DESIGN EXHIBITION CATALOG

Denver, Colorado

International Textile and Apparel Association

Innovate to Elevate
In the undergraduate student category, 122 designs were reviewed with 45 designs accepted (37% acceptance rate).


ITAA DESIGN COMMITTEES

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A total of 230 designs with associated images were reviewed by a jury and was evaluated on: (1) contextual review and concept; (2) aesthetic properties and visual impact; (3) process, technique, and execution; (4) cohesion; and (5) design contribution and innovation. Each undergraduate student entry was reviewed by two jurors, while professional and graduate student entries were reviewed by three jurors. Acceptance or rejection for the ITAA Design Exhibition was based on the jury’s scores in relation to these criteria. Further, a panel of industry experts reviewed submissions and award eligibility of entries.

As the result of the review process:
- In the professional category, 61 designs were reviewed with 24 designs accepted (39.3% acceptance rate)
- In the graduate student category, 47 designs were reviewed with 20 designs accepted (43% acceptance rate)

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Cheyenne Smith, University of Missouri
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Cathy Starr, Missouri State University
Krissi Riewe Stevenson, Kent State University
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Dr. Mia (Mikyoung) Whang, Centenary University
Eunyoung Yang, Meredith College
Ling Zhang, Iowa State University

Apparel Industry Professionals
Paige Baker, Big Agnes, Inc.
Becky Hollands, Becky Hollands
Sara Hume, Kent State University Museum
Hope Rogers, Kontoor Brands/Lee Denim
Elahe Saeidi, Nike
Tracy Volbrecht, Adaptive Design Consultant

SPONSORED CREATIVE DESIGN AWARDS

Undergraduate
ATEXINC Award for Excellence in Marketable Textile Design
Michelle Yatvitskiy
“Pandemonium”
Mentors: Katya Roelse, Kelly Cobb, Huantian Cao, and Adriana Gorea
University of Delaware

Claire Shaeffer Award for Outstanding Marketable Design
Amanda Gene Brown
“Bandelier Mini”
Mentor: Xingqiu Lou
Washington State University

Optitex Technology Award
Rachel Houle
“Geode Quilted Convertible Jacket and Pant”
Mentor: Lori Wahl  
University of Idaho

**The Collier Award for Outstanding Consideration of Pattern**  
Elise Hadjis  
“Dragonfly Jacket: Waterproof Jacket and Pant for Female Rock Climbers”  
Mentors: Kristen Morris, Kevin Kissel, and Jennifer Jeanneret  
Colorado State University

**Brooks LTD/Brooks Luby Empowerment through Zero Waste Award**  
Sydney McClintock  
“The Power of Women”  
Mentor: Cheyenne Smith  
University of Missouri

**Gina Lundby Innovative Surface Texture Award**  
Lauryn Fiona Muljo  
“ARUNIKA: Redefining Chinese-Indonesian Fashion for the Modern Generations”  
Mentor: Lushan (Sarina) Sun  
The Hong Kong Polytechnic University

**Graduate**  
**ATEXINC Award for Excellence in Marketable Textile Design**  
Katie Miller  
“Regenerative Garment Design within a Colorado Fibershed”  
Advisor: Kristen Morris  
Colorado State University

**ITAA Award for Creative and Innovative Employment of Techniques**  
Yu Li  
“Brain Power”  
Advisor: Young-A Lee  
Auburn University

**ITAA Award for Innovative Design Scholarship**  
Constance R. Spotts  
“Ivory and Irony”

**Advisor:** Eulanda Sanders  
Iowa State University

**University of Fashion Sustainability Award**  
Ha Eun Chae  
“Minimal to Zero”  
Advisor: Ling Zhang  
Iowa State University

**Optitex Technology Award**  
Katie Miller  
“Regenerative Garment Design within a Colorado Fibershed”  
Advisor: Kristen Morris  
Colorado State University

**Professional**  
**ATEXINC Award for Excellence in Marketable Textile Design**  
Jessica L. Ridgway, Florida State University  
Kelly Cobb, University of Delaware  
“Two Sides to Every Story: A Reversible Kangaroo Care Garment Designed for a Mother and Infant’s Shared Lived Experience in the NICU”

**Claire Shaeffer Award for Outstanding Marketable Design**  
Jeremy M. Bernardoni  
“Contouring Method for Zero Waste Design”  
Louisiana State University

**Sandra Hutton Award for Excellence in Fiber Arts**  
Sun Young Choi  
“Floating World”  
The Hong Kong Polytechnic University

**Optitex Technology Award**  
Young-A Lee and Yu Li  
“Consonance of 3D Printed Fiber Network”  
Auburn University

**ITAA Award for Creative and Innovative Employment of Techniques**
Jennifer S. Ingram
“Ebony and Ivory”
Washington University in St. Louis

**ITAA Award for Innovative Design Scholarship**
Carolyn Schactler (Professor Emeritus)
“Renaissance Armor as an Inspiration for 21st Century Clothing Design”
Central Washington University

