

CELEBRATING

FACULTY AND STUDENT-FACULTY SCHOLARSHIP 2017-2018



MARYMOUNT
UNIVERSITY

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SUMMER RESEARCH: A MARYMOUNT DISTINCTIVE

Marymount's DISCOVER Research Center regularly funds 10 to 15 summer research grants for students to work with a faculty mentor on a research project or creative endeavor. Students are encouraged to take initiative by finding a subject of interest and/or a faculty member pursuing a particular topic and applying for the \$1,000 stipend and possibility of room and board.



Please join us in celebrating the impressive accomplishments of our Marymount faculty. This report documents the many books, journal articles, external conference presentations, and external grants and awards of our faculty during the 2017-2018 academic year. The report also provides the 'stories' behind a few representative projects. We wish we could provide the stories behind every work cited in this document. But, know there are similar stories of outstanding dedication, disciplinary excellence and intellectual vitality behind each and every scholarly work listed in this report.

The works of the Marymount faculty span a broad and diverse range of topics, including health and wellness, cybersecurity, humanities, emerging technologies, literature, history, politics, communication and philosophy/theology, just to name a few. Faculty have presented their work at conferences across the United States as well as in South Africa, Australia, Ireland, Canada, Mexico, United Kingdom and the Netherlands. Faculty have worked with students in 25 different summer research projects.

These accomplishments enrich the academic life of Marymount University and the learning experiences and opportunities of our students. Our students, as active participants with faculty in the creation of knowledge, art and innovation, are well-equipped to excel in their professions and to contribute to their communities.

We hope you will take a few minutes to review the achievements of Marymount's faculty. These faculty members are truly accomplished and dedicated scholars and teachers.

Enjoy,

Rita Wong Ed.D., P.T., F.A.P.T.A.
Associate Provost, Research and Graduate Education

Jeanne Matthews, Ph.D., R.N.
Interim Provost and Vice President for Academic Affairs



BOOKS AND CHAPTERS IN BOOKS

| Names in **bold type** are Marymount faculty members.

Bosson, J., Vandello, J. & **Buckner, C.** (2018). *The Psychology of Sex and Gender*. Thousand Oaks, CA: SAGE.

Christie, L. & Dubrowski, K.* (2018). "Turnover, Trust, and Communication: Worldwide Education Initiative Case Study." In Dey, A. & Thatchenkery, T. (Eds.), *Leveraging Human Resources for Humanizing Management Practices and Fostering Entrepreneurship* (pp. 117-127). New Delhi, India: Bloomsbury.

Cote-Reilly, L. & Bornstein, M. (2018). "Specialization, Coordination, and Developmental Sequelae of Mother-Infant Person- and Object-Directed Interactions in U.S. American Immigrant Families." In Chuang, S. & Costigan, C. (Eds.), *Parental Roles and Relationships in Immigrant Families: an International Approach* (pp. 91-109). New York, NY: Springer.

Flanagan, B. (2017). "Ecclesial Holiness and Guilt: Insights from Liturgical Theology." In Enxing, J. & Peetz, K. (Eds.), *Constitutio: Annäherungen an Schuld, Scham Und Reue* (pp. 259-265). Leipzig, Germany: Evangelische Verlagsanstalt Leipzig.

Garces-Foley, K. (2018). "Emerging Adult Catholics and Parish Engagement." In Day, M. (Ed.), *Young Adult American Catholics Explaining Vocation*. Mahwah, NJ: Paulist Press.

Hargreaves-Cormany, H. (2018). "Animal Cruelty Offenders." In Van Hasselt, V., Vincent, B. & Michael, L. (Eds.), *Handbook of Behavioral Criminology* (pp. 81-95). Cham, Switzerland: Springer International Publishing.

Hargreaves-Cormany, H., Hoffer, T., Meloy, J. & Muirhead, Y. (2018). *Violence in Animal Cruelty Offenders*. Cham, Switzerland: Springer International Publishing.

*denotes Marymount University student

Lado, A. & Wright, A.* (2017). "Practical Language Learning Strategies That Increase Science Learning and Engagement." In De Oliviera, L. & Wilcox, K. (Eds.), *Teaching Science to English Language Learners: Preparing Pre-Service and In-Service Teachers* (pp. 191-218). Cham, Switzerland: Palgrave/Macmillan.

Liu, X. (2018). "The Cyber Acumen: an Integrative Framework to Understand Average Users' Decision Making Processes in Cybersecurity." In Zheng, Y. (Ed.), *Analyzing Human Behavior in Cyberspace* (pp. 192-208). Hershey, PA: IGI Global.

Matthews-DeNatale, G., Blevins-Bohanan, S., Rothwell, C. & **Wehlburg, C.** (2017). "Redesigning Learning: Eportfolios in Support of Reflective Growth within Individuals and Organizations." In Batson, T., Rhodes, T., Watson, C. & Chen, H. (Eds.), *Field Guide to Eportfolio* (pp. 14-24). Washington, TX: AAC&U.

Sachs, C. (2018). "Speculative Materialism or Pragmatic Naturalism: Sellars Contra Meillassoux." In Gironi, F. (Ed.), *The Legacy of Kant in Sellars and Meillassoux* (pp. 85-105). New York, NY: Routledge.

Sachs, C. (2018). "Sellars's Pragmatist Distinction between Signifying and Picturing." In Nunziante, A. & Corti, L. (Eds.), *Sellars and the History of Modern Philosophy* (pp. 157-177). New York, NY: Routledge.

Sachs, C. (2018). "Discursive Intentionality as Embodied Coping." In Svec, O. & Capek, J. (Eds.), *Pragmatic Perspectives in Phenomenology* (pp. 87-102). New York, NY: Routledge.

Singer, S., Bloom-Pojar, R., Dubriwny, T., Kinney, T., **McFarlane, M.**, Murawski, C., Edwell, J. & Jensen, R. (2018). "Reevaluating Our Commitments: Intersectionality, Interdisciplinarity, and the Future of Feminist Rhetoric." In Rice, J., Graham, C. & Detweiler, E. (Eds.), *Rhetoric's Change/Rhetoric's Change* (pp. 1-12). Anderson, SC: Parlor Press.

Tichenor, C. (2018). "The Mythical Lines of Code Metric: a Form of Moral Hazard." In Bagwell, T., Cropf, R. & Foster-Gadkari, S. (Eds.), *Information Technology as a Facilitator of Social Processes in Project Management and Collaborative Work* (pp. 124-143). Hershey, PA: IGI Global.

Todd, L., Myers, A. & Lauriello, A. (2018). "The Use of Online Information Retrieval in Telephone Triage: Professional Resources and Social Media." In Long, V. & McMullen, P. (Eds.), *Telephone Triage for Obstetrics & Gynecology* (pp. 34-44). Philadelphia, PA: Wolters Kluwer Health.

Wehlburg, C. (2017). "Texas Christian University Assessment System." In Cumming, T. & Miller, M. (Eds.), *Enhancing Assessment in Higher Education: Putting Psychometrics to Work* (pp. 245-268). Sterling, TX: Stylus.

BOOKS EDITED

Langran, E., Ed. (2018). *Research Highlights in Technology and Teacher Education*. Waynesville, NC: Association for the Advancement of Computing in Education.



3-D PRINTING GIVES NEW DIMENSION TO DOCTORAL CANDIDATE

Brandon Lusk is a second year graduate student pursuing a doctorate in physical therapy. The Montclair, Virginia native's summer research involved creating affordable 3-D printed lower extremity prosthetics for patients with an amputation in economically-deprived countries. He worked with Dr. Eric Bubar, associate professor of biology and physical sciences.

"I have an interest in working with patients with an amputation at some point in my future career and this project was a small step in that direction," Lusk said. "Add in the 3-D printing aspect for the 'cool' factor and I was immediately interested."

He said the project transcended his expectations by affording him experience that he would not have otherwise gained.

"This research opportunity seemed like a great way to broaden my horizons and use my summer effectively while I had a couple months off from the D.P.T. program," he assessed. "I have never worked with 3-D printing and have been interested in it since I learned of the technology. Dr. Bubar has experience 3-D printing hands for patients and has been a great mentor to learn from."

As Lusk's undergraduate degree was business-related, he was excited for research opportunities.

"We even taught Dr. Bubar 'physical therapy' lingo and a few things about gait," he said, with a chuckle. "This has been an awesome learning experience thus far, and I am excited to see our final project come to fruition."

DR. TONYA HOWE INVOLVES STUDENTS IN CREATING NEW DIGITAL ANTHOLOGY

It's a way to cut out the middleman in academic publishing, so to speak.

