

YESHIVA UNIVERSITY MAGAZINE

YU TODAY

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DEEPLY ROOTED FORWARD FOCUSED

The Future of Science, Tech & Ethics



Dear Friends,

I am so pleased to introduce this edition of *YU Today*.

In this issue, we are focusing on **the interplay among science, technology and ethics**, which is just a small window into the expansive universe of great research and accomplishments by which our faculty and alumni impact the world.

While science and technology advance human history, our values and ethics nourish our humanity. With the acceleration of progress in science and technology, it is more important than ever to provide our next generation a **first-class education** with the knowledge and competencies as well as the values and ideas to **advance humanity with wisdom and purpose.**

This combination of science and Jewish ethics serves as the bedrock of the Yeshiva University experience. Our mission is to guide our students in both confronting contemporary challenges and seizing the wondrous opportunities of our time as the students **transform our world of tomorrow** for the better. We dedicate ourselves to scientific inquiry and technological innovation to develop **morally mature, market-ready graduates** with the skill sets for lifelong success.

In this issue, you will find a diverse and impressive collection of profiles and articles that feature some of Yeshiva University's renowned scientists and mathematicians as well as demonstrations of how, in the face of COVID-19, our scientific community of faculty, students and alumni have met the challenge with **creativity and compassion.** I welcome you to read about their inspiring dedication and commitment to improving our world.

Deeply Rooted and Forward Focused is the hallmark of a Yeshiva University education. I hope this glimpse into Yeshiva University will help you re-imagine your world.

Dr. Ari Berman
President, Yeshiva University

Future-Proofing YU's Computer Science Studies

PROF. JUDAH DIAMENT

Clinical Associate Professor; Chair, Computer Science Department, Yeshiva College

When Prof. Judah Diament took on the leadership of the Yeshiva College computer science department in 2016, he brought a wealth of tech-sector experience to the mission. From 2000 to 2014, he worked at IBM's Thomas J. Watson Research Center on middleware and distributed systems, from which he has 13 patents and multiple publications.

From 2014 to 2016, he was a vice president at Goldman Sachs (Finance Engineering), where he researched, designed and developed a custom language and tool chain used to reduce weeks to days for updates in application business logic in production.

Since he took over the helm, the department has seen impressive growth in enrollment, course diversity, faculty breadth and internship and employment options for students. For example, since he came on board, the number of students in the department has risen 143%, and full-time job offers to graduates have come from tech and financial technology companies (e.g., Google, Amazon, Goldman Sachs, Bloomberg, Citi and Prudential) as well as from the nonprofit and university sectors, such as The Center for Clinical Data Science at Massachusetts General Hospital and Bar-Ilan University in Israel.

In fact, this past year's graduates alone received offers from Amazon (8), Google (3), Bloomberg (3), Broadridge (2) and Capital One (2) as well as from IBM, Accenture and Deloitte, among others.

He has also upgraded the two four-year tracks in the major—Data Science and Distributed Systems (also known as cloud computing)—to the status of a Bachelor of Science degree. The three-year track will continue to award a B.A. degree. “This will give our four-year computer science degree students an additional edge in their careers,” he noted.

“When you combine all the opportunities in New York City,” Prof. Diament said, “at ‘the big players’ of tech as well as the banks and smaller fintech companies, you quickly see that this city has become one of the best places in the world for computer scientists to live and work.”

Prof. Diament established many avenues outside of the curriculum for his students to acquire skills and build professional networks. He has invited influential lecturers to Yeshiva College, in-



cluding such notable people as Mois Navon, founder of Mobileye; Dr. Yehudit Abrams, CEO of MonitHer; Elisha Wiesel, then-chief information officer of Goldman Sachs; Dr. Erick Brethenoux, a research director at Gartner; and Steve Demuth, chief technology officer and head of the Office of IT Strategy and Architecture at the Mayo Clinic in Rochester, Minnesota.

He has partnered with the YU Career Center on such events as TechUcation, which brought 200 students together to discuss opportunities and options for their future with YU students and alumni working in tech companies as well as recruiters.

Prof. Diament has also enlisted a top-notch Industry Advisory Board that helps the department expand the program's development and keep its curriculum current and dynamic. Board members come from a diverse array of companies, such as Amazon, IBM, Google and Facebook that, in one way or another, deal with the challenges of managing and keeping secure large sets of data.

“We have excited, talented and hardworking students and faculty and a program that has proven itself to be an attractive part of Yeshiva University's unique education,” he said. “Our focus now is on the pleasant challenge of continually improving both the program itself as well as the career opportunities and connections that we create for our students, be they computer science majors or students in other majors who want to learn the technology and styles of thinking they need to succeed in the modern economy.”

