

FALL 2021 + SPRING 2022

# IND MAG

*Metropolitan  
State University  
Of Denver*

Industrial Design  
Department  
Magazine



BEST OF CLASS  
PROJECTS

FROM STUDENT  
TO PRO: ALUMNI  
INTERVIEW

WHERE ARE WE  
HEADED NEXT?

# WHAT'S INSIDE:

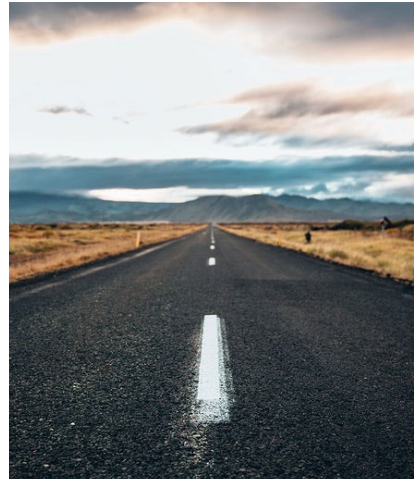
---



Letter from the Chair  
Onwards + Upwards



Who We Are | Faculty  
and Staff Pages



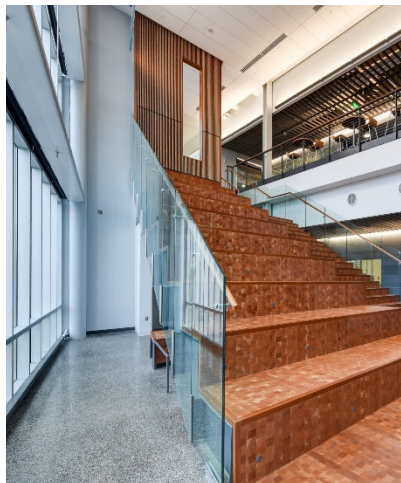
Journeys | Sophomore  
+ Senior Portfolios



Top of the Class | Best  
Works from Selected  
Courses



Alumni News |  
Spotlight on Lily  
Cornett



Facilities News |  
Where the Magic  
Happens



The Library |  
Industrial Design  
Resources



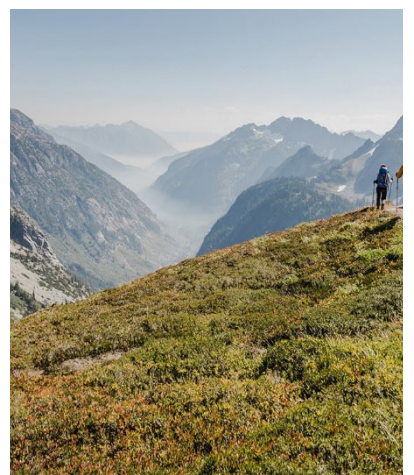
Going Abroad |  
Travel with Industrial  
Design



This Academic Year's  
Events and News



Senior Show |  
A Singular Attraction



Credits & Index

# ONWARDS + UPWARDS

---

---

## Letter from the Chair

Welcome to MSU Denver's new Industrial Design department magazine! We've seen some incredible growth in our students, program, and faculty over the past few years—in spite of a global pandemic—and are excited to use this outlet as a means to showcase some of the spectacular work that has been going on within the department.

Industrial design is a very competitive profession, but brings with it an immense amount of creative latitude and satisfaction. Our faculty provide important guidance, but each student must put in the effort to become true designers! This magazine shares several of the developments that students have made during their time in our Industrial Design department, and the ways in which they are preparing themselves to become the designers they want to be.

Our faculty are currently working on some important, incremental improvements to the department's curriculum, procedures, and facilities. These changes are meant to enhance each student's experience while offering them more opportunities to grow in the profession. For example, we are revisiting the department's curriculum, updating the content, and implementing coursework to provide our students with even more competitive knowledge and skills. We have changed some of the procedures students must use to find and register for internships, and we're establishing long-term relationships with several companies to offer ongoing internship opportunities. This past fall semester, the department was provided with some additional funding from MSU Denver to procure more up-to-date equipment for our labs, including water-jet cutting equipment, some professional-grade 3D printers, and additional textiles equipment—to name a few. Plenty of other exciting developments are also in the works, and we're pleased with the upward direction the department is moving. We all look forward to assisting our students in the best way we possibly can, so let us know how we can help you in your own design journey!

All the best,

John Wanberg

Department Chair

Professor



Courses Taught | IND 1450, IND 2100, IND 2810, IND 3400, IND 3660, IND 4460



# OUTSTANDING STUDENT

---



The field of industrial design is broad and multifaceted and the tendency for undergraduate students of design is to dig deep on their particular interest.

---

Our outstanding student this year is Sarah Wong. She digs deep AND keeps her interests far-reaching... excelling in versatility and not falling into complacency.

She has spent her time in IND mastering processes rather than product categories: problem solving, storytelling, and puzzling when to use her ample artistic or technical sensibilities. She helps other students see by example that it is up to them to learn and take advantage of the many department and campus resources here. In class, she loves the culture of feedback she receives from her IND peers and professors and spends her time outside of class in nature. Her career might start with designing prosthetics but she's eager to engage professionally across the spectrum of design... in her words, "I don't want to do one thing forever."

# FACULTY PAGES

---

---

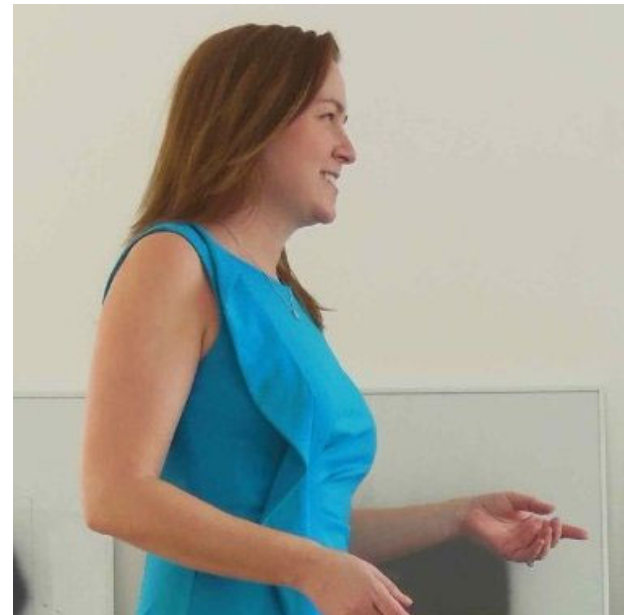
## Passionate Professors



All of our faculty have a vast amount of industry experience and they stay relevant. Their passion for all things industrial design shows in their professional projects and how they bring that passion to our students.

“It’s the sense of walking  
around the space and  
knowing that everything has  
been detailed and  
considered.”

— David Flack



Courses Taught | IND 1000, IND 3000, IND 3400,  
IND 3480, IND 3800, IND 4450

## FACULTY PAGES

Amy Kern

A

As a furniture and lighting designer for residential and contract brands, Amy had seen first hand how little choices impact the overall context and, more importantly, the experiences people can have. Pursuing her interests in environment design, clients began requesting her design services to

complement their visions for restaurants, hotels, event spaces, and more.

Now she uses those professional skills in service to the university by recommending designs for the Auraria campus’s built environment and infrastructure. She and her small team have envisioned non-binary restroom and lounges, a 10,000+ sq. ft. student run business arcade and event space, educational nature exercise paths, pop-up picnic vendors and outdoor classrooms. Just to name a few.

“Spatial design isn’t a leap from traditional product design in that it’s about understanding how people need and desire to experience the design holistically, not in parts and not universally.”



“Design is a process- an intimate collaboration between engineers, designers, and clients.”

– Henry Drefuss



Courses Taught | IND 2450, IND 2455, IND 2830, IND 3400

## FACULTY PAGES

### Trent Garner

O

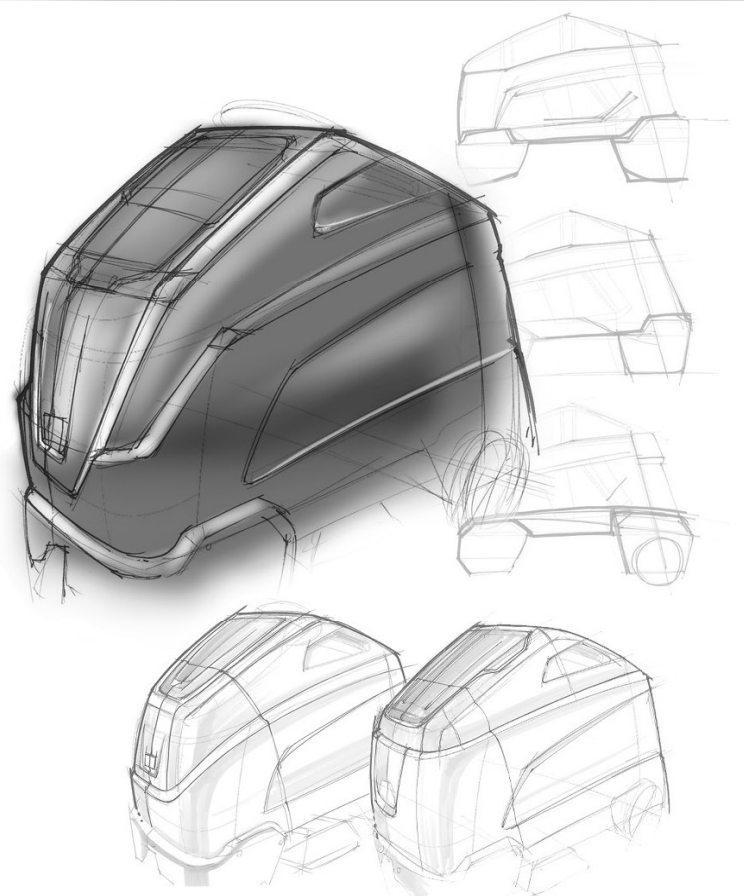
The Objective of this new development was to design a modular platform of three different ride-on machines that exceeded customers needs in cleaning different floor types.

After quickly conducting field observation and over 15 user interviews, Trent was

able to isolate particular pain points like chemical damage on the pump and specific required tools leading to poor cleaning performance. Although the ergonomics needed only slight adjustments they needed to eliminate the need for external tools in daily usage among other issues.

The re-design was a smashing success. It reduced the cost of the machine by 20%, doubled the predicted sales volume in the first year, created a tool-less maintenance machine that increased repeat sales rate by 10%.

As an industrial designer Trent Garner loves to develop and inspire teams to collaborate and create products that customers love. He has been a design leader with Karcher for many years and is an IDSA-DEN chapter Chair. This year, he is focused on bringing the design community closer together and building camaraderie.