An Open Educational Resources project, "Literature in Context: An Open Anthology of Literature," will grant students opportunities to help create a digital anthology of British and American literature for use in classrooms across the globe. The work involved establishes the students' research skills while building their knowledge bases in both literature and open-source coding.

Dr. Tonya Howe's involvement in the project began by studying and teaching 18th century literature with digital enhancements.

"I wanted to connect what I was doing in my research and my pedagogy with a larger audience, and I wanted both graduate and undergraduate students to be able to contribute," said Howe, a literary scholar and digital humanist in Marymount University's Department of Literature & Languages. "I discovered that a colleague from the University of Virginia was doing the same kind of thing, on a slightly different track."

Howe worked with Dr. John O'Brien to put together a federal grant proposal, a joint effort of UVA and Marymount. They were awarded a National Endowment for the Humanities (NEH) Level 2 Digital Humanities Advancement Grant that provides \$72,542 in funding from January 2018 to July 2019 to support the development of the anthology's platform and editorial principles.

The work, jointly led by Howe, O'Brien and Christine Ruotolo of The University of Virginia Library, merges the existing experimental classroom projects — Howe's "[Novels in Context](#)" and O'Brien's "[Open Anthology of Literature](#)." Both were developed through student-faculty collaborations, which are important components of the project.

"While having so much access to public domain texts online is really exciting, the texts that are available on Project Gutenberg, for instance, are often poorly edited, and very rarely annotated," said Howe. The accuracy, quality and authority of digital texts are far from uniform. "The sheer abundance of material that appears in a simple Google search — often the first means of access for students — can overwhelm the inexperienced, who aren't in a position to judge the quality or authenticity of what they find."

"Literature in Context" will create a platform for establishing authoritative, contextualized works that teachers and students can use with confidence.

"For the past 20 years, students have been able to turn to so much material on the web that is in the public domain," Howe said. "But that can also lead to problems, which is one reason we (continue to) choose to use printed texts for the classroom that we know have been edited and well-sourced."

She noted as a prime example the fact that the first search result for Daniel Defoe's "Robinson Crusoe" is not the 1719 original version but a 1938 edition that was altered in several odd ways. That edition, found online easily, is presented without proper context or important scholarly annotations.

"It is, in a very real way, not the 18th century novel we know as 'Robinson Crusoe,'" she said, adding that students often think all texts on the web are created equal.

"But, by providing them with educational resources that are not only reliable but also free — and by involving them in the process of creation — they're learning valuable skills of how to be scholars and critical readers. Students can begin to think fully about where online material comes from and how it gets there."

Although "Literature in Context" is still in the early stages, two of Howe's students received Marymount grants for summer research: graduate student Amy Ridderhof and undergraduate James West.

A senior economics major with minors in English and sustainability from Washington, D.C., West became interested in the Enlightenment period during one of Howe's literature courses.

"The Enlightenment produced some of the most insightful pieces of English and American literature," said West. "Authors of the Enlightenment period addressed political turmoil and tyranny, the impact of human captivity on society, many of the premises for women's rights, and the critical need to include women's perspective and knowledge in their societies."

Over the summer he learned the basics of markup in TEI-structured XML to make Phillis Wheatley's 1773 "Poems on Various Subjects" machine-readable.

"Another skill I developed was digesting resources to make decisions on which information is meaningful and what can be discarded due to a lack of credibility," he said.

West expects those skills can be easily transferred and support his plans to become an economic researcher specializing in financial strategies, decision-making and sustainability. He said he has also found joy in making "a contribution to an ongoing project that was much larger than myself and that could have a positive long-term impact in the field of digital humanities."

"The project is both about incorporating students into the process of their own learning and giving them the chance to participate in a project of wider scholarship," Howe said.

Stage one of the NEH grant was geared toward the project's proof of concept. Howe, Ridderhof and West began their summer work by meeting in the Rare Book and Special Collections Reading Room of the Library of Congress to look at 18th century printed works. Texts included a first edition of "Frankenstein," a hastily put-together American edition of Joseph's Addison's political play "Cato" and the poetry of Wheatley and Anne Finch.

The team is working to create the infrastructure through which faculty and students can collaborate and ultimately be able to create their own anthologies for classroom use. They are dealing with individual documents, annotating them, photographing page images of the material objects and putting text online.

Another graduate student, Allyson Freeland, does research for the project during the regular school year.

"Ally, James and Amy are helping me identify pitfalls, such as the best way to teach students how to do annotations, how to write like scholars and figure out what's appropriate in a field they're just beginning to learn," said Howe.

"I really like that the project requires me to think about how to encourage students to see themselves as having a stake in the liberal arts education they're getting at Marymount. How do you create something that is reliable and authoritative? Why is it important that we look at stories and objects from long ago? How do their voices take shape in this long story of human creativity and effort? This is a really rich and rewarding experience and the students have responded very well."

Howe is pleased the work has major implications for the future.

"The future of publishing, the work of learning and the demands of public discourse are changing," she said. "As teachers and scholars, part of our charge is to ensure that these changes benefit our students' intellectual, ethical and civic growth in a context grounded by the liberal arts." ♦





JOURNAL ARTICLES

| Names in **bold type** are Marymount faculty members.

Bharath, L., Choi, W., Cho, J., Skobodzinski, A., **Wong, A.** Sweeney, S. & Park, S. (2018). "Combined Resistance and Aerobic Exercise Training Reduces Insulin Resistance and Central Adiposity in Adolescent Girls Who Are Obese: Randomized Clinical Trial." *European Journal of Applied Physiology*, 118(8), 1653-1660.

Bornstein, M., Putnick, D., Rigo, P., Esposito, G., Swain, J., Suwalsky, J., Su, X., Xiaoxia, D., Zhang, K., **Cote, L.**, De Pisapia, N. & Venuti, P. (2017). "The Neurobiology of Culturally Common Maternal Responses to Infant Cry." *Proceedings of the National Academy of Sciences*, 114(45), 9465-9473.

Branson, T., Sanchez, J., Robbins, S. & **Wehlburg, C.** (2017). "Collaborative Ecologies of Emergent Assessment: Challenges and Benefits Linked to a Writing-Based Institutional Partnership." *College Composition and Communication*, 69(2).

England, C. & Fratrik, C. (2018). "Where to Bitcoin?" *Journal of Private Enterprise*, 33(1), 9-30.

Erkan, G. & **Liu, X.** (2017). "Investigating Vulnerabilities and Cybersecurity Issues in Connected Cars." *Southeastern Institute for Operations Research and the Management Sciences*, 52, 403-414.

Gilbert, L. & **Buckner, C.** (2017). "Paving the Way: the Distinctive Mentoring Style of Janet Taylor Spence." *Sex Roles: a Journal of Research*, 77(11-12), 743-750.

Green, N. & Larasati, S. (2018). "The First 100 Days: a Corpus of Political Agendas on Twitter." *Proceedings of the Eleventh International Conference on Language Resources and Evaluation*, 2785-2789.

Green, N., Liu, X. & Murphy, D. (2018). "Revisiting an Educator's Dilemma: Using Natural Language Processing to Analyze the Needs of Employers and Inform Curriculum Development." *Proceedings of the 2018 Consortium for Computing Sciences in Colleges*.

*denotes Marymount University student

Gulyan, L. & Diaz-Asper, C. (2018). "Exploring Perceptions of Blame for Autism Spectrum Disorder." *Journal of Developmental and Physical Disabilities*, 30(5), 587-600.

Jaber, D., Heuett, W. & Gogal, K.* (2017). "Chemcompete: an Organic Chemistry Card Game to Differentiate between Substitution and Elimination Reactions of Alkyl Halides." *Journal of Chemical Education*, 94(9), 1276-1279.

Kelekar, U. (2017). "Oral Health Matters in Bending the Cost Curve." *World Medical and Health Policy*, 9(3), 377-388.

Kelekar, U. & Naavaal, S. (2018). "Hours Lost to Planned and Unplanned Dental Visits Among U.S. Adults." *Preventing Chronic Disease*, 15.

Liu, X. & Murphy, D. (2018). "Constructing a Connected Program in It/Is: a Non-RI University Case." *SALS 2018 Proceedings*, 22.

Lopresti-Goodman, S. & Goodman, J. (2018). "Discussions of Animal Research Ethics in Introductory Psychology Textbooks." *Journal of Animal Ethics*, 8(1), 39-49.

McFarlane, M. (2018). "Circuits of Discipline: Intensified Responsibilization and the Double-Bind of Pregnancy in the U.S. Military." *Women's Studies in Communication*, 41(1), 22-41.

Naavaal, S. & **Kelekar, U.** (2018). "School Hours Lost Due to Acute/Unplanned Dental Care." *Health Behavior and Policy*, 5(2), 66-73.

