (STEM Studies/Physics), **David Jabon** (STEM Studies/Mathematics), and **Eric Landahl** (Physics) went with twelve DePaul students to Perryville, MO to experience the total eclipse on Aug. 21, 2017 and to launch a high altitude balloon with cameras and sensors to observe the eclipse from the stratosphere. DePaul students who participated were **Robert Coulson**, **Doreen Elrad**, **Noel Garcia**, **Sinead Humphrey**, **Loay Khalifa**, **Fabricio Marin**, **Eli Martin-Eberhard**, **Megan Mikota**, **Aarti Mistry**, **Brian Saboriendo**, **Samantha Smiley**, and **Krzysztof Skwirut**. The primary payload was a Controlled Heading Automation Device (CHAD) built by physics sophomore Robert Coulson, which is designed to compensate for the motion of the balloon during the ascent in order to record the motion of the Moon shadow across the Earth's surface (see <https://resources.depaul.edu/newsroom/news/pressreleases/Pages/solar-eclipse-camera-system.aspx>)



An image of the Aug. 21, 2017 eclipse taken by DePaul Physics student Fabricio Marin. (Photo courtesy of Fabricio Marin)

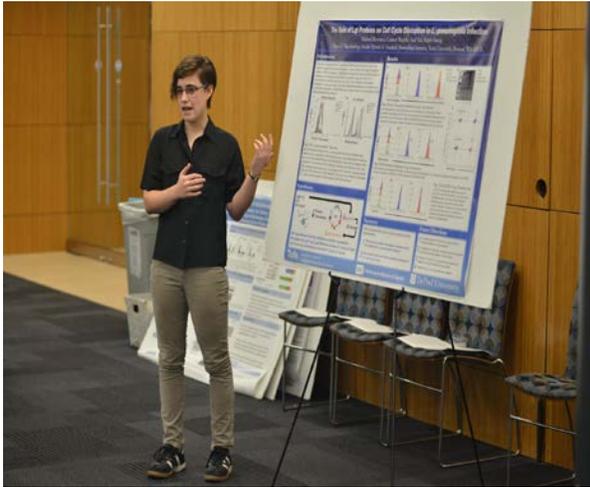
STEM – Science Technology Engineering and Mathematics Grant



The CME Group Foundation has awarded **Carolyn Narasimhan**, Director of the STEM Center in the College of Science & Health, \$200,000 for the "Elementary Math Specialist Pilot." The goal of this project is to finalize the development of the Math Specialist Program, designed to provide elementary school teachers with the knowledge, confidence, and tools for teaching mathematics to young children. A DePaul cohort of 15 Chicago Public School teachers will complete the program.

COLLEGE OF SCIENCE AND HEALTH SUMMER HIGHLIGHTS

Biology Undergraduate Student is recognized for Top Poster



Mildred Devereux, an undergraduate biology student participated in Building Diversity in Biomolecular Sciences Summer Research Program at Tufts University. She presented her research in poster form, and the judges declared her the winner! She is presenting her research at a conference as part of her award. She conducted research on Legionella pneumophila bacterial mechanisms of host cell cycle disruption. The title of her poster was "The Role of Lgt Proteins on Cell Cycle Disruption in L. pneumophila Infection".

Biology Faculty and Graduate Students Summer Publications

Tim Sparkes, Professor of Biology and one of his graduate students produced a publication:

Park, T., & Sparkes, T. C. (2017). Multidimensionality of modification in an isopod-acanthocephalan system. *Frontiers in Ecology and Evolution*, 5, 103.

Margaret Silliker, Professor of Biology worked with two collaborators to produce a book chapter:

Walker, L. M., Hoppe, T., Silliker, M. E. (2017). Molecular Techniques and Current Research Approaches, In C. Alvarado & S. Stephenson (Eds.), *Myxomycetes: Biology, Systematics, Biogeography and Ecology*, (145-174). Imprint: Academic Press.

New Student Advising

The Office of Advising and Student Services (OASS) coordinated advising for over 500 incoming first-year students during 11 Premiere DePaul programs, and approximately 150 transfer students during six Transition DePaul programs. CSH Associate Deans hosted Premiere DePaul academic presentations for incoming CSH students and their parents. Among the over 500 incoming first-year students are 120 new Pathways Honors students – making up almost 25% of the first-year class. This is a record number for a Pathways Honors cohort, exceeding the size of last year's incoming cohort by 25%.

OASS also launched DePaul's first college-wide online new graduate student orientation. Recognizing that graduate students have prior college experience and many outside commitments, the virtual orientation focuses on what is unique about DePaul and being a graduate student in the CSH. The scope of the orientation covers an overview of the DePaul community, college policies, procedures, and deadlines, as well as, academic resources, and student services. Over 130 new CSH graduate students will experience this new orientation format in early September. The orientation may be revisited by the student, as needed, 24/7.

The Way That We Go: Studying Abroad in Ireland's National Parks



Remarks by **Liam Heneghan, Ph.D.**, Professor and Department Chair
Environmental Science and Studies

"The way that I went," wrote Irish naturalist Robert Lloyd Praeger in his 1937 book of that name "was an Irish way, with extraorbital aberrations, especially in later years, to the extent of a thousand or fifteen hundred miles. It was from the beginning a way of flowers and stones and beasts." More than eighty years after the publication of Praeger's classic account of Irish natural history, Hugh Bartling in the Department of Public Policy Studies and I follow Praeger in our study abroad trip to Ireland's wildest places.

