Spring 2020
IN THE LOOP

A publication for College of Computing and Digital Media alumni

Spring 2020

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DIBS emojis are at your fingertips thanks to a student-designed texting app. See page 8.
Letter from the Dean | IN THE LOOP

ADVANCING PAST
ADVERSITY

I hope this letter finds you safe and healthy.
We have all been profoundly affected by the COVID-19 pandemic in many ways. For students, the past several months have marked an unprecedented time in their educational careers. But these months have also shone a light on the resilience of the College of Computing and Digital Media (CDM) community and our commitment to DePaul’s Vincentian mission as together we responded to the question, “What must be done?”

CDM delivered about 500 courses online this spring quarter. This could not have been done without our faculty, staff and instructional design team, who worked diligently to move us online in less than two weeks.

CDM has a long history of providing high-quality online learning to students, going back to the creation of our own lecture-capture system for delivering courses asynchronously in 2000. Forty percent of our graduate credit hours have been delivered online for quite a while, via both that proprietary CourseOnline technology and other formats. Still, an extraordinary amount of work was involved in getting all classes fully online.

It has been inspiring to watch our faculty figure out how to move classes online and preserve educational quality. They identified inexpensive tablet/pen devices so students could do the drawing required in animation and graphic design classes. They introduced new cloud-based software such as Frame.io to facilitate online collaboration for film production and critique. These are just a few examples of ingenuity that allowed the college to pivot so quickly to exemplary distance learning for every student.

There have also been some remarkable extracurricular responses to the crisis. We mobilized our makerspaces to assist in the production of personal protective equipment (PPE). Tools such as 3D printers and sewing machines were moved from DePaul’s labs into the homes of CDM and College of Science and Health faculty and students. There they were put to work using medically approved designs to produce face shields, masks, gowns and other PPE for health care workers at Illinois hospitals and frontline responders. Their crucial effort was supported by crowdfunded donations on inspire.depaul.edu and a collaboration with the Robert Bosch Tool Corporation and their subsidiary, Dremel, which provided laser cutters and more than 100 3D printers.

Though the stories in this issue do not specifically address our operations under COVID-19, you will read about programs, people and activities that exemplify the same Vincentian spirit, rigor and focus on real-world challenges to promote learning.

We are always proud of our CDM community and hope you feel the same pride as we share our accomplishments with you.

Dean David Miller

David Miller
Expert Talk Series | IN THE LOOP

LOOK WHO’S TALKING

School of Design Talks
The School of Design (SoD) Talks series presents six to seven presentations annually. They are livestreamed on YouTube.

Underrepresented voices across disciplines are the norm, says Assistant Professor Heather Quinn, who organizes the series. “They’re not just pumping out logos and brochures,” says Quinn. “They’re doing design ethics, augmented reality to represent climate change—some things a little off the beaten path.”

Guests have included Antionette Carroll, founder of Creative Reaction Lab, a nonprofit social enterprise designing healthy and racially equitable communities for black and Latinx populations; Tobias Frere-Jones, Yale University typeface design professor; and Cennydd Bowles, London-based digital product designer and futurist. Speakers often offer workshops to students as well.

Increasingly, SoD is partnering with other Chicago institutions to present some talks. A recent appearance by Tulane University professor Lesley-Ann Noel (see “Seen and Heard,” page 4) was co-hosted by the Illinois Institute of Technology’s Institute of Design.

“Collaboration builds community and opens resources for students,” says Quinn. “And when we get promoted on other organizations’ channels, that boosts DePaul’s brand and reputation as well.”

Learn more at cdm.depaul.edu/sodtalks.

CDM Research Colloquium
This weekly talk series, held Friday afternoons 1–2 p.m., is a required course for School of Computing (SoC) and SoD PhD candidates. Faculty, doctoral students and scientists from DePaul, other academic institutions and related industries discuss creative and scholarly research challenges across a spectrum of technological endeavors in an informal setting.

CDM faculty take turns teaching the course. They often invite colleagues in their fields of expertise, but strive to expose students to cutting-edge work in different disciplines.