**Vince Quevedo Award for Best of Show**
Krisi Riewe Stevenson and Jennifer Meakins
“Soft Boundaries”
Kent State University

**UNDERGRADUATE STUDENT DESIGNS, pages 12-53**

**A Webbed Affair**
Angela Lan
Mentor: Fatma Baytar
Cornell University

**Above the Clouds**
Mackenzie LLwelleyn
Mentor: Jennifer Ingram
Washington University in St. Louis

**Acceptance, Invisible Threads**
Keana Ecklund
Mentor: Rhee Jongeun
University of Wisconsin-Stout

**Although I Must Leave, I Take A Part of You With Me**
Angelica Murillo
Mentor: Ashley Rougeaux-Burnes
Texas Tech University

**Anger, Invisible Threads**
Keana Ecklund
Mentor: Rhee Jongeun
University of Wisconsin-Stout

**ARUNIKA: Redefining Chinese-Indonesian Fashion for the Modern Generations**
Lauryn Fiona Muljo
Mentor: Lushan (Sarina) Sun
The Hong Kong Polytechnic University

**Ashes to Ashes**
Hannah Trostle
Mentor: Ashley Rougeaux-Burnes
Texas Tech University

**Bandelier Mini**
Amanda Gene Brown
Mentor: Xingqiu Lou
Washington State University

**Beverly Hillbilly**
Mary Nease
Mentor: Haeun (Grace) Bang
University of North Carolina at Greensboro

**Cadence II: Athleisure Designed for Females with Diabetes**
Jaxson Metzler, Martha Hill, and Allison Nigg
Mentor: Yingying Wu
Kansas State University

**Coalesce**
Cindy Gonzalez
Mentor: Hae Jin Gam
University of North Texas

**Disco Comet Dress**
Garret Hanson
Mentor: Li Jiang
Iowa State University
Dragonfly Jacket: Waterproof Jacket and Climbing Pant for Female Rock Climbers
Elise Hadjis
Mentors: Kristen Morris, Kevin Kissel, and Jennifer Jeanneret
Colorado State University

Drink and Wear Kombucha? A Sustainable Approach to Fashion
Mackenzie Sayers, Indiana University of Pennsylvania
Mentors: Mercan Derafshi, University of Tennessee at Martin; and Pao Ying Hsiao, Indiana University of Pennsylvania

Established
Anthony Bartalo
Mentor: Angela Uriyo
West Virginia University

Eye-Spot a Lucky Moth
Gracie Speer
Mentor: Dawn Michelson
Baylor University

French Flare
Madison Hess
Mentor: Colleen Moretz
West Virginia University

Geode Quilted Convertible Jacket and Pant
Rachel Houle
Mentor: Lori Wahl
University of Idaho

Hallowed Shores
Hannah Trostle
Mentor: Ashley Rougeaux-Burnes
Texas Tech University

Heart on Her Sleeve
Mackenzie Llewellyn
Mentor: Jennifer Ingram
Washington University in St. Louis

In Bloom
Jordan Spears
Mentor: Colleen Moretz
West Virginia University

Individuality and Collectivity, An Investigation Through Indigo Dyeing and Taoism
Benjamin Acklin
Mentors: Elizabeth Shorrock (faculty) and Jordon G (graduate student, M.S.)
West Virginia University

Interpret: An Adaptive and Gender-Neutral Line for People with Vision Loss
Lexie Schrock
Mentor: Kerri McBee-Black
University of Missouri

Invisible Monsters, Reclaiming Childhood Through Sustainable Textiles
Sophia Notto
Mentor: Sandra Starkey
University of Nebraska-Lincoln

L’esprit de névrotique
Alli Park
Mentor: Fatma Baytar
Cornell University

Naiad
Caroline Wallace
Mentor: Ling Zhang
Iowa State University

New Americana
Will Humphries
Mentor: Karla Teel and Minsu Kim
Auburn University

Pandemonium
Michelle Yatvitskiy
Mentor: Katya Roelse, Kelly Cobb, Huantian Cao, and Adriana Gorea
University of Delaware

Polluted Waters
Connor Serger
Mentor: Mary Ruppert-Stroescu
Washington University in St. Louis

Psychedelic Euphoria
Joel Kurkowski
Mentor: Mary Simpson
Western Michigan University

Re. Doll Haus XY
Cara Yoshimi
Mentor: Minako McCarthy
The University of Hawai’i at Mānoa

Recuerdo
Melissa Rosales
Mentor: Ashley Rougeaux-Burnes
Texas Tech University

Rise and Grind
Jillian Smith
Mentor: Colleen Moretz
West Virginia University

Rubigo
Shae Woodruff
Mentor: Katya Roelse and Kelly Cobb
University of Delaware

Seasons of Life
Grace Brown
Mentor: Karla Teel
Auburn University

The Denim Kintsugi Project
Lila White
Mentor: Eunyoung Yang
Meredith College

The Hideaway Set
Amanda Gene Brown
Mentors: Armine Ghalachyan and Manal Shaheen
Washington State University