A Quantum Leap for Women in STEM

DR. LEA FERREIRA DOS SANTOS

*Professor of Physics; Chair, Physics Department,
Stern College for Women*

Dr. Lea Ferreira dos Santos, professor of physics and chair of the physics department at Stern College for Women, has been a trailblazer for women in physics at Yeshiva University and in the world at large.

For instance, in 2008, when she was an assistant professor of physics at Stern College, she was selected from over 70 applicants to join the U.S. delegation to the 3rd International Union of Pure and Applied Physics International Conference on Women in Physics in Seoul, South Korea. The purpose of the conference was to highlight the underrepresentation of women in physics and bring attendees together to share common problems and find ways to improve women's participation.

Growing up in Brazil, where she attended the University of Sao Paulo and earned her Ph.D., Dr. Santos remembers feeling somewhat isolated as a woman in her science classes. "However, it wasn't until I came to the United States and was exposed to discussions about women in science that I realized the depth of the social problem behind the small numbers," she said. "I felt that discussions were essential to creating awareness, which eventually would lead to changes."

She became instrumental in advancing the then-new physics program at Stern College by developing new innovative courses and attracting talented students to her research group. Being the only female faculty member in the department, Dr. Santos understands the profound influence she has on the young women in her classes. "I became convinced that my contribution to science would come from two realms: as a researcher and as a role model to female students," she said.

Dr. Anatoly Frenkel, head of the physics department at Stern College in 2008, noted of her work that "in a very short time, Dr. Santos has established impressive scientific productivity in her research of quantum many-body systems as well as establishing herself as an excellent teacher and mentor."

Since that time, Dr. Santos has been as good as her word to improve the research skills of her students and the representation of women in STEM fields.

Dr. Santos has received many prestigious grants and other forms of financial support for her work on quantum systems from such

organizations as the National Science Foundation (NSF), Research Corporation for Science Advancement and the Simons Foundation (more on the Simons Foundation in a moment). She always creates with these grants opportunities to "foster the participation of women in physics and improve the educational infrastructure at Stern College by offering new research opportunities and training in core areas of physics and in computational methods."

An excellent example of her commitment to women in physics is reflected in her most recent grant from the NSF of \$400,000 to study "Nonequilibrium Quantum Matter: Timescales and Self-Averaging." Three of the five educational and outreach goals of the project involve promoting women in STEM: engaging female undergraduate students in the principal investigator's research projects, giving presentations about what can be done with a degree in physics in open houses and visits to high schools for girls, and modernizing the curriculum at Stern College by integrating computational activities into the undergraduate science courses.

Since August, Dr. Santos has been on a yearlong sabbatical supported by a \$100,000 grant from the Simons Foundation based, in part, on her scientific accomplishments in the five-year period preceding the application and on the potential scientific impact of the work to be done during the leave period.

"The grant will give me the uninterrupted time to expand my current program on nonequilibrium quantum dynamics and to initiate new research lines," she said. "I will be able to develop long computer codes, strengthen current collaborations and establish new ones, and write new proposals."

After so many years studying the subject, "I find it fascinating that despite quantum mechanics' mysteries, we have been learning how to make use of its properties," she said. "The world's race to achieving control of many-body quantum systems is getting closer to an ending. The trophy for the first group to cross the finish line will be the fastest and most powerful computer ever seen: the quantum computer."





Bringing Expertise, Compassion and Values Learned to Helping Patients

DR. SCOTT CHUDNOFF
'96 Yeshiva College; Chair, Department of Obstetrics and Gynecology, Stamford Health; Clinical Professor of Obstetrics and Gynecology, Columbia University's Vagelos College of Physicians and Surgeons

Dr. Scott Chudnoff '96YC is a perfect example of YU's philosophy of pursuing excellence in his chosen field and a life filled with a commitment to Jewish values.

As chair of the Department of Obstetrics and Gynecology at Stamford Health in Stamford, Connecticut, and a clinical professor of Obstetrics and Gynecology at Columbia University's Vagelos College of Physicians and Surgeons, he specializes in treating women with infertility challenges and gynecologic abnormalities as well as a variety of related disorders.

He received his degree from the Robert Wood Johnson Medical School at Rutgers University and completed his residency, fellowship and a Master in Clinical Research and Biostatistics at Albert Einstein College of Medicine/Montefiore Health System, where he also held a position as associate professor. He was also the director of gynecology at the Moses Campus at Montefiore and served as associate residency director for several years and co-director of the Fellowship Program in Minimally Invasive Gynecologic Surgery.

