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ICO Matters is the alumni magazine of the Illinois College of Optometry. It is published three times per year.

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Departments

- **Talking Heads**
- In Focus
- **Trending**
- **Essentials** 24
- Class Notes/In Memoriam
- Vault
- **IBC** Datebook
- Last Look BC



2015 READERSHIP SURVEY RESULTS

In 2015, ICO Matters was redesigned with a fresher look and more timely content. Key visual differences included new fonts, a reformatting of the Class Notes and In Memoriam sections, and a larger page size. New content sections were also added: Talking Heads, Trending, Close Up, Essentials, and Vault. We hope you've been loving the changes!

The updated magazine has been delivered to ICO alumni for more than a full year. We wanted to hear your opinions, so we conducted an online readership survey. To the right, you'll see highlights and specific results from this 2015 "pulse check" of 170 respondents.

SURVEY WINNERS

Won Amazon Kindle Fire HD 10: Gretchen Bromann, OD '15

Won ICO Prize Packs (valued at \$50):

Jeanette Carbone Varanelli, OD '97 Jeffrey M. Doot, OD '02 Diane Galbrecht, OD '06 IN GENERAL, HOW SATISFIED ARE YOU WITH ICO MATTERS?





35%

OF RESPONDENTS
HAVE WATCHED A
VIDEO INCLUDED

IN A DIGITAL

ISSUE IN 2015



OF RESPONDENTS RANK IN FOCUS

AS THE MOST

INTERESTING

SECTION



OF RESPONDENTS
AGREE THAT
ICO MATTERS

STRENGTHENS THEIR CONNECTION TO ICO

MORE THAN HALF OF READERS PREFER TO READ *ICO MATTERS* IN PRINT.





44%

VS

54%

90th PERCENTILE

READERS RATED
ICO MATTERS VERY GOOD OR
GOOD IN THE 90TH PERCENTILE
ACROSS THE BOARD.

98% WRITING

96% DESIGN

98% PHOTOGRAPHY

98% READABILITY

98% QUALITY

The season of spring is a vibrant, energizing period each year. During these months, relationships bloom and grow- and not just our relationships with other people! The feelings we have about our work, too, are ever evolving.

What made you first fall in love with optometry?

AROL AUGSBURGER, OD PRESIDENT OF ICO:

I fell in love with optometry when my family optometrist, an ICO alumnus, fitted me with PMMA contact lenses in 1961. I was a 13-year-old freshman in high school and a three sport athlete (football, basketball and baseball.) It was challenging to wear my sport specs under my football helmet, or deal with getting my glasses mangled while rebounding the basketball, or fumble with flip down sunglasses over my spectacles while playing 1st base on the baseball team... all before contact lenses.

Those contact lenses changed my life. I lettered in every sport all four years of high school, and we won the conference in football twice with me playing defensive end and linebacker with my contact lenses. Then, when it came to choosing a major at Earlham College, I gravitated to the pre-professional study courses that would be needed to gain entry into optometry.



Arol Augsburger wearing his PMMA contact lenses drives by a larger basketball player.



SANDRA BURY, OD '95

I fell in love with optometry after I had my first eye examination shortly after getting my BFA in fine art. I was passionate about vision, perception, and light, and was frustrated that there was no clear path to earning a living with those interests. It was also important to me to do something positive for humanity.

It was during that examination and dilation that I knew optometry would combine everything I loved already in a fantastic profession that was helping, positive, and exciting. I was not afraid of the additional six years of school, and am grateful every day for the opportunity to follow my dreams.

Choosing optometry was the best decision that I ever made and my passion for helping my patients grounds me and carries me through all of the crazy directions that life takes me.

DIANE GALBRECHT, OD '06

When I was in high school, I always thought I would be an elementary school teacher. Then one day, we had to take the ACT. I remember scoring much higher in math and science compared to the other sections, making me wonder why I wanted to be a teacher in the first place.

That same month, I saw my optometrist for my yearly exam. I had been seeing him since 1st grade. I asked him if I could shadow him for a day. Well, that day opened my eyes to the optometry world, what I could do with my life, and how much I could impact my community.

As I was going through school, I thought every day, "What am I getting myself into?" Jump forward to my pediatric residency; I finally answered that question. I was seeing children who were all disabled, on the autism spectrum, or developmentally delayed. I remember sitting down one evening after a long day of vision therapy thinking, "WOW, I really do love my job. I can't wait to come back tomorrow."

In Focus

>>> Editor's Note

While putting together this season's ICO Matters, I began noticing a pattern: ICO alumni tell love stories. It's easy to see why! Students and graduates from the Illinois College of Optometry have much in common, even before they meet.

Every ICO student overcomes the same trials, from final exams to icy winters in Chicago. The victories are shared, too- implementing new skills in the IEI, achieving Board Certification, and finally, crossing the finish line at Commencement. Lifelong friendships are made at ICO. Some alumni even found life partners within these walls- love stories, indeed.

This issue's feature on ICO couples obviously fits the pattern. Dig deeper, though, and you'll see that powerful relationships permeate the magazine:

- Various ICO personalities narrate how they fell in love with optometry in *Talking Heads*.
- Our Essentials subject, Dr. Christina Twardowski, builds incredible relationships with children. She also met her husband at ICO.
- Dr. Luis Lewis, star of Close Up, demonstrates how mobile doctors rise to the occasion when other bonds falter.
- Alumni and friends explore their relationships with technology in a feature on 3D printing.

Of course, there are thousands of ICO love stories just waiting to be told. If you know an alumnus who should be featured in ICO Matters, e-mail communications@ico.edu. Thank you for reading, and happy spring from the Illinois College of Optometry!

Lauren Faits, Editor

Flat Kits

In the last issue of *ICO Matters*, we introduced ICO.edu's new look and the institution's updated voice. Our message remains clear: ICO best prepares students to practice optometry in the real world. We're proud of our strengths, and wanted our students to get enthusiastic about what makes ICO great. A social media campaign known as #ICOPrepared got our future ODs talking.