“Music gives a soul to the universe, wings to the mind, flight to the imagination and life to everything.”

– Plato



Courses Taught | IND 1000, IND 2450, IND 2810, IND 3950, IND 4540

## FACULTY PAGES

David Klein

T

This project was done with a partner named Mayur who owns an outdoor gear company called Outdoorsman Labs, we both thought there was a need for the kit and that it would be fun to design.

We were going for about 60% sound reduction, easy to pack and beautiful. Sustainability was a goal so we are trying to source cardboard, wood or paper products where possible. Also trying to hit a low price point.

I feel passionately about this project because I play drums and there is no mini quiet acoustic practice set on the market. The need for a small acoustic kit for practice or light gigs like café's, and something that could be packed into a guitar case or equivalent size case. The quality of sound is pretty good, it's easy to move around, and everyone who has seen it likes the look. The project is currently stalled but hopefully will pick it up this summer.



“People ignore design that ignores people.”

— Frank Chimero



Courses Taught | IND 1000, IND 1130, IND 1470, IND 2000, IND 3000, IND 3450, IND 3660, IND 3800, IND 3950, IND 4540

## FACULTY PAGES

Paolo Grazioli

T

This was an incredibly complicated project that required embracing the uncertainties that are presented in a real world design project to solve the multi-faceted problems it presented. It was designed for affluent Chinese consumers who want to have a cinema-room in their home.

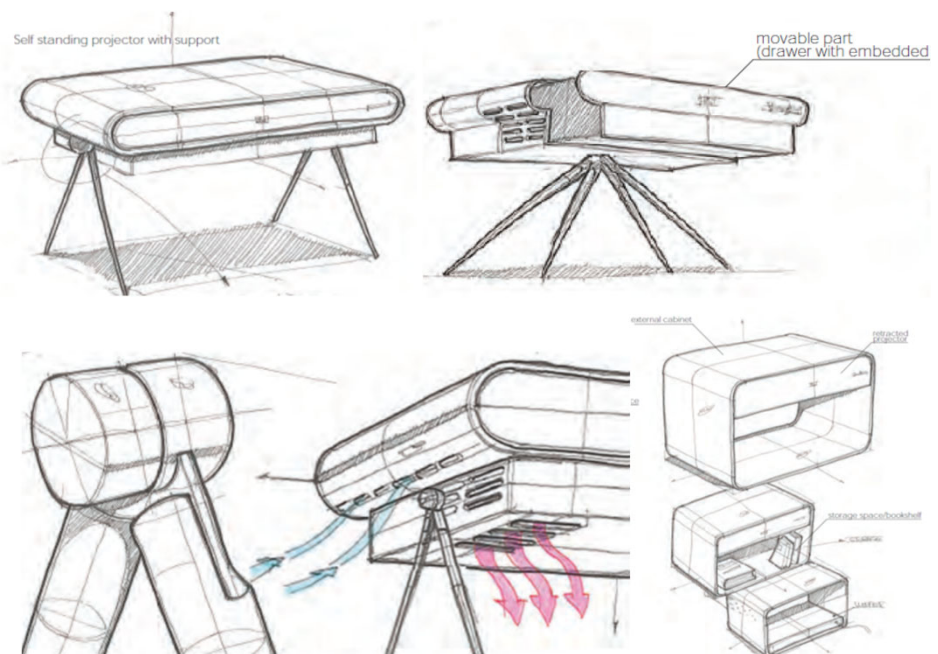
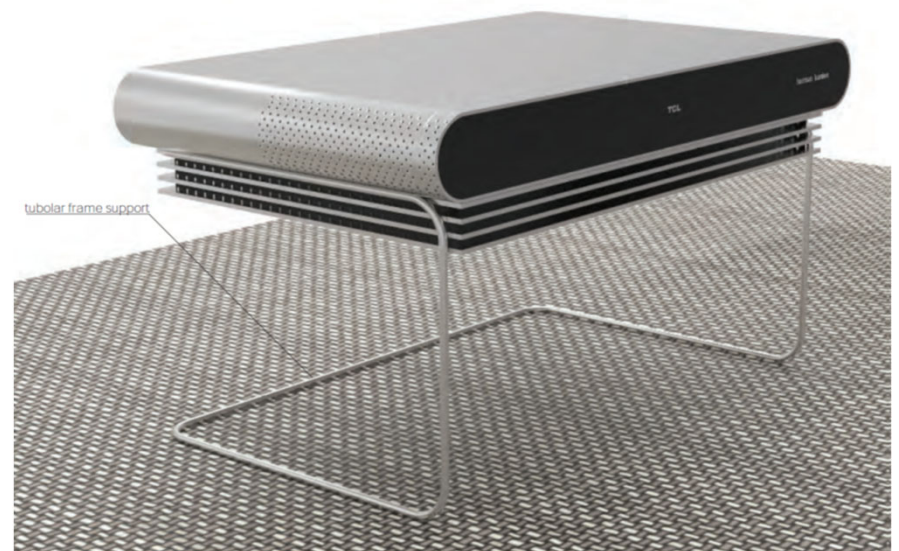
The main problem that my team and I had to solve was how to find a good balance between the strict installation requirements (the project sits at a very specific distance and height from the wall and should not be moved because the variation in focal distance of the lens requires a lengthy setting) and the ergonomic posture generated by the height of the projection on the wall.

This required a complete rethinking of the installation, as we devised an innovative way to place the projector into a piece of furniture. An idea copied by Sony later to solve the same problems with their projector.

It required the draft of a completely different marketing promise, to better explain to the users how it works.

Another problem was how to create a pleasant appearance from very bulky internal electro mechanical components. All this required a very deep user centered analysis of the users' interaction with the product and the creation of many different solutions to solve the problems.

The motivation for the design was simple and real: the company required the design studio to do it well. The inspiration was geometric shapes that simplify the appearance. Only a combination of circles and straight lines were used to design the product, a very innovative approach for the Chinese market.



# BEST IN CLASS

---

—  
Hard at work



Faculty are encouraged every semester to pick a couple of their favorite projects completed by students in their classes. The following pages give you a snap shot of what we are up to in several of our most popular classes.

## IND 4460 | professional industrial design studio

Students develop a semester-long design project under the guidance of a primary instructor and specialized mentor. Students compliment knowledge and skills from previous coursework with in-depth, qualitative research to create design solutions.



## IND 4450 | advanced industrial design studio

This course extends the industrial design skill set into user-centered research, conceptualization, and presentation. In this course, students learn advanced product conceptualization techniques, use additional product development tools, and produce professional quality product presentation materials. Special emphasis is given to human factors and research in product design.



Credenza | Weldon Henderson

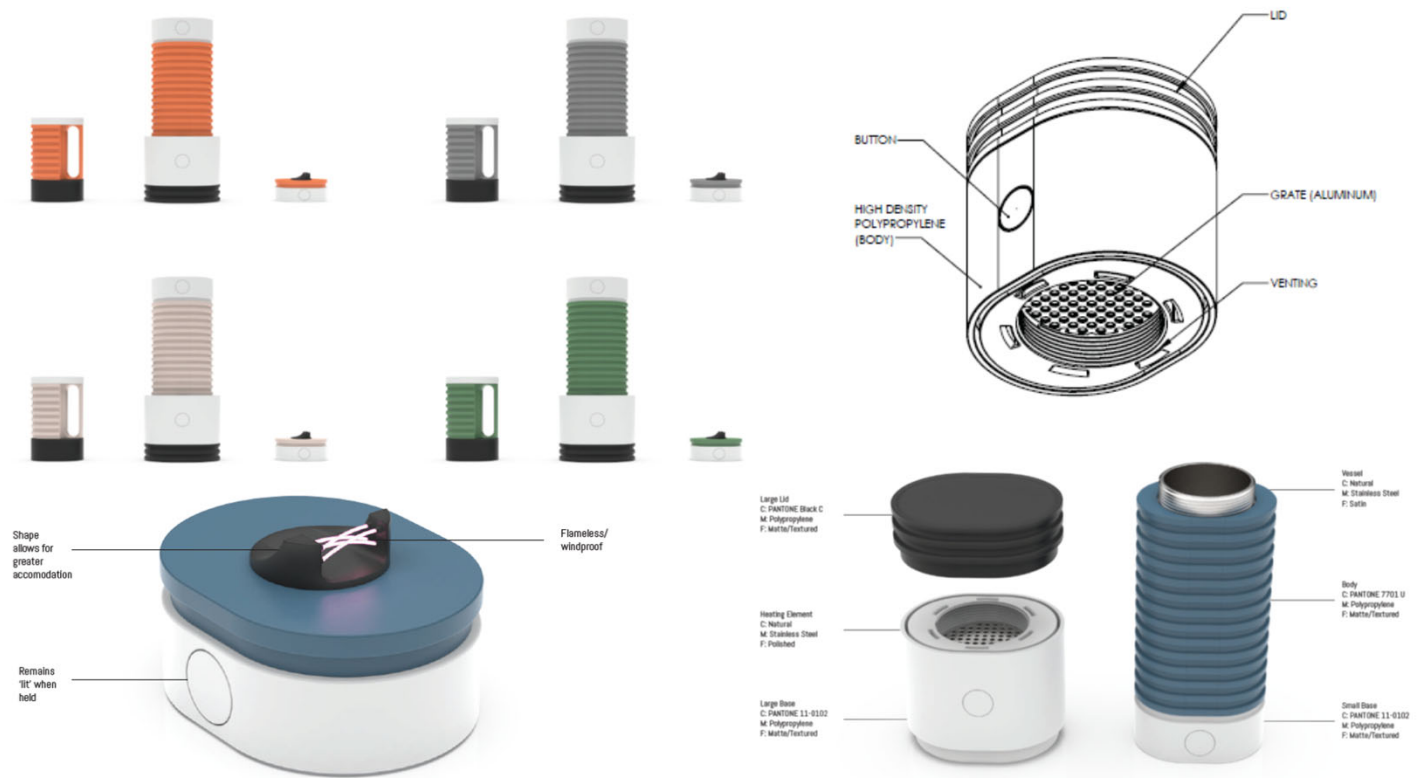


Ronin 50 Bike | Hayden Schramm

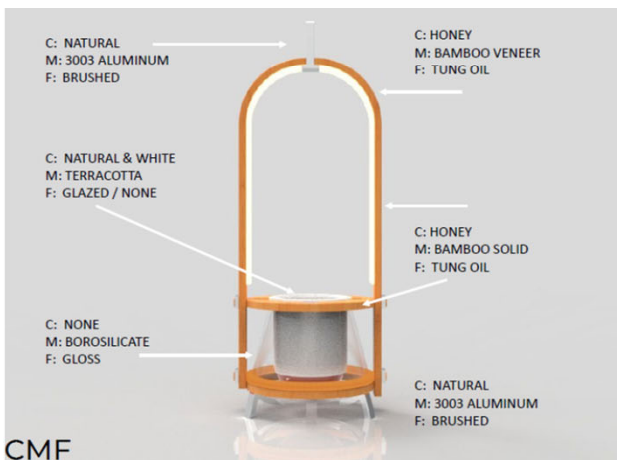
# IND 4450 | advanced industrial design studio

PREVIOUS PAGE | fall 2021

THIS PAGE | spring 2022



TRVLR Family of Products | Kevin Aragon



CMF



Healthy Planter | Aaron Reneau

# IND 3450 | intermediate industrial design studio

Students will produce functional, aesthetic designs for mass-market consumer products. Students will also learn and adapt the design developmental process used in industry. This includes finding and analyzing problems, conducting and documenting research, generating and proposing concepts, and presenting solutions in public. Projects emphasize materials, manufacturing methods, concept visualization, market relevance, and historical context.