In following Praeger, we hike through four distinct regions in Ireland: the Wicklow Highlands, Connemara, the Burren, and the Kerry Highlands. We also travel by ferry to Inishmore, the largest of the Aran Islands and cycle along its rugged coastline. Each area is ecologically distinct, exemplifying a particular aspect of Ireland's natural legacy, and each is the location of a National Park, which form the focal points of the study-abroad trip. In Ireland, areas of preserved landscapes also overlap with those where traditional culture is preserved. Thus, students have a rich cultural experience as we hike throughout the country. They even learn a few tunes on the Irish tin whistle!

Examining the overlap of culture and landscape in the Irish National Parks is instructive to students since it illustrates that beautiful and biodiverse systems can be found even when human use of nature has persisted for millennia. Little, if any, of Ireland's ecosystems are pure wilderness, in the sense of being remote from the influence of people. In an increasingly humanized world, learning to sustain people and nature simultaneously is a priority. Thus, the trip to Ireland offers optimistic models for the designing a sustainable future to those students following in Praeger's footsteps.

An essay on this study abroad trip is appears in Aeon Magazine <https://aeon.co/ideas/we-have-a-new-word-for-that-feeling-when-travel-makes-everything-new>.

Spain: Research Experience - From Atoms to Ecosystems, Science is Global

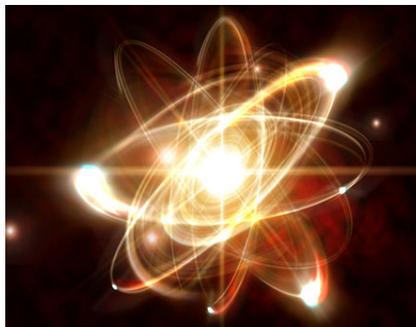


Dr. Kyle Grice (Assistant Professor, Chemistry) and **Dr. Jason Bystriansky** (Associate Professor, Biological Sciences) designed and led a research study abroad experience in Spain for CSH students. In order to participate, students enrolled in Spring quarter classes to learn about the chemistry and biology research, techniques, and methods that they would use in Cadiz. Students developed their own research projects to carry out in Cadiz, based on primary literature and the available resources at DePaul and Cadiz.



The University of Cadiz is noted for its marine sciences expertise. In particular, it actively participates in the Campus of International Excellence of the Sea and the Agrifood Campus of International Excellence. CSH students spent two weeks at the Universidad de Cadiz conducting research in laboratories and at field sites at the San Pedro River. Their research included studying how gold nanoparticles affected the health of aquatic organisms, examining biodiversity of phytoplankton, assessing aquatic metabolism through respirometry, and analysis of lead in aquatic organisms. Students learned a wide variety of research skills, carried out projects of their design, and had a very rich cultural experience.

COLLEGE OF SCIENCE AND HEALTH 2017-2018 COMMITTEE APPOINTMENTS



Graduate Directors Committee

Donna Badowski – Nursing
Jeffery Bergen - Mathematics
Jocelyn Carter – Psychology
Jerry Cleland - Psychology
Pablo Gomez – Psychology
Ronald Graf - Nursing
Desale Habtzghi – Mathematics
Jane Halpert – Psychology
Barb Harris - Nursing
Yevgenia Kashina - Mathematics
Eric Landahl - Physics
Susan McMahon – Psychology (Committee Co-Chair)
Lynn Narasimhan – STEM
Michael Roberts – CSH Academic Services (Committee Co-Chair)
Bernadette Sánchez - Psychology
Quinetta Shelby – Chemistry
Tim Sparkes – Biology
Roxanne Spurlark - Nursing
Ilie Ugarcovici - Mathematics

International Committee

Phillip Funk – Biology
Lihua Jin – Chemistry
Young-Me Lee – Nursing
Yan Li – Psychology (Committee Chair)
Antonio Polo - Psychology
Cecilia Martinez-Torteya – Psychology

Pathways Honors Committee

Lindsey Burdick – CSH Advising
Phillip Funk – Biology
Barbara Harris – Nursing
Caitlin Karver – Chemistry
Joseph Mikels – Psychology
Lourdes Molina de Mesa – Health Science
Michael Roberts – CSH Academic Services

COLLEGE OF SCIENCE AND HEALTH 2017 -2018 COMMITTEE APPOINTMENTS

Personnel Committee

- Kim Amer – Nursing
- Christopher Goedde – Physics
- Lihua Jin – Chemistry
- Yevgenia Kashina – Mathematics
- Bernadette Sánchez – Psychology
- Kenshu Shimada – Environmental Science
- Timothy Sparks – Biology (Committee Chair)
- Bridget Tenner - Mathematics