- "In my opinion, the most striking thing about the Illinois College of Optometry is that we're already in the optometry labs the first week of school"
- "It takes a lot of hard work and dedication to get your portrait on this wall. If you set your goals high and are #ICOPrepared, there's no telling what you can achieve."

Cutouts featuring Kits the Shiba Inu puppy were hidden around campus. Each cutout contained a word that describes ICO. When a student found a cutout, they were tasked with posting a photo online. Here are some of the fantastic responses we received:

- "ICO transforms you into the most prepared OD!"
 - Meghan Murray, '18
- "Kits is posing next to his life and career role model Dr. Neil Hodur and many of our esteemed alumni. He can't wait to add his bow tie flair to this prestigious collage of ICO alums and knows hard work will get him there."
 - Nicole Gall, '17





Eye Health Life Health

Maintaining healthy eyes is an essential part of living a healthy life. This is the message we are now conveying through the **Eye Health Life Health Coalition**. EHLH is an exciting collaboration between healthcare, social service, and community business leaders dedicated to advancing awareness of the importance of eye health. The coalition is chaired by our very own **Nancy DeMaso**, Senior Director of Illinois Eye Institute Administration.

The Coalition launched the Healthy Eyes for a Healthy Life campaign on November 11, 2015, to educate people about the link between eye health and overall health. Key points include how eye tests can detect



chronic health problems like diabetes, hypertension and high cholesterol. A comprehensive list helps link patients with Medicaid providers.

EHLH creative elements can be seen online and around the city of Chicago, including on the CTA. Our efforts are

reaching the medical community as well as underserved populations in Chicago with the message that eyes really are windows to general well-being.

For more information about the Coalition, please visit **www.eyehealthlifehealth.com.**

Special Olympics

On Tuesday, November 10, ICO students, faculty, and staff gathered bright and early at the United Center. There, volunteers offered eye care to **Special Olympics** athletes at the 17th annual **MedFest**. Eye exams, prescriptions, and even glasses with custom lenses were distributed to these inspiring patients. It was all part of the **Opening Eyes** Program, created with the help of Lions Clubs International.

At the end of the day, 1,500 athletes received a sports physical, with hundreds being seen by ICO. We are proud that so many people volunteered their time and talent. Together, we continue to prove that the Illinois College of Optometry cares for and prioritizes its community.



IEI Construction

Preliminary IEI patient surveys have long indicated a desire to have an in-house pharmacy. Now, this request is being granted. Construction has begun on the **Bronzeville Pharmacy**. This facility will be housed within the Illinois Eye Institute to serve the prescription needs of patients, staff, and students. The pharmacy's grand opening is slated for Spring 2016.

Additionally, a new Diabetic Eye Clinic within the IEI has been established. This suite will initially serve new patients with a history of diabetes, and will ultimately be a referral center for diabetic patients from our community health center partners.

In Focus

Giving Tuesday

Immediately following the Thanksgiving holiday, ICO upheld a tradition for its second year. We participated in **Giving Tuesday**. This global event follows Black Friday, Small Business Saturday, and Cyber Monday. Amidst the hustle and bustle of holiday shopping, Giving Tuesday encourages people to donate to worthy causes.

Our online campaign featured interactive images of iconic Chicago attractions, experienced through the eyes of patients with low vision. All money raised by ICO on December 1 went toward the **Charitable Care Eyeglass Program**. This initiative provides eyeglasses for underserved populations in the Chicago area.



Giving Tuesday 2016 was a great success. ICO doubled its amount of donors over 2014. Thanks to the help of matching gifts, we raised over \$30,000. With this sum, ICO will be able to provide frames and lenses to 1,000 adults and children who can't otherwise afford them. Thank you to everyone who gave the gift of sight in Chicago by supporting this program.

SVOSH Trips

Seven ICO students traveled to La Barca, Mexico for a Student Volunteer Optometric Services to Humanity (SVOSH) mission over Thanksgiving break. Sarah El-Khazendar, Jane Fang, Noreen Tafalla, Anna Waters, Casey Wilgenbusch, Melissa Woodward, and Ashley Zimmerman (all '17) joined forces with optometry students from Queensland University of Technology in Brisbane, Australia and doctors and opticians from Canada. In total, the mission saw over 2,700 patients ranging from children with BV disorders to the elderly with advanced ocular disease including glaucoma, severe cataracts, and AMD.

Earlier in November, **Dr. Tracy Matchinski** took 19 ICO students to Santo Domingo and Quinto, Ecuador. The group was accompanied by 13 optometry students from Quinto's Metropolitan University, 4 additional optometrists, 2 nurses, and 29 volunteers. The mission was overwhelmingly successful.

All told, 2,382 patients were examined with 6,000 pairs of eyeglasses, sunglasses, and reading glasses distributed.

120 cataract referrals were made (with half of the surgeries already completed,) and numerous cases of glaucoma, infection and inflammation detected, with treatment initiated. This trip was made possible by VOSH, Rotary clubs in Santo Domingo and Quito, as well as numerous other local community service organizations.



De La Salle

On January 20, we welcomed some of our Bronzeville neighbors to ICO. The students of **De La Salle Institute** visited our campus and learned about the profession of optometry. It was an enlightening day for The Meteors, who are already thinking about their future career paths.

Dr. Mark Colip spoke to the high schoolers about how he "fell in love" with optometry. After his presentation, ICO students used hands-on models to explain the structure of the eye. De La Salle also received a full campus tour.

"It was exactly what I was looking for and all of my students truly enjoyed the experience," said Dr. Michael McCrohan, Applied Sciences faculty member at De La Salle. He accompanied his students on the ICO visit. Once his class was settled back at school, McCrohan shared with us why ICO is so important to his students. "Most of them knew very little about optometry going into it and came away with a new perspective on health care possibilities. It has already led to several discussion of what students should be doing now, in high school, if a health care field is their goal. Please extend my thanks to everyone that was involved in the afternoon."