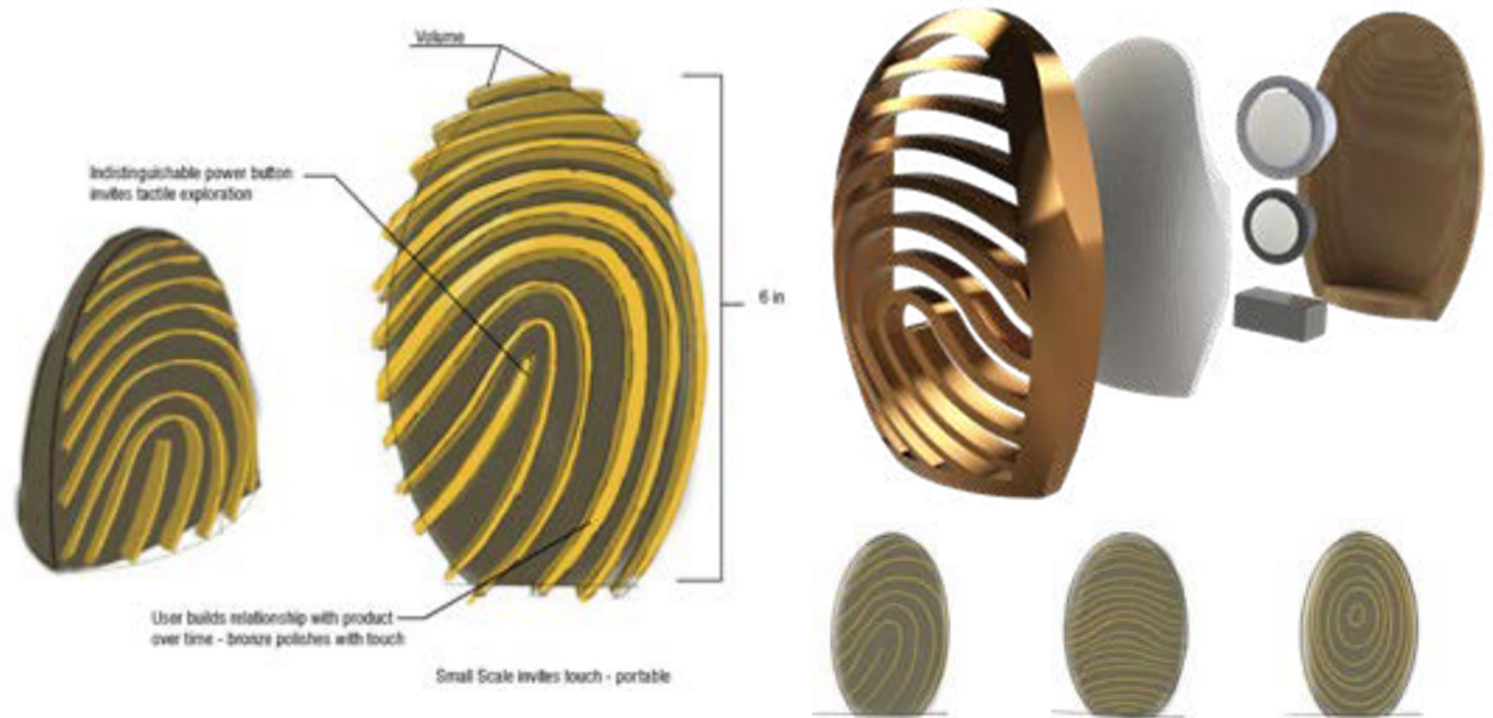
BoBo Coffee Machine | Kevin Aragon



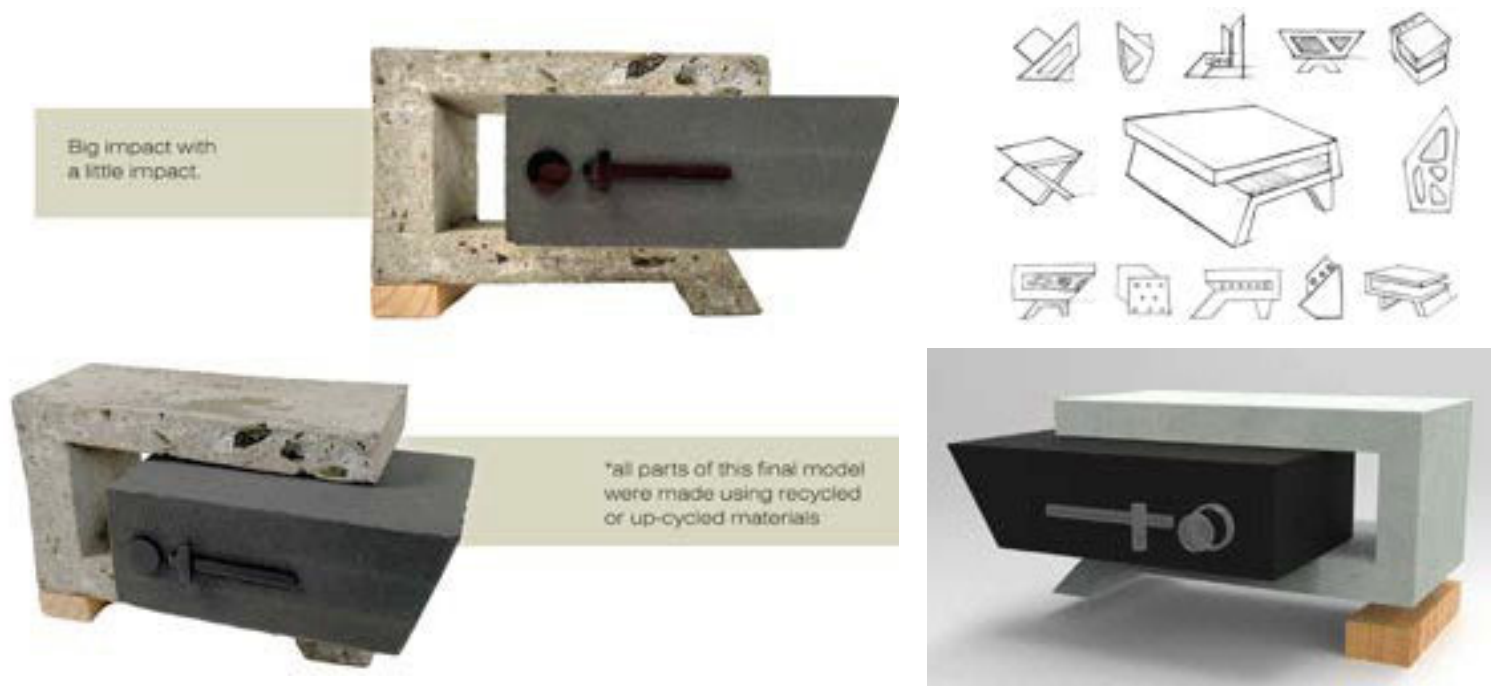
Camelbak Beverage Machine | Clara Roberts

# IND 2450 | beginning industrial design studio

In laboratory and studio environments, the design process is introduced and practiced as students apply learned fundamental skills, critical thinking, problem solving, and aesthetic refinement to assigned design projects. Students are required to address the historical context of their designs as they research technological evolution, market trends, aesthetic preferences, and consumer behavior.



Keepsake Speaker | OliverGreenwood



Concrete Speaker | Claire Neugebauer

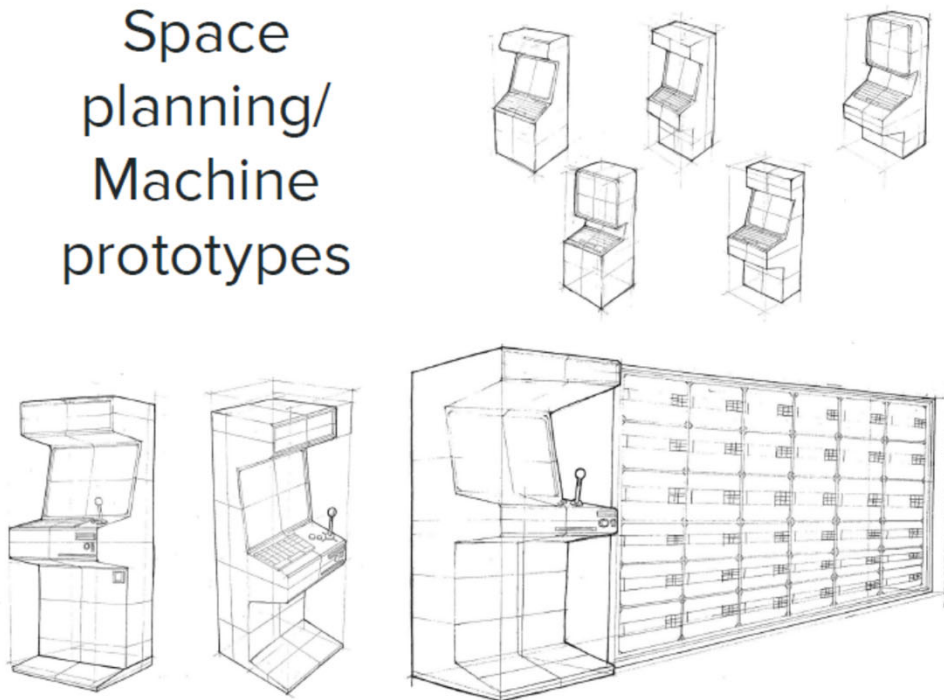
# IND 3000 | design thinking

Design thinking methodology teaches a holistic approach and innovative way of solving problems. Multiple design challenges will be utilized to help students develop creative thinking skills, gain knowledge of design thinking, and to practice a wide range of problem solving methods.