Pre-Health Advising Committee

- Justine Amato – Biology
- Linsey Burdick – CSH Advising
- Jocelyn Carter – Psychology
- Sarah Connolly – Health Science
- Phillip Funk – Biology (Committee Co-Chair)
- William Gilliland – Biology
- Caitlin Karver – Chemistry
- Hung-Chih Ku – Mathematics
- Karen Larimer – Nursing
- Hilarie Longnecker – Career Center Advising
- Joseph Mikels – Psychology
- Kitty Muto - CSH Advising
- Eric Norstrom – Biology
- Michael Roberts – CSH Academic Services (Committee Co-Chair)
- Heather Sevenser – Health Science
- Paul Vadola – Chemistry

Research and Faculty Development Committee

- Joanna Brooke – Biology
- Douglas Bruce – Health Science
- Lihua Jin – Chemistry
- Christie Klimas – Environmental Science
- Barbara Harris – Nursing
- Christopher Goedde – Physics
- Christine Reyna – Psychology
- Susan McMahon – Psychology (Committee Chair)



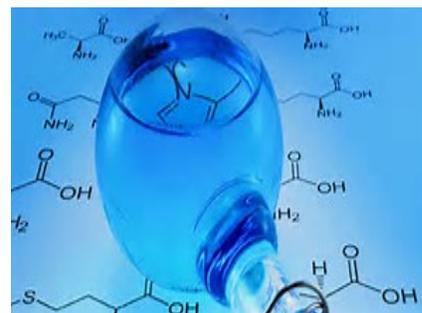
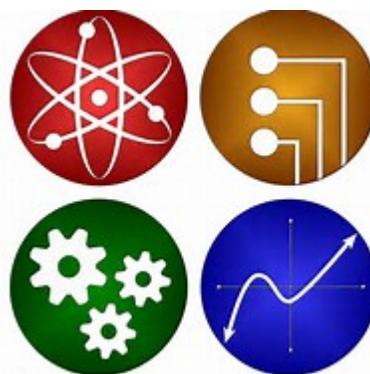
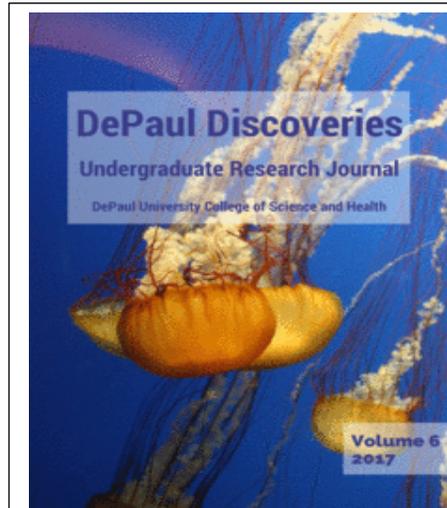
COLLEGE OF SCIENCE AND HEALTH 2017 -2018 COMMITTEE APPOINTMENTS

Teaching and Learning Committee

Craig Klugman – Health Science
Graham Griffin – Chemistry
Joseph Tariman – Nursing
Michele McCay – Health Science
Kashica Webber-Ritchey – Nursing
David Jabon – STEM Studies
Ruben Parra – Chemistry

The DePaul Discoveries Editorial Board

Joanna Brooke - Biological Sciences
Douglas Bruce - Health Sciences
Gabriela Gonzalez Aviles -Physics
Kyle Grice – Chemistry
Susan McMahon – Psychology (Editor-In- Chief)
Mark Potosnak - Environmental Sciences and Studies
Bridget Tenner – Mathematics
Cecilia Martinez-Torteya - Psychology



CSH Promotion and Tenure

Douglas Bruce (Health Sciences), promoted to Associate Professor with tenure
Jason Bystriansky (Biological Sciences), promoted to Associate Professor with tenure
Verena Graupmann (Psychology), promoted to Associate Professor with tenure
Caitlin Karver (Chemistry), promoted to Associate Professor with tenure
Suzanne Bell (Psychology) promoted to Full Professor
Joanna Brooke (Biological Sciences) promoted to Full Professor
Bridget Tenner (Mathematical Sciences) promoted to Full Professor
Sandra Virtue (Psychology) promoted to Full Professor

Induction into the Society of Saint Vincent de Paul Professors

The Society of Saint Vincent de Paul Professors is an organization of professors who have distinguished themselves within a family of distinguished teachers and scholars. The members of the Society commit themselves to service projects that support the university's mission.



Jocelyn Carter is an Associate Professor of Clinical Child Psychology and serves as the Director of Clinical Training for the doctoral program in clinical psychology. Dr. Carter's research focuses on understanding the contextual and individual factors that contribute to health disparities in health outcomes in children and adolescents. National rates of childhood obesity have declines in recent years, but the data continue to show that ethnic minority youth have higher rates of obesity than European American youth and that prevalence is still increasing in this population. Dr. Carter conducted two prevention studies to identify mechanisms for reducing the obesity epidemic in this population. During her time at DePaul University, Dr. Carter has published over 20 peer-review articles and has served on numerous university, college, and department committees. She has recently also taken on leadership positions in the Society of Pediatric Psychology and serves as an editor for *Collabra: Psychology*.