He spends much of his time counseling patients on the best course of treatment in such areas as gynecologic abnormalities, genetic issues and infertility concerns. He is widely recognized as being an innovator in treating fibroids, a condition that impacts 25% to 50% of American women, and has been involved in developing a new technology that allows destruction of the fibroids without affecting the surrounding tissue.

Dr. Chudnoff spent months of what seemed at the time to be endless days and nights on the front lines of the coronavirus pandemic tending to sick patients. Yet, he still found time to create a video teaching viewers how to make homemade face shields for use by medical professionals to help alleviate a shortage of the protective equipment, especially in the early days of the pandemic. Using materials easily found at local stores, such as clear plastic report covers found in office supply stores and self-stick rubber foam found in many home supply chains, he showed how to create much-needed face shields in just a few minutes.

Thanks to that video, which has been viewed close to 10,000 times, hundreds of face shields were donated to local hospitals by

concerned community members eager to help.

While Dr. Chudnoff is at the forefront of the latest medical advances in his field, he looks to other disciplines for his patients' treatments as well, such as artificial intelligence (AI). "AI is going to be critical moving forward. It will allow us to better understand upcoming trends and be integrated into early warning systems," said Dr. Chudnoff. "AI will significantly help with designing new approaches to treatments."

He's also interested in using imaging processing to better allow for reliable self-assessments of concerns and has been working with adapting augmented reality solutions with robotic procedures to help improve surgical outcomes. He believes that many of these advances can provide services to individuals in underserved communities and in poor countries.

He is married to Rivki, an alumna of Stern College for Women, and looks back on his years at YU with pride, saying, "No other university could have prepared me as well for my career." He is grateful for what YU has given him, especially regarding his religious development. He strongly identifies with its philosophy of encouraging students to be both committed to Torah values and accomplished in the secular world. "The two don't have to be mutually exclusive," said Dr. Chudnoff.

Thanks to YU's dual curriculum, he also learned how to balance his workload efficiently, and he regards this training as a perfect preparation for a busy physician with a strong dedication to his family and faith. YU also instilled in him a sense of giving back by serving his local community and the Jewish community at large and by integrating his medical expertise with many of the halachic [Jewish legal] dilemmas that arise.

Dr. Chudnoff is guided by his compassion and medical expertise along with his faith and the values he learned while at YU. "Medicine can be confusing and uncertain," said Dr. Chudnoff. "I believe that you need to imagine that the person sitting across from you is your family member and they need to be treated with the utmost respect and care."

For Travelers with Disabilities, Her Site is the First Stop

MIRIAM ELJAS
'00 Stern College for Women; Co-founder and CEO, accessibleGO



What some see as a flight of stairs, others see as Mount Everest. To others, a doorway that can't fit a wheelchair means not having access to a hotel room. Miriam Eljas '00S created accessibleGO to fill this need, building an award-winning travel-planning platform for people with disabilities, which offers bookings, reviews and, most importantly, community.

Eljas is a serial entrepreneur who founded a media company in New York City and held a managerial position at one of Israel's most active venture capital funds before creating accessibleGO. And for her, it's personal. "Growing up with a parent who had a disability made me constantly aware of places that were accessible and those that were not," said Eljas. "This really formed my identity, and I always wanted to start a

company that could do well by doing good in this area."

Eljas and her team have compiled data on hotel and service provider accessibility for the top 30 cities in the United States, with 4,000 hotels covered to date, and have plans to cover the majority of U.S. hotels by the end of next year. Future services include cruises, insurance and ground transportation options as well as airline reviews and a rankings section, all based on accessibility.

Whether it's travelers with mobility, visual or hearing challenges, accessibleGO offers people with disabilities the convenience of booking a hotel with data included on each facility and reviews written by the community. The site also covers many other aspects of the travel experience, including a customer service team that contacts the hotel as well as airline and car rental

companies to ensure that all accessibility requests will be met, with confirmation emails sent to the user for the user's peace of mind. To accommodate the changed travel environment due to COVID-19, the site has added health and hygiene information to many listings, enabling users to book with confidence since a significant number of people with disabilities are in a higher risk category for contracting the virus.

"I believe that doing good can be a fundamental part of growing a business, where catering to an underserved population with unmet needs can result in a very successful company that is making a difference in people's lives," said Eljas.

So many of us say we want to change the world. Miriam Eljas, a YU alumna driven by compassion coupled with the vision of an entrepreneur, has done just that.

Humboldt Winner Has Found His Formula for Success

DR. EDWARD BELBRUNO

Clinical Professor of Mathematics, Yeshiva College

Dr. Edward Belbruno is one of those rare individuals who can bridge what British scientist and novelist C.P. Snow called, in 1959, “The Two Cultures” of the sciences and humanities.