Classroom Re-design | Zuleyma Sanchez, Antoine Darger, William Dunwoody

## Space planning/ Machine prototypes



Supply Vending Machine | Joey Taylor, Adam Wolf

## IND 3550 | textiles: materials & fabrication

In this course, students are provided with instruction in textile material characteristics, selection criteria, and appropriate textile design applications. The course will also provide an opportunity for basic skill development in fabrication techniques, including the use of sewing machines and pattern design.



Swallowtail 18L Day Pack | Sarah Neuville

## IND 390 N | future transportation design

This course approaches transportation design through multiple pedagogical models, using a deep study of user-centered research to help redefine the needs of all transportation means. This course will focus on environmental responsibility, aesthetic research to redefine the traditional semiotic design approach, constraints of human factors and ergonomics.



Commuter Bike | Alexa Eastep

# IND 390 O | sustainable impact lab

This course teaches students to utilize the methods and mindsets of design problem solving to design and realize models of designs that create positive change for underserved populations. Students learn to maintain the highest level of human-centered and sustainability considerations.



# GOING ABROAD

---

---

## Design Wanderlust



Every year faculty may provide a group of students to expand their design perspectives by arranging unique design travel experiences both in the United States and far abroad.



# GOING ABROAD

## Germany

**P**rofessors David Klein and Amy Kern have travel with students to our partner design school in Dortmund, Germany as well as hosted their students at MSU Denver. Producing original and inventive works collaboratively has lent itself to a better appreciation of different cultural approaches to how we 'make' and

come together and communicate. Fachhochschule Dortmund University of Applied Sciences and Arts is a short distance to many design attractions including Essen where the reddot design museum houses a world renowned collection of the very best examples of designed products in most conceivable categories. Inspiring architecture and new friendships bring a creative spark to the workshops and outings.





# GOING ABROAD

## South Korea / Japan

O

Once a year IND professor Ted Shin takes students to Asia, mostly South Korea and Japan, to experience how different cultures impact designs. During the trip, usually 3 weeks, the students visit culturally important sites, notable design focused destinations, professional design offices, meet

professional designers, and work with other design students in Korea on a special topic. In 2019 and 2020, Professor Shin and MSU Denver IND students spent 2 weeks in South Korea, Seoul and Busan, and 1 week in Tokyo, Japan. Students visited many well-known design offices including: cloudandco (<http://cloudand.co.kr/>), pxd (<https://www.pxd.co.kr/en/>), BOUD (<https://www.theboud.com/about>), Duotone (<https://duotone.io/en/>) in Seoul, Korea, Jin Kuramoto Studio (<http://www.jinkuramoto.com/>), and Keiji Ashizawa Design (<https://www.keijidesign.com/>) in Tokyo.

Students had a great opportunity to meet and talk to owners and principal designers to learn specific design processes and philosophies. In Busan, MSU Denver students spent one week with South Korean design students on a design project. They visited many companies, manufacturing facilities, and research centers in Busan, Korea during their workshop. It has been an eye opening experience and excellent learning opportunity for many students and we hope to do it again post-COVID.





# GOING ABROAD

## Belgium

P

Professor David Klein reflects on the 23rd International Design Experimental Meeting (IDEM) in Alden Biesen, Belgium from October 6-12, 2019, with Professor Amy Kern.

International Design Education Meeting (IDEM) is an international workshop

for students, teachers and professionals. The inter-cultural exchange from the mixed working groups are a guarantee for surprising results, always to be shown at the last day of the workshop week.

Teams of teachers work with foreign students, not their own, and gently guide the process towards a result. An average IDEM brings about 50-60 people together from around the globe.

The workshop facilitates working in inter-cultural groups, stimulates interdisciplinary processes. As in the contemporary changes in design education, some





non-design related students and specialists may work together, in order to create wide stimuli for design thinking. The reframing and solving problems are an experiment within the given themes. In IDEM workshops all kinds of research contexts are presented for speeding up the process, but also to make it possible for the design teams to come up with surprising answers at the end of the workshop week.

## Belgium



# READY, SET, GO

---

Design Futures: Where they start, finish, + thrive



Our mission is to educate students in the foundational and specific skills of industrial design so that they may make responsible, beneficial and lasting contributions to humanity. Take a look at various portfolio pages from a few of our recent graduates- see where their skills started and what they are taking away with them into our industry and the world.

# ALUMNI SPOTLIGHT

---

---

## Q + A with Lily Cornett

**After graduating in 2019, Lily was hired on as Junior Product Designer for Thule in Longmont and now plays the role as Product Designer for the brand's soft good products.**

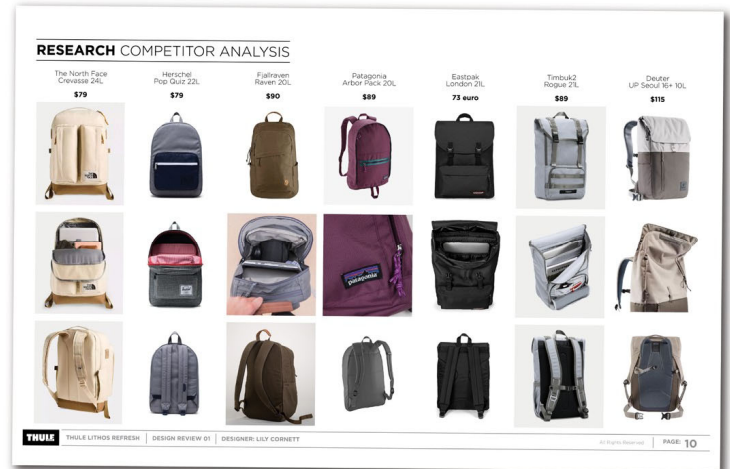
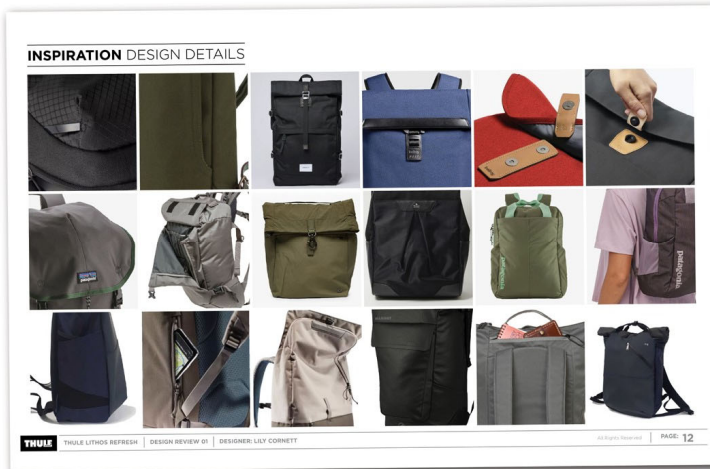
---

**We caught up with her to see what she's been up to since graduating and ask a her about life as a young designer.**



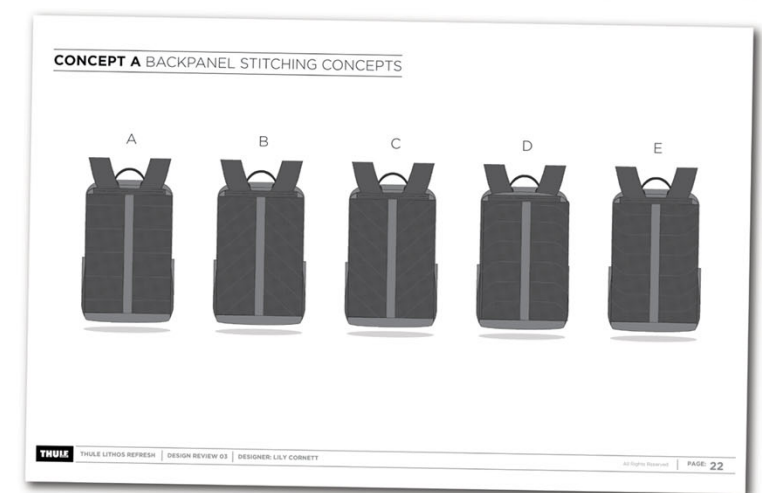
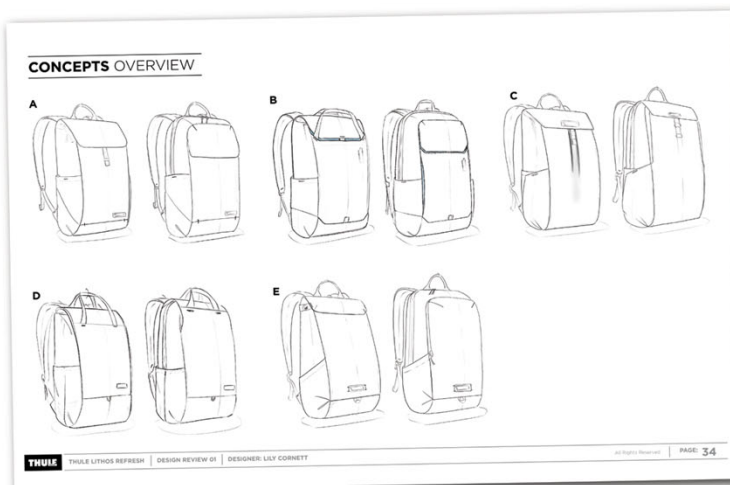
**Q:** What does your day-to-day as a design professional look like?

Usually, I have reoccurring meetings with pattern designer in our sample room. I have weekly check-ins with boss and interns where we share work and critique each other and discuss new developments in tech and upcoming trends. It really depends on what part of the project I am in that determines how a given week might look. At the start of a project, I'm usually doing a lot of project research, so looking at consumer trends and product features. Then I get into sketching and then ideation to get ready for an initial design review where I present to a product manager (leader of the project), product manager (in charge of the project timeline) and then a developer (coordinates w/ factory and helps us get right material). Once we get into the final stages of a design, which is usually about 10-12 weeks, we present the final concepts with full scale orthographic views I've built out. From there I build out spec packs for about two weeks and then wait for the factory to send me back samples of the designs.



Q: What is one piece of advice you wish you could go back and give yourself while you were a design student / would give to current students?

Always keep sketching. You need to be able to sketch for so many reasons. Really work to build a strong understanding of form on a flat surface. Designers need to have a good grasp of ideating 3D form on 2D paper to be able to have good sketches. Really get into research and understanding why we research and how to empathize about your target group. Always try to network with professionals outside of school.



