Mental energy and passion. They are what fuel creativity, encourage deep investigation and animate the civil exchange of ideas, enabling us to come to a more precise and generous understanding of our world.

In this edition of Intellect, which marks my first as the dean of the College of Arts and Sciences, you will find many examples of the brain power our faculty and students harness daily in work that has made an impact on the lives of others. For instance, an applied mathematician develops algorithms that help solve challenging engineering problems; a neuroscientist translates the effect of sleep deprivation on memory formation; a Catholic theologian and Jewish studies scholar facilitate fruitful dialogue around a potentially polarizing topic.

I know you will be impressed by the wide-ranging research interests and scholarship of our world-class faculty, who, by their actions and intent, champion liberal arts education and its role in a democratic society. I celebrate their dedication to our students, which is manifold. Carried out in the lecture hall, the laboratory, the studio, and in many more settings and circumstances, the effects of their guidance, mentorship and intellectual prowess on our students and the culture of Saint Joseph’s University cannot be overstated.

*Cura personalis*, or care of the whole person, a term from our Jesuit, Catholic heritage, best sums up the personal attention each student receives from his or her faculty mentors. That tradition is alive and well at the college, evidenced by the achievements of our students and alumni. Perhaps more to the point, though, is that a Saint Joseph’s liberal arts education furthers the Jesuit ideals of integrating contemplation and action, so that students have well-developed and reflective minds, alongside a desire to work toward a more just and humane world, shaping and channeling their mental energy and passion to work for the greater good.

My vision for the college has as its foundation the principles of collaboration, innovation and excellence. I look forward to an immense and satisfying journey as we build on the great tradition of the liberal arts at Saint Joseph’s.

*Shaily Menon, Ph.D.*
Dean, College of Arts and Sciences
Manuela Vuelve
Katie Smith ’15

Translating Sleep and Memory
Molly Grab ’17

Differing Perspectives on the Holy Land
Marisa (Fulton) Benjamin ’03

Cabaret Voltaire: Dada’s Movement and Magazine
Patricia Allen ’13 (M.A.)

Land of Hope and Dreams
Jeffrey Martin ’04, ’05 (M.A.)

Life by the Numbers
Katie Smith ’15
On July 5, 2010, the 199th anniversary of Venezuela’s independence, then-president Hugo Chávez kicked off a year’s worth of celebrations running up to the country’s bicentennial in 2011. In an elaborate display of pomp and circumstance called “Manuela Vuelve,” or “Manuela Returns,” Chávez welcomed back the symbolic remains of an iconic revolutionary woman, Manuela Sáenz Aizpuru (1797-1856) — to a country in which she had never set foot.

Born in present-day Ecuador, Sáenz was the illegitimate daughter of aristocrats. Married to an English merchant, she joined the independence movement around 1817. Opening her home in Lima, Perú, to important political figures, she gathered information that became vital to the revolution’s success. Sáenz lobbied for the role of women in the movement and was jailed for disguising herself as a male soldier.

“Sáenz was an incredible figure — who most historians remember simply as General Simón Bolívar’s lover,” says Heather Hennes, Ph.D., associate professor of Spanish. “Known as ‘the Liberator,’ Bolívar had many lovers. What made Sáenz stand out was her tenacity, her dedication to the independence movement and her loyalty to both her partner and his cause.”

Sáenz met Bolívar in 1822, when his army was making its way south — after having liberated present-day Venezuela and Colombia — to help solidify Perú’s independence. She is reported to have
participated in at least one of those important battles. Though the specifics of her participation are debated, Bolívar recognized her valor by promoting her to the rank of colonel and made her the guardian of his personal archives.

Bolívar’s military and political leadership was instrumental in securing independence from Spain and the eventual establishment of Venezuela, Colombia, Ecuador, Bolivia, Perú, and Panama as autonomous nations. His dream was the unification of the region in a nation called “la Gran Colombia.” As his de facto first lady, Sáenz had unparalleled access to Bolívar, making military and political leaders nervous.

“People feared her influence over Bolívar,” says Hennes. “Sáenz was outspoken and opinionated, which upset both his enemies and his allies.”

Sáenz was often excluded from official roles in the new government. According to Hennes, her story is exemplary of the threat that women pose when they enter politics. “Especially in her time, civic-minded women were seen as overstepping their bounds,” she adds.

Later exiled from Ecuador, Sáenz died of diphtheria in Perú and was buried in a pauper’s grave.

Hennes, who since 2003 has studied the representation of iconic women in Latin America — particularly Sáenz and Bolivian-Argentinian heroine Juana Azurduy — says that Sáenz is just one of the scores of women whose historical contributions have been ignored. She has published eight articles in scholarly journals about revolutionary women — most notably about Sáenz in Ecuador’s national publication, Revista nacional de la cultura. With the support of a Summer Research Grant from SJU, she traveled to the Dominican Republic in 2017 to begin work on the English-language translation of “Mañana te escribiré otra vez. Minerva y Manolo. Cartas,” a volume of letters between Dominican national heroine Minerva Mirabal and her husband Manolo Tavárez Justo. Mirabal and her sisters are internationally known by their codename “the Butterflies.”

Hennes takes up the cause of telling the stories of powerful women in her first-year seminar and her advanced Spanish course, both titled “Iconic Women of Latin America.”

“History, stereotypes and political agendas shape how we look at female figures,” says Hennes. “It’s important to consider society’s expectations for women and feminine behavior — how they met or transgressed those norms, and what happened as a result.”

Gender expectations change with time and place, but according to Hennes, women today face many of the barriers that Sáenz had to overcome. She encourages her students to reflect on their own lives and experiences in order to connect with the figures they study in class.

“Studying iconic women matters,” says Hennes, “because the same norms persist that prevent women from accessing the opportunities and power that heterosexual white men occupy. I hope students leave this course with an increased sensitivity to these gendered expectations.”

Historically, Sáenz’s tenacity and fervor earned her a reputation for being unhinged and dangerous. Yet, beginning in the 1980s, with the emergence of feminist perspectives on history, the rhetoric around Sáenz changed. The Manuela Vuelve campaign reflects this transition. Stoking ardent revolutionary passions to inspire the support of his regime, Chávez began to use Sáenz’s image as the embodiment of the Venezuelan citizen.