As a scientist, Dr. Belbruno is a world-renowned mathematician who, in 2017, received the Humboldt Research Award from the Alexander von Humboldt Stiftung/Foundation of Germany for his accomplishments in research and teaching in mathematics as applied to celestial mechanics, astrodynamics and astrophysics. This is no small accomplishment, since past winners have included many Nobel Prize laureates as well as Fields Medalists (the equivalent of the Nobel Prize for mathematics).

As part of the prize, Dr. Belbruno was able to spend a period of up to one year working on a long-term research project with colleagues at the University of Augsburg, in Augsburg, Germany. While there, he worked on two projects with Dr. Urs Frauenfelder in the field of celestial mechanics and dynamical systems. They studied a new family of periodic orbits in the three-body problem, which may have applications to space missions.

Their second project focused on special trajectories to Mars, found in 2015, that promise to have important applications for NASA and the European Space Agency.

He is continuing his work on studying the Big Bang in cosmology using methods in mathematics such as stochastic differential equations and dynamical systems as well as investigating a different approach to studying orbits in the three-body problem.

He has also founded a company, Innovative Orbital Design, that specializes in interplanetary trajectories that are low energy, using methods of dynamical systems, with an emphasis on weak stability boundary theory. His company has worked often with NASA and Boeing.

On the other hand, quite literally, Dr. Belbruno is a celebrated painter with regular exhibitions in the United States and Europe who uses the imaginative processes of art to complement his mathematical studies. *Painting the Way to the Moon*, the documentary screened last year in New York City at Agora Gallery, 530 W. 25th St. (with astrophysicist and science communicator Neil deGrasse

Tyson as the emcee), tells Dr. Belbruno’s story of working at NASA’s Jet Propulsion Laboratory (JPL) by day and making space-inspired paintings by night.

A concrete example of art and math creating insight and solutions was the work Dr. Belbruno did with Japan in 1991 to rescue the lost lunar mission of the Japanese spacecraft Hiten, where he applied the newly articulated mathematics of chaos theory to space travel (an idea popularized by James Gleick’s 1987 book, *Chaos: Making a New Science*). Here is how he described his work in an interview with *Antiques and The Arts Weekly* in November 2019:

Japan wanted to be the third country to send something to the moon, after the United States and the Soviet Union. [In March 1990] they sent two robotic spacecraft into Earth orbit. One was a relay to stay in Earth orbit and the other was to go to the moon. Well, it never made it there. The engineer told me the Japanese wanted to see if the other spacecraft in Earth orbit could be used to go to the moon and salvage their mission. Problem was it had almost no fuel. He said Japan was desperate and he wanted to see if my weird chaos ideas might work. Eureka! This was my moment. Suddenly the idea flashed in my head how to find a novel way to the moon with no fuel. He didn’t believe that it would work, but to his surprise, it did in a computer simulation. This route was based on a painting I had done. One year later, Japan put its spacecraft, renamed Hiten, on this trajectory and it successfully arrived October 2, 1991.

Dr. Belbruno continues to explore the borderlands of science and art. He recently produced a painting “that I’m very happy about and could redefine my art direction” while, at the same time, publishing a piece in *Journal of Physics Communications* titled “Relation between solutions of the Schrödinger equation with transitioning resonance solutions of the gravitational three-body problem.”

Whatever paths his future work takes, he sees himself as always building “a bridge between both the arts and sciences.”





Yeshiva University is a unique ecosystem of educational institutions, affiliates and resources that prepares the next generation of leaders with the Jewish values and market-ready skills to achieve great success in their personal and professional lives and endows them with the will and wherewithal to transform society for the better.

Undergrad

- YESHIVA COLLEGE
- STERN COLLEGE FOR WOMEN
- SY SYMS SCHOOL OF BUSINESS
- THE KATZ SCHOOL

Cardozo

BENJAMIN N. CARDOZO SCHOOL OF LAW

Wurzweiler

WURZWEILER SCHOOL OF SOCIAL WORK

Revel

BERNARD REVEL GRADUATE SCHOOL OF JEWISH STUDIES

GPATS

GRADUATE PROGRAM IN ADVANCED TALMUDIC STUDIES FOR WOMEN

Belz

THE PHILIP AND SARAH BELZ SCHOOL OF JEWISH MUSIC

Centers & Institutes

- THE ZAHAVA AND MOSHAEL STRAUS CENTER FOR TORAH AND WESTERN THOUGHT
- THE EMIL A. AND JENNY FISH CENTER FOR HOLOCAUST AND GENOCIDE STUDIES
- CENTER FOR THE JEWISH FUTURE
- CENTER FOR ISRAEL STUDIES
- YESHIVA UNIVERSITY MUSEUM
- YESHIVA UNIVERSITY LIBRARIES