Recent topics included continuum robotic arms, cybersecurity vulnerabilities of AI voice assistants, humanitarian supply-chain digitization and video game pathway design. While research presentations are cerebral, the ambience is deliberately low-key.

Typically, 15 to 20 students attend the talks, and refreshments are served.

“Students write abstracts on what they’ve heard,” says Assistant Professor Tanu Malik. “It increases their awareness level on a variety of research, which is critical for us.”

Learn more at colloquium.cdm.depaul.edu.

School of Cinematic Arts
Visiting Artists Series
The School of Cinematic Arts (SCA) formats its Visiting Artist Series as talk-show television productions. Students in SCA’s Film 319 course form the crew, switching among four cameras and livestreaming online as instructor Wendy Roderweiss directs them and another faculty member chats with guests onstage.

“It’s all student-run and a super-practical learning experience that’s great for their résumés,” says Roderweiss. “They learn quickly whether live events are for them or not. You either love the energy and chaos, or you’re in an utter panic the whole time.”

SCA produces about six events per quarter, usually on Fridays.

Guests come from film, television, screenwriting and animation. They’ve ranged from superstar filmmakers to indie newcomers. Lana and Lilly Wachowski (“The Matrix” film series) made an appearance. So did Milwaukee-based filmmakers Kirill Mikhanovsky and Alice Austen, whose shoestring-budget feature “Give Me Liberty” won the John Cassavetes Award at the Independent Spirit Awards.

Learn more at cdm.depaul.edu/vas.

Antionette Carroll offers tips on designing for equity and social justice.

Moustafa Youssef, a professor at Egypt-Japan University of Science and Technology, speaks to SoC and SoD PhD students.

Actor Rainn Wilson, of TV’s “The Office,” shares career insights.
**“SAINT FRANCES” RELEASED NATIONWIDE**

“Saint Frances,” a feature film directed by School of Cinematic Arts (SCA) adjunct faculty member Alex Thompson (MFA ’17) and produced by SCA faculty members James Choi and Raphael Nash, was released in theatres nationwide on Feb. 28 and garnered widespread praise from film critics. The film follows the unlikely friendship between an inexperienced nanny and the 6-year-old in her care. Actress Kelly O’Sullivan wrote and co-stars in the film, which premiered at the 2019 SXSW Film Festival and won the Audience Award in the narrative feature competition.

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**SUMMER LEARNING FOR CHICAGO YOUTH**

Sheena Erete, associate professor in the School of Design (SoD), is working with Chicago Public Schools and multiple community partners on a new, multiyear initiative called My CHI, My Future, launched by the office of Chicago Mayor Lori Lightfoot. The project teams up organizations, educators and parents to provide innovative summer learning opportunities for youth. The four communities participating this year are Austin, Back of the Yards, West Garfield Park and Roseland.

“We’re facilitating conversations about ways to transform out-of-school learning landscapes,” says Erete. “We’re using a team-driven, data-informed approach. Not only related to the tools and technology, whether that’s game design, computer science or music, but how we provide equitable opportunities for young people so they have exposure to varied programming.”

So far, virtual workshops and camps are among the offerings in keeping with stay-at-home COVID-19 guidelines.

Learn more at mychimyfuture.com.

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**SPOTLIGHT ON BLACK DESIGNERS**

On February 17, SoD partnered with Illinois Institute of Technology’s Institute of Design to host a talk, panel discussion and workshop with Lesley-Ann Noel (second from right), professor of practice and associate director of design thinking for social impact at Tulane University. The “Spotlight on Black Designers” event, held during Black History Month, addressed design as a means of agency for students and communities of color and explored the connection between design and empathy.

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**VINTAGE VIEWING**

Vince Anter (CDM ’10) is busy churning out season two of his “V is for Vino” streaming series on YouTube and Amazon Prime Video. Anter, who studied interactive media at CDM, produces, writes, hosts and edits the show. In each episode, Anter profiles a winemaking region and its vintners and demonstrates wine pairings with cuisine cooked by a chef in that region.