“It’s important to understand Chávez’s leadership style,” says Hennes. “He relied on his people’s passion to evoke an emotional reaction — beyond the intellectual — to his revolution and to him as a person. Chávez wanted to say, ‘I’m one of you. I understand you. I connect with you.’ To do that, he needed to reach people in a way that moved them.”

Hennes’ students analyze the ways in which women are represented throughout Latin America. She stresses that representations reflect stereotypes, political agendas and biases. “My goal is for students to become critical readers of representation,” says Hennes. “The women we study in this class deserve it.”

— Katie Smith ’15
TRANSLATING SLEEP AND MEMORY

Understanding the neuroscience of sleep deprivation and memory formation
It’s an everyday phenomenon that takes many forms: all-night study sessions, late nights at the office or midnight wake-up calls from young children. While sleep deprivation may seem commonplace, the CDC reports that it is a true public health crisis affecting more than a third of all Americans. It’s also what intrigues neuroscientist Jennifer Choi Tudor, Ph.D., assistant professor of biology, who was honored recently by the Sleep Research Society as an Outstanding Early Investigator (honorable mention) for her 2016 Science Signaling paper on the connection between sleep deprivation, memory and a little-known protein called 4E binding protein 2 (4EBP2). Tudor is the lead author of the paper.

“Sleep deprivation can lead to a whole host of issues,” Tudor explains. “It can affect metabolism, the processing of waste and gene expression. But we showed that, of a specific subset of that pathway, Tudor found that associated with memory. The molecular machinery for commonplace, the CDC reports that it is a true public health crisis affecting more than a third of all Americans.

Prior to joining Saint Joseph’s faculty in 2016, Tudor shed light on this subject as a postdoctoral research fellow at the University of Pennsylvania.

While it’s widely accepted that protein synthesis in the brain fuels memory function, the mechanical relationship between protein synthesis and sleep is much less clear. Prior to joining Saint Joseph’s faculty in 2016, Tudor shed light on this subject as a postdoctoral research fellow at the University of Pennsylvania.

By comparing the brain function of both sleep-deprived and well-rested lab mice, Tudor found that just five hours of extended wakefulness resulted in significant memory deficits.

“That’s the equivalent of someone who usually goes to bed around 11 p.m. staying up until 3 a.m.,” Tudor says.

Following sleep deprivation, memory deficits occur because the process to make proteins is impaired in a region of the brain called the hippocampus, which is associated with memory. The molecular machinery for protein synthesis is governed by an insulin-signaling pathway, and sleep deprivation causes changes in a specific subset of that pathway. Tudor found that by manipulating this pathway, the molecular setup for protein synthesis remained intact, reducing sleep deprivation’s adverse effects on memory formation.

To accomplish this, Tudor injected a virus that increased the abundance of the 4EBP2 protein into the hippocampus of mice, which fully restored protein synthesis — even when they were sleep deprived — as well as memory function.

“What we found is that even though the mouse is sleep deprived, because plenty of the protein synthesis was there and the machinery was available, we were able to prevent memory deficits,” Tudor explains.

In her lab at Saint Joseph’s, comprised of a team of graduate and undergraduate assistants, Tudor is building on this finding by asking new questions about how sleep affects memory. Her work focuses on gaining a better understanding of the 4EBP2 protein and its role in the insulin-signaling pathway.

One of the questions she is now considering involves memory and enhanced sleep: Can it alter the insulin-signaling pathway, boost the protein synthesis machinery, and potentially improve memory function?

“If we work with an Alzheimer’s disease mouse model that already has memory impairment, and we make their sleep ‘better’ or give them more sleep, can we then increase protein synthesis enough so that they’ll have improved memory function?” Tudor asks.

While her research considers the possibility of enhancing sleep — and ultimately, memory — by performing protein-level analyses, Tudor is conversely exploring whether or not modified 4EBP2 proteins can produce memory deficits if injected into well-rested organisms. Answering this question could lead to a better understanding of 4EBP2’s role in memory formation.

In addition to her work with memory, Tudor and her students are currently preparing a manuscript describing a neurodevelopmental disorder linked to faulty insulin signaling known as Fragile X Syndrome, a single-gene disorder that causes autism. According to Tudor, the study yielded a surprising finding about the mouse model used by many Fragile X researchers.

“Our data reveal that the mice do not have many of the autism-related behaviors evident in prior studies, like problems with social interaction and repetitive behaviors,” says Tudor. “Researchers need to be aware that it’s a difficult model with which to work.”

As her research on the intersection of memory, sleep and disease continues, Tudor is hopeful that she and her students can make a difference in the lives of those with neurodegenerative diseases or careers that cause insufficient sleep, such as military and health care professions.

“The silver bullet would be if we could come up with some sort of drug or pharmaceutical agent that could keep the memory there, or help create the memory, even though one is sleep deprived,” Tudor says.

She knows that, even if this idea is relegated to the future, in the meantime, her lab serves an important role.

“The goal is that we do good science, learn something new in the process, and then share that with my students, now and in the future,” Tudor says.

— Molly Grab ’17
Differing Perspectives on the Holy Land:
Enabling Fruitful Dialogues
The International Council of Christians and Jews (ICCJ) was receiving the same request for help, over and over again. When local Jewish and Christian dialogue groups met, in countries all over the world, its members could not discuss the Israeli-Palestinian conflict without verbal battle.

“The polarizing power of this topic is tremendous,” says interfaith scholar Philip A. Cunningham, Ph.D., professor of theology and director of the Institute for Jewish-Catholic Relations (IJCR) at Saint Joseph’s. “I was hearing reports regularly that when the Israeli-Palestinian conflict came up, people were suddenly at each other’s throats.” Cunningham is the ICCJ’s most recent past president.

Headquartered in Heppenheim, Germany, the ICCJ is a global organization engaged in the historic renewal of Christian-Jewish dialogue. Cunningham relates that the frequency of calls from groups across Europe, North and South America, and Israel signaled an opportunity to take action.

“The conflict between Israelis and Palestinians has complicated and intertwined political and theological aspects, which make dialogue very challenging,” he says. “We needed to develop resources to enable people to think about differing perspectives by engaging in constructive analysis and discussion of writings representing diverse viewpoints.”

The ICCJ chose to sponsor “Promise, Land, and Hope,” a five-year (2012-17) collaborative research initiative, for which Cunningham served as the project coordinator and liaison with a team of 15 scholars charged with developing materials for groups to use when discussing these issues. SJU Jewish studies scholar Adam Gregerman, Ph.D., assistant professor of religious studies and assistant director of the IJCR, joined Cunningham on the leadership team.