RIETS

RABBI ISAAC ELCHANAN THEOLOGICAL SEMINARY

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AZRIELI GRADUATE SCHOOL OF JEWISH EDUCATION AND ADMINISTRATION

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ALBERT EINSTEIN COLLEGE OF MEDICINE

Ferkauf

FERKAUF GRADUATE SCHOOL OF PSYCHOLOGY

Katz

THE KATZ SCHOOL OF SCIENCE AND HEALTH

Did you know?

- \$51.7M in philanthropy raised in 2020
- 375 wrongly convicted individuals exonerated by Cardozo's Innocence Project
- 94% of YU applicants to medical schools accepted in 2020
- 75% of all major Modern Orthodox congregations in America led by graduates of RIETS

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An Ethicist Grapples with the Transformational Nature of Science and Technology

RABBI DANIEL FELDMAN

*Rosh Yeshiva, Rabbi Isaac Elchanan Theological Seminary;
Instructor, Sy Syms School of Business*

How do we determine when life ends? How have advances in reproductive biotechnologies helped or harmed the future of the Jewish family? How has the digital world shaped our social behavior in the actual world? Has the internet diluted or improved the value we place on learning?

Rabbi Daniel Feldman '96YC, '98R addresses questions like these as he traces the evolution of our technology-driven world to shed light on the dilemmas, dangers and opportunities it poses to his students, congregants and readers.

A prolific author, sought-after speaker and respected authority on Jewish ethics, Rabbi Feldman is a rosh yeshiva at the Rabbi Isaac Elchanan Theological Seminary (RIETS); an instructor at the Sy Syms School of Business; executive editor of the RIETS initiative of YU Press; editorial board member of *Tradition: A Journal of Orthodox Jewish Thought*; and spiritual leader of Ohr Saadya of Teaneck, New Jersey.

Rabbi Menachem Penner, the Max and Marion Grill Dean of RIETS, has described him as “without a doubt, one of the upcoming great Talmidei Hakhamim [Torah scholars] of our community.”

Following in the footsteps of his late father, Rabbi David Feldman, a well-known bioethicist, the younger Feldman explores the challenges that emerge when science and technology intersect with Jewish law, challenges that he finds both endless and endlessly fascinating. “From when life begins to when it ends, science allows us both to know things and do things that were unimaginable a short time ago. We can help people in ways that we never could before, but often it comes at a cost that we are forced to question if we are permitted to pay,” he said.

Those moral costs were the subject of his presentation at the Yeshiva University Student Medical Ethics Society Conference on Feb. 23, 2020, where he explored the halachic [Jewish legal] aspects of physician-assisted suicide, “a topic that causes much trepidation and intimidation” and is legal in nine states.

Like his public lectures, Rabbi Feldman's classes at RIETS and Sy Syms investigate the relevance and power of Jewish values in the broader society. At RIETS, he teaches a daily Talmud shiur [lecture] that incorporates classes in Jewish thought and biblical commen-

tary. His courses at Sy Syms have included Business and Jewish Law, Judaism and Public Policy, and the Ethical and Legal Environment of Business. He is developing a new course on Economics and the Torah for the Zahava and Moshael Straus Center for Torah and Western Thought.

But when it comes to untangling some of the biggest conundrums that his students and congregants face, Rabbi Feldman trains his ethical lens on digital technology, where he sees distraction, overload, apathy and moral confusion impeding spiritual and intellectual growth. “The digital world has been a major focus of some of my recent work, particularly my last English-language book, *False Facts and True Rumors: Lashon Hara [Derogatory Speech] in Contemporary Culture*,” he noted.

In it, he explores two broad topics: how the digital revolution has redefined our cultural landscape and the struggles we face as we order our priorities to meet the demands that this new sensibility forces upon us as we make our way through a complex world with unstable boundaries.

For example, “the premium we put on privacy and modesty, certainly, has been completely turned on its head,” he said. “The default is that everything happens in the public sphere and that we are expected to know everything and to engage with everything. We are at once exposed and protected, informed and misinformed, in ways we never before have been.”

That is why, according to Rabbi Feldman, “a thorough knowledge of the basic fundamentals and the vast landscape of Torah is more important than ever,” but it cannot be a knowledge acquired simply by going to a website or being part of a social media feed, as convenient as these may be. “The Jewish reverence for learning is not only based on making knowledge accessible. It is also premised on the transformational nature of the encounter with divine wisdom.”