See more of Lily's work: <https://ioannacornett.com/>



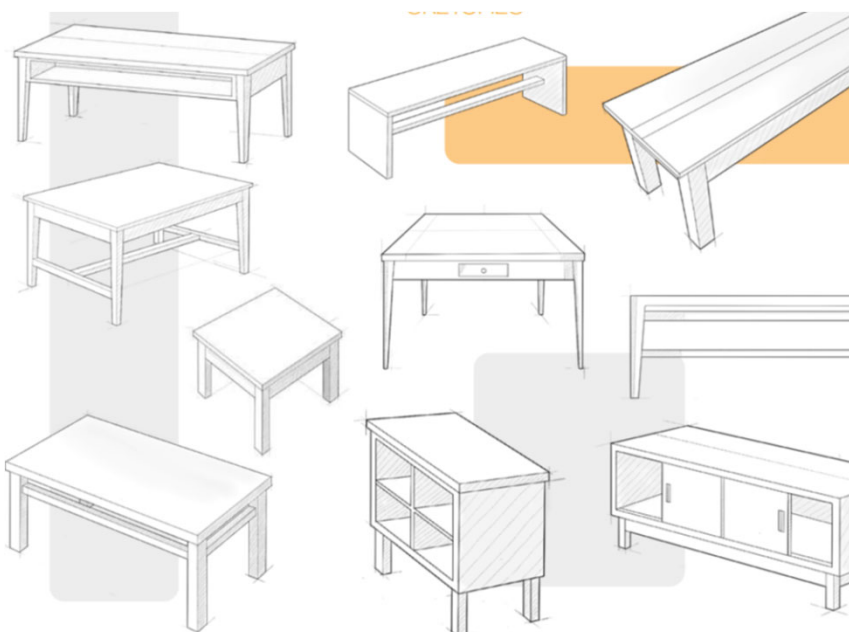
Q: What are some projects you have been working on?

Right now I'm working on a redesign of the smaller bags in the Subterra luggage collection, small bags projects for bike carrier bags, recently worked on Thule Accent collect, and starting an eco-collection for Case Logic. Currently working on small bags for bike carrier bags.



Q: What is your favorite part about being a designer?

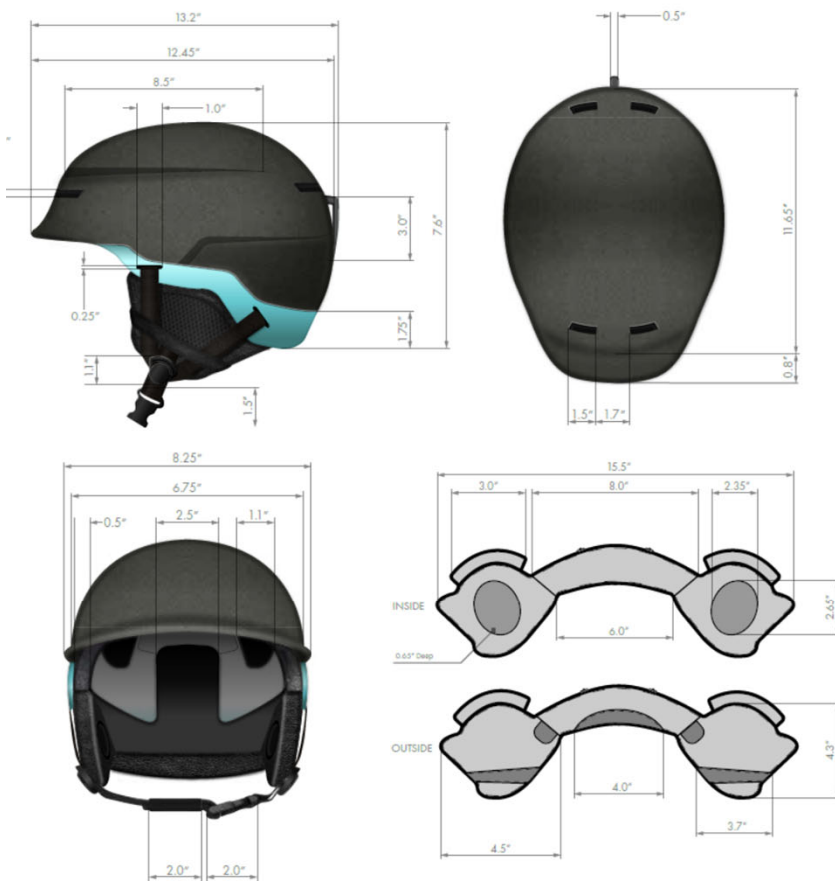
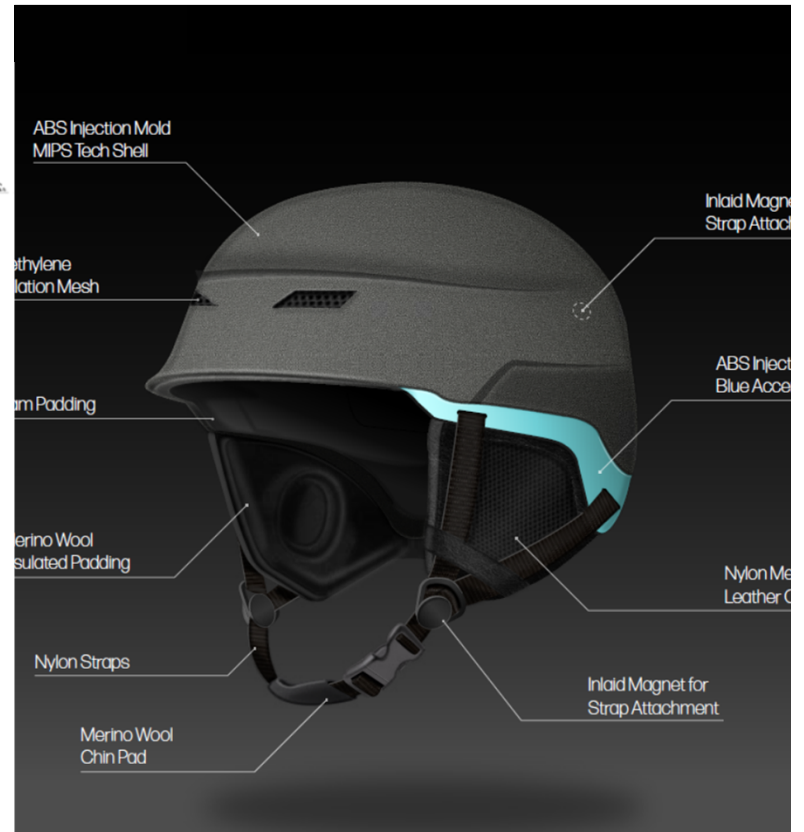
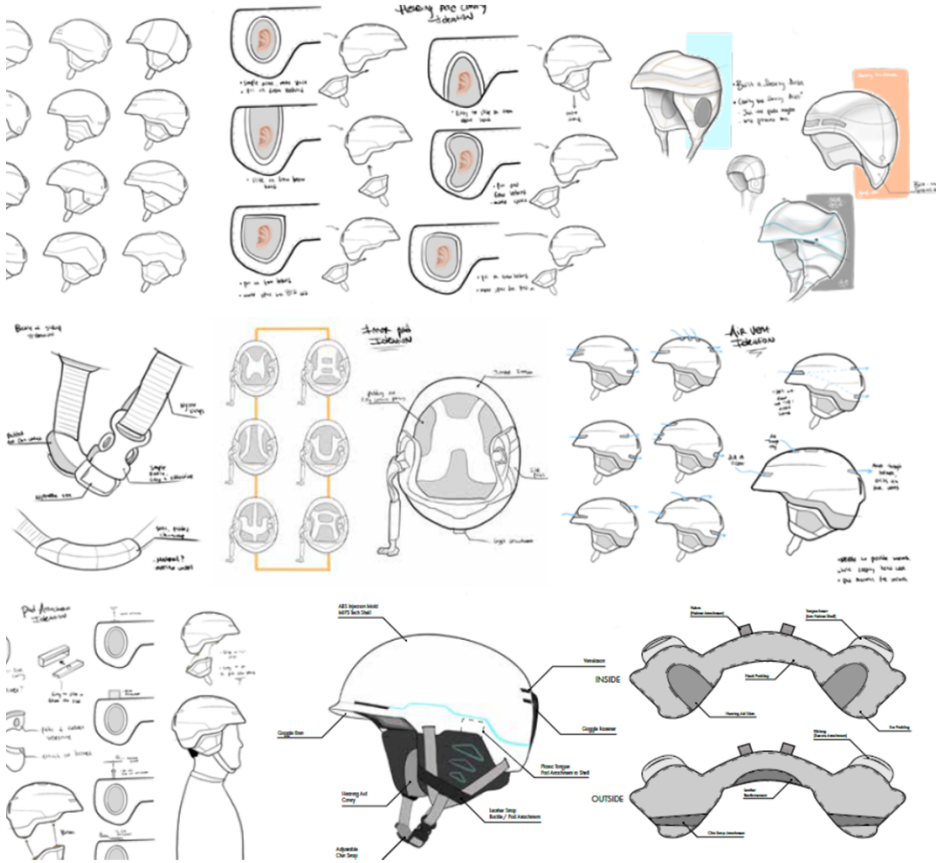
Love being focused on design; coming up with meaningful solutions and working out smaller design details. The creative process of researching, ideating and being able to bring a product to market is really exciting. I love collaborating designers and sharing my work with other designs. Being able to creatively problem solve with others is my favorite part.

[illegible]

# Graham Goldsheitter : 2020 Sophomore Folio

# READY, SET, GO

Graham's work matured in his depth of research, human factors, and technical drawing skills.



## 3-STEP SCENARIO Putting on Helmet

1. Pick up helmet with pads and straps clipped to shell.
2. Place helmet on head with straps and pads secured to the sides of the shell.
3. Disconnect straps and pads from shell and flip them down over the ears.
4. Connect ear pads to neck pad with velcro straps located on either side of the neck pad.
5. Connect buckles under chin to ensure safety, and adjust strap length as needed.

See more of Graham's work:  
[www.grahamgoldscheitter.com/](http://www.grahamgoldscheitter.com/)

# READY, SET, GO

Sarah's attention to detail and craftsmanship was just the beginning.