In their roles as institute directors, examining issues from multiple religious perspectives — and finding mutuality — is daily work. SJU’s ongoing commitment to the study and promotion of Jewish-Catholic dialogue has been closely aligned with the University’s identity since the institute’s inception in 1967.

“The interreligious relationship between Jews and Catholics is richly woven into SJU’s ethos,” says Cunningham.

The collaboration will result in a forthcoming book, Enabling Dialogue About the Land: A Resource Book for Jews and Christians. The work includes two parts: the first is a selection of essays written primarily by Jews and Christians on various facets of the Holy Land, including scriptural overviews; the meaning of the land for Jews, Christians and Muslims; challenges and creative approaches; and personal reflections. The second is a series of exercises that center on encountering the subject by discussing relevant religious texts in small groups.

“We thought it would be useful to address the topic directly by featuring diverse scholars who offer varying viewpoints and can foster dialogue around this complicated issue,” says Gregerman.

The research team met annually at sponsoring universities all over the world, including initially at Saint Joseph’s in 2011, and later in Jerusalem in 2015. Meeting in the Holy Land was especially significant, says Cunningham, as the team gained additional insights from local residents and, in return, witnessed how their work related to what was happening in Jerusalem.

Continuing to field test the developing exercises, the pair worked with members of their own local community and SJU honors students. Within each group, the exercises focused on participants discussing texts from perspectives beyond their own often closely held beliefs.

Cunningham and Gregerman stress that the purpose of the exercises is for people to see the logic, evidence and rationale behind each perspective — no matter the level of controversy — and not to win an argument or score debating points. They hoped that by introducing participants to a range of approaches, individuals would become aware of their existing presuppositions which, in turn, would lead to more fruitful conversations.

“By the end of the sessions when we had a variety of documents to compare, we saw that the tendency to inject premature judgments diminished,” says Cunningham. “Participants now understood a more varied set of opinions.”

Notes Gregerman, “These sessions have been fruitful because while Phil and I are both rooted in a religious tradition, we are also committed to promoting a productive dialogue about these traditions.”

“Promise, Land, and Hope” is among the numerous contributions that Cunningham and Gregerman continue to make to the international study of interfaith relations. In addition to sponsoring educational events for the University and wider community, the IJCR works in partnership with several organizations dedicated to interreligious relations. Cunningham also oversees the interfaith database Dialogika. Gregerman is the book review editor for Studies in Christian-Jewish Relations.

Especially noteworthy is the role the IJCR played in inviting Pope Francis to campus during his 2015 American tour. At SJU, his Holiness was reunited with his longtime friend Rabbi Abraham Skorka. Their friendship was embodied in the University’s new sculpture, Synagoga and Ecclesia in Our Time, which the pope blessed during his visit.

“SJU was the first educational institution to respond to the directive issued during the Second Vatican Council in 1965 for Jews and Catholics to collaborate and study alongside each other,” says Cunningham. “If, in the past 50 years, we have learned to have authentic dialogue with each other, now is the time to go forward to probe key topics together.”

— Marisa (Fulton) Benjamin ’03
As the First World War cut a gruesome swath across Europe, refugees fled to Zurich in neutral Switzerland. Among them were dramaturg/poet Hugo Ball and his wife, performer/poet Emmy Hennings. They rented a back room in a bar located at Speigelgasse 1, and in February 1916, Ball, Hennings and other refugee artists — sculptor Hans Arp, painter Marcel Janco, writer Richard Huelsenbeck, dancer/visual artist Sophie Taeuber-Arp, and poet Tristan Tzara — launched Cabaret Voltaire.

Named for the 18th century French political satirist and free-thinker and billed as a center for artistic entertainment, the group produced art of many genres that they displayed at the cabaret: poetry, performance pieces, paintings, collages, and sculpture.

Inspired by the avant-garde movements of the day — Expressionism, Futurism and Cubism — the work was wildly original, anarchic, eclectic, iconoclastic and conceived as a response to the war. “That was their common ground,” says art historian Emily Hage, Ph.D., associate professor of art. “They felt that rationality and logic, a blind faith in the machine and technology, and nationalism and the military led to this war in which millions of people were dying. They answered with absurdity.”

Cabaret Voltaire, 1916
Credit: Marcel Janco
A preeminent Dada scholar, Hage, a former journalist, is fascinated by the movement’s magazines, which were produced in cities across Europe and in New York where Dadaism developed followings.

The first Dada magazine, Cabaret Voltaire, produced as a single issue, was published in June 1916. Edited by Ball, it was meant to be an anthology of everything that happened at Speigelgasse 1 — the visual art hanging on the walls, the dissonance and anarchy of the performance pieces — but it functioned as a magazine. Hage, who has a forthcoming book, Dada Magazines: The Making of a Movement (Bloomsbury, 2018), says Cabaret Voltaire launched the movement, and tells us what the first Dadaists were producing and interested in.

Traveling the world to study original versions of Cabaret Voltaire and the publications that followed it, she convinced curators and archivists to allow her a closer look. After 100 years, many magazines are crumbling, but she knew it was vital to go beyond reviewing reproductions. Upon close inspection, Hage realized even the same issues could be different, including Cabaret Voltaire.

“Two versions were made, one in German, one in French, to avoid censorship and to appeal to different audiences,” she says. “Its cover is one of the more stunning, with a gold or silver strip of paper glued on the red background and Arp’s abstract woodcut and the title printed over them. Finding censor stamps, notes, written dedications from the editors, and in the German magazines, parts of pages cut out, it was exciting to imagine that these were the publications Dadaists handled.”

The Dadaists used the magazines to share their work and ideas with members of the avant-garde when the war made travel and communication impossible. “In a way, these publications were traveling exhibitions, engendering an art movement that was non-hierarchical, heterogeneous and transnational,” Hage says.

“Being a part of Dada did not entail pledging commitment to any set beliefs, but it did require editing or contributing to a magazine, bringing Dada to readers simultaneously and spurring recipients to make their own,” she explains. “The medium’s format is unrestricted, allowing editors to print a hodgepodge of materials in one publication under the ‘Dada’ label without explanation, encouraging many, even contradictory, versions. The magazines elucidate the group as a whole without losing sight of its specific, diverse manifestations.”