RC Renovations

ICO's Residential Complex is undergoing renovations. New lounge furniture was installed over holiday break, along with updates to every student room. Each dwelling has received new bed frames, under-bed storage units, memory foam mattresses, pest and waterproof mattress covers, and study chairs. The common kitchen and tour room have also been revamped. A new personality is shining through the building, and the work isn't even over! By Summer 2016, all bathrooms and carpeting will also be revitalized. These efforts are keeping the RC a safe, comfortable living space that alumni can recommend and be proud of.



Trending



October 8 – Twitter
ICO Retweeted Arol Augsburger
We're proud of the @Cubs! No matter which side of the city you're from, it's great to see a #Chicago team succeed.



October 23 - Facebook

Halloween comes early for ICO students! Here are just a few of the creative costumes seen at this year's student shindig, Boo Bash.



October 9 – Facebook
Big news from Academy 2015: Our
own **Nick Colatrella, OD '96**, has been
named one of the first Diplomates in
the Anterior Segment Section of the
American Academy of Optometry!
This is a spectacular achievement
reserved for true experts in the field.



June 27 – Twitter
The RC is getting #ICOPrepared with a colorful makeover!





October 27 - Twitter
One of our alumni, **Jim Hutchins, OD '80**, won the 2015 Manufacturing and Technology Award in Sleepy Eye, Minn.



November 13 - Twitter

Go ahead- hit the snooze button! Our latest video shows how on-site housing gets you #ICOPrepared in a flash.



December 5 - Pinterest Holiday Gifts for Optometry Students Stocking stuffers and holiday delights for future ODs.



December 15 - Twitter Pulled sugar demo going on in the lounge right now-beautiful, edible flowers and ribbons!.





December 16 - Twitter

Learning about Chicago as prime film location with @arolaugsburger and Rich Moskal. ICO as backdrop for blockbuster?















Trending



December 28 – Facebook

If 2016 is looking like a good year to start a new career, may we suggest ... optometry?

The Bureau of Labor Statistics this month published its biannual Occupational Outlook Handbook, which ranks occupations by salary, required education and expected job growth between 2014 and 2024. Optometrists are among the fastest-growing occupations, with strong employment in Illinois, and have a median salary of \$101,410 a year.



January 4 – Facebook

One of our recent grads started 2016 in a BIG way. Congratulations to **Kinzy Frizzle, OD '15**, on being FIRST to get married in Cook County this year!



January 29 – Twitter • Via Chicago Tribune
Twelve @NHL teams are now using a concussion test invented by ICO alumni
Steve Devick, OD '77 and Alan King, OD '76.



February 7 – LinkedIn
Specialization vs. Primary Care: They're Not So Separate After All! – Marian Longo, OD '11



February 11th - Facebook

Behind the scenes with ICO alumni **Drs. Tom and Vasvi Babu, OD '93** - focused, connected, and having fun! — at Old Town Scottsdale.



January 1 – Facebook
Happy New Year from the Illinois
College of Optometry! We're thrilled
to welcome 2016. This exciting year
will bring us Residential Complex
renovations, an increased emphasis on
Practice Management in our curriculum,
and much, much more.



January 12 – Facebook • via IFLScience In memory of David Bowie, the optometric reasons behind the artist's iconic eyes:





February 5 – Twitter Some #ValentinesDay surprises are in the works for our students. We only have eyes for them! #ILOveICO





February 24 – Twitter

Congratulations to **Patricia Winters**, **OD '97**, for joining the VIP Woman

of the Year circle at @NAPWInc!



5YR ANNIVERSARY • 31,000+ PATIENTS SEEN

Illinois Eye Institute at Princeton Elementary School

1 YR ANNIVERSARY • 5,500+ PATIENTS SEEN

Alfred and Sarah Rosenbloom Center on Vision and Aging

THE LOOK Todd and Deon Bogard-Erickson (OD '92) By Jacqui Cook omewhere between their White Coat Ceremony and Capstone, ICO students may discover something even more life-changing than the profession of optometry: the love of their life. A few of the many ICO couples through the years shared with ICO Matters what brought them together and how they have built their families and optometric practices since graduation. Although every couple's story is unique, the ones featured here share the common thread of supporting their spouse through school and beyond. Each realizes how fortunate they are to Jeffrey Varanelli (OD '98) and navigate life with someone who shares a Jeanette Carbone Varanelli (OD '97) love of optometry and patient care.



Nick Colatrella, OD '96, and Stacy Hinkemeyer-Colatrella, OD '96 Married since: 1998

Their story: Their first week on campus, Nick and Stacy were part of a group outing downtown to Chicago's Shedd Aquarium. There, they began getting to know each other. They remained just friends and study partners for a while before their romance began the following spring.

"I realized right away that she made me a better student and we worked well together in a learning environment," Nick says. "We could bounce ideas off one another, and that blossomed into a more in-depth relationship."

Stacy agrees, adding that Nick made her a better student. "He was always the nerd who sat in the front row and he would encourage me to sit up there, too."

Both of them look back very fondly on their years at ICO, in particular the EyeBall during their fourth year. They rented a limousine for the formal event with two other couples; all are still friends today. In fact, Stacy's roommate, Jeannette Carbone, ended up marrying Nick's roommate, Jeffrey Varanelli.

After ICO, Nick and Stacy accepted residencies together at the Cleveland VA. However, before they left Chicago, Nick had one thing to take care of. He took Stacy back to the Shedd Aquarium and proposed, presenting her with the ticket stub from that very first visit when they met.

He was always the nerd who sat in the front row and he would encourage me to sit up there, too.

Stacy Hinkemeyer-Colatrella, OD '96

Their life today: The Colatrellas live in Sartell, Minnesota, with their daughter (age 13) and son (age 10.) They own the Pine Cone Vision Center, which recently moved into a brand new building.