Bernadette Sánchez is a Professor of Community Psychology. Dr. Sánchez is an expert on the role of mentoring relationships in the positive development of urban, low-income adolescents of color. Her research is on the role of formal and informal relationships in youth's educational experiences, and she also investigates the resilience of marginalized youth and racial and ethnic processes, such as racial discrimination and racial/ethnic identity, in adolescent development. She has over 40 publications and 100 presentations. She authored literature reviews on the role of race, ethnicity, and culture in youth mentoring for the first and second editions of the leading scholarly handbook on youth mentoring. She recently received a Distinguished Fellow Award from the William T. Grant Foundation, and also has received research funding from the National Institute of Child Health and Human Development (NICHD). Dr. Sánchez is a member of the Research Board for the National Mentoring Resource Center, received the 2014 Ethnic Minority Mentoring Award from the Society for Community Research and Action (SCRA) and is a SCRA Fellow.

COLLEGE OF SCIENCE AND HEALTH – UNIVERSITY RECOGNITIONS

Spirit of DePaul Award

The purpose of the Spirit of DePaul Award is to highlight institutional Vincentian values and their relation to the achievement of DePaul's mission, and to personally honor and recognize members of the DePaul community for their leadership and service in the spirit of Saint Vincent DePaul.

Staff Quality Service Award

The Staff Quality Service Award is designed to recognize staff members whose work and job-related accomplishments set the quality standard for service at the university.

Congratulations to **Heather Sevenser**, from the Department of Health Science, Advising and Student Services, who received the Staff Quality Service Award.



Congratulations to **Darren S. Davis**, from the Office of Advising and Student Services, who received the Spirit of DePaul Award.

Gerald Paetsch Academic Advising Award

Academic advising has long been recognized as a critical contributor to student success and, here at DePaul, as a natural extension of our commitment to Vincentian personalism. As a reflection of our commitment, the university established the Gerald Paetsch Academic Advising Award in 2005, in recognition of university community members who demonstrate excellence in advising undergraduate and graduate students.



Congratulations to **Theresa Luhrs, Ph.D**, Director of Undergraduate Studies in the Department of Psychology, who received the Gerald Paetsch Academic Advising Award.

COLLEGE OF SCIENCE AND HEALTH – NEW ROLES NEW FACES

Amanda Copeland (Office of the Dean) Business Coordinator



Amanda was promoted to Business Coordinator after serving the OOTD as an Administrative Assistant for a year. She has successfully tackled projects of increasing difficulty and complexity, and has been a significant resource to the Dean's office. Prior coming to DePaul she worked for 4 years in office administrative & university settings in roles that included budget accountability. Her strong attention to detail, communication style, and DePaul experience make her ideally suited for this role.

Jennifer Salazar (Advising) Assistant Director of Undergraduate Advising and Research.



We are pleased to welcome Jennifer Salazar as our new Assistant Director of Undergraduate Advising and Research in the College of Science and Health. Jennifer will advise CSH students on course selection and planning, research and internships, graduation, and much more! She will be responsible for planning, coordinating, and evaluating the logistics for donor funded research programs. In addition, she will be facilitating workshops, events, and programs to include the undergraduate CSH Honors Celebration. Jennifer is an alumna of DePaul and CSH.

She graduated in 2013 with a Bachelor of Arts in Psychology. She has a great deal of event planning experience through AmeriCorps and as a program coordinator for Waukegan Township. Jennifer was responsible for supervising, training, and mentoring all student interns, both high school and college level, in her previous position. She has helped to coordinate multiple student events, programming, and scholarships. She also worked as a student assistant at DePaul for all four years of her undergraduate career so she is very familiar with the University.

She is looking forward to helping students achieve exactly what they want out of DePaul and to support them towards meeting their career goals. Jennifer is looking into DePaul's Public Service Management program as well as the Educational Leadership program.

Kurtis Todd (Office of the Dean) Executive Assistant to the Dean



We have found an excellent person to take over the position of Executive Assistant to the Dean, Kurtis Todd. Since 1998 Kurtis served as the senior on-site administrator and has managed multiple suburban campuses for DePaul (Lake Forrest, Rolling Meadows, O'Hare, and Naperville). During this time he worked closely with many local community, university, business, and government leaders. He has also designed and taught on ground and online courses in data base design, applied management information systems, and data mining, as an adjunct faculty member in the School for New Learning. In addition to a BS in chemistry from St. Joseph's

University (Philadelphia) and several research publications, he is almost a "triple Demon", with 2 MS degrees from DePaul (business information technology and computer information and network security) and is completing an MBA concentrating in finance and accountancy. Kurtis will rapidly become a valuable asset to the CSH team, and he looks forward to contributing in the Dean's Office and supporting faculty.

COLLEGE OF SCIENCE AND HEALTH – DONOR FUNDED RESEARCH

The Grace Peterson Nursing Research Colloquium

Nursing, as a patient care profession is typically not top of mind as a research area, but nursing research is very vibrant and critically important to the profession. The Grace Peterson Nursing Research Colloquium showcases exceptional student research from the DePaul University School of Nursing. Funding for the Colloquium was provided by a scholarship from Grace Peterson, MA, RN, to support student and faculty research. The colloquium featured poster presentations as well as a small number of oral presentations, chosen by a committee of faculty members as outstanding representations of nursing student research.