Acknowledging the documentary value of Cabaret Voltaire, Hage says its eclecticism makes it interactive, demanding of the reader a shift in approach on each page. “Content and formatting conspire to prevent the reader from perusing passively and relying on visual cues,” she adds. “It’s a lively compilation akin to a cabaret.”

When Hage introduces students to Dada, she emphasizes that the magazines changed how we now experience art.

“The founders of Expressionism, Futurism and Cubism have contributions in it.”

Hugo Ball

“The magazines elucidate the group as a whole without losing sight of [Dada’s] specific, diverse manifestations.”

Emily Hage, Ph.D.

Work Included in Cabaret Voltaire

- Abstract woodcut, cover art by Hans Arp
- Futurist Filippo Tommaso Marinetti’s poem “Dune”
- Affiche pour le “Chant Noir” du 31iem Mars 1916, (Poster for ‘Negro Song’) by Marcel Janco
- Two poems by Expressionist Wassily Kandinsky, “Blick und Blitz” (Look and Lightning) and “Sehen” (To See)
- Puppen (Puppets) by Emmy Hemmings
- “L’Amiral cherche une maison à louer” (The admiral is looking for a house to rent) – a three-part poem read in three languages simultaneously
- Untitled etching by Cubist Pablo Picasso

“The magazines elucidate the group as a whole without losing sight of [Dada’s] specific, diverse manifestations.”

Emily Hage, Ph.D.
Inside one of the world’s most successful rock stars beats the heart of a social justice crusader.
William Wolff, Ph.D., spends a lot of time listening to and thinking about music. Posters decorate the walls of his office. Vinyl albums await their chance on a turntable. Speakers play folk rock at just the right level to provide a soundtrack to his work.

But Wolff isn’t a musicologist. He’s an assistant professor of communication studies and teaches classes in social media and community engagement, digital storytelling and communication theory. Wolff is also an expert in rhetoric, the art of persuasive speaking and writing.

He combines his expertise with his passion by studying one of the greatest living rhetoricians: Bruce Springsteen.

Wolff is the editor of Bruce Springsteen and Popular Music: Rhetoric, Social Consciousness, and Contemporary Culture (Routledge, 2018), a collection of scholarly essays, looking at the ways that Springsteen presents himself and his music to the world, from a diverse set of disciplines including gender studies, theology and communications.

Wolff argues that since the 1980s, Springsteen “has employed what Aristotle called epideictic rhetoric — a form of rhetoric where a person consciously attempts to influence an audience’s beliefs and actions on cultural issues. In Springsteen’s case, in response to his observations of a world overrun by corruption, duplicity, war, loss of decency and unfairness.

“Look further than the lyrics: Think about his public statements,” Wolff urges. “Think about album packaging and liner notes. Think about which songs an artist chooses to sample, remix and make new — such as when Springsteen borrowed Blind Alfred Reed’s 1929 song ‘How Can a Poor Man Stand Such Times and Live,’ which was about the Great Depression, and in 2006 remade it into an indictment of the Bush administration’s handling of the aftermath of Hurricane Katrina. With Springsteen, we study how these forms of media are communicated to reinforce a particular view of the world and enact change.”

One song that illustrates the difference between intention and inferred meaning, Wolff says, is the title track on Springsteen’s massively successful 1984 album Born in the U.S.A.

“It’s very clearly a protest song, pointing out the effects of the Vietnam War and United States’ treatment of veterans,” Wolff explains. “But because of its thundering, radio-friendly presentation, people misinterpreted it as a patriotic anthem and used it for reasons he never intended. George Will wrote in The Washington Post that it was a ‘cheerful affirmation,’ and Ronald Reagan mentioned it in a September 1984 speech, which Springsteen decried from the stage in Pittsburgh the following day. It wasn’t how the song was intended to be heard and may be why he has now chosen to play a stripped down, haunting, guttural version on stage during his Springsteen on Broadway show — so he can leave no doubt in the matter.”

While Springsteen occasionally engaged in this kind of discourse during the height of his commercial success, Wolff says it was “Streets of Philadelphia” that set him on a new path.

The song, written for the 1993 film Philadelphia, which presented life with HIV/AIDS in a way mainstream films hadn’t before, was Springsteen’s “first push since signing with a major record label to consciously make music with a social and political purpose and inspire change in others,” Wolff says. “That led to his 1995 folk album, The Ghost of Tom Joad, which featured the stories of laid-off factory workers, migrant farmers, drug runners, vagrants — those left behind and forgotten who often pay with their lives.

As he grew more comfortable with his rhetorical method, Springsteen incorporated more intentional messaging into his songs and albums. In 2012, he released Wrecking Ball, a pointed attack against financial corruption. Wolff calls the record “his angriest, most politically overt album. In the final song, ‘We Are Alive,’ Springsteen calls forth voices from the Great Railroad Strike of 1877, which left nearly 100 dead; from the 1963 church bombing in Birmingham, which left four black girls dead; from the migrant workers crossing the southern border who died on their journey; to encourage those fighting for justice and solidarity to ‘stand shoulder to shoulder and heart to heart.’”

Beyond the messages contained within the songs themselves, Springsteen has also made a point to exercise his ability to persuade when he’s outside the recording studio.

“His public statements clearly have an epideictic purpose and are meant to inspire action in others,” Wolff says. “The day after the global Women’s March in January 2017, he performed in Perth, Australia. From the stage, he publicly stated his support of women’s rights, immigrant rights and racial justice. He reinforced the message by going into a five-song set that started with ‘Lonesome Day,’ which expressed the despair that people felt, and ended with ‘Land of Hope and Dreams,’ which lifted people up with resilience.”

Wolff notes that, while the book captures academic thought about Springsteen’s post-9/11 work, there is a wealth of material to study from his career and as he continues to make music.

“As long as there’s an imbalance between the wealthy few and the struggling many,” Wolff shares, “Bruce Springsteen will have more reasons to sing, play and assert his view of America.”

— Jeffrey Martin ’04, ’05 (M.A.)
LIFE BY THE NUMBERS:
OPTIMIZING EVERYDAY OBJECTS WITH APPLIED MATHEMATICS
Some people play golf in their free time. Rommel Regis, Ph.D., prefers math.

As director of actuarial science and associate professor of mathematics, Regis spends his days preparing budding actuaries for their professional exams. He teaches courses as complex as mathematical optimization and as elementary as The Whole Truth about Whole Numbers, a course for non-math majors. Between classes, he advises students, as well as new faculty members, about realizing their career goals.