Words of wisdom: "If you can find that special person who shares your passionand you can share your personal life and business life with them—what a lucky thing for you," Stacy says.

Nick agrees, "To be able to work with someone day in and day out whom you trust, admire, respect and love... there's nothing better than that."



Todd and Deon Bogard-Erickson (OD '92) Married since: 1991

Their story: As with many love stories, the Ericksons' story began with a good wingman. During his pre-enrichment program, Todd became friends with another student, Mark Park, OD '93. Park wanted to introduce him to a young woman named Deon coming to ICO

from his undergraduate program at California State University, Fullerton. The rest, as the saying goes, is history.

"My palms started sweating when I met her," Todd recalls. "We would have started texting but there were no cell phones then, so we just started hanging out together."

On their first date, the Hard Rock Café in downtown Chicago, Todd says he made sure to order the hamburger with avocado. Deon was from California and he wanted to impress her with his West Coast-inspired choice. Another time, she made him quesadillas in her dorm room toaster oven, which he says, "sealed the deal."

Both Deon and Todd treasured their time exploring Chicago together and trying to find new places to study, such as the University of Chicago and Northwestern Law libraries. They got married the summer after third year.

Looking back, Deon says she knew Todd was someone special when she met him. "When we started hanging out, I thought, 'Wow. This is why I'm here.' ICO gave us an excellent education, amazing careers and, best of all, each other."

Their life today: The Ericksons live in West Palm Beach, Florida, with their three daughters (ages 22, 19, and 16.) Todd took over a group practice his father started, while Deon owned her own practice for many years until she sold it a year ago. She is now semi-retired and spends three days a week in the office.

My palms started sweating when I met her, we would have started texting but there were no cell phones then, so we just started hanging out together.

Todd Erickson, OD '92

Words of wisdom: Todd and Deon both agreed that working together in the same practice was not for them. They try not to bring work home with them, but they enjoy sharing stories of their day with each other.

"We bring some funny stories home," Deon says. "We laugh a lot about what we do and how we met."



Jeffrey Frank, OD '03, and Kristy Marczewski-Frank, OD '04 Married since: 2005

Their story: Jeff and Kristy first met each other while Jeff was a TA in the optometry skills lab. Love began to bloom when they both volunteered for a contact lens study (worth \$35) and stood in line together. Kristy invited him to go out with her and some friends that night; Jeff already had plans.

Fortunately, he got another chance to spend time with Kristy. They met again at the annual Big House Party. Jeff still remembers the exact date: November 15, 2001. They started dating each other shortly after that event.

Both of them recall very fondly their days hanging out with friends at ICO, and all of the great memories and friendships that were made. Jeff and Kristy were married in 2005 at the Sears Tower surrounded by many dear ICO friends.

Their life today: Jeff and Kristy bought four practices in Sycamore, Illinois, and merged them into Spex Expressions, a private practice they own and operate together. In addition to growing their business, they have also been busy growing a family and enjoying time together.

Words of wisdom: Both of them say it is a blessing to work together and share the same vision of providing great optometric care to patients. Nevertheless, Jeff and Kristy agree that seeing patients on opposite days at the office provides them with much-needed space to keep some distance between their personal and professional lives.

"Be sure that you have a good balance in life," Jeff says. "I could go to work and come home and focus on optometry and our business all night, but it is good to have other hobbies and passions in life."

"As a couple working together you have to be really good at communicating," Kristy adds. "There are going to be stressful things that occur in running a business and life but if you have open dialogue you can overcome anything together."



Jeffrey Varanelli (OD '98) and Jeanette Carbone Varanelli (OD '97) Married since: 1998

> Their story: The Varanellis are good friends with the Colatrellas, and their story

also is very similar. They started hanging out with a big group of friends and realized there was something a little deeper between them.

Both of them say Chicago and its sights played a big part in their romance. For their first date, Jeffrey took Jeanette to Chicago's famous Rosebud Italian restaurant for her birthday. The traditional Italian waiters sang to her and gave her delicious tiramisu with a candle on it. When it came time to pop the question, Jeffrey asked Jeanette at the top of the John Hancock Building.

"When I talk to first years during orientation, I tell them to study hard but realize you have to have fun," Jeffrey says. "I always end with a statistic from my class- that about 20 percent of us married someone from our class or another at ICO. So, I tell them it's pretty likely you might be sitting next to your spouse when you're sitting in anatomy class that first year."

Their life today: Jeanette is the chief of optometry at the Detroit VA, while Jeffrey is in an ophthalmology private practice. They live in Grosse Pointe, Michigan, with their 13-year-old twin son and daughter.

Words of wisdom: The Varanellis agree it is important for optometrist couples to be supportive of each other in school and beyond.

"Take care of each other during the stressful times," Jeanette says. "There are lots of ups and downs in this profession. You are fortunate to have someone to commiserate with and work through the difficult situations with. Be supportive of each other."

Jacqui Cook is a freelance writer based in suburban Chicago. She may be reached at Jacqueline.k.cook@gmail.com

I always end with a statistic from my class - that about 20 percent of us married someone from our class or another at ICO.

Jeffrey Varanelli, OD '98



ICO ANNUAL REPORT

THE ANNUAL REPORT-INCLUDING
OUR HONOR ROLL OF DONORS AND FINANCIAL
SUMMARY-HAS GONE DIGITAL.

FIND IT HERE:
WWW.ICO.EDU/ANNUAL-REPORT-2015



Close Up: Luis Lewis, OD '05



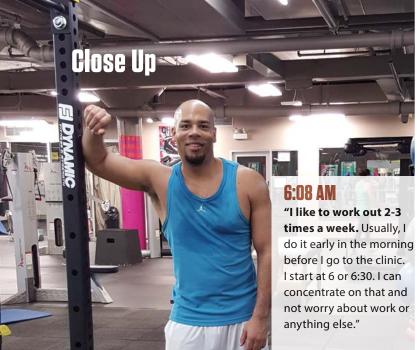




Without a doubt, the practice of optometry makes the world a better place. Luis Lewis, OD '05, knows this better than anyone. His practice, Ageless Eye Care, is entirely mobile. Dr. Lewis and his team travel the city of Chicago to provide eye care to underserved populations.