Ries, J. (2018). "Rehabilitation for Individuals with Dementia: Facilitating Success." *Current Geriatrics Reports*, 7(1), 59-70.

Schaeffer, D., Olson, P. & Knott, C. (2017). "An Interdisciplinary Approach to Cybersecurity Curriculum." *Journal of Higher Education Theory and Practice*, 17(9), 36-40.

Terenteva, N., Chernykh, O., Sanchez-Gonzalez, M. & **Wong, A.** (2018). "Acupuncture Therapy Improves Vascular Hemodynamics and Stiffness in Middle-Age Hypertensive Individuals." *Complementary Therapies in Clinical Practice*, 30, 14-18.

Tripken, J. & Elrod, C. (2018). "The Design and Implementation of a Theory-Based Interdisciplinary Falls Prevention Program for Community Dwelling Older Adults." *American Journal of Health Studies*, 32(4), 208-218.

Tripken, J. & Elrod, C. (2017). "Young Adult Perspectives on Advance Care Planning." *American Journal of Hospice and Palliative Medicine*, 35(4), 627-634.

Turissini, L. (2017). "A Collegial Approach to Improving College Teaching: the Evolution of a Five-Year Peer Coaching Study." *International Journal of Arts & Sciences*, 10(2), 677-682.

Wehlburg, C. & Stitt-Bergh, M. (2017). "Emergent Themes in Assessment." *Assessment Update*, 29(5), 4-13.

Wong, A., Figueroa, A., Son, W., Chernykh, O. & Park, S. (2018). "The Effects of Stair Climbing on Arterial Stiffness, Blood Pressure, and Leg Strength in Postmenopausal Women with Stage 2 Hypertension." *Menopause*, 25, 731.

Wong, A. & Figueroa, A. (2018). "Effects of Whole-Body Vibration on Heart Rate Variability: Acute Responses and Training Adaptations." *Clinical Physiology and Functional Imaging*, 11, 124.

ROLLING A NEW TECHNOLOGY INTO THE FUTURE

Shellee Pelayo is a junior from Stafford, Virginia and a health sciences major with a concentration in pre-physical therapy and a minor in psychology. Her research focused on constructing a custom electric wheelchair using 3-D printed parts.

"I was interested in doing this project because I want to work with veterans and perhaps patients with an amputation as a physical therapist and feel this project could benefit my future endeavors," Pelayo said.

She liked working over the summer because she was able to dedicate more time to the project and didn't have to worry about classes and homework.

"One of the reasons I enrolled in Marymount was because of opportunities like this," she said. "Going into college, I definitely wanted to do some sort of research while I was still an undergrad and found this opportunity was perfect for my schedule and achieving a personal goal. Although I did expect to do research, I didn't expect that I would be building an electric wheelchair in a 3-D printing lab!"



DR. CATHERINE DIAZ-ASPER GARNERS AN NIH GRANT

Dr. Catherine Diaz-Asper has been awarded a National Institutes of Health (NIH) research grant. The award undergirds the assistant professor of psychology's work on a new screening test that can measure cognitive decline and dementia from speech recorded in a telephone conversation.

A neuropsychologist with both clinical and research experience, Diaz-Asper completed two post-doctoral internships, at Johns Hopkins and at the National Institute of Mental Health. She has conducted neuropsychological evaluations of cognitively impaired adults, along with designing a number of research studies and implementing protocols based on findings.

She first examined semantic memory function in patients with Alzheimer's disease while working on her master's degree. Her doctoral dissertation explored aspects of visual and spatial memory in epilepsy. More recently, her research has focused on using computational methods to analyze the content of speech in various patient groups.

The assistant professor in the School of Sciences, Mathematics, and Education notes her pleasure in being able to introduce students to the world of research and brain function. "I am excited to employ a graduate research assistant, Kelly Ha from the Forensic & Legal Psychology program, to help me with the study," she said.

"I am fascinated by the brain and behavior," Diaz-Asper continued. "My first foray into studying Alzheimer's disease was my master's research back in New Zealand, and since that time, I've had the honor of working with older people both in clinical and research settings. Too many of us know, or know of, people with Alzheimer's disease, but we need to challenge the perception that it's an inevitable consequence of aging. The earlier we can catch the decline, the more time we have to intervene."

The two-year, \$123,177 NIH award names Diaz-Asper as the principal researcher in a pilot study. Study participants are being recruited in collaboration with Georgetown University Medical Center's Memory Disorders Program, a subrecipient of the grant. Participants complete a brief telephone interview, which is then analyzed by sophisticated software to gauge cognitive status.

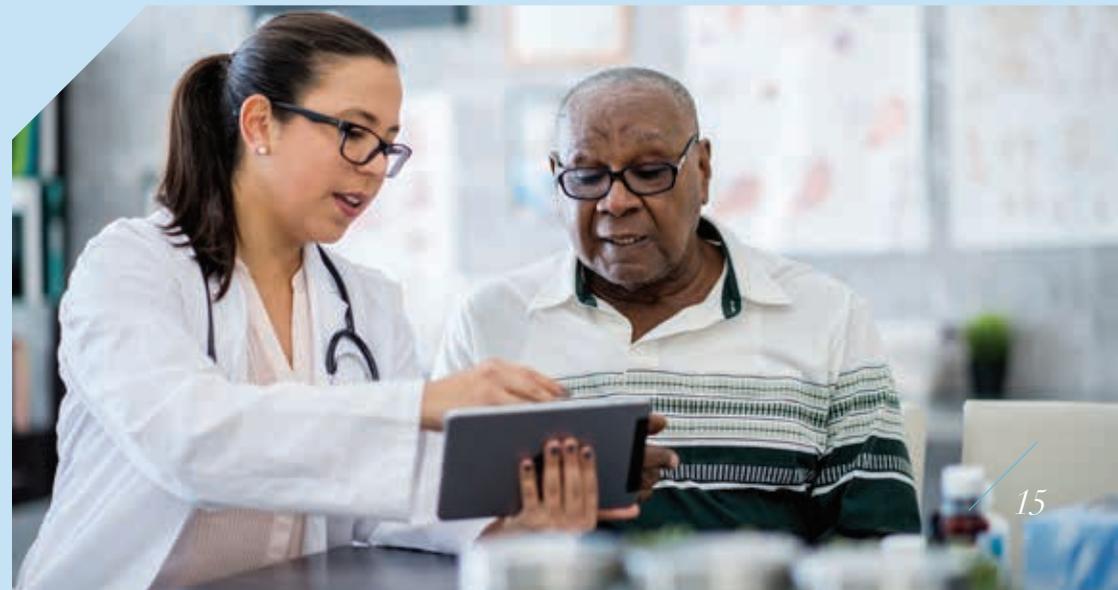
"Because a lot of older people face barriers to receiving diagnostic services, this new approach has the potential to outperform current dementia screening tests, not only in terms of sensitivity to cognitive decline, but also accessibility, cost and user satisfaction," Diaz-Asper explained.

The professor noted that minute changes in communication can be predictive, "even years before a person receives a diagnosis."

Those with dementia, particularly Alzheimer's-type, might display complications in keeping a conversation going, struggle for the words they wish to use or take longer than they once did in processing information. While many technologies exist to measure speech patterns, Diaz-Asper said the one her team will employ "can mathematically derive several useful metrics from the speech samples, including how coherent the speech is and the frequency and type of words used."

Coherence measures the relationship of individual words to each other as well as to the speech sample as a whole. "My collaborators and I have previously used these approaches to successfully characterize the content and style of speech in people with psychiatric illness," Diaz-Asper added.

Dr. Lois T. Stover, former dean of Marymount's School of Education and Human Services, is pleased that her colleague "has paved the way for other faculty to apply for such grants. Institutionally, we know more about the process and know that persistence and revision pay off."



GRANTS

| Names in **bold type** are Marymount faculty members.

EXTERNALLY FUNDED GRANTS: New Awards in 2017-18

Diaz-Asper, C. (2018). Dementia Screening Using Automated Speech Analysis: A Pilot Study. National Institutes of Health. \$123,177.

Burke, M., Baldwin, K. & Yang, M. (2017). Fast Pitch Competition: Library Ticketing System using Google Apps. Goodall Family Charitable Foundation. \$2,500.

Garcés-Foley, K. & Vor de Bruegge, A. (2018). Advanced Care Planning Workshops. Commonwealth of Virginia. \$10,000.

Good, C. (2018). Georgian Papers Fellowship. Omohundro Institute of Early American History and Culture. \$2,500.

Murphy, D., Liu, M. (2018). Marymount University Gencyber Residential Summer Camp. National Security Agency (NSA), \$65,954.

O'Donnol, D. (2018). Legendrian Graphs, Invariants and DNA Topology. National Science Foundation. \$26,589.