For his research, Regis designs algorithms used by engineers to solve design optimization problems in various industries. He also collaborates with international researchers in the field, writing articles for submission to academic journals and, for fun, working on theoretical math proofs.

His dedication shows. Regis is a widely cited scholar of applied mathematics in academic journals — particularly in the area of black box optimization. Researchers in this field design algorithms to develop innovations for major industries, where physical tests and experimental designs would be too expensive or time-consuming to produce. Mathematical optimization applies to almost anything, from developing lighter airplanes that still fly safely to more effective radiation treatments for cancer patients that cause less damage to surrounding tissue.

“It’s math that improves people’s lives,” says Regis.

Regis’ 2014 paper published in *Engineering Optimization* debuted his COBRA method, short for “Constrained Optimization by Radial Basis Function Approximation,” which has become a benchmark algorithm in the field of optimization. At the time of publication, COBRA was regarded by Regis’ peers as one of the most efficient methods for solving black box problems — used anywhere from the aerospace industry to environmental engineering. Since then, Regis has continued to refine the method and has developed more effective algorithms.

COBRA’s success has garnered international attention, particularly at General Motors, where the company strives to build the most fuel efficient car without sacrificing crash test performance. His work is among the first steps in the larger research and development of a new vehicle.

“My algorithm delivers the 124 specifications for the lightest vehicle possible to industry specialists, while still satisfying over 68 different constraints in the car’s design and safety,” says Regis. “Researchers, then, use the algorithm in a computer simulation that evaluates some of the potential designs to find the most promising ones — before creating and testing prototypes.”

While he could have worked for the optimization arm of a major corporation, like Boeing or Ford, he chose academia. Regis explains, “Teaching grounds me and keeps me from getting stuck in my own bubble — and I get to stay up-to-date with every aspect of the subject.”

His love for mathematics has been lifelong. Originally from Naga City, Philippines, Regis began his mathematical journey at age 12, when he was one of 250 students (out of 16,000 applicants) accepted into the Philippine Science High School, the country’s best science secondary school. After teaching himself college-level Calculus I through III, he graduated at the age of 15 and majored in math at Ateneo de Manila University, a Jesuit institution. He went on to earn a doctorate in operations research from Cornell University, under the direction of Christine Shoemaker, Ph.D.

Regis strives to support motivated math and actuarial science students, particularly those who engage in long-term research as Summer Scholars or Honors students. His mentorship of ICC Scholar Luigi Nuñez ’17, who majored in math and computer science, lead to the development of an article that is currently under review for publication in the *Journal of Computational and Applied Mathematics*.

Nuñez received a Global Health Corps Fellowship in 2017 and currently works for the Program for Accessible Health Communication and Education (PACE) in Kampala, Uganda. He serves in PACE’s IT sector, evaluating data to determine the success of its projects and working to improve the efficiency of their health equity initiatives.

“I remember how strongly I loved math and wanted to achieve my dreams as a young student,” says Regis. “If I encourage that in my students, who knows what innovations they’ll pioneer?”

— Katie Smith ’15
Professor Awarded for Excellence in Experiential Education

Ann Green, Ph.D., professor of English, accepted the 2017 Outstanding Leader in Experiential Education in Higher Education award from the National Society for Experiential Education (NSEE) at its annual conference on Sept. 26.

“To receive the NSEE award is a huge honor,” Green says. “Experiential learning not only deepens students’ understanding of course material, but inspires them to engage with the world on a broader level.”

Green has long been a leader in experiential education on campus, teaching at least one service-learning course each semester since 1999. In the fall 2017 semester, Green taught two service-learning courses: a first-year section of Craft of Language where students performed service related to writing, literacy and education at five different sites in the Philadelphia area, and an upper-level course, Hospital Stories, where students read about health care and medicine from health care professionals, caregivers and patients’ points of view and engaged in relationship-based service with medically fragile clients at local care facilities and hospices.

Green was nominated for the award by Ann Marie Jursca Keffer, director of the Faith-Justice Institute, which celebrated its 40th anniversary in 2017. Keffer has worked with Green to develop her service-learning course.

“Ann is a dedicated scholar in the field of experiential education,” Keffer says. “Her leadership, commitment and promotion of service-learning pedagogy are invaluable resources to SJU.”

SJU Podcast Explores Faculty Research

This semester, Saint Joseph’s University launched “Good to Know,” a new podcast showcasing professors and students. Each episode, released biweekly on Wednesday, features an interview with someone who’s doing interesting research or has topical expertise.

In the first episode, Jennifer Choi Tudor, Ph.D., assistant professor of biology, discusses her research on the effect sleep deprivation has on the protein synthesis necessary for proper memory formation, and why getting the right eight hours of slumber — sleep when it’s dark, work and play when it’s light — is critical. The third edition features Paul Patterson, Ph.D., associate professor of English, sharing the medieval roots of Valentine’s Day.

“Good to Know” is available on iTunes, Stitcher, Google Play, TuneIn and most other podcast subscription services. It can also be accessed at sju.edu/goodtoknow.

IJCR Offers Discussion on Relationship Between Orthodox Jews and Catholics

On Nov. 9, the Institute for Jewish-Catholic Relations sponsored a panel discussion featuring two leading rabbis, Rabbi Mark Dratch and Rabbi Eugene Korn, Ph.D., who discussed their involvement in preparing two recent statements regarding the Jewish community’s relations with the Catholic Church from their Orthodox Jewish perspective.

“This program marked the first time that contributors to the two statements publicly shared their distinctive approaches,” says Philip A. Cunningham, Ph.D., professor of theology and religious studies and director of the IJCR.

Dratch is the executive vice president of the Rabbinical Council of America, and founder of JSafe: The Jewish Institute Supporting an Abuse-Free Environment, an organization addressing issues of domestic violence, child abuse and institutional and professional improprieties in the Jewish community. Korn is a scholar in the areas of Jewish ethics, Jewish-Christian relations and Israel. He is also the academic director of the Center for Jewish-Christian Understanding and Cooperation in Israel and co-director of its Institute of Theological Inquiry.
Faculty Earn Awards for Research, Teaching and Advising

Saint Joseph's University recognized members of the College of Arts and Sciences faculty with awards throughout the year.