Learn more at visforvino.com.
“SUN KING” SHINES AT FEST
“Sun King,” the first film produced by SCA’s Indie Studio initiative, premiered in late February at the Beloit (Wis.) International Film Festival, where it won the award for Best Illinois Feature Film. SCA Instructor James Choi is executive producer of the film, which was crewed entirely by SCA undergraduate film and television students.

The SCA Indie Studio helps students produce microbudget feature films while enrolled in a class that spans three quarters. “Sun King” was shot during summer 2018 and completed in fall 2019. It follows an eccentric Chinese man who embarks on an epic journey to marry his cousin after convincing himself he is the reincarnated soul of King Louis XIV of France.

CODE CONQUERORS
The School of Computing’s Security Daemons team won its sixth-straight Illinois title in the Collegiate Cyber Defense Competition (CCDC), then won first place in the competition’s Midwest regional. The team placed fourth in the national CCDC tournament held virtually in May. Undergraduate and graduate students try out for Security Daemons, a club whose members compete in contests connected to computer, information and network security industries and professions. The prestigious CCDC is sponsored by Raytheon, a major U.S. defense contractor and global cybersecurity firm.

LIGHTS, CAMERA, ACTION
Hayley Anderson (CDM ‘12) was included in Forbes’ “30 Under 30” class of 2020, which highlights outstanding entrepreneurs, representing 20 different industries. Anderson is the chief creative officer and co-founder of soona, a service that provides brands with professional product photography and video content on a fast, informal basis for less than the price of stock files. Clients can work with crews at studio locations in Denver, Minneapolis and (coming soon) Austin, Texas, or mail product to the studios and collaborate with crews online in real time.

DEVELOPER CONNECTIONS
SoC’s Developer Student Club (DSC) and DePaul’s Center for Educational Technology welcomed LinkedIn representatives to DePaul for a March 10 virtual workshop on best practices for branding yourself on the social-networking platform. The online workshop was open to students and faculty from all majors and colleges. The DSC also hosted two days of workshops on March 5–6 with Google engineers. Topics covered included résumé strategies, Google Cloud Platform solutions and how to maximize each year of school to be ready for industry internships and full-time opportunities. The DSC helps students bridge the gap between theory and practice by building software solutions to solve local problems in a peer-to-peer learning environment.
Aiding National Security

School of Computing (SoC) undergraduate and graduate students in Assistant Professor Filipo Sharevski’s INSuRE class work on unclassified cybersecurity projects that support the National Security Agency (NSA), the Department of Homeland Security and other federal agencies. The projects are for the U.S. federal government’s National Research Laboratories, such as Sandia, MITRE and MIT Lincoln Lab, as well as government-contracted cybersecurity research institutions.

INSuRE (Information Security Research and Education) is an educational initiative of the NSA and National Science Foundation, whose grants fund Centers of Academic Excellence in Education (CAE-ED), a small group of universities deemed to have impressive cybersecurity degree programs. Sharevski was part of INSuRE’s first cohort as a graduate student at Purdue University, and he brought DePaul into the elite partnership after he was hired onto the SoC faculty in 2016.

“It’s a rare thing,” says Sharevski. “We’re part of an NSA community of schools who have harmonized curriculum in terms of research and education, so people who graduate from cybersecurity programs can get jobs in government and industry, and know how to switch between those employers.”

The program also helps students learn how government research differs from similar pursuits in private industry and whether they have a passion for it.

“The best way to find out is by taking a class like this,” says Sharevski. INSuRE students at CAE-ED schools work simultaneously on challenges provided by either a national lab or a cybersecurity research institution. Examples have focused on moving target defense for automated communication systems in aircraft and measuring social media influence via digital assistants, such as Siri, that use cryptographic, password-free authentication. Student teams present research and proposals through an online hub to sponsors’ technical advisors, with whom they also have a weekly half-hour phone call to monitor progress.

Government research labs connecting with academia to cultivate future employees may surprise some, but competition for such specialized graduates is a matter of necessity.