Presiding on August 18, 2017, over this summer's colloquium was **Shannon Simonovich, Assistant Professor, PhD, RN**. At the colloquium nursing students presented oral and poster research presentations covering a wide variety of topics. A common thread among the presentations was an attention to the research implications to nursing and potential future research. Some of the research incorporated advanced key word literature search techniques for data gathering and integrated review analysis.

An audience of students, faculty, family, and the community heard student oral presentations on the following topics:

Wendy Clayton, *"The Nurse's Role in Overcoming Barriers to Cancer Screening of African Americans."*

Pamela Katz, *"Development and Testing of Cancer Treatment Shared Decision Making Scale for Nurses."*

Brittany Knipp, *"Personality Traits, Perceived Stress, and Coping Mechanisms of Emergency Department Nurses."*

Emily Miller, *"Barriers to Medication-Assisted Opioid Recovery: An Integrative Review of Literature."*

Paige Robbins, *"Effects of Neurofeedback Therapy on Patients with Traumatic Brain Injuries."*

Elizabeth Ross, *"Psychological & Psychosocial Deficits Among Pediatric Survivors of Hematological Neoplasms."*

A full list of all students' abstracts and posters can be found at <http://via.library.depaul.edu/nursing-colloquium/>.



COLLEGE OF SCIENCE AND HEALTH – DONOR FUNDED RESEARCH

Deans Undergraduate Fellowship Recipients at Work

The Dean's Undergraduate Fellowship is a donor funded, 10-week paid summer research internship program for undergraduate students in the College of Science and Health. Fellows selected for the program are placed in Chicago-area sites to participate in research projects over the summer of 2017. Support for CSH fellowship students is always welcome - to participate visit <https://alumni.depaul.edu/GiveNow?id=1242>.

This summer CSH students conducted research at 13 world-class institutions, such as Argonne National Lab, Field Museum, Peggy Notebaert Nature Museum, and Shedd Aquarium. The quality of these fellowships is made possible, in part, through site visits by CSH Advising staff like Jennifer Salazar, who spend considerable time communicating with the Fellows and their site supervisors to ensure everyone involved was having meaningful experiences.



2017 Deans Undergraduate Fellowship

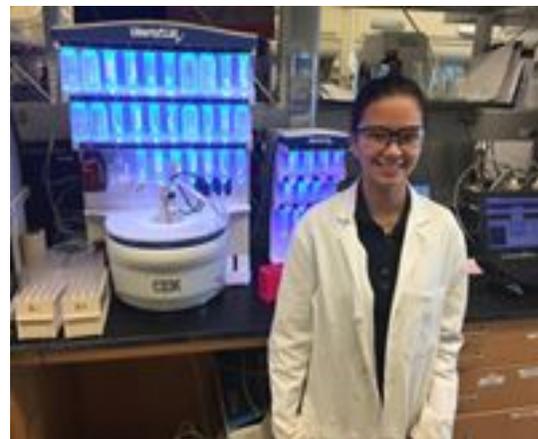
Completely Donor Funded!

\$36,627

Total awarded for 13 academic research projects



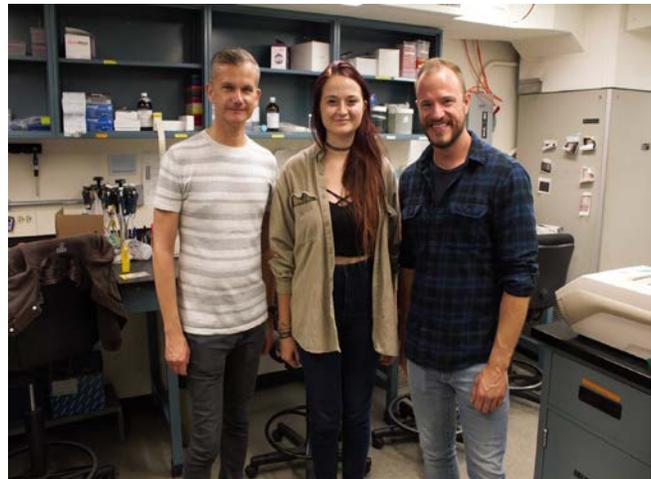
Gabrielle is an incoming senior majoring in Biology with a minor in Chemistry. She is currently conducting research with Dr. Mark Karver, the Director of the Northwestern University Peptide Synthesis Core.



COLLEGE OF SCIENCE AND HEALTH – DONOR FUNDED RESEARCH

Deans Undergraduate Fellowship Recipients at Work

Here we have Kirby, a BIO major, working with Dr. Thorston Lumbsch & Todd Widhelm in the Pritzker DNA lab at the The Field Museum. Kirby has been working on DNA extraction, amplification, and sequencing of lichens.

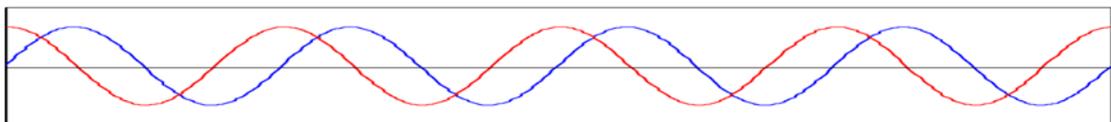


COLLEGE OF SCIENCE AND HEALTH – DONOR FUNDED RESEARCH

Deans Undergraduate Fellowship Recipients at Work



Eleanor, a Mathematical Sciences major has spent her summer at [The Adler Planetarium](#) with Dr. Geza Gyuk working on coding a GPS system to track high-altitude balloon missions with the Far Horizons project. Their goal this summer is to get a 360 visual of the eclipse using the balloon launches.