That word “encounter” is crucial to Rabbi Feldman because it implies a vital entanglement, a beneficial wrestling, with Judaism's core precepts and not just a superficial surfing of widely disseminated sources. “We are different people for learning the way that we learn and an ever-improving people for continuing to do so,” he said.

Studying the Dynamic Interaction Among Thought, Feeling and Behavior

DR. LEANNE QUIGLEY

*Assistant Professor of Psychology,
Ferkauf Graduate School of Psychology*

Dr. Leanne Quigley is an assistant professor in the Clinical Psychology PsyD Program in the Ferkauf Graduate School of Psychology. Originally from Canada, she completed a Ph.D. in clinical psychology at the University of Calgary in Calgary, Canada, and a clinical internship and postdoctoral fellowship at the Centre for Addiction and Mental Health in Toronto, Canada.

Her primary research focus is “on the interplay between cognitive and emotional factors in the etiology and treatment of emotional disorders.” When asked what that means to a non-scientist, she laughingly noted that what it means is “how the way we think influences how we feel, and conversely, how our moods can affect how we think and take in information.”

Her current work focuses on cognitive control, which is the ability to control the contents of one’s mind. “We think that people vulnerable to depression might have difficulty exerting cognitive control over negative emotional information, leading to a repetitive processing of that negative information and difficulty shifting away from negative thinking,” she said.

Her interest in depression “came out of my research on cognitive processes in anxiety because anxiety and depression share similar cognitive processes. These two con-

ditions affect the lives of most people in some way, and research that helps us better treat these problems can have a big impact.”

At the beginning of 2019, she received a significant grant from the Canadian Institutes of Health Research to study cognitive control and vulnerability to major depression as part of a four-person team. She and her collaborator in Toronto have started recruiting participants, and the study will examine cognitive control biases in currently depressed, previously depressed and never-depressed individuals and examine whether cognitive control biases increase risk of relapse to depression over one year. “The findings of this study will help us identify people most at risk of relapse and develop targeted treatment approaches,” she said.

Dr. Quigley grew up in Kitchener, Ontario, and she completed her graduate training in clinical psychology in Calgary, Alberta. “Ferkauf was on my radar because of the director of the clinical psychology PsyD program, Dr. Lata McGinn. I was drawn to Ferkauf because it would allow me to train students in clinical theory, practice and research and focus on graduate-level teaching. When I experienced the culture of Ferkauf firsthand at my interview, I knew the program was the right fit for me.”

One of Ferkauf’s great strengths, ac-

ording to Dr. Quigley, is that it offers training in both cognitive behavioral and psychodynamic therapies, which puts the school in a unique position to be a leader in integrating different theoretical orientations, clinical approaches and research methodologies. “Ferkauf should continue to explore how to provide training in integrating theoretical orientations in addition to providing strong foundational training in both approaches,” she said.

As a keen observer of her discipline, Dr. Quigley has paid close attention to the challenges raised by the age of algorithms, artificial intelligence (AI) and tech disruptions. “I think technology can benefit clinical psychology in many ways, such as computerized cognitive training in conjunction with psychotherapy, therapy delivered via computer or apps and using virtual reality to help patients with phobias and psychoses,” she said. “Algorithms and AI are used increasingly to facilitate diagnostic assessment and personalized medicine.”

But, as she pointed out, “an algorithm cannot replace critical thinking and clinical judgment, and we need to be aware of the potential harmful effects of technology and social media.”





Ailin Elyasi

A Dedication to Helping Others is in Her DNA

AILIN ELYASI
'20 Stern College for Women

How she had the time is anyone's guess. Spending her senior year at YU pursuing a double major in biology and political science. Balancing a dual curriculum. Studying for the MCAT. Applying to medical schools. And her absolute favorite, helping students as an EMT.

Yet somehow, Ailin Elyasi '20S got it all done.

Elyasi is currently a scribe assisting a urological surgeon at three of the physician's satellite offices during her gap year before medical school, yet during her time at YU, she was quite busy. She founded and was the coordinator of Ezras Nashim at Stern College for Women, an all-female ambulance corps sensitive to the needs of Orthodox women. She explored the idea of starting a branch at Stern College with Judge Rachel "Ruchie" Freier, founder of Ezras Nashim in Brooklyn. (At the time, Elyasi was a legal intern in the judge's office, an opportunity she landed thanks to YU.)

Judge Freier and the University's administration were instantly supportive, and Elyasi's hard work paid off in April 2019 when Ezras Nashim officially started at Stern College. It now has 20 state-certified EMTs, all of whom are Stern students responding to calls 24/7.