“Otherwise, the rapidly growing cybersecurity industry would siphon every single one of them,” Sharevski says.
Supporting City Services
Chicago Mayor Lori Lightfoot has focused on the guiding principles of transparency, equity, diversity, inclusion, accountability and transformation to realize her vision for municipal governance. Those principles have extended to a redesign of the city’s website, chicago.gov, and the efforts of students in Collaboration Studio, a School of Design (SoD) graduate course in the Experience Design program. Students were tasked with reviewing the site and offering recommendations for making the user experience and site architecture more efficient.

Jason Kunesh (CDM ’06), the city’s director of design, reached out to associate professor Sheena Erete, one of the course’s instructors. Erete then facilitated the project with students who divided into teams to focus on different project goals, streamlining pathways for users coming to the website to pay fines, seek employment and request services.

Teams did usability testing, which included collecting feedback from students across the university who were asked to perform tasks on the website. They studied how other governments had improved content and information architecture after website redesigns. They used search keywords provided by Kunesh to gauge search engine optimization and sifted through thousands of web pages spanning multiple city departments for duplicate content and dead links. Besides compiling all their data-driven findings in a massive implementation guide, they designed additional assets that plugged holes in the new design system created by Kunesh and other project partners.

“It was a big undertaking,” says participant Christanne Siamas, who is scheduled to graduate this spring. “Cities don’t really put technology infrastructure top-of-mind as they should. It’s really important, because a city’s website is often a resident’s or visitor’s first interaction with your city, and it makes a lasting impression.”

Designing Websites for Nonprofits
SoC instructor Michael Chase wants undergraduate students taking his Software Projects for Community Clients two-quarter course to be responsive, show compassion and “satisfy our Vincentian mission of doing good” as they build websites and online applications for nonprofit, community service organizations.

Students in the class have worked on web projects for an array of organizations. One organization builds wells in sub-Saharan African communities to provide them with access to clean water and proper sanitation. Another provides pet therapy for kids. Others include a juvenile-justice coalition on Chicago’s South Side seeking alternatives to youth incarceration and a collective of higher education institutions in Chicago that partners with businesses to connect students with internships.

Projects come to the class from different sources, including DePaul’s Steans Center for Community-based Service Learning, other professors with ties to nonprofits, and Riipen, a Canadian-based online service connecting students and nonprofits.

“These are real clients with real challenges,” says Chase. “We want students to learn how these organizations serve their constituents while assessing the client’s technological needs and using problem-solving methods to make a difference for them.”

Students interact weekly with clients online, but Chase tells his students to be considerate toward such organizations, which are often understaffed and run by people with other jobs. “We realize it’s asking a lot for individuals to spend time answering questions about a website color preference or placement of a donation button,” says Chase.

Chase also believes that projects can be optimized by building them incrementally versus delivering a finished product all at once that may not meet the client’s needs. He teaches a project-management methodology known as Agile that prioritizes personal interaction, continuous self-assessment, adaptive planning and dividing projects into small components.

“Like all real projects, they can’t all be successful,” he says. “But at the end of the day, we want clients to tell their friends they had a great experience with empathetic students who listened to them and valued the collaboration.”
OMG, IT’S DIBS, LOL!

CDM students Anna Scudder and Imayan Gowtham created a DIBS mobile-texting app featuring emoji versions of DePaul mascot DIBS. In the Loop texted with Anna, who designed the emojis, about it.

Anna: When I was a graphic designer for the Office of Student Involvement I drew stickers of 🎤 shouting Hey! Go Blue! and riding on his bicycle for Athletics’ Blue Crew. My boss asked if I could make them into emoji forms. I was like, sure, why not?

ITL: The emojis grew out of an earlier project, right?

Anna: I had to do the ones.

ITL: How did you choose your emojis?

Anna: This is true. IDK. Or 🍵 that he missed the Midterm Cereal Bar.

ITL: There’s one of 🎤. Could be tears of happiness after a victory.

Anna: Only with people who know 🎤. Two of my uncles are alumni and their wives downloaded the app. So I’m getting random 🎤 emojis from my aunts.

ITL: Do you use them when you text?