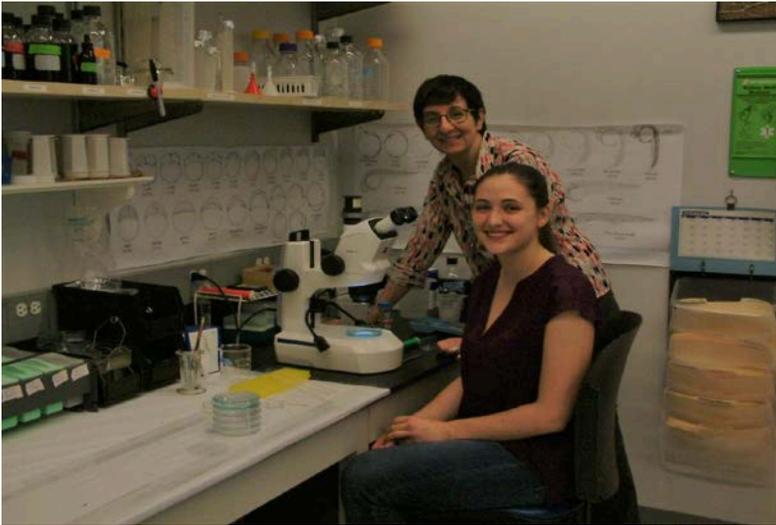


Martha, an Environmental Sciences major is working with Dr. Allen Lawrence at the [Peggy Notebaert Nature Museum](#). They are working on butterfly monitoring surveys and helping with the re-population of specific butterfly species.



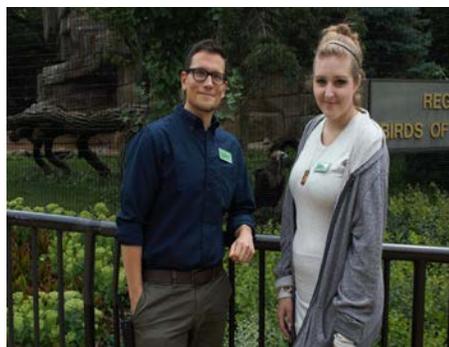
COLLEGE OF SCIENCE AND HEALTH – DONOR FUNDED RESEARCH

Deans Undergraduate Fellowship Recipients at Work



Torin, a Health Science senior is conducting research for Dr. Antipova, working with X-ray microscopy at [Argonne National Laboratory](#).

Meghan is currently doing research with zebra fish at our very own DePaul University with Dr. LeClair in the [DePaul Department of Biological Sciences](#)



Tasha, a Biological science major is helping Dr. Jason Wark track and observe animal behavior for the ZooMonitor software app at the [Lincoln Park Zoo](#). She's spent most of her time observing Eva, a golden lion tamarin. However, her favorite animal is Bruno, the 30 year old cinereous vulture!



COLLEGE OF SCIENCE AND HEALTH – FACULTY SUMMER RESEARCH GRANTS

MARGARET BELL, ASSISTANT PROFESSOR, BIOLOGICAL SCIENCES

EFFECTS OF AN ENVIRONMENTAL CONTAMINANT (PCBS) ON IMMUNE REACTIONS IN THE BRAIN

MOLLY BROWN, ASSISTANT PROFESSOR, PSYCHOLOGY

HOUSING OUTCOMES, TENANT SATISFACTION, AND COMMUNITY INTEGRATION IN SINGLE-SITE AND SCATTERED-SITE HOUSING FIRST MODELS: A RANDOMIZED TRIAL