"Helping students who would not have gotten medical attention otherwise brought with it a sense of accomplishment," said Elyasi, who was born in Iran. Understandably, she's quite proud of the outstanding emergency medical care the students continue to provide since she's graduated. She is grateful for having been given the opportunity by YU and Ezras Nashim to be involved in such an important undertaking and looks forward to finding other ways in which she can help those in need as she pursues her career in medicine.

Knowing Ailin Elyasi, she'll make the time.

A Graduate Who Raised the Bar in the Classroom and on the Court

BAR ALLUF
'20 Yeshiva College

It's not a combination you come across very often: math and physics major, president of the Physics Club and point guard on YU's basketball team. It was, however, found in Bar Alluf '20YC during his time at YU as he balanced a dual curriculum of Jewish and academic studies, 6 a.m. practices, noontime shoot-arounds and games at the Max Stern Athletic Center and on the road.

During his senior year at YU, he was also a Kressel Scholar researching Network Science, a discipline that analyzes how complex systems of such things as information, social media, diseases, rumors and so on flow through networks of billions of connected components. Alluf incorporated his math background, especially linear algebra, and physics knowledge about electricity and magnetism in his research to attempt to predict certain chain reactions in a network that could lead to a catastrophic outcome. "I attempted to find out,"



Bar Alluf

said Alluf, "what are the conditions for this event and if they could be generalized and reproduced in other systems. How can we prevent it?" Other areas of Network Science that interest him include disease propagation and the ability to provide governments and nations with proven scientific methods to contain an outbreak and prevent a global catastrophe.

A native of Kfar Saba, Israel, Alluf is currently a student at Georgia Tech pursuing a Ph.D. in physics. "I would like to satiate my thirst for knowledge and use my skills in the best way possible," he said.

By all accounts, while at YU, Alluf was a superstar as a student in the classroom, as a research scholar and as a player on the basketball court. Word is, his team had a pretty good season.

Following Her Passion for Medicine and Medical Ethics

BAILEY FROHLICH
'20 Stern College for Women

Although she just started medical school, Bailey Frohlich '20S already has patients' well-being on her mind.

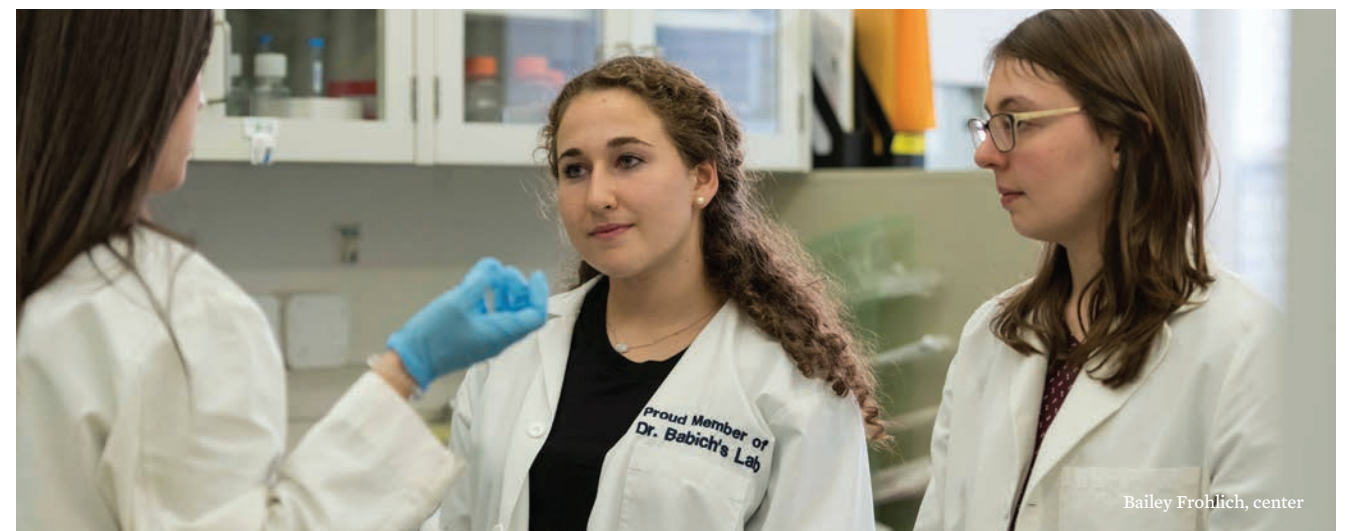
As a former co-president of Yeshiva University's Medical Ethics Society (MES),

she is passionate about understanding how the intersection of Jewish and secular medical ethics and the underlying values of both systems can provide patients with the best care.