Anna: Definitely the main use for that one.

ITL: Kind of a grimace IMHO. Good for when you’re about to take a test.

Anna: The one had a lot of moving parts. And getting the gradient right on the 🎤 was challenging.

ITL: Which emojis were hardest to design?

Anna: Lot of back and forth to make the image files small enough. But it worked out.

ITL: How did you collaborate with Imayan when he developed the app?

Anna: They’re on pillows, socks and t-shirts. One was used for a coloring page passed out at the Midnight Breakfast.

ITL: BTW have the emoji designs been used for anything else at DePaul?

Anna: They’re on pillows, socks and t-shirts. One was used for a coloring page passed out at the Midnight Breakfast.

ITL: Such versatility. Do you have the 🎤 emoji pillow?

Anna: I do. Next to a different DePaul pillow on a chair in my apartment hallway. It would be a little creepy if it was on my bed. OMG. But they are really cute.

ITL: Such versatility. Do you have the 🎤 emoji pillow?

Anna: Got those too. They have little 🎤 emojis all over them.

ITL: How about the socks?

Anna: I am. In my sorority they refer to me as the 🎤 expert.

ITL: You’re inundated with 🎤 in your life.

Anna: Haha. Yeah, I imagine the person inside the costume doesn’t appreciate that.

ITL: They might like his emojis, but maybe he can’t text them with his giant, furry hands.

Anna: I graduated at the end of winter quarter. I just got hired as lead graphic designer for a national chain of piano bars called Howl at the Moon.

ITL: What’s next for you?

Anna: 🎤. Maybe!

Download the free DIBSemoji app on Apple and Android mobile devices.
Brian Andrews bones up on anthropomorphic entities and virtual reality in an audacious Project Bluelight film

In 2012, he repurposed the imagery in a 70-second computer-generated (CG) animation called “Hominid.” After coming to DePaul in 2016 and then collaborating with School of Design faculty on a live-action VR project, Andrews realized his CG skeletal mashups were ideally suited to the emerging medium of cinematic VR.

Brian Ferguson, SCA’s animator in residence and a Walt Disney Animation Studios veteran, guided student animators on how to give the creatures realistic movement and emotional resonance.

Being in the vanguard of a new medium, however, meant limited tools of production.

“In many ways it was a traditional CG animation pipeline, with the huge asterisk that every step needed to be translated into a headset or VR process, which is totally different than what you see on a flat screen,” says Andrews. As a result, the team had to hack and modify tools throughout the production.

Shaping the narrative in a 360-degree format presented other novel challenges, adds Andrews.

“If you want the audience to focus on a specific point in the story, you can’t just cut to it in the edit as you would in a traditional film.”

“Instead, you have to lead their attention with movement and sound, and draw their eye where you want it to go. Coordinating that delicate dance required months of trial and error.”

Learn more at hominidanimation.net.

The film’s hybrid creatures are inspired by composites of human and veterinary X-ray images.
Some career paths have rocketlike trajectories.

Shannon Linares (CDM ’19) is an information security engineer at Raytheon, a major U.S. defense contractor and industrial corporation specializing in missile systems, military and commercial electronics, and cybersecurity services. She’s worked at Raytheon’s missile systems subsidiary in Tucson, Ariz., since July 2019.

As recently as 2016, Linares was attending College of DuPage, a community college in Chicago’s western suburbs, and assessing her next steps as an aspiring first-generation college graduate. Her parents, blue-collar factory and warehouse workers, were supportive. Her mom, who’d arrived in the United States as a refugee from Guatemala, was proud of her determined daughter. But Linares’ decision to transfer to DePaul—where, three years later, she earned a bachelor’s degree in network engineering and security from the School of Computing (SoC)—was sparked when she witnessed a malware attack while working a part-time job in customer support and database administration at a packaging supplies manufacturer.

“I sort of fell into the field,” says Linares. “But if you’re curious about solving complex problems, know your strengths and are open to learning constantly and working hard, it’s totally doable.”