JOANNA BUSCEMI, ASSISTANT PROFESSOR, PSYCHOLOGY

THE ROLE OF FOOD REINFORCEMENT IN THE EFFICACY OF A “SMARTER LUNCHROOM” INTERVENTION

BALA CHAUDHARY, ASSISTANT PROFESSOR, ENVIRONMENTAL SCIENCE AND STUDIES

MAXIMIZING ECOSYSTEM SERVICES OF URBAN GREEN ROOFS WITH MYCORRHIZAL FUNGI

STANLEY COHN, PROFESSOR, BIOLOGICAL SCIENCES

INVESTIGATION OF INTER-SPECIES EFFECTS ON MODULATION OF DIATOM MOTILITY

EIRON CUDABACK, ASSISTANT PROFESSOR, HEALTH SCIENCES

THE ROLE OF APOE IN EXPERIMENTAL MS

JOHN V. DEAN, PROFESSOR, BIOLOGICAL SCIENCES

THE VACUOLAR TRANSPORT OF FLAVONOIDS BY PLANT CELL MATE TRANSPORTERS

TIMOTHY FRENCH, ASSISTANT PROFESSOR, CHEMISTRY

ASSESSMENT OF AN INNOVATIVE COURSE IN SCIENTIFIC WRITING AND COMMUNICATION

WILLIAM D. GILLILAND, ASSOCIATE PROFESSOR, BIOLOGICAL SCIENCES

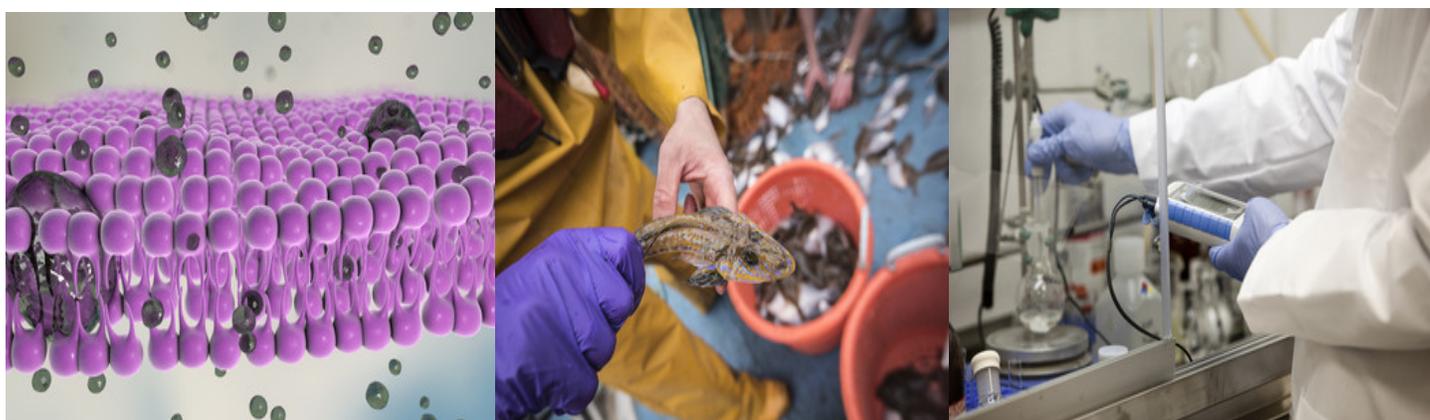
DOES THE *_MTD_* GENE REGULATE RECOMBINATION IN DROSOPHILA?

VERENA GRAUPMANN, ASSOCIATE PROFESSOR, PSYCHOLOGY

EMOTION REGULATORY MECHANISMS INVOLVED IN CULTURE-BASED COPING WITH DEATH AWARENESS

CHRISTIE KLIMAS, ASSISTANT PROFESSOR, ENVIRONMENTAL SCIENCE AND STUDIES

EXPLORING THE ENVIRONMENTAL IMPACT OF HOLIDAY GIFT PURCHASES



COLLEGE OF SCIENCE AND HEALTH – FACULTY SUMMER RESEARCH GRANTS

ERIC LANDAHL, ASSOCIATE
PROFESSOR, PHYSICS

TOWARDS A MOLECULAR MECHANISM OF PARKINSON'S DISEASE

YIOU LI, ASSISTANT PROFESSOR,
MATHEMATICAL SCIENCES

ROBUST DESIGN OF GENERALIZED LINEAR MODEL

CECILIA MARTINEZ-TORTEYA,
ASSISTANT PROFESSOR, PSYCHOLOGY

EMOTION REGULATION DEFICITS ASSOCIATED WITH EARLY TRAUMA
AMONG LOW-INCOME, MINORITY PRESCHOOLERS

CHRISTINE REYNA, PROFESSOR,
PSYCHOLOGY

POLICE DECISION MAKING AND USE OF FORCE UNDER STEREOTYPE
THREAT

CHARLES M RUBERT PÉREZ, ASSISTANT
PROFESSOR, CHEMISTRY

DEVELOPMENT OF PEPTIDE-BASED SUPRAMOLECULAR POLYMERS AS
BIOMATERIALS FOR REGENERATIVE MEDICINE.