Dr. Lewis lives in Bronzeville, the same Chicago neighborhood as ICO. His main office is in Pilsen. However, he never stays in one place for long. Ageless Eye Care visits schools, nursing homes, retirement centers, even prisons. We followed Dr. Lewis on an average day, and found out just how many lives he improves through optometry.

Interview by Lauren Faits Photos by Brian Holloway





8:45 AM

"My first job after my residency was with a mobile practice. I just enjoyed the concept of providing eye care to people that actually needed it-very rewarding. [Ageless Eye Care] kind of just grew from there. My practice slogan is, 'Compassionate Eye Care, Anywhere."



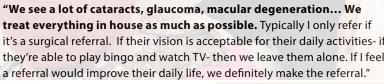
"When I branched out on my own, Center Home for Hispanic Elderly was one of the first homes I contracted with. I go once a month. We're there the whole day, and typically we see anywhere from 10 to 15 patients."



11:20 AM

it's a surgical referral. If their vision is acceptable for their daily activities- if they're able to play bingo and watch TV- then we leave them alone. If I feel

was really happy about that, I know."



11:45 AM

"There aren't many optometrists who are willing to work in nursing homes. You have to be very flexible. Some days, they'll have you working in a little closet. Some nursing homes may smell nicer than others. Some are kept up very well and others aren't. Sometimes, it's a little sad. The patients are there, but their families, kids, and grandkids don't really visit them. Going there and taking care of them, looking at it from that standpoint, is more important."







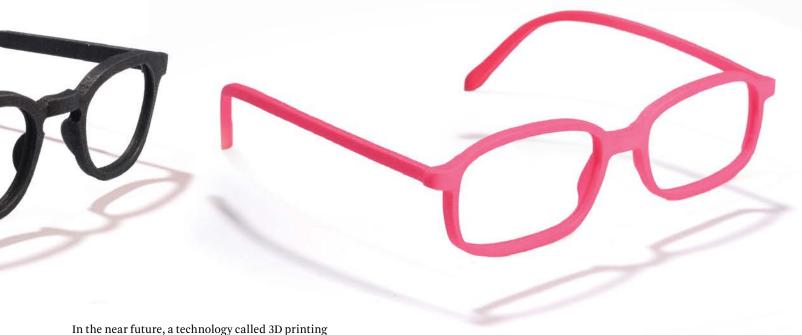


customized for custom Eyes! How 3D Printing Could Change Optometry

By Lauren Faits

hoosing a pair of eyewear is never easy, whether for yourself or a patient. Finding that perfect match takes time. The winning pair must be comfortable, fashionable, and affordable. Then, if the wearer breaks or loses them, the lengthy process begins anew.

That if the hunting and frustration were taken out of the equation?



In the near future, a technology called 3D printing may change the way eyewear is distributed. Instead of choosing from pre-designed frames, an individual could dream up an original product. These custom eyeglasses would be suited to the patient's taste, budget, and anatomy. The frames would be made to order, perfect on the first try. This is the promise of 3D printing.

David Friedfeld is the president of ClearVision Optical. He is an expert on future technology, and frequently speaks on the future of the eyewear industry. He is fascinated by trends like 3D printing and how they may affect business. Friedfeld spoke at AAO 2013 on "the various applications of 3D printing to the eye care and eyewear community."

For the uninitiated, here are some basics. 3D printing is an additive manufacturing process that creates objects from raw material. It is part of a larger "DIY" (do-ityourself) or "maker" culture on the rise in America.

To 3D print an object, a person first uses a computer program to design what they wish to make. The finished digital file is called a CAD (computer aided design) file. This CAD file is then sent to a 3D printer, just like you would send a picture or written document to a standard printer. The 3D printer lays down many tiny layers of material until the desired object is created.

Most 3D printing is done with thermoplastics such as PLA and ABS. However, metals and ceramics have made their 3D printing debut, as have edibles like chocolate and sugar. 3D printing is already being used to create many types of objectstoys, jewelry, tools, prosthetic body parts, and even candy!

Thanks to more desirable materials and dropping prices, 3D printing is finding its place in business. The process is fantastic for product prototyping. The high level of customization is attractive to the automotive and aerospace industries, too. Parts for specific vehicles or machines- even long outdated ones- can be recreated via 3D printing. Multiple

components of an object can even be printed simultaneously. This cuts out potentially expensive manufacturing steps. As an example, ICO has received 3D printed eyeglass frames with hinges and temples already connected.



"I'm a grown-up who could fit into the frames of any child. It would be nice to engineer a pair of glasses."

- Valerie Kattouf, OD '95

The Cost of 3D Printed Glasses

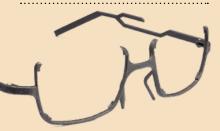


3D printed plastic frames with simple design, no hinges.

Estimated cost to patient, including lenses: \$50



3D printed plastic frames with functional hinges. **Estimated cost to patient, including lenses:** \$150-\$300



3D printed metal frames with functional hinges, earbud guides, and personalized/custom fit.

Estimated cost to patient, including lenses: \$300-\$500

Pre-assembled eyeglasses aren't the only optometric possibility for 3D printing. Explains Friedfeld, the technology could "change how frames are dispensed." In theory, "a patient will pick a design and go through facial scanning to ensure optimal fit." This process could particularly benefit individuals with facial asymmetry, disfigurements, or sensitivity.

Even if a patient has no medical need for custom frames, 3D printing still makes quite the fashion statement. Designs can be simple or ornate. The artistic possibilities are limited only by the imagination. If 3D printing takes off, creative patients could avoid name brands altogether, instead favoring their own designs.