Michael J. Morris '56 Grants for Scholarly Research
Christopher Close, Ph.D., assistant professor of history
Piotr Habdas, Ph.D., associate professor and chair of physics
Susan Liebell, Ph.D., associate professor of political science
Kersti Powell, D.Phil., assistant professor of English
Jenny Spinner, Ph.D., associate professor of English

Faculty Research Awards
Steve Cope, M.F.A., assistant professor of art
Rommel Regis, Ph.D., associate professor of mathematics
Aimee LaPointe Terosky, Ed.D., associate professor of educational leadership
Brian Yates, Ph.D., assistant professor of history

Faculty Teaching Awards
Christopher Close, Ph.D., assistant professor of history
Millicent Feske, Ph.D., associate professor of theology and religious studies
Brian Forster, Ph.D., GEP science lab coordinator
Ginger Hoffman, Ph.D., visiting professor of philosophy
Grace Wetzel, Ph.D., assistant professor of English

Faculty Advising Award
Rommel Regis, Ph.D., associate professor of mathematics

Lindback Award
Millicent Feske, Ph.D., associate professor of theology and religious studies

Two-Day Conference Commemorates Pakistan’s 70th Anniversary

In recognition of the 70th anniversary of the creation of Pakistan on August 14, 1947, Saint Joseph’s hosted the Pakistan at 70 Conference on Oct. 20 and 21. Events included a film screening and panels of international experts who discussed contemporary Pakistan, issues of gender and the country’s cultural arts scene.

The conference, sponsored by the Bernadette B. and James J. Nealis III ’69 Program in Asian Studies, opened with a screening of Dobara Phir Se, a romantic drama about a divorced Pakistani woman living in New York City and her star-crossed romance. Co-writers Mehreen Jabbar and Bilal Sami attended the screening, along with the film’s child star, Musa Khan, of Lower Merion, Pennsylvania.

At the conference, panelists from across the country spoke on a number of issues currently affecting Pakistan. “This conference, which marked the 70th anniversary of Indian independence and the birth of Pakistan as a nation, was an opportunity to reflect on Pakistan’s journey in light of the challenges it has faced in creating a stable democracy that ensures equal rights for all of its citizens,” says Amber Abbas, Ph.D., assistant professor of history and the conference organizer. “In addition, we focused the event on the lived experiences of Pakistani men and women rather than primarily on American concerns about national security in relation to Pakistan’s geopolitical goals.”
Lecture Series Celebrates 20th Anniversary of Environmental Science Program

Saint Joseph’s University’s Environmental Science and Sustainability program, which offers a major and two minors within the College of Arts and Sciences, celebrated its 20th anniversary in spring 2017 with a series of lectures featuring experts in policy, agriculture, physics and chemistry.

Jonathan Fingerut, Ph.D., associate professor of biology, says that the series — which included lectures such as “The Southern Ocean and its Significant Role in Climate,” presented by Irina Marinov, Ph.D., assistant professor of earth and environmental science at the University of Pennsylvania — represented the variety of topics that SJU students explore.

“We bring in a wide range of speakers each semester to provide our students the chance to hear from practitioners in the field, find out what the latest research is and get a better idea of what career opportunities are available, both within and outside of the sciences,” Fingerut says. “This series gave attendees a sense of the breadth of possibilities available to our students.”

Student, Alumni Award Winners Further Research and Studies

Undergraduate students and alumni are earning scholarships to advance their education and secure service positions locally and around the world.

Marisa Egan ’18, a senior biology major, was named a recipient of the 2017 Barry M. Goldwater Scholarship. The prestigious scholarship, given annually to sophomores and juniors who intend to pursue careers in the natural sciences, mathematics and engineering, covers the cost of tuition, fees, books, and room and board, up to a maximum of $7,500 per year.

Egan, who also holds minors in mathematics, philosophy and chemistry and is a John P. McNulty Scholar at SJU, is one of only 240 students nationwide to receive a scholarship from a pool of 1,286 applicants.

The St. Andrew’s Society of Philadelphia awarded junior Haley Waites ’19 the St. Andrew’s Scholarship. The $25,000 award enabled her to study at the University of Edinburgh this year.

Waites’ award marks the seventh consecutive year, and the eighth overall, that a Saint Joseph’s student has received a scholarship from the St. Andrew’s Society, which was founded in 1958 to foster understanding between Scotland and the United States.

Waites, a political science major, hopes to pursue work in domestic and international environmental policy after graduating.

Senior international relations major Daniel Soucy ’18 was awarded the Critical Language Scholarship by the U.S. Department of State for summer 2017. The scholarship is a part of the Competitive Language Program, a United States government effort to increase significantly the number of Americans studying abroad and mastering critical foreign languages.

Soucy used his scholarship to continue his study of Hindi, the national language of India, at the American Institute of Indian Studies Summer Language Program in Jaipur, India. The award covered all of his expenses and also provided a stipend.

Brenna Ritzert ’17 earned a Fulbright English Teaching Assistantship position in Slovakia. She is currently spending a year in the town of Trebišov teaching English to students at a local high school and representing the United States as a cultural ambassador.

The Fulbright Program is one of the most competitive scholarship opportunities in the United States. Approximately eight students per year are selected for the Fulbright ETA in Slovakia. Ritzert is one of the few to make it through Fulbright’s highly selective application process, which is based on academic excellence and personal accomplishment.

Lab Students Go Back to the Sandbox with Augmented Reality

This semester, Saint Joseph’s University unveiled an augmented reality sandbox, designed as an educational tool for natural science laboratory students. Based on a model designed at the University of California Davis, the sandbox models topography and storm water runoff for environmental science and sustainability lab students.

“One of the challenges in studying topography is having students visualize something that is three-dimensional using only a two-dimensional map and a traditional lesson,” says Brian Forster, Ph.D., science lab coordinator for the general education program.

“The sandbox brings our lessons into 3-D.”

Students recreate a topographical map in the sandbox and mimic rain events to study where water runoff occurs. The experiment can help lab students learn about areas at risk for runoff damage and the effects of pollutants in a watershed.
In partnership with the U.S. Department of Health and Human Services and the Philadelphia Department of Public Health, students in the Appropriated Art class led by Ronald Klein, M.F.A., professor emeritus of art, used confiscated tobacco products to create pieces of art that called attention to public health concerns.