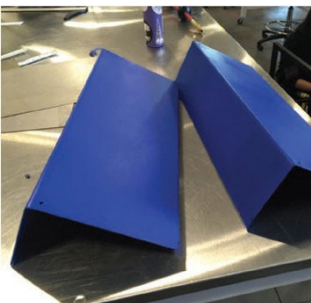
## Side Table



Weld together frame



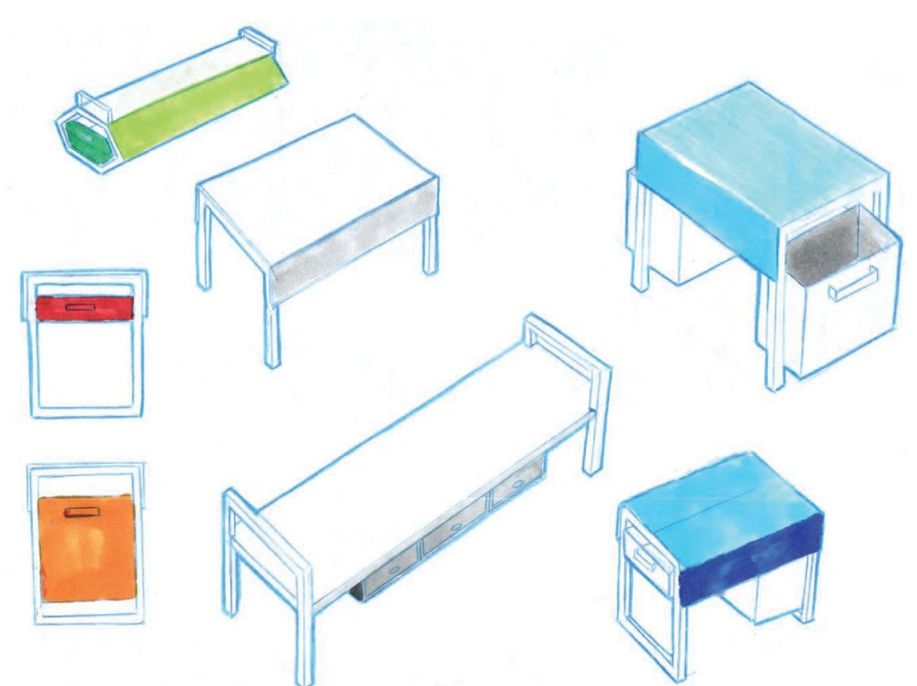
Fold and spot weld



Powder coat parts



Assembly



---

Sarah Wong : 2020 Sophomore Folio

# READY, SET, GO

Sarah's work thrives in the smallest details where nothing is left for later.

sponsored by:



## Grip Bands for Prosthetic Fingers

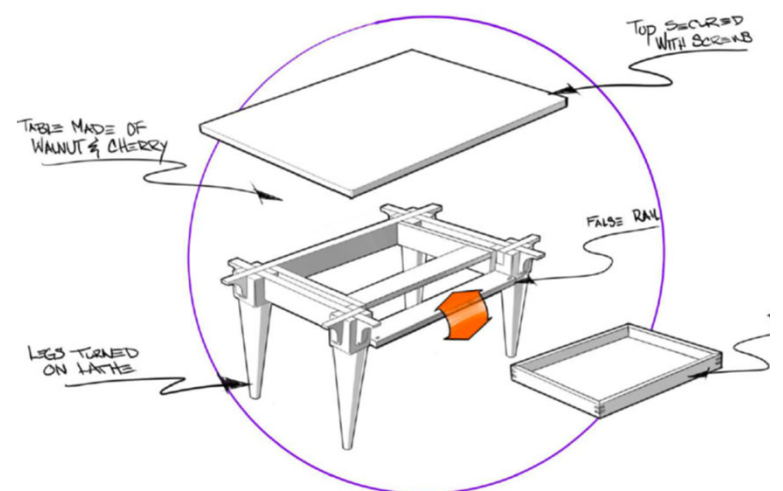
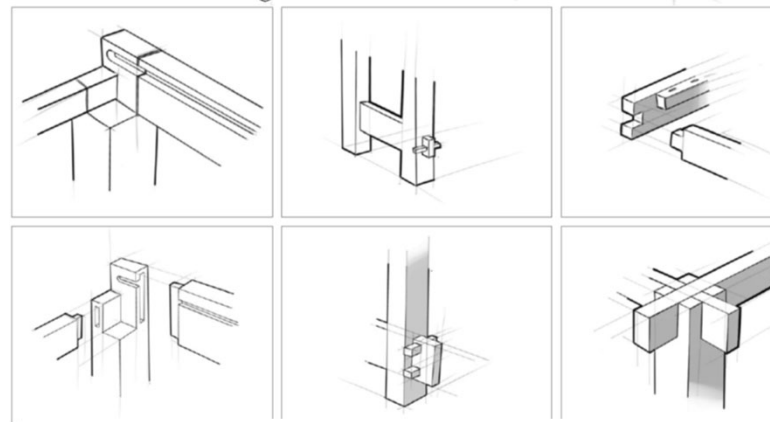
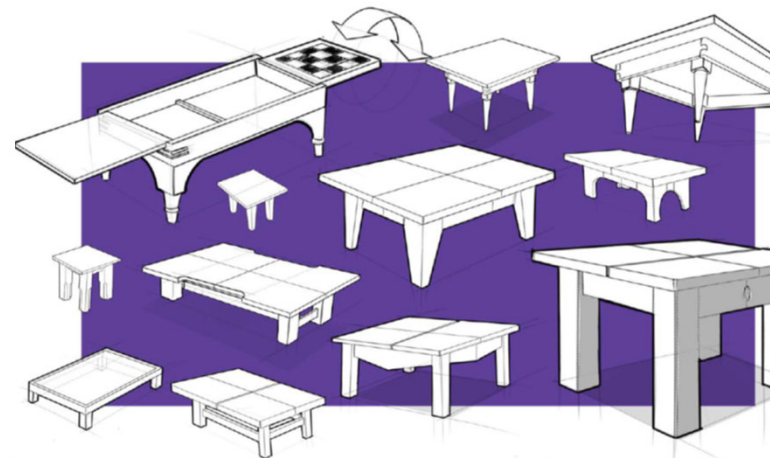


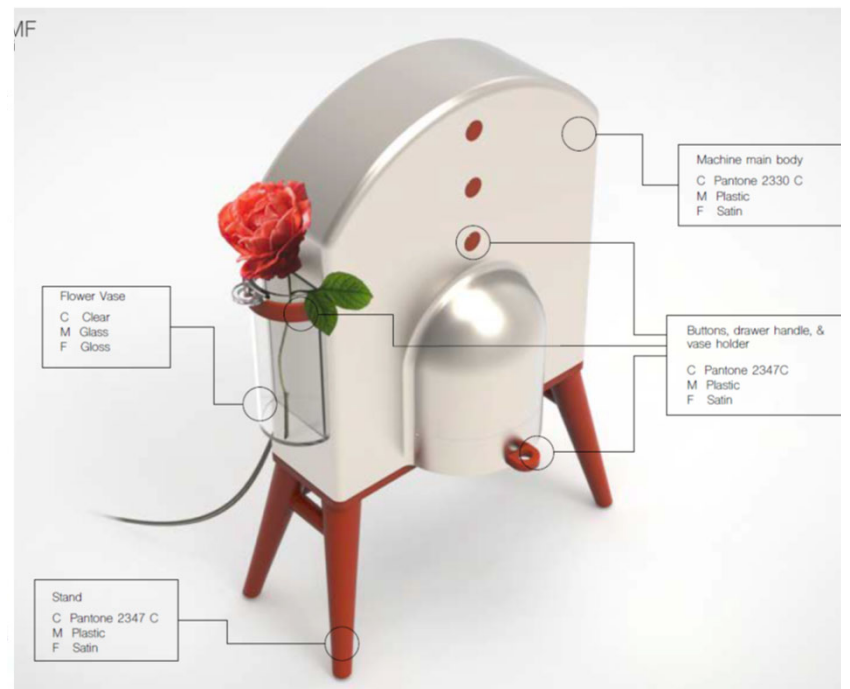
---

Sarah Wong : 2022 Senior Portfolio

# READY, SET, GO

Weldon's design philosophy is "good enough sucks."

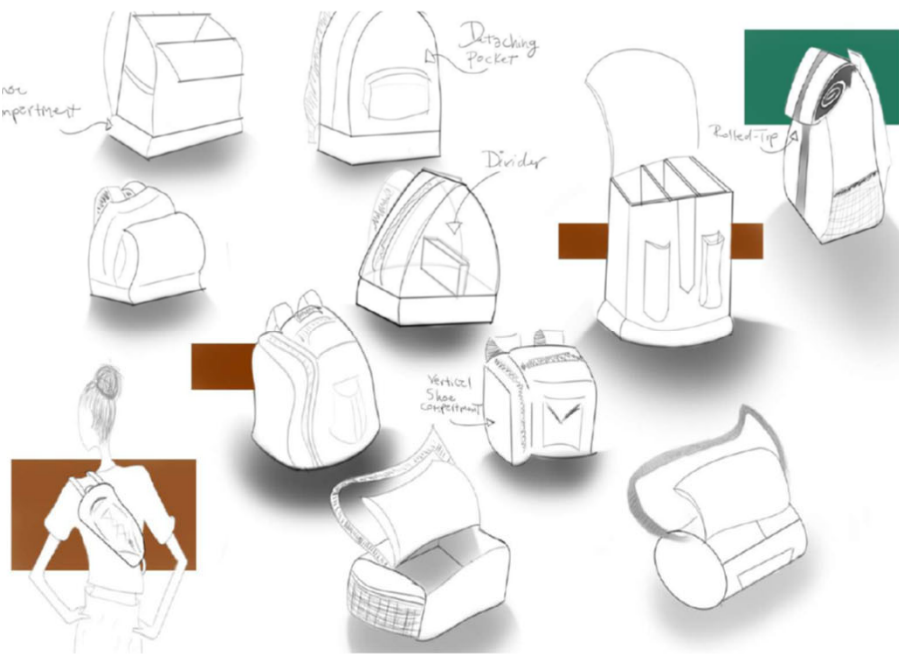


[illegible]