Tripken, J., Wong, R., Elrod, C., Venskus, D. & Ries, J. (2018). Academic Community Partnership for Falls Prevention Network Hub. Administration for Community Living - Department of Health and Human Services. \$542,554.

*denotes Marymount University student

“The NIH RO3 funding mechanism allows for smaller-scale pilot projects that can be carried out fairly quickly,” the awardee noted. “The actual award has a maximum monetary value and you just make the budget work within that maximum.”

Diaz-Asper’s response to learning she had won an NIH grant was an expected reaction among those whose research finally secures major financial support – “Equal parts elation and panic! I’ve spent a number of years working on various iterations of this proposal, so to finally have it funded is both exciting and a bit frightening.” ♦

Note: The research reported is supported by the National Institute On Aging of the National Institutes of Health under Award Number RO3AG052416. The content of the research is solely the responsibility of the investigators and does not necessarily represent the official views of the National Institutes of Health.



NSA CONTINUES SUPPORT OF GENCYBER CAMP

For the third consecutive year, Dr. Diane Murphy and IT program colleagues in the School of Business and Technology received National Security Agency (NSA) funding to host a GenCyber residential summer camp. The grant-backed camp is designed to introduce high school students to cybersecurity careers. It has three main objectives:

1. Increase interest in cybersecurity careers
2. Practice and advocate for safe and secure online activities
3. Provide materials for future independent study

The co-ed camp drew 32 participants from a variety of backgrounds and granted opportunities for interactions with Marymount cybersecurity students, as well as faculty and community cybersecurity professionals. Beyond formal instruction, campers participated in supervised activities, field visits and took on challenges in solving cybersecurity problems.

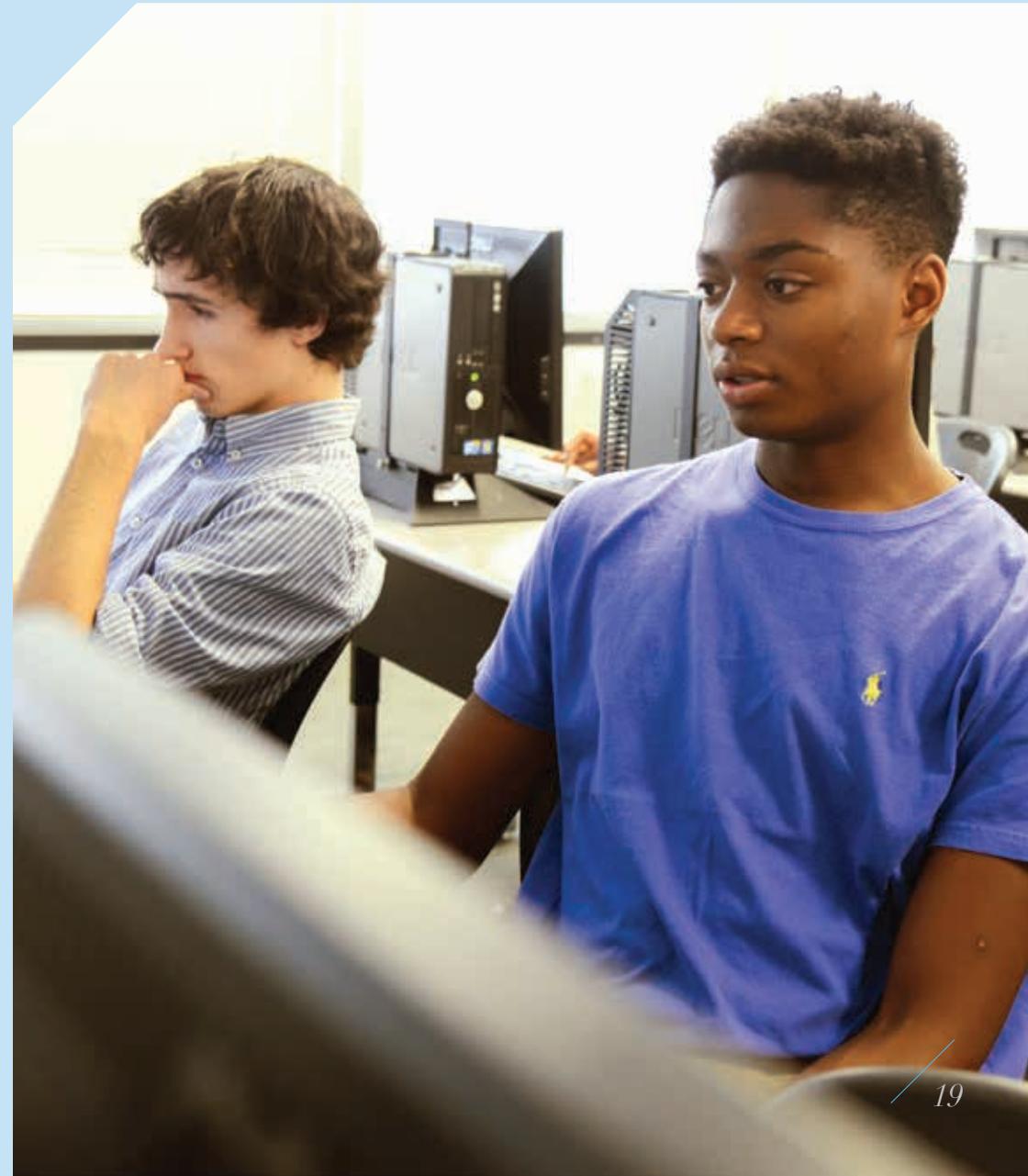
Along with Murphy, faculty members included Dr. Michelle Liu, Dr. Nathan Green and Dr. Susan Conrad, each of whom has been actively involved in the NSA's Center for Academic Excellence (CAE) and cybersecurity curriculum initiatives. The students also served as mentors and role models for those interested in cybersecurity careers.

The 11-day program, which seeks technology-minded students but does not require specific cybersecurity knowledge, follows NSA guidance parameters for delivery and goals. The curriculum is scaled to reflect age-appropriate material and cybersecurity knowledge by grade (freshmen to seniors), including the "10 First Principles" of security, which were introduced in lectures and demonstrated through hands-on, inquiry-based lab work and projects. The principles are the foundation upon which security mechanisms are reliably built and by which security policies are implemented.

Liu noted that Marymount's GenCyber camps strongly emphasize ethics, helping students distinguish what she calls "ethical hacking practices" from illegal and malicious activities. "The goal is to reach teenagers early with the strong message of the importance of a cybersecurity professional code of ethics."

According to research completed by Murphy and Liu, the lack of tech-savvy guardians is a critical factor in the proliferation of teenage

hacking. In this case, says Liu, "Guardians are not only parents or family members, but can also be schools and teachers. If we reach out to this age group early, like with Gencyber camps where ethics are emphasized, we will have more responsible young talent entering the cybersecurity field in the future." ♦





Presentations at **PROFESSIONAL CONFERENCES**

| Names in **bold type** are Marymount faculty members.

Allen-Bronaugh, D., **Hauth, C.**, Thompson, C. & Cuenca-Carlino, Y. (2018). "Building on a Theme: Supporting Math Engagement in Diverse Classrooms Using Hands-on Activities." DISES, Cape Town, South Africa.

Anuszkiewicz, M. & **Petillo, A.** (2018). "Remedial Mathematics: Speed Bump or Access Ramp for College Completion?" Association for Institutional Research, Orlando, FL.

Bakker, M., Damhof, L., Dewitt, J. & Graham, T. (2018). "More INTER than CULTURAL: How Globally Networked Learning Can Bridge Our Divides." Council on International Educational Exchange (CIEE), Austin, TX.

Becker, S. (2018). "Comparison of Pharmacological Regimens for Alcohol Withdrawal Patients: A Retrospective Study." Sigma Theta Tau International Pi Mu Chapter, Harrisonburg, VA.

Becker, S. (2018). "A Comparison of Pharmacological Regimens for Alcohol Withdrawal Patients: A Retrospective Study." Sigma Theta Tau International 29th Research Congress, Melbourne, Australia.

Buckner, C. (2018). "The Gender Revolution: How To Stay Apace in the Psychology of Gender Classroom." National Institute on the Teaching of Psychology, St. Pete Beach, FL.

Burke, M., Baldwin, H. & Yang, M. (2018). "That's the Ticket! Building a Homegrown Library Ticketing System." Electronic Resources & Libraries Conference, Austin, TX.

Christie, L., Liu, M. & Murphy, D. (2018). "Reinforce Teamwork and Creativity for Cybersecurity in a Classroom Setting: A Team Activity for Building a Strong Cyber Defense Using K'Nex." International Management and Organizational Behavior Teaching Society, Dublin, Ireland.