ANNE SAW, ASSISTANT PROFESSOR,
PSYCHOLOGY

REACHING CALIFORNIA MEDICAID ASIAN PACIFIC ISLANDER
AMERICAN SMOKERS: THE MEDICAL INCENTIVES TO QUIT SMOKING
PROJECT

ANUJ P. SARMA, ASSOCIATE
PROFESSOR, PHYSICS

OBSERVATION OF METHANOL MASERS IN HIGH MASS STAR FORMING
REGIONS

TIMOTHY SPARKES, PROFESSOR,
BIOLOGICAL SCIENCES

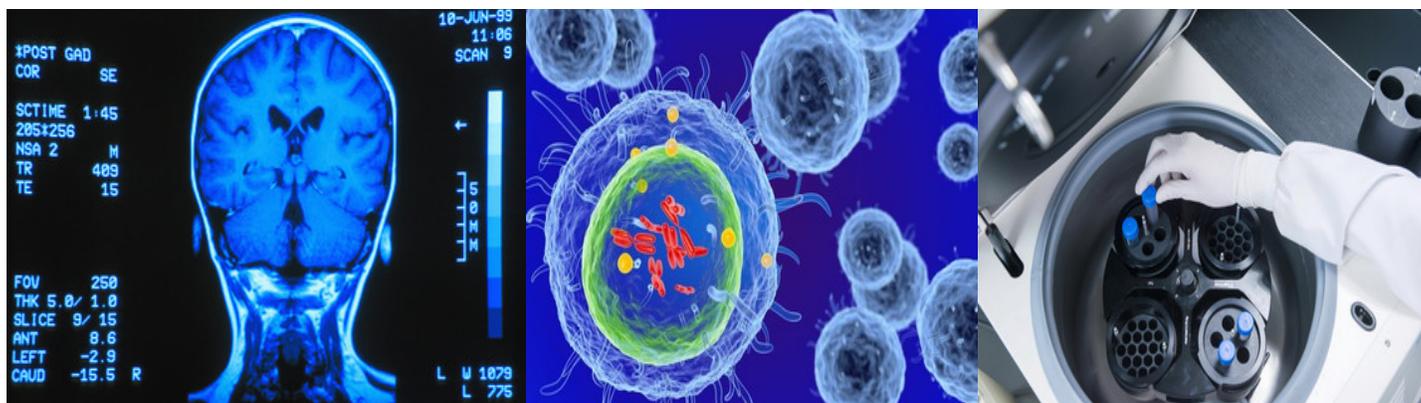
COMPARATIVE ANALYSIS OF HOST-PARASITE DYNAMICS

DAVID SHER, ASSISTANT PROFESSOR,
MATHEMATICAL SCIENCES

AN ASYMPTOTIC FORMULA FOR SLOSHING FREQUENCIES

SANDRA VIRTUE, PROFESSOR,
PSYCHOLOGY

HEMISPHERIC PROCESSING OF METAPHORS: THE ROLE OF
BACKGROUND KNOWLEDGE



COLLEGE OF SCIENCE AND HEALTH – UPCOMING EVENTS AND CALENDAR

- September 22** **Mathematics Department Colloquium** featuring Sara Billey (University of Washington),
“Reduced words and a formula of Macdonald”, 3:30pm [Levan Center 201](#)

New Faculty Seminar Plus 3:00 pm – 4:15 pm, MCGS 402
- September 25** Online elections begin for Workplace Environment Committee (WEC)
- September 29** **Mathematics Department Colloquium** featuring Ryan Kinser (University of Iowa)
“Matrix problems and quiver representations”, 3:30pm [Levan Center 201](#)
- October 4** DePaul University President, A. Gabriel Esteban, PhD visits CSH, 11am - 5pm
CSH Autumn Quarter College Meeting, McGowan South 105, 2:30pm – 5:00 pm
This meeting will feature:
- College updates from the Dean, Gerald P. Koocher, PhD
 - Budget updates from Executive Vice President, Jeffrey Bethke,
 - Q &A with DePaul University President, A. Gabriel Esteban, PhD, as well as,
 - Mid-Career Excellence in Research Presentation from, Suzanne Bell, PhD.
- October 6** Undergraduate Research Showcase abstracts & registration due
- October 7** DePaul University’s TRIO and Center for Access and Attainment, in conjunction with Chicago area TRIO college access programs and the Council for Opportunity in Education (COE), will host a **STEM Fair at DePaul University**. This initiative is to introduce our growing population of low-income and first-generation youth to careers in STEM fields. We anticipate 400-500 low-income and minority high school students participating in TRIO college access programs (sponsored by 29 colleges and community agencies) will be visiting DePaul. There will be a resource fair, campus tours, and presentations. We will showcase CSH for these visiting students! 9:30 am to 4:00 pm Levan Center
- October 11** Undergraduate Research Assistant Program (URAP) Winter and Spring 2018 applications due

COLLEGE OF SCIENCE AND HEALTH – UPCOMING EVENTS AND CALENDAR

October 14 CSH Family Weekend, McGowan South Atrium, 12:30pm – 3:00pm

October 27 **Mathematics Department Colloquium** featuring Eric Weber (Iowa State University), 3:30pm
“A Gentle Introduction to the Kaczmarz Algorithm” 3:30pm [Levan Center 201](#)

November 1 Faculty Summer 2018 Research Grant (FSRG) applications due
Graduate Research Fund (GRF) Deadline

November 3 Undergraduate Research Showcase, [McGowan South](#), 12:00pm-5:00 pm

The Science and Mathematics Undergraduate Research Showcase is an annual event open to undergraduates conducting research in the natural sciences, mathematics, technology and computer science, geography, and anthropology. DePaul students from across the university, family members, employers, internship recruiters, faculty, prospective students, and young scientists are all welcome.

November 17 [The Grace Peterson Nursing Research Colloquium](#) 9:30am-11:30am
School of Nursing Honors and Pinning Ceremony 3pm- 4:30pm
Lincoln Park Student Center, room 120

December 1 Diversity Faculty Fellowship applications due

Thank you to all contributors to this newsletter!

If you have an idea for features, honors, awards, events, and/or news items that you would like considered, please send them to CSHDean@depaul.edu, or contact the CSH Newsletter Publication Editors [Kurtis Todd](#) and [Susan McMahon](#).



COLLEGE OF
SCIENCE AND
HEALTH

Summer 2017 Newsletter