Linares thrived in the collaborative, hands-on environment nurtured by SoC’s faculty, who help connect students with industry experts in the growing field’s numerous disciplines. It was at a Women in Cybersecurity conference Linares attended while at DePaul that she met her current manager at Raytheon.

En route to graduation, Linares undertook internships at Northwestern Medicine and Juniper Networks, a global networking tech company. She also belonged to Security Daemons, a student club whose members compete in cybersecurity competitions.

In 2017, Linares led a student team from three different higher ed institutions to victory in the Illinois Capture The Flag competition held by U.S. Cyber Challenge (USCC), a public-private partnership program that helps train cybersecurity professionals. Linares was among the select few eligible to compete after being invited to attend an intensive, four-day USCC summer camp.

Linares says respect and communication among teammates was key to the win.

“It’s important to have your own technical skill set,” she says. “But it’s often harder for people in this competitive field to share what they’re doing with others and successfully move in one direction at the same time.”

Earning respect as a woman in a male-dominated field is another challenge, adds Linares.

“I don’t know if I’d have it any other way, though,” she says. “It teaches you to have a thick skin, stand behind your ideas and talk to leadership about things you find important.”

One thing Linares finds important, besides computer science, is helping others. In Chicago, she mentored kids in STEM skills for a West Side community nonprofit and volunteered for a refugee resettlement service. Despite her busy workload at Raytheon, she makes time to support a Women in STEM student group at the University of Arizona.

“I love to share my story, and hope it empowers others,” says Linares. “Never give up.”
Dairy meets Dada in Claire Rosas’ submission to Communication Arts magazine’s 2020 international typographic competition. The School of Design (SoD) student, expected to graduate this spring, was honored as one of the contest’s few student finalists by the prestigious trade journal for her Online Egg Community zine.

Rosas hatched the multipronged project by creating a satirical online class and Facebook group that revolved around egg jokes while poking fun at academic web platforms. Family, friends and classmates played along, engaging in absurd interactions that Rosas further explored in the zine’s printed format. The latter scrambles up tongue-in-cheek technical diagrams of eggs, polled statistics of attitudes toward eggs, an egg chip raffle and an interview with an “egg hater” who refuses to join the club. It’s all rendered in yolky yellow, black-and-white duotone images and clever typefaces.

“It’s oddly an ontological study,” says Rosas. “What would life look like if it revolved around something that’s not a human?”

Rosas also arranged unique interactions as president of DePaul’s American Institute of Graphic Arts (AIGA) student chapter. Those included studio visits with local professional innovators and workshops with DePaul students in other disciplines. A workshop with a DePaul improv and sketch comedy troupe showed chapter members how improvisation can be used as a design technique when working with other people.

“Transdisciplinary learning involves being adaptable,” says Rosas, who also writes about design methodology and ethics. “When things are adaptable, they function better.”

Rosas and her AIGA group applied that approach to a prototype concept for an indoor-rowing ergometer, or erg, for an AIGA grant-funded Adaptable Athlete Initiative in 2017.

“We researched and volunteered at indoor-rowing events for adaptive athletes and looked at the way they interact with machines not necessarily designed for them or their bodies,” says Rosas.

Using design to help others is also of DePaul’s Idea Realization Lab, a where Rosas worked part time as a lab helped teach students from across the university how to screen print, vinyl cut, laser cut and use vector-based software. Knowledge was often exchanged. An electrical engineering student gave Rosas a better grasp on microcontrollers and circuitry, a skill she now incorporates into fabrication projects.

The technological and computing skills SoD students receive at CDM separates them from peers in more traditional design programs at other universities, says Rosas.

“Technical and design elements overlap in every project I do,” she says. “That’s the future of design. Actually, it’s where we already are.”
You can be part of DePaul University’s response to the COVID-19 pandemic. Our students and other members of the DePaul community need your support for everything from technology support for online learning to emergency assistance with everyday and extraordinary expenses. Your gift means so much during this uncertain time.

Visit Inspire DePaul, the university’s crowdfunding website, to support efforts to help members of the DePaul community affected by COVID-19.

Be part of the response at inspire.depaul.edu.