Donovan, S. & Brown, M. (2018). “Beyond FITT-ness: Changing How We Teach Therapeutic Exercise in a DPT Curriculum.” APTA, New Orleans, LA.

Donovan, S., Craig, J., Galloway, C. & Tucker, J. (2018). “Please Touch: Mobility and Movement-Related Research, Design and Technology.” APTA, Orlando, FL.

Donovan, S. & Pagliano, C. (2018). “Women’s Health in a DPT Curriculum: Integration Without Adding to Academic Bloat.” APTA, New Orleans, LA.

Earl, P. (2017). “Making Virtue Come Alive.” St. Timothy Catholic School, Chantilly, VA.

Earl, P. (2017). “Catholic Identity: Leaders Forming Leaders in Faith, Charism, and Traditions.” NCEA, Tempe, AZ.

Earl, P. (2017). “The Spiritual Role of the Principal and Vice Principal in Catholic Schools: A Presentation for New Pastors, Principals, Vice Principals and Potential Future Leaders.” Diocese of Arlington, Annandale, VA.

Earl, P. (2018). “Prayer: The Key to Spirituality, Afternoon workshop on why we pray and how to pray.” St. Timothy Catholic School, Chantilly, VA.



BEING LAB-READY FOR THE NEXT STEP

Dr. Amanda Wright, associate professor of biology and physical sciences, had three summer research assistants. They explored protein interactions that regulate embryonic brain development in mice. Mutations in the human versions of these genes — which transmit nerve impulses — can lead to development disorders such as autism and schizophrenia.

“We do a really good job at training students and giving them real research experience, such as tissue culture or fluorescence microscopy, that they can take into grad school or an industry lab,” Wright said.

It’s part of the family atmosphere at Marymount, which also includes taking students to national conferences where they can make presentations. That’s a stark contrast to Wright’s experience as an undergraduate at a large research university.

“At Marymount, I know all of our biology majors and they know me on a personal level,” she said. “That makes it easier to have academic and scientific discussions when they know us as individuals.”

Callie Levinger, a senior biochemistry major from Pittsburgh, Pennsylvania, has worked with Wright for a couple of years — including summers. Levinger has studied two proteins during the embryonic development in the brains of mice.

“I have had the privilege of working side by side with Dr. Wright for the past two years and she has helped me grow as a scientist more than I could on my own,” Levinger said. “The research we have been doing has been really great and has provided me many opportunities, such as presenting my work at a national conference and writing a paper to get published in a research journal!”

Wright said such experience is “really a game-changer” for students once they go on from Marymount and start seeking opportunities at graduate schools or in the job market.



Earl, P. (2018). "Catholic Identity and Spirituality: Teachers Forming Students." NCEA, Cincinnati, OH.

Figuroa, A., **Wong, A.**, Grubbs, B., Panton, L., Fischer, S. & Jaime, S. (2018). "Aortic Blood Pressure Responses to Metaboreflex Activation Are Attenuated in Older Adults With Dynapenia." International Conference on Frailty and Sarcopenia Research, Miami Beach, FL.

Flanagan, B. (2017). "Ecclesial Sin and Holiness in Liturgical Commemoration of the Reformation." American Academy of Religion, Boston, MA.

Flanagan, B. (2018). "The Migrant Church as a Local Pilgrim Church, The Church and Migration: Global (In)Difference." Ecclesiological Investigations, Toronto, Canada.

Fox, B. (2017). "Bracha Ettinger's Feminist Revolution in Psychoanalytic Theory." Feminisma and Rhetorics, Dayton, OH.

Fox, B. (2018). "Using the Principles of Universal Design to Revise Writing Program Curricula for International Students." College Composition and Communication, Kansas City, MO.

Garces-Foley, K. (2017). "Parishes as Hubs, Homes, and Sacrament Stations." Society for the Scientific Study of Religion, Washington, D.C.

Good, C. (2017). "Washington Family Fortune: Lineage and Social Capital in the 19th Century South." Southern Historical Association, Dallas, TX.

Good, C. (2018). Keynote speaker, Seward Stories. University of Rochester, Rochester, NY.

Good, C. (2017). Keynote speaker. Carter Society Annual Meeting, Alexandria, VA.

Good, C. (2018). Founding Friendships. Historic Sotterley, Hollywood, MD.

Gray, J. & Hauth, C. (2017). "Engagement Beyond Borders: How Global Perspectives and Collaborative Literacy Learning Opportunities Supporting Pre-service Teachers in Costa Rica and Panama Can Impact Their Future Classroom Literacy Practice." ALER, Tampa, FL.

Hargreaves-Cormany, H., Rhinerson, S.*, Ciolek, D.*, Paul, K.* & Pitsenbarger, J. (2018). "Evaluation of the Society for the Prevention of Cruelty to Animals-Los Angeles (spcaLA) Junior Teaching Love and Compassion (jTLC) Humane Education Education/Diversion (HED) Program." American Psychological-Law Society, Memphis, TN.

Harris, K., **McFarlane, M.** & Wieskamp, V. (2017). "Attributions in Motion: Sexual Violence and the Promise and Peril of Distributed Agency." National Communication Association, Dallas, TX.

Hauth, C. & Creighton-Thompson, C. (2018). "Working Collaboratively with Diverse Families in the IEP Process." CEC, Tampa, FL.

Hauth, C. & Creighton-Thompson, C. (2018). "Thriving as a New Special Education Teacher: How to Dot the I's and Cross the T's in the IEP Process." CEC, Tampa, FL.

Hauth, C. & Creighton-Thompson, C. (2018). "Strategies for Success: The Survival Guide for New Special Education Teachers." CEC, Tampa, FL.

Hauth, C., Gray, J. & Williams, E.* (2018). "Impacting Culturally Responsive Classrooms: How Global Perspectives and Collaborative Literacy Learning Opportunities Prepare Preservice Teachers for Diverse Classrooms." CEC, Tampa, FL.

Hauth, C. & Turissini, L. (2018). "Inclusion and the Development of Interprofessional Educational Global Service Learning Teams Case Study." DISES, Cape Town, South Africa.

Hauth, C., Turissini, L., Paredes, M.*, Lightweis, J.*, Malachec, K.*, Eghtesadi, S.* & Reardon, M.* (2018). "Executive Functioning Deficits and Strategies to Support ALL Learners." DISES, Cape Town, South Africa.

Jaber, D. (2018). "CHEMCompete-I: A Chemistry Card Game for Substitution and Elimination Reactions of Alkyl Halides." 25th Biennial Conference on Chemical Education, Notre Dame, IN.

Jaber, D. (2017). "CHEMCompete: An Organic Chemistry Card Game to Differentiate Between Substitution and Elimination Reactions of Alkyl Halides." The Lilly Conference on Evidence-Based Teaching and Learning, Bethesda, MD.

Jaber, D. (2017). "CHEMCompete-I: A Chemistry Card Game for Substitution and Elimination Reactions of Alkyl Halides." 254th American Chemical Society National Conference, Washington, D.C.

Kelekar, U. (2017). "Economic Losses Associated With Oral Problems in the United States: Using the National Health Interview Survey, 2008." Society for Benefit-Cost Analysis, Washington, D.C.

Kelekar, U. & Triphen, J. (2017). "Prevalence of Uncorrected Refractive Error Among School-going Children in Peru." American Public Health Association, Atlanta, GA.

Lado, A. (2017). "Interactive Teaching Strategies to Accelerate Learning: Picture." MEXICO TESOL, Monterrey, Mexico.

Lado, A. (2017). "Sustainable Success on the UN Goals for Marginalized Children in Pakistan 2017." Association of Literacy Educators and Researchers, St Petersburg, VA.

Langran, E. & Borup, J. (2018). "Proceedings of Society for Information Technology & Teacher Education International Conference 2018." AACE, Chesapeake, VA.

Langran, E. (2017). "Getting Moving and Into Your Community With Mobile Mapping." Virginia Society for Technology in Education Conference, Roanoke, VA.

Langran, E., Alexander, C., Cohen, J. & Shoffner, M. (2018). "From Job Postings to New Positions: Navigating the Academic Job Search." Society for Information Technology & Teacher Education International Conference, Alexandria, VA.

Liu, X. & Murphy, D. (2018). "MUMADE: Marymount University Mobile Apps Development for Everyone." SIGCSE (Special Interest Group on Computer Science Education), Baltimore, VA.

Meltzer, K. (2017). "Journalistic Responses to Trump's Attacks on the Press." National Communication Association, Dallas, TX.

Meltzer, K. (2018). "Student Newspaper Bylaws and Structures at Religiously Affiliated Universities." Association for Education in Journalism and Mass Communication (AEJMC) Annual Conference, Washington, D.C.