Other forms of vision correction also have 3D printed potential. As of today, no major breakthrough has been made toward printing contact lenses. However, the possibility is on the horizon. Explains Friedfeld, "companies like Luxexcel have the ability to print 3D optics using proprietary plastic." Research is ongoing. In 2014, Princeton University researchers 3D printed 5-layer contact lenses made of transparent polymers. While not able to correct vision, these lenses created tiny circuits that beamed light directly into the wearer's eyes.

Friedfeld feels there is a robust future for 3D printing in optometry. "3D printing unleashes a tremendous amount of creativity and energy in our organization," he says. "It allows us to think differently." ClearVision Optical currently 3D prints prototype frames and personalized items for customers, and provides 3D printing demonstrations at trade shows. He has spoken to focus groups-namely families with small children. "Parents love the idea of customized and personalized eyewear." In response, Friedfeld now employs two mechanical engineers to work exclusively in the realm of printed eyewear. He hopes to soon partner with additional companies and educational institutions to further the cause.

3D printing's place in health care at large is even more promising. Friedfeld imagines a world of "personalized medicine." Already, custom-printed titanium jaws have been implanted in patients in Australia and the Netherlands. Scientists at Harvard University are experimenting with human cells as "ink" to print human tissue- perhaps even organs, someday.

So, how and when can 3D printing become a part of your optometric practice? The big question is, "How much will it cost?" The price of 3D printing can vary heavily. There are many factors to take into account.



"I imagine a world
where people will go
to the mall, get their
head scanned, and
within the hour, get a
pair of frames that fit
perfectly in every way."

By becoming a one-stop 3D design and manufacturing shop, your practice could reduce the costs of creative talent, logistics, and shipping. However, it's a big commitment. An optometrist would have to purchase a 3D printer, facial scanner, and design software. Printers are manufacturing tools, not medical ones, so at least one employee would likely need to be hired and trained for technical maintenance.

Friedfeld estimates these collective purchases at "\$20,000 - \$100,000 based on current pricing." If this sounds daunting, don't worry! Pricing has dropped every year as technology advances.

Additionally, 3D printing can

be introduced into a practice

in partial ways. Pre-made
designs can be found on sites
like Thingiverse.com. Third
parties such as Shapeways can
print designs at their facility
and then ship the product to
you. 3D printers can also be leased to
curb cost and obligation. This may
be the best option of all, as Friedfeld
predicts that industry-specific printers,

3D printing, perfected for optometry, may change the profession forever. Personalized eyewear could improve vision, save money, and increase patient enthusiasm for wearing and caring for their spectacles. Mobile clinics could instantly print tools in remote locations. Overall, optometrists and patients would gain more control over how we create and distribute eyewear.

made exclusively for optometrists, "will

be available between 4 to 8 years."

In this version of the future, every individual can custom manufacture the "perfect" life for them. 3D printing satisfies unique people and solves unique problems. Why not discover what it can do for your practice?



"I think these could benefit people who are very particular or people with asymmetrical facial structure. For somebody who breaks or loses their glasses, this might be a cheaper alternative."

- Kelli Theisen, OD '14

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Whether you want to connect with old friends, network with colleagues, or refer a patient, ICO's online alumni directory is a great resource for you. You can even search by name, class year, city, or state.

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Directory information is exclusively for ICO alumni and students.

Essentials: Christina Twardowski, OD '10



hristina Twardowski, OD '10, has a real gift. She completed a Pediatric Residency at Children's Mercy Hospital between 2011 and 2012. As it turned out, children were her calling. Dr. Twardowksi now lives in Kansas City, Missouri, permanently practicing at the same site. She has two children of her own, Lukas and Will, whom she raises with her husband, Matthew Twardowski, OD '10.

Providing eye care to children is already a big task. To be building a family at the same time requires patience, skill, and a few great tools. Here are Dr. Twardowski's "Essentials" for a career surrounded by little ones:



READING RAINBOW

"There is a book we have titled *Jacob's Eye Patch*. This book talks about how a child, who is currently undergoing occlusion treatment for his amblyopia, might feel or could be viewed by others since he is constantly wearing an eye patch. We treat a lot of amblyopia in my office, so it's nice to share this story with parents if they are having difficulty getting cooperation from their child."

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HOME STARTS HERE

"I'm not one to sit and watch TV, but if someone were to pin me down, I would choose *Fixer Upper* with Chip and JoJo. They are the cutest couple and their children are adorable!"

THE SOUND OF YOUR OWN WHEELS

"I listen to whatever my children feel like dancing to- mainly Lukas. It's quite amazing how picky a 2 year old can be with their music selection! Currently, he enjoys *Take it Easy* by the Eagles, *Down by the Bay* by Raffi, and *The Wheels on the Bus.*"

A GOOD HUG

"Hands down, my mentor is my Residency Director Dr. Tim Hug, who I now am honored to call my colleague. Much of the doctor I am today I owe to his guidance and leadership. He continually challenges me every day to be a better doctor and person."

THE CENTENNIAL STATE

"Breckenridge, Colorado, is my favorite vacation spot. Skiing or hiking those mountains is so beautiful and peaceful."

INDESTRUCTIBLE EYEWEAR

"Miraflex is the most durable frame I have come across. Kids can bend them, throw them, bite them... The frame is offered in different shapes and many different colors and has a head strap to allow for better comfort and compliance."



I DRINK IT UP

"I don't usually have time to go out for lunch, but we do have lunch delivered sometimes. I like to splurge on Potbelly milkshakes. Yes, they deliver milkshakes and it's amazing!!"