Inspired by Rabbi Saul Berman's Medical Ethics course, she joined MES during her first year at Stern College for Women so that she could impart her knowledge of and passion for medical ethics to others. She is drawn to the subject by both its practical and philosophical aspects and enjoys exploring fundamental concepts such as the inherent human right to health care, the scope of patient autonomy and what "quality of life" means.

Originally from Boca Raton, Florida, Frohlich studied biology and public health while serving as the co-captain of YU's NCAA women's tennis team. Following her graduation in May, she began medical school at the Albert Einstein College of Medicine, where she looks forward to cultivating her passion for medical ethics and applying it to her future role as a physician.

"I know that this area will have tremendous relevance to my professional goals and obligations," said Frohlich. "But even more so, I believe that having a deeper understanding of today's pressing bioethical issues and the nuances involved in addressing them will enable me to be a more sensitive and productive member of society."



Bailey Frohlich, center

During Hard Times, YU Takes the High Road

Yeshiva University students, faculty and alumni battle COVID-19 with technology and innovation inspired by the values of charity, generosity and justice.

HEALTH SERVICES



Dr. Marissa Barrera

Virtual Speech Clinic

The M.S. in Speech-Language Pathology at the Katz School of Science and Health, directed by Dr. Marissa Barrera, is offering free online speech and language therapy to students, alumni, faculty, staff and their families residing in New York State.



The Parnes Clinic

The Max and Celia Parnes Family Psychological and Psychoeducational Services Clinic is the training clinic of the Ferkauf Graduate School of Psychology. Since March, 125 to 150 students have been providing supervised telehealth services to patients, and starting in September, patients were able to sign up for in-person sessions as well as access services online.

Social Workers in Israel

A team of alumni from the Wurzweiler School of Social Work living in Israel provides anonymous telehealth counseling for frontline COVID-19 medical workers in hospitals around the United States. As one team member pointed out, "Being in Israel plays in our favor since people can find support at the odd hours of the day and night."

"We provide an educational experience suffused with values. Our values may be easy to discuss when the world is calm, but they are most needed when the world is in disarray."

—DR. ARI BERMAN
President, Yeshiva University

SOFTWARE APPLICATIONS

Online Tutoring

In June, Ben-Gurion University of the Negev organized The Triple Bottom Line Challenge to turn the isolation of the COVID-19 quarantine into a startup that would improve the world.

Shira Feen '20K and Lavanya Karanth '20K from the M.S. in Digital Marketing and Media at the Katz School won the overall competition with Remote Education for All, their proposed virtual tutoring app. The app allows students to scroll through a list of teachers available online and select with whom they want to schedule a call.



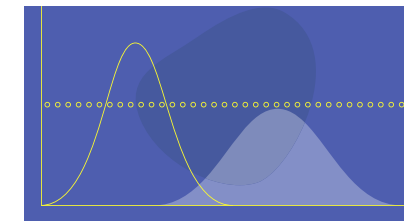
Diagnosis and Treatment

Two alumni of the Data Analytics and Visualization program at the Katz School, Maridor Bocalbos '19K and Dean Pienica '19K, have produced Image2Txt.Doc, where users can get an instant diagnosis and treatment of an injury by either speaking with a chatbot or finding a clinician based on their insurance.

RESEARCH AND TEACHING

Racial Disparity

An analysis of public datasets by Julian Ruggiero, a Fulbright scholar in the Data Analytics and Visualization program at the Katz School, showed that a higher incidence of COVID-19 occurred in ZIP codes with a low socioeconomic status.



Psychological Impact

Dr. Katie Aafjes-van Doorn, Dr. Vera Békés, Dr. Tracy Prout and Dr. Jordan Bate at the Ferkauf Graduate School of Psychology explored the psychological impact of COVID-19 on adults, parents of children 6 – 12 years of age, therapists and the general population. The results have been published in several journals and extensively document the damages COVID-19 has wrought.

YU in Action



Academics

During the 2020 summer session, three courses covered the history, theology and science of COVID-19: Dr. Jeremy Brown's How Pandemics Shape the World, Rabbi Dr. Shlomo Zuckier's Responses to COVID-19 in Jewish Ritual and Theology and Dr. Jeremy Wertheimer's Introduction to COVID-19 Drug Development.

Rabbinical Support

YU's Roshei Yeshiva offered round-the-clock guidance to rabbis, rebbetzins [wives of rabbis] and congregants worldwide to help them navigate halachic [Jewish legal] challenges and questions concerning the pandemic.

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Racheli M. '19
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