“The products used to create these works of art were illegally sold to undercover youth surveyors in the city,” explains Elissa Martel, special projects coordinator at Get Healthy Philly, an initiative of the Philadelphia Department of Health. “As a result of compliance checks, we have amassed a sizable collection of tobacco products. We wanted to use these items that traditionally cause harm to create art as a tool for social change and education.”

Inspired by patterns such as those found in mandalas and wallpaper, Klein encouraged the students to create their work in small, square frames. Some of the resulting pieces are geometric and repetitive, calling to mind the habitual use of the materials from which they are created. Others employ shredded cigars, empty boxes or crumpled wrappers to create abstract art.

The exhibit was displayed at Boland Hall through September 2017 and was then exhibited in Philadelphia’s City Hall for the months of October and November.
Panel Discusses Global, Local Issue of Human Trafficking

The Department of Sociology and Criminal Justice, the Faith-Justice Institute, and the Justice and Ethics in the Law program sponsored a panel discussion about human trafficking on Nov. 13. The panelists included special agent Marlon Miller ’96, agent in charge of the Philadelphia Homeland Security Investigations Office; Kelly Sagastume ’15 from the School of Social Policy and Practice at the University of Pennsylvania; and Claire Renzetti, Ph.D., holder of the Judi Conway Patton Endowed Chair for Studies of Violence Against Women at the University of Kentucky.

In Philadelphia, thousands of men, women and children are trapped by the industry. In 2017, 117 known human trafficking cases were filed in the state of Pennsylvania, and a large percentage of them were adult females enslaved in sex trafficking. Of the 331 calls that tipped authorities on cases, a majority were from community members who were able to spot signs of human trafficking.

“Sagastume and Miller are two alumni doing the difficult work of combatting human trafficking,” says Susan Clampet-Lundquist, Ph.D., associate professor of sociology, who organized the event. “After talking with both, I saw an opportunity to discuss trafficking from different vantage points that would give our students a fuller understanding of the issues.”
Faculty Books


RANDALL M. MILLER, PH.D., professor of history, with Paul Cimbala ’74, PH.D., editors, *The Northern Home Front During the Civil War* (Fraeger, 2017).


BRENDAN T. SAMMON, PH.D., assistant professor of theology and religious studies, *Called to Attraction: An Introduction to the Theology of Beauty* (Cascade, 2017); *William Desmond and Contemporary Theology*, editor, with Christopher Simpson (University of Notre Dame Press, 2017).


Journal Highlights

AMBER ABBAS, PH.D., assistant professor of history, *Oral History Review*.

MATTHEW ANDERSON, PH.D., professor of psychology and associate dean of social sciences, *Behavioral Processes*.

PAUL J. ANGIOLILLO ’78, PH.D., professor of physics, *Journal of the American Chemical Society*.

LISA BAGLIONE, PH.D., professor of political science, *Journal of Women, Politics and Policy*.

ELIZABETH BECKER, PH.D., assistant professor and director of behavioral neuroscience, *Hormones and Behavior*.


JOHN M. BRAVERMAN, S.J., associate professor of biology, *Genes, Genomes, Genetics, Trends in Genetics*.


SUSAN CLAMPET-LUNDQUIST, PH.D., associate professor of sociology, *Journal of Urban Affairs*.

CHRISTOPHER CLOSE, PH.D., assistant professor of history, *European History Quarterly*.


JOSEPH CORABI, PH.D., professor of philosophy, *Journal of Consciousness Studies, Philosophia*.


ROBERT DANIEL, PH.D., assistant professor of modern and classical languages, *NFCTFL Review*.

JONATHAN FINGERUT, PH.D., professor of biology, *Herpetological Conservation and Biology*.

JANINE FIRMENDER, PH.D., associate professor and department coordinator of undergraduate teacher education, *Association for Supervision and Curriculum Development, Educational Leadership, Gifted Child Quarterly, Gifted Child Today, Teaching Children Mathematics*. 
Journal Highlights, continued

Brian Forster, Ph.D., general education program laboratory coordinator of natural sciences, Proceeding of the 38th Conference of the Association for Biology Laboratory Education.

Kazuya Fukuoka, Ph.D., associate professor of political science, Nations and Nationalism.

Terrance Furin, Ph.D., coordinator of international education programs, The School Administrator.

Kathleen Gaval, Ed.D., adjunct, educational leadership, Academic Impressions.

Cheryl George, Ph.D., assistant professor of special education, Journal of Aquatic Physical Therapy, Journal of Intellectual Disability – Diagnosis and Treatment.

Adam Gredger, Ph.D., assistant professor of religious studies and assistant director of Institute of Jewish-Catholic Relations, Israel Affairs, Modern Theology, Theological Studies.

Eileen Grogan, Ph.D., professor of biology, Scientific Reports.

Piotr Habdas, Ph.D., professor and chair of physics, Biochimie.

Emily Hage, Ph.D., associate professor of art, American Periodicals, Dada/Surrealism.

G. Anita Heeren, Ph.D., assistant professor of interdisciplinary health, Cogent Psychology.

Christopher E. Kelly, Ph.D., assistant professor of sociology and criminal justice, Criminal Justice and Behavior, Justice Quarterly.

Christina King Smith, Ph.D., professor and chair of biology, Neuroscience and Biobehavioral Psychology.

Ailing Kong, Ph.D., associate professor of graduate teacher education, IABC and ICE Conference Proceedings, Proceedings of the International Conference on Education.


Julia Lee-Soety, Ph.D., associate professor of biology, Behavioral Process.

Erin Leichman, Ph.D., research scientist, Journal of Clinical Child and Adolescent Psychology.

Aisha Damali Lockridge, Ph.D., associate professor of English, CLA Journal.

Melissa Logue, Ph.D., assistant professor of sociology, Journal of Ethnicity in Criminal Justice.

William Madges, Ph.D., professor of theology and religious studies, Studies in Christian-Jewish Relations.

Michael McCann ’87, Ph.D., professor of biology, Mycologia.

Scott McRobert, Ph.D., professor of biology, Herpetological Conservation and Biology.


Jodi Mindell, Ph.D., professor of psychology and director of graduate gerontology and psychology, Behavioral Sleep Medicine, Journal of Clinical Child and Adolescent Psychology; Infant Behavior and Development, Journal of Clinical Sleep Medicine, Sleep Medicine, World Journal of Pediatrics.

Matthew Nelson, Ph.D., assistant professor of biology and director of animal studies, Elife.