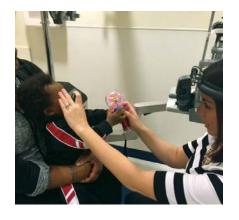


LOVE AT FIRST SIGHT

"My husband is truly my most important "essential," whether I'm having a frustrating day at work (none of my kids or parents want to cooperate), a sad day (we see so many children with complicated medical conditions), or an amazing day (I successfully treated a 20/400 corneal scar patient with an RGP lens who now sees 20/20!) He's always there to listen and support me. He has been by my side throughout every step of my optometric path and continues to encourage me to have no limits with my career goals."

TOY STORY

"Favorite toys for an exam are anything that lights up. We have this toy- we call them 'spinny balls.' I'm not sure if that's the technical name for them, but they are wonderful! Kids of all ages love to watch the lights spin and are able to touch the toy."



Class Notes



1955

Robert Vander Meer retired after 61 years in practice. He served in the military as part of a medical team working with chimpanzees, including HAM, the first chimp in space, and with Colonel John P. Stapp. He retired from the military as a major in 1964. Throughout his years of optometric service, he established and maintained successful private practices in Las Vegas, Nev., Clayton, N.M., and Boise City, Okla.

1960s

1969

Robert P. Rutstein, professor emeritus at the UAB School of Optometry, presented the poster "Atypical Presentation of Acute Acquired Comitant Esotropia" at the 2015 AAO annual meeting.

1970s

1974

Tom Griffith received a Lifetime Service President's Award during SECO 2016.

1976

Steve Devick's company, King-Devick Test, Inc., announced 12 NHL teams have begun using the King-Devick Test as part of an effort to enhance the league's concussion assessment process.

Ronald R. Foreman received the Frank A. Broome, Sr., O.D., Lifetime Achievement Award during the 2015 Florida Optometric Association Annual Convention.

1978

Barry Cook, of Price, Utah, has retired after 38 years in practice. He plans to serve those with eye care needs by continuing to travel to third world countries on mission trips.

Dennis Harkins, optometrist at Davis Duehr Dean in Portage, Wis., was recently named recipient of the Sisters of St. Mary's Patients' Choice Award, recognizing caregivers who achieve the highest results in patient satisfaction. He received the award at the 2015 SSM Health Leadership Conference. In 2014, he was in the top 1% nationally for overall patient satisfaction.

Donald Mazzulla retired after 37 years of practice and teaching. He spent 20 years in Chicago and the last 17 years in Las Vegas. He says, "It's all green felt from here on."

1980s

1980

James Hutchins and the staff of Lifetime Eyecare Center received the 2015 Manufacturing and Technology Award from the Sleepy Eye, Minn. Chamber of Commerce. His practice was praised as one of the top 1% in the state in terms of having all the latest technology available for treating patients.

1981

Sandra Block was appointed chair of the Public Health Committee for the World Council of Optometry. She also moderated a Vision 2020 USA Congressional Briefing for World Sight Day 2015 on uncorrected refractive error.

1982

Eric Paulsen was featured and quoted in the Oct. '15 issue of *AOA Focus* magazine for his knowledge and advocacy of optical coherence tomography.

1986

Peter Ryan joined Valley Eyecare Center in the Phoenix area.

1989

Knial "Nile" Piper became owner of Vision Xpress in West Plains, Mo.

Rebecca Ryan joined Bard Optical in Springfield, Ill.

1990s

1995

Sandra Bury and **Tracy Matchinski** traveled to Santo Domingo and Quito, Ecuador in partnership with VOSH Illinois and Rotary Clubs in Santa Domingo and Quito. Along with three other ODs, 19 ICO students, 13 optometry students from Metropolitan University in Quito, two nurses, and 29 volunteers, they provided services to 2,382 patients.

1997

Jeffrey D. Johnson was elected to ICO's Board of Trustees during its February meeting.

Patricia Winters was inducted into the National Association of Professional Women's VIP Woman of the Year Circle, honoring her as an inspiration and leader in healthcare.

1999

Dan Everts and his practice, Advanced Family Eye Care in Waupaca, Wis., received recognition as Best Optical Center for this year's Best of Waupaca. He bought the practice from his father-inlaw, **Jack Brueckner**, **OD '65**, in 1999.

2000s

2001

Alan "Joey" Patterson became owner, president, and CEO of DMV Corporation, a company that produces contact lens removers and distributes them worldwide. He will continue to see patients in his two private practices in Zanesville and Coshocton, Ohio.

2002

Brian Brightman was named Nebraska Optometric Association's Keyperson of the Year at the 2015 NOA annual convention last fall. He is the CEO of Eyecare Specialties in Lincoln, the largest independent optometry practice in Nebraska. **Todd Swanson** became owner of Meng's Eye Care in Rice Lake, Wis.

2003

Robert Steinmetz was elected to ICO's Board of Trustees during its February meeting.

2007

Beverly Lezondra-Wheatley and her husband welcomed their first child, Isabelle Victoria, on February 22, 2015.

Tessa Sokol was featured in the Oct. '15 issue of the AOA's *Eyes on the Future* publication. The article commends Dr. Sokol's commitment and active involvement in the profession of optometry and praises her leadership as an example for all young ODs to follow.

Jessica T. Tran married Tony Cicio in November 2015. She practices in Manhattan and Queens, N.Y.

2009

Susan Safratowich joined Lifetime Vision in Grand Forks, N.D.

2010s

2010

Joanna Slusky, owner of Halsted Eye Boutique in Chicago, was inducted into the National Association of Professional Women's VIP Professional Woman of the Year Circle for her leadership in healthcare.

2012

Naghmeh Thompson and her husband welcomed their first child, daughter Chelsea, on October 23, 2015.

2015

Michael Servi joined the medical team at Tower Clock Eye Center in Green Bay, Wis.

MEA CULPA

Christopher Winter was listed in the last issue as a 1996 graduate. He is a 1979 graduate.

In Memoriam

1940s

1947

Frank F. Sakamoto, MCO, Denver, Colo., Dec.
12. He practiced on Chicago's north side for 50 years. During his career, he served as president of the Chicago Northside Chapter of the Illinois Optometric Association, board member of the State of Illinois Board of Optometry, president of Andersonville Chamber of Commerce, and president of Kiwanis North Shore. He served proudly in the Japanese American Citizens League for many years. One of his many accomplishments was to supply President Lyndon B. Johnson's contact lenses during his presidency.