Meltzer, K. (2017). "The Legacy of Gaye Tuchman's Making News for Journalism Studies and the Sociology of News." National Communication Association, Dallas, TX.

Mirro, B. & Yang, M. (2017). "Meeting Your Students Where They Are: Making the Most Out of Your School's LMS." The Innovative Library Classroom, Radford, VA.

Mirro, B. & Yang, M. (2018). "Embedding LibGuides in Your LMS: Meet Your Students Where They Are!" Springshare, Webinar.

Mirro, B. & Yang, M. (2017). "Meeting Your Students Where They Are: Making the Most Out of Your School's LMS." The Brick and Click Academic Library Conference, Maryville, MO.

Mirro, B. & Yang, M. (2018). "Meeting Your Students Where They Are: How to Embed the Library in Every Course Via Your LMS." The Washington Research Library Consortium, Washington, D.C.

O'Donnol, D. (2017). "Legendrian Spatial Graphs." Invited Paper Session, Spatial Graph Theory, MAA MathFest in Chicago, Chicago, IL.

O'Donnol, D. (2018). "Planar Legendrian Graphs." 16th Chico Topology Conference & 60th Cascade Topology Seminar, Chico, CA.

O'Donnol, D. (2018). "Unknotting \hat{I}_1 -curves and DNA Replication." AMS Special Session on Topology of Biopolymers, AMS Spring Eastern Sectional Meeting, Boston, MA.

START GRANT HELPS SARAH HARDESTY MOVE MOUNTAINS

“In some work, thin lines pull weighted and grounded masses and attempt to shift a situation. They represent the strength and the effect of many. Wide and blurry brush strokes cover abstracted environments of deconstruction and memory of place. This abstracted narrative derives from deeper thoughts of weightlessness, control, fear, safety and holding back/letting go.”

— Artist’s Statement

Thanks to a START Grant, Assistant Professor of Fine Arts Sarah Hardesty is enjoying a 10-month studio residency at Arlington Arts Center as she develops her newest body of work, *Moving Mountains*. The residency includes open studios during exhibitions, which includes the Center’s annual spring benefit.

START grants are designed to support faculty research projects that demonstrate significant potential for generating external funding. Eligible participants are either tenured faculty members, tenure-track or librarians with faculty status who hold full-time appointments and are not on sabbatical during the grant period. The current funding period began July 1 and ends mid-June 2019.

Hardesty’s new work incorporates “imagery and inspiration from research on geological structural shifts, psychology and philosophy of human experience and other contemporary artists whose work aligns with my interests,” she explained. “I will begin by sourcing imagery, reading texts, and sketching as well as taking photographs during time I spend in nature and gathering materials from hikes.”

The School of Design, Arts, and Humanities faculty member and Barry Art Gallery director envisions the project’s result will be 10 to 20 drawings, five paintings and two installations. Her work will be accessible to the general public through open studios, exhibitions and artist talks.

“My artwork often begins with an intuitive response to my experiences and unfolds in the process as an interpretation and expression of a more pinpointed focus that was revealed through sketching, painting, drawing and combining media.”



She uses imagery of land and matches to its textures and other components to convey an interplay between geography and human existence.

“I plan to investigate the process and outcome of geological structural shifts (erosion, plate tectonics) and interweave that research with aspects of the human experience such as strength, resilience and change,” she noted. “For example, looking at studies on glacial erosion such as Mount Saint Elias in North America and ideas on how weathering a mountain can make it stronger, or how an entire mountain range can disappear because of plate tectonics in places like the Ruby Mountains of Nevada.”

It’s important for artists to have opportunities to work and be able to create. Hardesty thinks the studio time and research will yield a strong, in-depth body of work. She is likewise charged by interacting with other artists and creatives. Ultimately, she expects the funding will foster artwork that offers “layers of meaning to contribute to the current dialogue in contemporary art.”

Of the grant’s timing, Hardesty said, “It’s perfect. I was ready to move into a larger studio and be part of a broader art community here in the metro D.C. area. The space at the Arlington Arts Center opened up and is exactly where I want to work right now.”

The support is helpful in two ways, undergirding the present and providing a framework for the next steps.

“I am also ready to apply for larger and more expansive grants,” the awardee said. “I have been building up to this and the START grant gives me the foundation I need right now to anchor myself as an artist in this area and expand my reach and breadth and impact of my work.”

The assistant professor anticipates the undertaking will culminate in one or perhaps two exhibitions, foster external funding and, ideally, could lead to further bodies of work, displays and potential collaborations. She hopes at least one of other grants she will pursue can fund consecutive years; they include a program that supports established as well as emerging artists, another that features career advisory help and one that focuses on experimental and socially engaged work.

Hardesty earned the M.F.A. in painting from the University of Arizona and her B.S. in studio art from Skidmore College. She has held residencies at the MacDowell Colony, the Wassaic Project, the Carriage House at Islip Art Museum, Santa Fe Art Institute and Vermont Studio Center.

She has been featured in numerous exhibitions – the ISE Cultural Foundation, New York, NY; Davidson Contemporary, New York, NY; MPG Gallery, Boston, MA; Wheaton College, MA; the Tucson Museum of Art and The Museum of Contemporary Art, Tucson, AZ. She was awarded a Joan Mitchell Foundation grant in conjunction with Santa Fe Art Institute and a Leon Levy award for her MacDowell residency. ♦



O'Donnol, D. (2018). "Legendrian Graphs." Geometry Seminar, University of Bath, Bath, England, United Kingdom.

Overmier, J., Baldwin, H. & Burke, M. (2018). "Who Are We? Building Community Through a Mission Revision Project at Marymount University Library." Towson Conference for Academic Libraries, Baltimore, MD.

Overmier, J., Leventhal, J., Kirker, M. & Smith, D. (2018). "Building a Culture of Evidence-Driven Decision-Making." Washington Research Library Consortium Annual Meeting, Washington, D.C.

Petillo, A. (2018). "Preservice Teachers Experiencing Mathematics at STEM Festivals." American Educational Research Association (AERA), New York, NY.

Petillo, A. (2017). "Just-in-time Remediation for Liberal Arts Classes." Mathematical Association of America (MAA), Newport News, VA.

Rhinerson, S.*, **Hargreaves-Cormany, H.**, Ciolek, D.* & Paul, K. (2018). "Evaluation of the Society for the Prevention of Cruelty to Animals-Los Angeles (spcaLA) Court Diversion for Youth Program." American Psychological Association, San Francisco, CA.

Ries, J. (2018). "Movement & Motor Learning: What's Different in Dementia?" American Physical Therapy Association Combined Sections Meeting, New Orleans, LA.

Ries, J. (2017). "Interdisciplinary Rehabilitation of Individuals with Cognitive Impairment." National Association for the Support of Long-Term Care, Las Vegas, NV.

Rische, J. (2018). "Dispersal and the Spread of Language With Frequency-dependent Fitness." AMS/MAA Joint Mathematics Meetings, San Diego, CA.

Rogers, S. (2018). "Classification of Traumatic Brain Injury Severity Complexities in Retrospective Data." Sigma Theta Tau International, Melbourne, Australia.

Schaeffer, D. (2017). "Information and Communications Technology in Africa." SEInforms, Myrtle Beach, SC.

Schaeffer, D. (2018). "3D Printing and Public Policy." The Clute Institute, Orlando, FL.

Schaeffer, D. (2018). "IoT and Public Policy." Society of Business, Industry and Economics, Sandestin, FL.

Schaeffer, D. & Olson, P. (2018). "Public Policy for Nanotechnology." SE Decision Sciences Institute, Wilmington, NC.



Schaeffer, D. & Olson, P. (2018). "Securing Confidence with Data Escrow." The Clute Institute, San Francisco, CA.

Schaeffer, D., Olson, P. & **Liu, X.** (2018). "Cybersecurity Staffing Needs: Lessons from Information Technology." SEDSI (Southeast Decision Science Institute), Wilmington, VA.

Tripken, J. (2018). "Exercises That Reduce Falls and Falls Risk." American College of Preventive Medicine Healthy Aging Summit, Washington, D.C.

Tripken, J. & **Elrod, C.** (2018). "Recruitment and Retention of Evidence-Based Program Leaders." American Society on Aging - Aging in America Annual Conference, San Francisco, CA.

Tripken, J. & **Elrod, C.** (2018). "Stay Active and Independent for Life (SAIL) Informational Roundtable." National Council on Aging Center for Healthy Aging Annual Meeting, Arlington, VA.

Tripken, J. & **Kelekar, U.** (2017). "Prevalence of Uncorrected Refractive Error Among Children in Chulucanas, Peru." American Public Health Association, Atlanta, GA.