# Weldon Henderson: 2022 Senior Portfolio

# READY, SET, GO

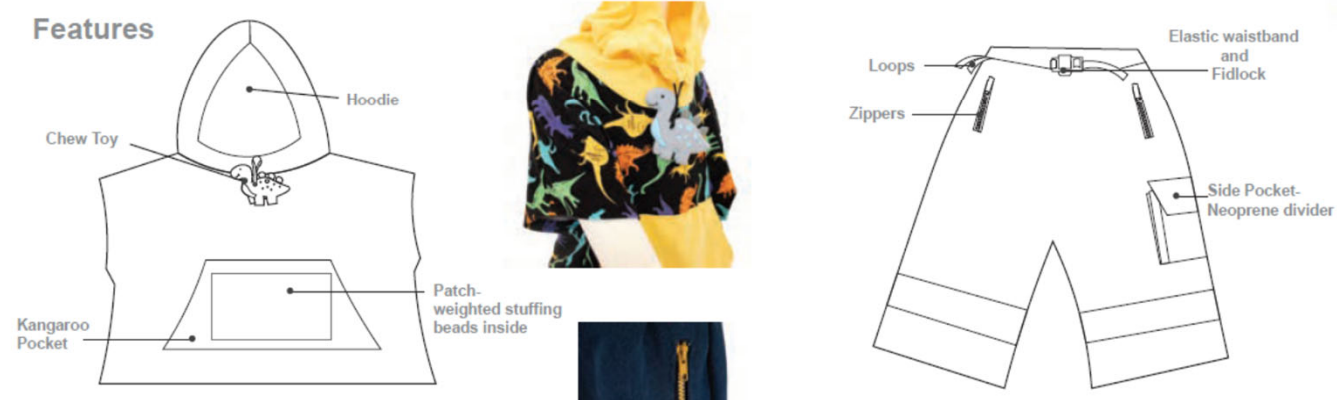
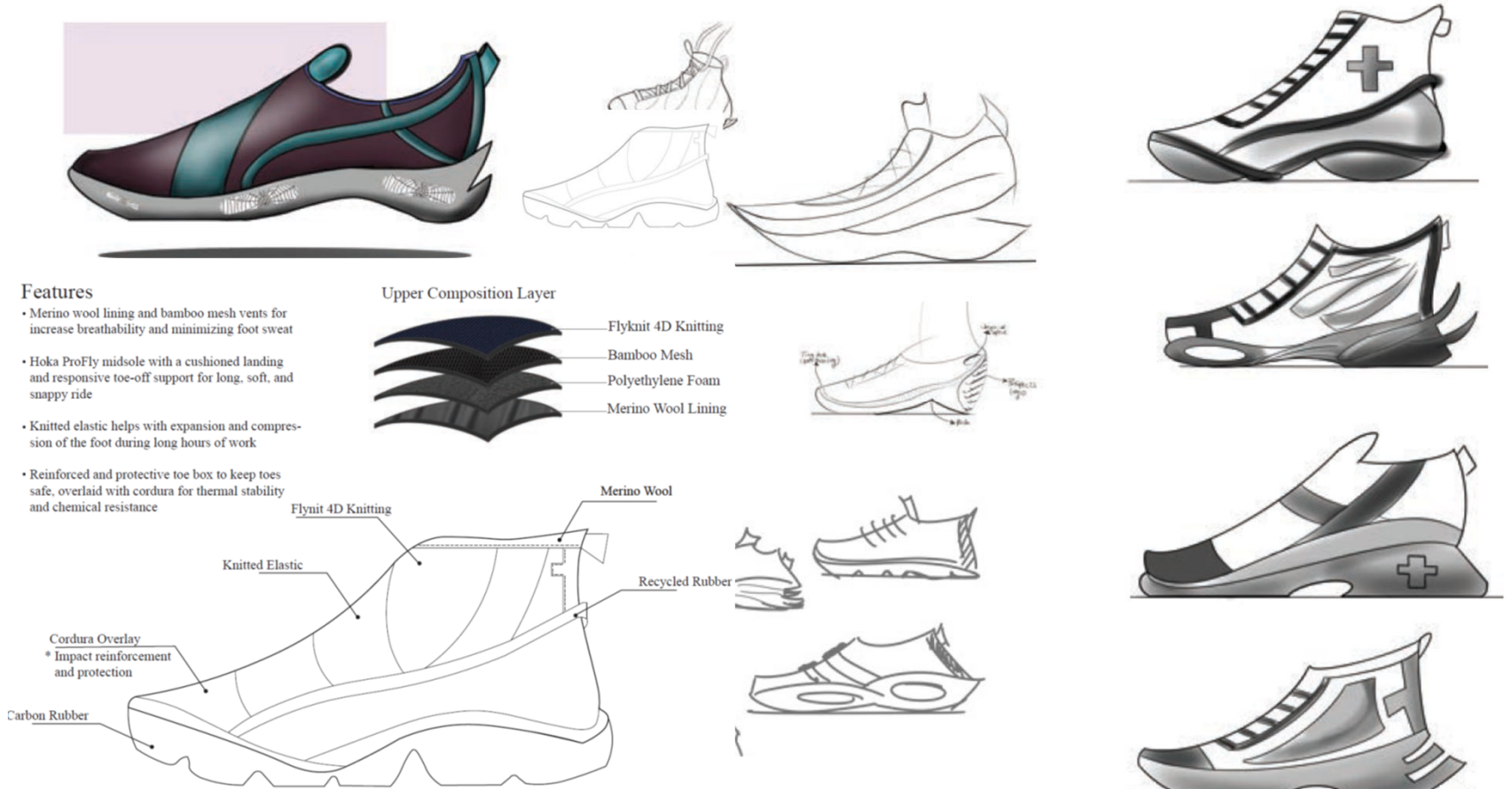
"I believe that design should be done from the heart." Korina began the program with a strong commitment to what matters most- connecting with people and sustainability.



Korina Salcido: 2020 Sophomore Folio

# READY, SET, GO

Korina has become an immensely dedicated and driven designer with a focus and appreciation in sustainable and emotional design.



# ON THE FRONT LINES

---

---

## News from the Lab



New equipment, Tool upgrades, New Policies and Information to get the most out of your Woods, Composites, Metals, Textiles, Photography, Printing and Plastics labs time.



# LAB COORDINATOR

Scott Mourer



Courses Taught | IND 1010, IND 1100, IND 1130,  
IND 298, IND 3550, IND 390

S

Scott Mourer is a graduate from the industrial design program at Metropolitan State University of Denver. He went on to the MFA graduate program at Savannah College of Art and Design where he majored in furniture design. Professor Mourer actively designs and builds

furniture, practices small scale urban farming, as well as collects and restores antique bicycles & tractors. He teaches woods, plastics & textiles material courses, in addition to courses on furniture & bicycle design, AutoCAD, Surface Modeling and Intro to Industrial Design.



# STATE OF THE ART



PART OF TEXTILES LAB



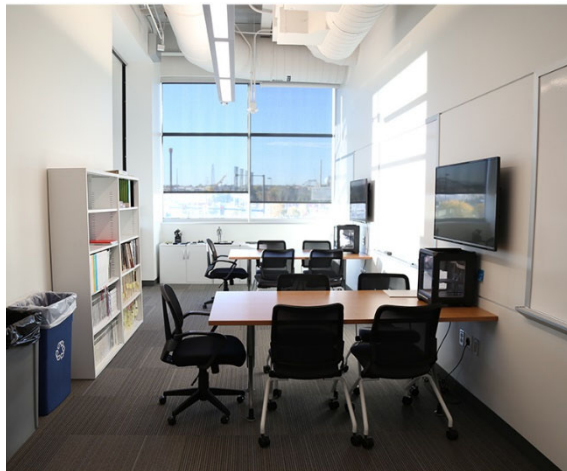
"SMART" CLASSROOMS



THE COMPOSITES LAB



WOODS LAB



LIBRARY AND PART OF OUR PRINT LAB



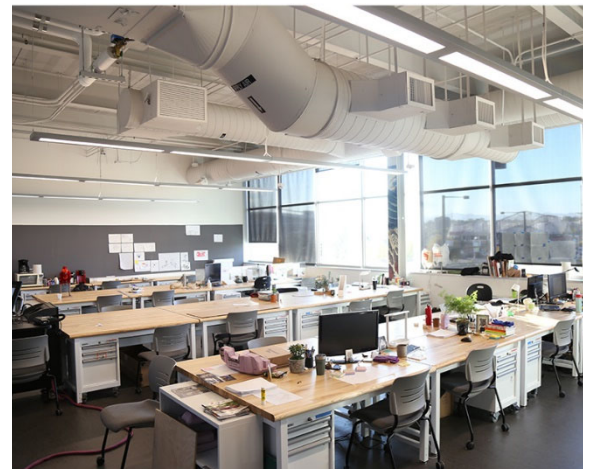
THE METALS LAB



PHOTOGRAPHY LAB



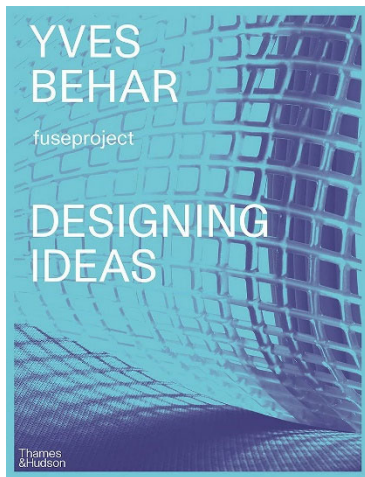
PLASTICS LAB



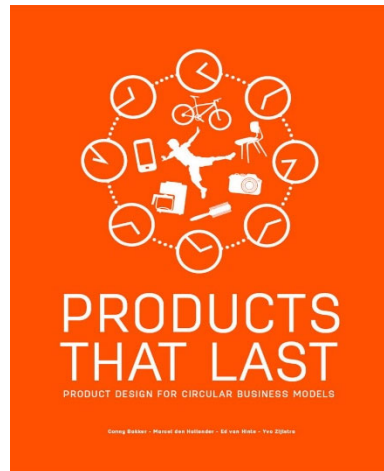
STUDENT STUDIO SPACE

**Industrial Design Department Facilities For Students**

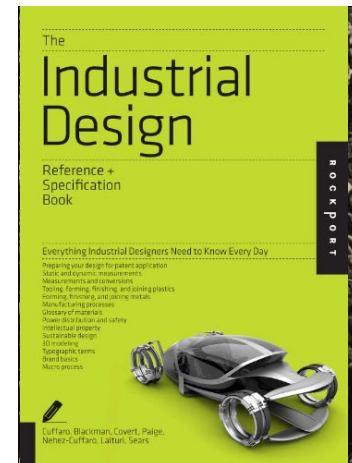
# LIBRARY + RESOURCES



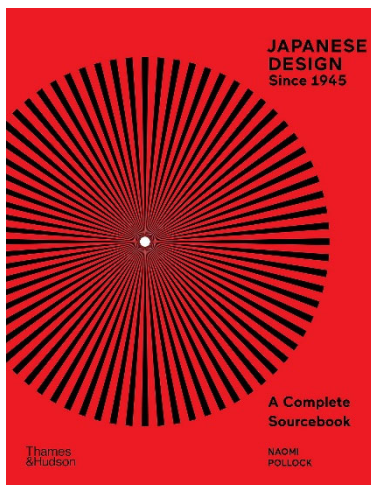
YVES BEHAR: Designing Ideas



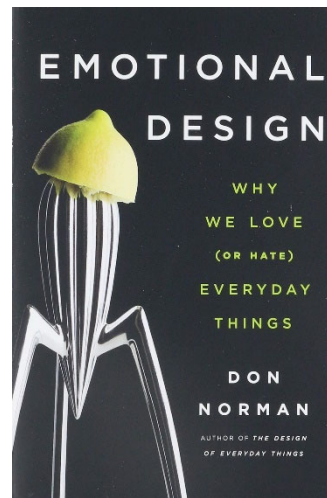
PRODUCTS THAT LAST: Product Design for Circular Business Models