1948

Murray "Budd" Gottlieb, NICO, Vancouver, Wash., Jan. 1. He served in the U.S. Army during WWII. He practiced in Carteret and Edison, N.J. until he retired at age 55.

Andrew J. "Buddy" Metz, NICO, Richmond, Va., Jan. 16. He served as a medic in the 305th Medical Battalion in General Patton's 3rd Army, serving in England, France, Luxembourg, Germany, and Austria. Following the war, he established his practice in Richmond. He served as president of the Richmond Optometric Society, the Virginia Academy of Optometry, and the Virginia Optometric Association.

1949

Warren H. Bohlinger, NICO, Verona, Wis., Jan. 4, 2015. He worked at Cutler-Hammer in Milwaukee, contributing to the U.S. efforts in WWII. He practiced in Hillsboro, Mauston, and Wisconsin Dells, retiring in 1982.

Leonard Drucker, CCO, Northbrook, Ill., Jan. 2, 2015. He entered WWII military service as a combat engineer and member of the greatest generation. He was heavily engaged in the battle of the Dusseldorf Bridge in the city of Remagen, Germany. While in optometry school, he served as editor of the school publication "Eyes Right" until graduating, and subsequently served as chairman of the Alumni Council for several years.

1950s

1950

George E. Laubach, NICO, Traverse City, Mich., Jan. 12. He enlisted in the U.S. Army during the European occupation and, after graduating from optometry school, returned to the Army to serve in the Korean War. In 1962, he opened a practice in Rochelle, Ill., where he practiced for 34 years until his retirement in 1996.

Frank "Bud" Ludford, CCO, La Salle, Ill., Jan. 2. He served in the U.S. Army from 1951-53 in the Medical Corps. He practiced in downtown La Salle with his son, **David Ludford, OD '94,** and received honors for 50 years of service as an active member of the IOA and AOA.

Morris M. Sureck, NICO, Alexandria, Va., Feb. 13.

1951

Melvin M. Schaeffer, CCO, Silver City, N.M., Oct. 28. He performed Army of Occupation service in Japan in 1947. He practiced in Rockford, Ill., for 30 years and retired to Silver City, N.M.

1953

Herbert S. Lux, NICO, Mt. Clemens, Mich., Jan. 5. He served in the Army at Fort Carson, Colo., in the optical clinic. He practiced optometry for 55 years, retiring at age 79.

1954

Robert W. Niles, CCO, Coeur D'Alene, Idaho, Oct. 7. He was in WWII in General Patton's 3rd Army, 9th Infantry and served in Germany. He practiced in Cadiz, Ky., for 44 years.

1955

Herbert S. Wheeler, CCO, Salem, Mass., Oct. 5. He served in the Navy on the original USS Oklahoma. He practiced optometry for 60 years.

1956

Ivan M. Hamberg, Atlantic City, N.J., Dec. 4.

1958

William A. Barnett, Annapolis, Md., Nov. 21. He served as a Captain in the Army's First Cavalry Division at Fort Dix and Fort Sam, Houston, and in Korea with the 15th Medical Battalion. He was a member of the national championship lacrosse team in 1954.

1959

Robert L. Sedlock, Baxter, Minn., Nov. 6. He practiced in Anchorage, Alaska, before expanding his interests to serve as a guide and pilot in the Alaska frontier.

1960s

1961

William C. Bock, Lakeland, Fla., Feb. 3. He was named OD of the Year by Walmart in 2010.

1962

Vernon A. Brickley, Dixon, Iowa, Jan. 28. He practiced in Dixon for 44 years, retiring in 2006. He was a diehard Chicago Cubs fan.

Philip J. Evich, Frederick, Md., Jan. 7. He served in the U.S. Army in 1955 and in the U.S. Navy from 1964-1967. During his time in the Navy, he worked as an optometrist at the U.S. Naval School of Hospital Administration in Williamsburg, Va., achieving the naval rank of Lieutenant JG. He returned to Frederick to practice after his service in the Navy.

1970s

1972

David Krafchak, Buffalo, N.Y., Nov. 17. During his 43-year career, he had practices at Sears Optical in two locations.

1990s

1997

YuChong Kim (nee Smith), Marietta, Ga., Dec. 30. She courageously fought an 18-month battle with gastric cancer.

Got alumni news? Please share.

CONTACT:

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1946 Roy Teshima, OD '46, NICO, of Evanston, III., passed away on December 7, 2015, at the age of 96.

Dr. Teshima taught at the Illinois College of Optometry from 1946 until 1985, lecturing in ophthalmic optics. He taught thousands of students perimetry and "the island of vision." In the early decades, he taught students the bread and butter of optometry in his era: how to make glasses and adjust them so patients would be comfortable. In the 1970's, he became a consultant for the National Board of Examiners in Optometry and taught a coordination course that prepared ICO students for their board examinations.

Dr. Teshima was widely respected and admired by students. The class of 1979 honored Dr. Teshima with an honorary membership in the Gold Key Society for his outstanding teaching. The class of 1985 honored him with an honorary membership in Tomb and Key and dedicated the 1985 yearbook to him, honoring his retirement and 39 years of service to the College. He was considered one of the great educators of the Illinois College of Optometry. His principles were simple: work hard and do your best.

Vault

R80S
TECHNOLOGY IS CONSTANTLY
EVOLVING. ICO does its best
R90S
to stay on the cutting edge,
always upgrading facilities and
incorporating the latest tools. We
dug into our Vault to see what the
latest and greatest tech looked
l910S like in previous decades. The
people in these photos could
have only imagined how smart
phones, apps, and 3D printers
are now influencing optometry!
1930S





Datebook





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Last Look