Tripken, J. & **Pappa, S.** (2018). "The Importance of Falls Prevention Programs." Virginia Association of Recreation Therapists, Herndon, VA.

Tripken, J. & Quinn, C. (2018). "To Train or Not To Train: Utilizing Students to Deliver Evidence-Based Programs." National Council on Aging Center for Healthy Aging Annual Meeting, Arlington, VA.

Tripken, J., Quinn, C., Alexander, J. & League, P. (2018). "Students and Seniors: A Perfect Match!" American Society on Aging - Aging in America Annual Conference, San Francisco, CA.

Turissini, L., **Hauth, C.**, Lodi, P.*, DeCou, M.*, Bazemore, C.*, Ojjeh, A.* & Miles, D.* (2018). "Characteristics of Students with Autism." DISES, Cape Town, South Africa.

Wong, A. (2018). "The Effects of Whole-body Vibration Training on Heart Rate Variability and Body Composition in Obese Postmenopausal Women." World Association of Vibration Exercise Experts, Groningen, Netherlands.

Wong, A., Figueroa, A., Son, W. & Park, S. (2018). "The Effects of Stair Climbing on Arterial Stiffness, Blood Pressure and Leg Strength in Postmenopausal Women With Stage-1 Hypertension." International Conference on Frailty and Sarcopenia Research, Miami Beach, FL.



MAJOR GRANT FUNDING SUPPORTS COLLABORATIVE FALLS PREVENTION PROGRAM

Over the past three years, Marymount University has received two federal grants totaling more than \$1 million. Provided through the Administration for Community Living, part of the U.S. Department of Health and Human Services, the funding supports the establishment of falls prevention programs across Northern Virginia communities.

Nearly 50 percent of older adults are considered at moderate-to-high risk for falling. In fact, every 11 seconds an older adult is treated in an emergency room for a fall-related injury. Such injuries annually result in more than 850,000 hospitalizations, 29,000 deaths, and \$50 billion in related health care costs.

Marymount's success in obtaining these highly competitive grants could not have happened without thoughtful and cooperative partnership building with senior adult community groups across the region. That includes a long history of involvement by Malek School of Health Professions faculty and students to provide falls prevention lectures and fall risk screenings at local senior community centers in Northern Virginia.

In 2014, Malek School faculty responded to a community request to expand our occasional one-hour lectures into a weekly workshop series. Under the leadership of Dr. Jennifer Tripken, a six-session program on falls prevention was offered. The effort was repeated several times to area senior community groups over the next two years.

In early 2016, the president of Arlington Neighborhood Village (ANV), a local group assisting older adults "age-in-place," mentioned the possibility of a grant to Marymount faculty members and committed to securing community partner commitments necessary for a competitive application. Working with Dr. Diana Venskus and Dr. Cathy Elrod, Tripken and Dr. Rita Wong prepared the grant application while ANV leaders garnered support from the Goodwin House Retirement Community, along with decision makers of Fairfax County Senior Services and Inova/Elderlink. Eighteen community groups supplied strong letters of support with commitments to participate in the program.

Marymount's successful application was one of nine funded in a cycle that had 120 submissions. When the effort began, Northern Virginia had no falls prevention programs that met the CDC's definition for

"evidence-based" programs, meaning one proven through research to have a positive impact on falls. Although exercise and fitness programs existed, none were tailored specifically to comprehensively address the risk factors for falls.

Just two and a half years later, thanks to the grant and academic-community collaboration, Northern Virginia has evidence-based falls prevention programs in over 50 locations, reaching more than 1,500 older adults. The Malek School now houses a regional training office for falls prevention and grant-supported faculty members have become master trainers for two falls prevention programs. Thus far, we have trained over 300 lay leaders/coaches.

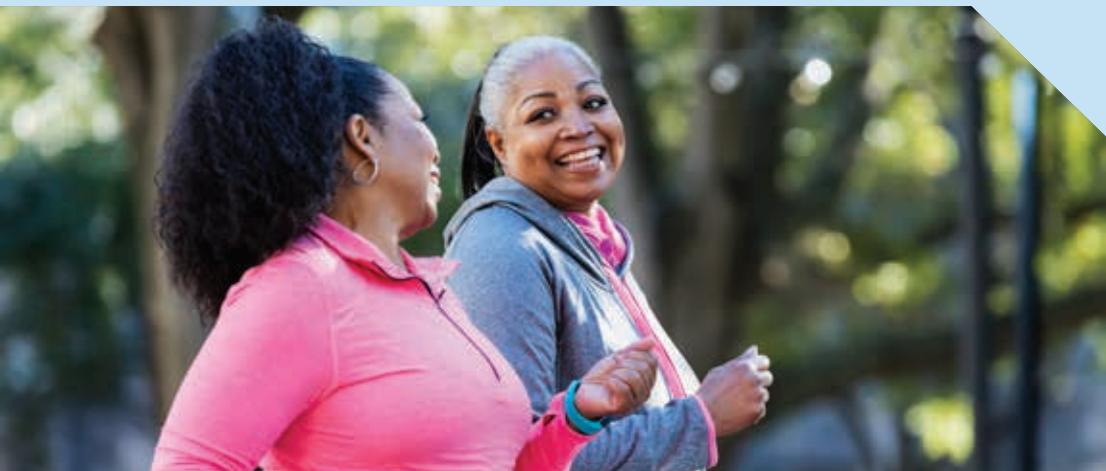
The Northern Virginia Falls Prevention Alliance was established and is made up of community agencies and organizations across Northern Virginia. Using the tagline "Working Together to Prevent Falls," it provides a support structure and advocacy group to expand and sustain falls prevention efforts.

Presently, the falls prevention team is transitioning from completing the activities of the first two-year cycle while initiating work on the new three-year grant. Six Marymount faculty members are key personnel on the new grant cycle, with Tripken serving as the primary investigator. Others include Dr. Julie Ries and Dr. Sara Pappa, along with Wong, Elrod and Venskus.

The team calls goals for the next three years "ambitious":

- reaching an additional 5,500 older adult participants
- recognition of the academic-community partnership as a national model for falls prevention programs
- offering focused programming to medically underserved communities and individuals with dementia
- fostering the full maturity of the Northern Virginia Falls Prevention Alliance
- building a robust referral network for falls prevention programs
- establishing an active speakers bureau
- providing a solid foundation for service and service-learning opportunities that connect college students with older adults

An ultimate goal is to merge the falls prevention program into a broader University initiative for optimal aging. Once fully realized, the Marymount initiative can promote optimal aging across physical, mental, emotional, social, and environmental realms. ♦



DR. JULIE RIES STUDIES BALANCE TRAINING FOR DEMENTIA PATIENTS WITH START GRANT

Dr. Julie D. Ries, professor in the Malek School of Health Professions, has been on the faculty at Marymount University's physical therapy program for the past 22 years. She has extensive physical therapy clinical experience in acute care, home care, and neurological rehabilitation, and has published research in the area of outcome measures and balance training in individuals with dementia.

Ries was recently awarded a Marymount University START grant. The competitive grant is awarded to a faculty member whose research project has a high potential for positioning the researcher for future external funding.

The support she received funded a pilot balance training program for individuals with dementia in an adult day health setting. "We used an evidence-based, CDC-supported balance training protocol," Ries explained.

The Otago Exercise Program is a series of strength and balance exercises delivered by a physical therapist to older adults at a high risk for falling. "The program has been demonstrated effective in reducing falls in older adults but has not yet been implemented with individuals with dementia," she added. "This pilot study looked at the feasibility of introducing the Otago program in a small group setting."

Marymount physical therapy faculty member Marti Carroll worked with Dr. Ries during the pilot. The study also employed two Marymount nursing students, Gia Parker and Charlotte Hepler, and three PT students, Nicole Dierkes, Shannon Gunning and Matt Smith, to assist in facilitating the exercise classes.

"My past research in this area has been in studying outcome measures – which tests we should use to assess change in performance in people with dementia and in studying the impact of multifaceted balance intervention programs delivered in a group setting with this population," Ries continued.

The pilot program demonstrated the Otago protocol to be feasible for use within a small group of individuals with dementia. Ries says she looks forward to implementing more programs as part of Marymount's community-based falls prevention programs and is now positioned for future funding for projects assessing exercise approaches for individuals with dementia.

A licensed physical therapist in Virginia, Ries earned her bachelor's degree in physical therapy at Quinnipiac College, a master's in education and human development at George Washington University and a Ph.D. in physical therapy at Nova Southeastern University. The Malek School of Health Professions has recognized her pedagogical gifts with the Outstanding Teacher Award three times.