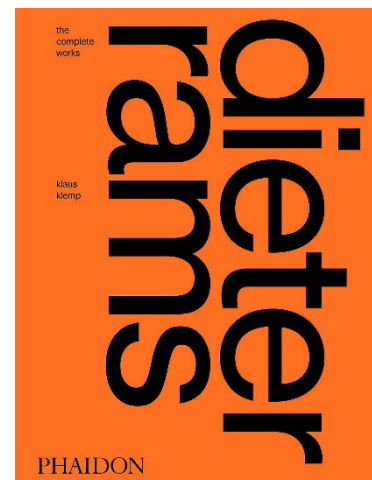
THE INDUSTRIAL DESIGN REFERENCE & SPECIFICATION BOOK: Everything Industrial Designers Need to Know Every Day



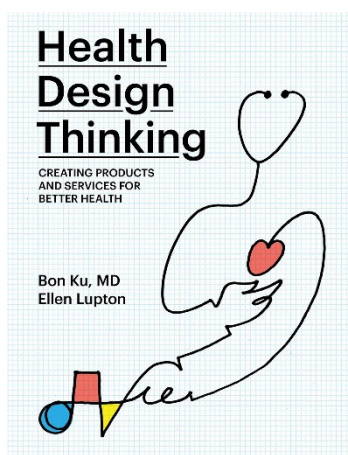
JAPANESE DESIGN SINCE 1945: A complete Sourcebook



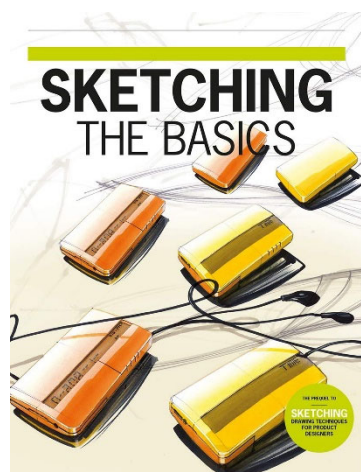
EMOTIONAL DESIGN: Why We Love (or Hate) Everyday Things



DIETER RAMS: The complete Works



HEALTH DESIGN THINKING: Creating Products and Services for Better Health



SKETCHING: The Basics



HOW THINGS ARE MADE: From Automobiles to Zippers

More at: <https://www.designer.com/directory/cat/Industrial-Design/Books>

# 2022 SENIOR SHOW

## A Singular Attraction



### Industrial Design Senior Exhibition

Industrial design graduating seniors show off their proudest work from their time in our department each semester showing the diversity of projects and personalities to sometimes hundreds of visitors.

May 11, 2022  
5pm

# 2021-2022 AY EVENTS

—  
We hope to see you at next years events!

## Design for the Common Good International Exhibition

Industrial design students teamed up with Communication Design students to design this international exhibition that addresses real needs of people across cultures.

January 14 – March 19<sup>th</sup>, 2022



## Professional Development Conference | 2021

Join professor Amy Kern for an interactive discussion about how to better engage in community projects for change with design thinking and lean principles.

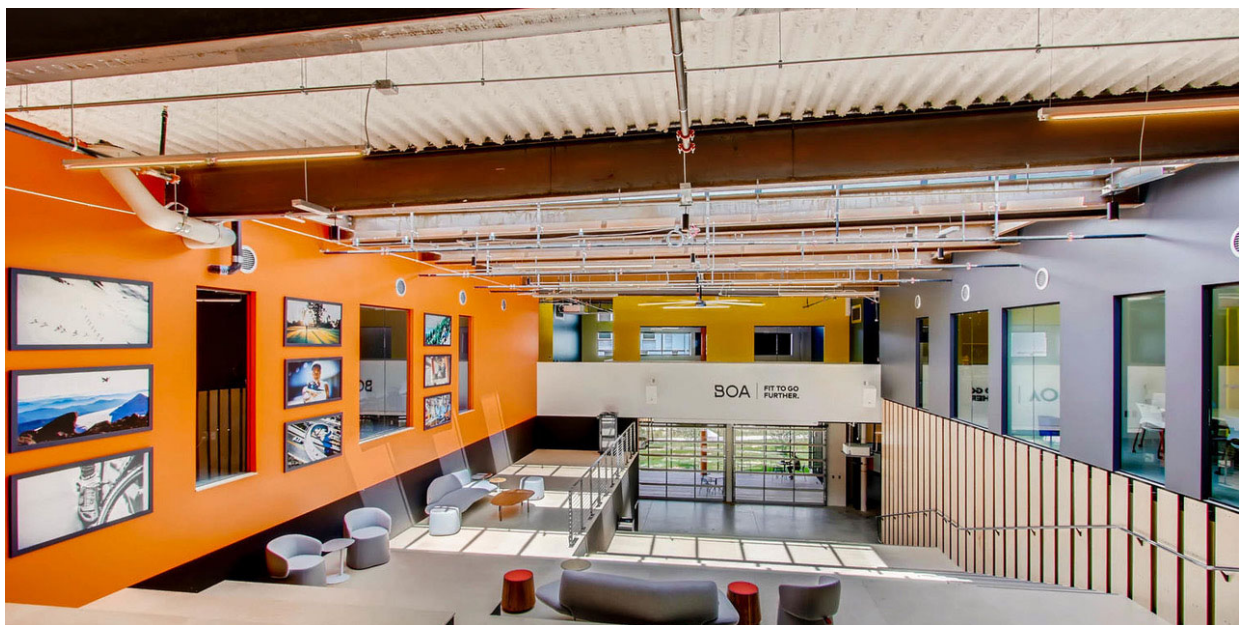
May 25<sup>th</sup>, 2021  
2:30 pm



## BOA Studio Event

BOA is opening up their impressive studio for a tour and a presentation. Please join us for an inspiring evening with the BOA Team. All designers and significant others welcome. Drinks and snacks will be available.

Time: 7:00 pm  
Date: April, 21st



# 2021-2022 AY EVENTS

—  
We hope to see you at next years events!

## Women in Design Deep Dive 2022

This gathering was built to recognize the unique talents, initiatives, challenges, and successes of women in the industrial design industry. We'll be hosting a live virtual viewing party & discussion group on campus.

March 31-April 1<sup>st</sup>, 2022  
8 am-4 pm



## Gorilla Testing Day

In exchange for a sunny grilled snack and lemonade, we'd love to get your opinion of some of the projects IND 3000 | Design Thinking students have envisioned for Auraria Campus.

April 25<sup>th</sup>, 2022  
2:30 pm

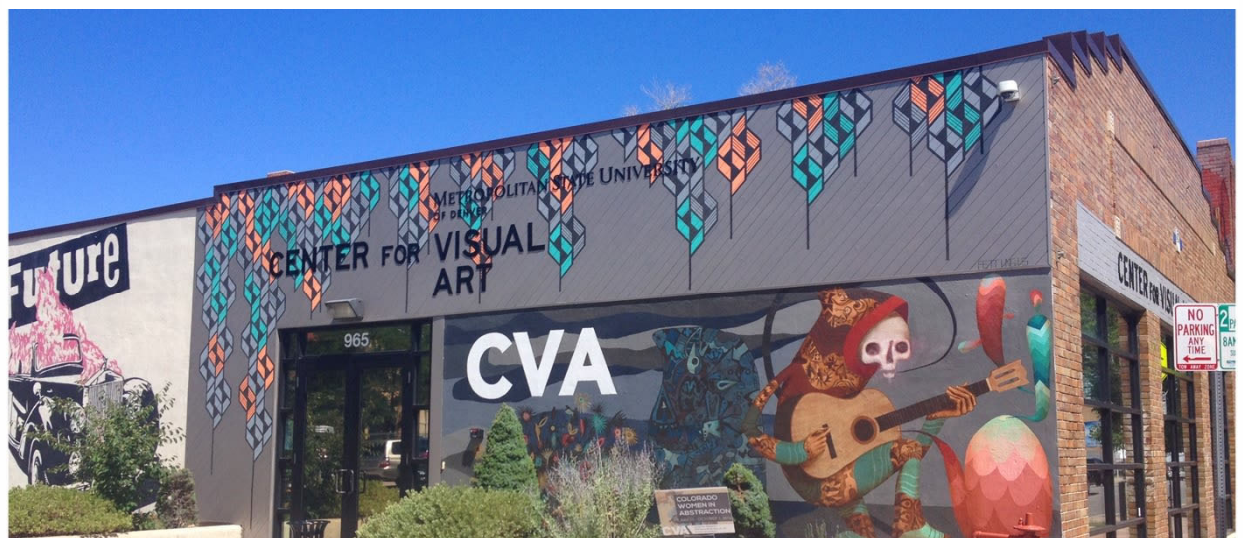


ALL ARE WELCOME! 4/25/2022: IN FRONT OF THE AES BUILDING AT 2:30-4:30  
Stop by for some quick user testing of product design concepts & enjoy some free refreshments

## Design for Social Impact Workshop

The Center for Visual Arts will host with IND and MarCom faculty a one day design sprint to address issues possible in Denver 2035.

Time: 11:00 am  
Date: March 16<sup>th</sup>, 2022



# 2021-2022 AY EVENTS

---

## Naidine Foik

Social Impact designer Nadine Foik, Director of Insights & Innovation at Desklight and who also worked at Catapult Design speaks about Design and Social Impact in the IND Department.

November 16<sup>th</sup>, 2021  
12:30 pm



## ID Day

This years Industrial Design Day hosted by IDSA featured celebrated and excellent designer at Angel Armor... and our alumnus.

March 3<sup>rd</sup>, 2022  
7:30 pm



# CREDITS

---

---

## EDITORIAL TEAM

### Managing Editor

Amy Kern

### Editor & Style Editor

Claire Neugebauer

---

## CONTRIBUTORS

### WORDS

Paolo Grazioli

David Klein

Amy Kern

Ted Shin

Claire Neugebauer

John Wanberg

### PHOTOGRAPHY

David Klein

Ted Shin

Aeh Jay Hollenbeck

Lily Cornett

---

## CONTACT

[akern@msudenver.edu](mailto:akern@msudenver.edu)

## CONNECT

<https://www.msudenver.edu/industrial-design/>

---

# IND MAG

FALL 2021 + SPRING 2022

*Metropolitan  
State University  
Of Denver*

Industrial Design  
Department  
Magazine



BEST OF CLASS  
PROJECTS

FROM STUDENT  
TO PRO: ALUMNI  
INTERVIEW

WHERE ARE WE  
HEADED NEXT?