Stacy Olitsky, Ph.D., assistant professor of undergraduate teacher education, Science Education.


Cristian Pardo, Ph.D., associate professor of economics, Oxford Economic Papers.

Jo Alyson Parker, Ph.D., professor of English, English Studies.


Rommel Regis, Ph.D., associate professor of mathematics, Optimization Methods and Software.


Elaine Shenk, Ph.D., associate professor of Spanish and linguistics, Multilingua.
CA&S Newsmakers

College of Arts and Sciences faculty have contributed their expertise to stories appearing in the following outlets:

- America Magazine: The Jesuit Review
- ArtBlog
- Asbury Park Press (N.J.)
- Associated Press
- The Atlantic
- BBC News (United Kingdom)
- BedTimes Magazine
- Catholic Philly
- Catholic Register
- Chronicle of Higher Education
- Clinical Adviser
- Charleston Post and Courier
- China-US Focus
- Commonweal
- The Conversation
- Crux
- C-SPAN
- Delicious Living
- EdSurge
- L’Express (France)
- Guardian (United Kingdom)
- Illawarra Mercury (Australia)
- Inside Edition
- Inside Higher Ed
- Inside Science News
- Jewish Exponent
- Kiawah Legends
- KYW-1060 AM (Philadelphia)
- KYW-TV-CBS3 (Philadelphia)
- Legends Magazine: The Golfer’s Journal
- LiveScience
- The Main Line Times (Pennsylvania)
- Men’s Health
- Minnesota Public Radio
- National Catholic Register
- National Catholic Reporter
- The New Yorker
- New York Post
- The New York Times
- NorthJersey.com
- NJ.com
- Pediatric Sleep
- Philadelphia Daily News
- The Philadelphia Inquirer
- PhillyVoice.com
- Philly.com
- PubMedHealth
- Quartz
- Reuters
- Scientific American
- Smithsonian
- Spectrum
- Sydney Morning Herald (Australia)
- Time
- USA Today
- The Verge
- Vice News
- The Washington Post
- WCAU-TV-10NBC (Philadelphia)
- WHYY-90.9 FM
- “Newsworks”
- WPHL-TV-PHL17 (Philadelphia)
- WPVI-TV-6ABC (Philadelphia)
- WTXF-TV-Fox29 (Philadelphia)
- WURD-900AM (Philadelphia)
- WVIZ-PBS-TV (Cleveland, Ohio)

Faculty who have been seen and heard in the news include:

- Amber Abbas, Ph.D.
- Matthew Anderson, Ph.D.
- Lisa Baglione, Ph.D.
- James Carter, Ph.D.
- Susan Clappert-Lundquist, Ph.D.
- Peter Clark, S.J. ’75
- Tom Coyne, M.F.A.
- Philip A. Cunningham, Ph.D.
- Tenaya Darlington, M.F.A.
- Adam Gregerman, Ph.D.
- Jeffrey Hyson, Ph.D.
- Daniel Joyce, S.J. ’88
- Maria Kefelas, Ph.D.
- Alan Kerkeslager, Ph.D.
- Ron Klein, M.F.A.
- Erin Leichman, Ph.D.
- William Madges, Ph.D.
- Gregory Manco, Ph.D.
- John McCall, Ph.D.
- Dennis McNally, Ph.D.
- Randall Miller, Ph.D.
- Jennifer Tudor, Ph.D.
- Jodi Mindell, Ph.D.
- David Parry, Ph.D.
- Paul Patterson, Ph.D.
- Usha Rao, Ph.D.
- Leslie Schumacher, Ph.D.
- Katherine Sibley, Ph.D.
- Alex Skolnick, Ph.D.
- Clint Springer, Ph.D.
- Aimee Terosky, Ph.D.
- Jennifer Tudor, Ph.D.
CA&S Programs

Dean
Shaily Menon, Ph.D.

Undergraduate Programs
Majors and Minors

Associate Deans
Matthew J. Anderson, Ph.D. — Social Sciences
Shawn M. Krahmer, Ph.D. — Humanities
Jean M. Smolen, Ph.D. — Mathematics, Natural Sciences, and Computer Science
John J. Vacca, Ph.D. — Education

Actuarial Science
Africana Studies
American Studies
Animal Studies
Art
Art History
Asian Studies
Autism Behavioral Studies
Behavioral Neuroscience
Biology
Chemical Biology
Chemistry
Chinese Language and Culture
Classical Studies
Communication Studies
Computer Science
Creative Writing
Criminal Justice
Criminal Justice Studies (PLS)
Economics
Educational Studies
Early Childhood and Special Education
Early Childhood Education (PreK-4)
Elementary Education and Middle School (4-8)
Elementary Education (PreK-4) (PLS)
English
English and Professional Writing (PLS)
Environmental Science
Environmental and Sustainability Studies
Faith-Justice Studies
Film Studies
Francophone Studies
French
General Studies BLS with concentrations in Humanities, Professional Studies, Social Sciences or Autism Studies (PLS)
Gender Studies
German
Health Administration (PLS)
History
Information Technology
Interdisciplinary Health Care Ethics
Interdisciplinary Health Services
International Relations
Italian
Italian Studies
Journalism
Justice and Ethics in the Law
Latin American Studies
Linguistics
Mathematics
Medieval, Renaissance and Reformation Studies
Music
Music Industry
Organizational Development and Leadership (PLS)
Philosophy
Physics
Political Science
Psychology
Psychological Studies (PLS)
Religious Studies
Secondary Education (7-12)
Sociology
Spanish
TESOL
Theatre and Film

Graduate Programs

Associate Deans
Matthew J. Anderson, Ph.D. — Social Sciences
Shawn M. Krahmer, Ph.D. — Humanities
Jean M. Smolen, Ph.D. — Mathematics, Natural Sciences, and Computer Science
John J. Vacca, Ph.D. — Education

Education - Middle School (4-8)
Education - Middle School (K-12)
Foreign Language Education
Health Administration
Health Education
Mathematics Education
Organization Development and Leadership
Professional Education
Psychology
Reading Specialist PK-12
Secondary Education (7-12)
Special Education PreK-8 or 7-12
Teacher of the Deaf and Hard of Hearing (PreK-12)
Writing Studies

Majors
Art Education PK-12
Biology
Computer Science
Criminal Justice
Doctorate of Educational Leadership
Education - Elementary (PreK-4)

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