She has been honored by the American Physical Therapy Association's Academy of Geriatric Physical Therapy with its 2010 Excellence in Geriatric Research Award and received the Malek School's Faculty Scholarship Award in 2012. She has presented many times on topics related to the rehabilitation of older adults at national conferences. Her original research has been published in book chapters and a variety of refereed journals, including *Physical Therapy*, the *Journal of Neurologic Physical Therapy* and the *Journal of Geriatric Physical Therapy*. ♦



JURIED EXHIBITIONS, SHOWS

| Names in **bold** type are Marymount faculty members.

Hardesty, S. (2017). "Moving Mountains." VisArts, Rockville, MD.

Hardesty, S. (2017). "Throwing Light." Metro Micro Gallery, Arlington, VA.

Hardesty, S. (2018). "Interlude: Unfinished Works." Target Gallery, Torpedo Factory, Alexandria, VA.

SUMMER HUMANITIES INSTITUTE



The Humanities Research Institute is a unique summer research immersion opportunity for Marymount undergraduates, selected through a competitive process. A different thematic topic is chosen each summer. Student scholars, along with faculty mentors and occasional guest lecturers, explore the theme through literature, history, philosophy, theology, and the visual and performing arts.

The 2018 humanities institute theme was *Transforming Humanity: The Promise and Peril of Gene Editing*.

Dr. Adam Kovach, professor of philosophy, and Dr. Susan Agolini, Clare Boothe Luce assistant professor of biology, served as the faculty mentors for the 2018 institute. Six students participated in the institute: Charlotte Hepler, Jordayne Moses, Erin Musterman, Katharina Tesmer, Evan Todd and Julia Torrico.



INNOVATIONS 2017

| Names in **bold type** are Marymount faculty members.

Each October, faculty with ongoing scholarly projects are invited to share their work with fellow faculty at our Marymount sponsored Innovations Conference. The faculty work presented at Innovations 2017 are listed below.

Brown, D. (2017). “Elaborated Specificity Versus Emphatic Generality: A Corpus-Based Comparison of Higher- and Lower-Scoring Advanced Placement Exams in English.”

Claman, F., **Hauth, C.**, **Tripken, J.** & **Venskus, D.** (2017). “The Development of an Interprofessional Education Global Service Learning Course: From Conceptualization to Realization.”

Delmonico, M. (2017). “Theological Inquiry and Leadership in a ‘Post-Truth’ Era – Insights from Blessed Oscar Romero.”

Denson, M. (2017). “Empathic Design Matters – How Resilient Are We?”

Dunn, M. (2017). “Habits of Mind: A Case Study of Three Teachers’ Experiences with a Mindfulness-Based Intervention.”

Farrell, A. & **Foster, S.** (2017). “Using Study Abroad Experiences to Enhance Criminal Justice Curriculum.”

Francis, R. (2017). “Him, Not Her: Why Working-Class White Men Reluctant About Trump Still Made Him President of the United States.”

Inanoglu, H. (2017). “Women in the Gulen Movement.”

Jaber, D. (2017). “CHEMCompete-I: A Chemistry Card Game for Substitution and Elimination Reactions of Alkyl Halides.”

Kelekar, U. (2017). “Work Hours Lost Due to Dental Visits in the U.S., National Health Interview Survey 2008.”

McFarlane, M. (2017). “Beyond the Iconic Photograph: Fragments, Memories and Rhetorical Force.”

*denotes Marymount University student

Faculty-Student Summer COLLABORATIVE RESEARCH PROJECTS

| Names in **bold type** are Marymount faculty members.

Each summer, Marymount hosts a competition to support student-faculty teams engaging in collaborative summer research projects. Support is received from both Marymount internal grants and Virginia Foundation for Independent Colleges (VFIC) for these high-impact experiences. Student-faculty team projects for Summer, 2018 were:

Agolini, S., Amurrio, O.* & Oliver, S. (2018). Secretary Carrier Membrane Proteins (SCAMP).

Bubar, E. & Malani, E.* (2018). The functionality of different styles of e-NABLE assistive hands using a box and block test.

Bubar, E. & Sanchez, K.* (2018). Integration of visual feedback during prosthetic training.

Bubar, E. & Pelayo, S.* (2018). Building an open source, electronic wheelchair (developed by a First Robotics Team of Engineers).

Bubar, E., Goldberg, P.* & Lusk, B.* (2018). Create technologically simple and inexpensive devices and investigate the gait offered by a 3D printed lower limb prosthetic device.

Howe, T., Ridderhof, A.* & West, J.* (2018). Encoding a selection of canonical texts from the Enlightenment period into TEI-formatted XML.

Johnson, L. & Larino, N.* (2018). Understand how Anglo American and Mexican American women wrote about historical events in U.S. history.

Kreutzer, B. & Sciorillo, A.* (2018). Investigate how the DNA methylation of the hox13a gene correlates with glioblastoma tumors.

Otten, R. & Luperón, J.* (2018). Understand “post-modern childhood” better, analysis that scrutinizes the concepts of The Literature of Childhood and Adolescence.

Rimkus, T. & Alvarez, J.* (2018). The Green Iguana Project. VFIC grant.

*denotes Marymount University student

Ries, J. (2017). “Mom’s Memory Is Worse, but Her Balance Is Better.”

Tipple, C. (2017). “Advancing Care for Children with Disabilities: A Capacity Building Partnership With Jerusalem Princess Basma Centre.”

Whitehead, B. (2017). “Writing in Fashion: An Exploratory Case Study Examining Fashion Faculty Use of Writing and the Transmission of Industry Specific Genres.”

Wong, A. (2017). “Cardiac Autonomic and BP Responses to Acute Foam Rolling.”

PODCASTS SHARED AS PART OF INNOVATIONS 2017

Good, C. (2017). “Washington Family Fortune: Lineage and Social Capital in the Early Republic.”

Meltzer, K. (2017). “From News to Talk: The Increase in Opinion and Commentary in News.”

Quigley, B. & Rustagi, N. (2017). “Accounting: Entrepreneurs - Do Your Own Accounting.”



RESEARCH IS CRUCIAL TO STUDENT EXPERIENCE

Research projects allow Dr. Susan Agolini, the Clare Boothe Luce assistant professor of biology, to show students science in action.

“It is one thing to learn about scientific experiments as we do in class; it’s something else to design your own experiment and carry it out,” Agolini said. “At Marymount, students can join their freshman year and stay involved for as long as they like.”

Unlike other institutions, where research — if available at all — is often limited to juniors and seniors, Marymount provides opportunities to all undergraduates. That allows them to dive deeply into research questions and really begin to understand in practice the scientific process. This past summer it served 15 professors, 13 undergraduates and two graduate students.

Agolini and two students studied SCAMPs (secretory carrier membrane proteins), which may be important in preventing breast cancers from becoming invasive.

“The funding for undergraduate research is crucial to allow students to get into the work,” she said. “There is not enough time in the semester to allow the dedicated time that students/faculty need to do research in a significant way.”

Wright, A. & Baker, T.* (2018). CHLI cell adhesion molecule found in mice.

Wright, A. & Levinger, C.* (2018). Co-localization occurs between CHLI and ROBO1.

Wright, A. & Bertacche, A.* (2018). Binding interaction of CHLI and ROBO1 proteins in mouse brain tissues.

Wright, A. & Stephens, C.* (2018). The effect of opioids and anesthetics on central control of breathing. VFIC grant.



THE PERSPECTIVE OF CULTURE

Like language, circumstances and life experiences provide context. Dr. Leigh Johnson, associate professor of literature and languages, worked this past summer with junior Noelle Larino to examine cultural differences in shaping writers. The pair explored historical events through the lenses of Mexican American women and Anglo American women and how they approached the same subject from varied perspectives.

“Noelle was in my early American Lit class and I was thrilled when she asked about summer research,” Johnson said. “She’s so dedicated; I knew she could handle the complexity of the reading.”

They spent a lot of time at the Library of Congress, which requires undergraduates to work with faculty members. “Opportunities for research are often limited to the sciences,” Johnson said. “Being able to do humanities research with an undergraduate is really special. The opportunity to do real, active research that early in their careers is invaluable. Wherever they go next – the archive or the lab – won’t be a scary place.”

Johnson appreciates the return on the investment she makes during summer projects.

“There was also a huge benefit for me,” she noted, adding that two sets of eyes is important when it comes to document review. “And, because I wanted to make sure Noelle felt comfortable, I was there more than I might have otherwise been. It’s such a treat to get to work with students, and it’s important that we get to do so much with undergraduates.”

Larino, a communications major with a minor in public history from Great Meadows, New Jersey, maintains a 4.0 GPA. The Marymount Honors Program student plans to intern at the Smithsonian National Postal Museum next summer and hopes to pursue a career in a related field.

“This experience has enabled me to develop hands-on skills and advanced research techniques which will be valuable in the future, especially working in a museum,” said Larino.





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