The Memorial for Beauty Jacket
Amanda Gene Brown
Mentor: Armine Galachyan
Washington State University

The Power of Women
Sydney McClintock
Mentor: Cheyenne Smith
University of Missouri

The Pyramid
Uyen Nguyen
Mentor: Hae Jin Gam
University of North Texas

The Restrictive Dress, Experimental and Modern Take on the French Revolution
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Iowa State University

Beyond Abaya
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Brain Power
Yu Li
Advisor: Young-A Lee
Auburn University

Flora
Aditi Galada
Advisor: Fatma Baytar
Cornell University

Functional Period Panty for People with Disability
Jia Wu
Advisor: Kerri McBee-Black
University of Missouri

Glamor of JABARA
Fatimah Hakeem
Advisor: Casey Stannard
Louisiana State University

Her Crown
Kai Stephens
Advisor: Amy Dorie

Ivory and Irony
Constance R. Spotts
Advisor: Eulanda Sanders
Iowa State University

Joya’s Dragon
Constance R. Spotts
Advisor: Ling Zhang
Iowa State University

Leaf Speed Suit
Mary-Gwynedd Taylor
Advisor: Susan Sokolowski
University of Oregon

Lilac Flare Ski Suit and Love your Sisters Base Layer
Katelyn Schmidt
Advisor: Kristen Morris
Colorado State University

Minimal to Zero
Ha Eun Chae
Advisor: Ling Zhang
Iowa State University

Overloaded
Wenjia Zong
Advisor: Fatma Baytar
Cornell University

Regenerative Garment Design within a Colorado Fibershed
Katie Miller
Advisor: Kristen Morris
Colorado State University

Slalom Race Suit for Paralympic Athletes with One Leg
San Francisco State University
Kristofer Thorgrimsson  
Advisor: Susan Sokolowski  
University of Oregon

The Delicate Awe: Inclusive Eveningwear  
Li Jiang  
Advisor: Rachel Eike  
Iowa State University

The Power of Artemis  
Fatimah Hakeem  
Advisor: Casey Stannard  
Louisiana State University

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Iowa State University

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Young-A Lee and Yu Li  
Auburn University

Contouring Method for Zero Waste Design  
Jeremy M. Bernardoni  
Louisiana State University

Ebony and Ivory  
Jennifer S. Ingram  
Washington University in St. Louis

Embellished Modularity  
Chanjuan Chen  
University of North Texas

Entrapment  
Jooyoung Shin  
Indiana University

Floating World  
Sun Young Choi  
The Hong Kong Polytechnic University

Gradable Zero-Waste Bridal Jumpsuit with Transformable Components  
Casey Stannard  
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Gradable Zero-Waste Trench Coat  
Ashley Rougeaux-Burnes  
Texas Tech University

Kaleidoscope: Spiraling Patterns and Color  
Colleen Moretz, West Virginia University  
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Melanie Carrico  
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Ellen McKinney  
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**Modular Illusion**  
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University of North Texas

**Pick Up the Pieces: The Reformation of Silk Sari Remnants**  
Pimpawan Kumphai and Alyson Vitale  
Central Michigan University

**Renaissance Armor as an Inspiration for 21st Century Clothing Design**  
Carolyn Schactler (Professor Emerita)  
Central Washington University

**Soft Boundaries**  
Krissi Riewe Stevenson and Jennifer Meakins  
Kent State University

**Tall Grass Prairie Burial Gown**  
Sherry Haar  
Kansas State University

**The Button Dress Project**  
Sandra Starkey and Venn Veronica Jemkur  
University of Nebraska-Lincoln

**Tulipa ‘Rococo’ I**  
Dawn Michaelson  
Baylor University

**Two Sides to Every Story: A Reversible Kangaroo Care Garment Designed for a Mother and Infant’s Shared Lived Experience in the NICU**  
Jessica L. Ridgway, Florida State University  
Kelly Cobb, University of Delaware

**Unvested Waste – Sustainable Design Practice in Upcycling**  
Sheri Dragoo and Jaynie Fader  
Baylor University

**Wearable Basket**  
Casey Stannard  
Louisiana State University

**Zero-Waste Barrister Cocoon Coat**  
Jeremy M. Bernardoni  
Louisiana State University
UNDERGRADUATE STUDENT DESIGNS
This garment was an exploration into how new technologies can be integrated with traditional design techniques to create unique, intricate fashion pieces. A given theme of “60s Fashion” served as the basis for the overall silhouette, while a secondary theme of Fungi and Mushrooms was self-chosen as the inspiration for the textile design. Drawing from these two ideas, the goal was to design an outfit with the soft material and hard material garments complementing each other and being equally important in the overall look and style. Flat patterning techniques were used to draft the pieces for the jumpsuit on paper, which were then scanned using Optitex PDS to create digital patterns. For the body fabric, the green satin was engraved with the fungi web pattern. For the sleeves and collar, a fusible web was applied to the back of a gold lame fabric. Then it was laser-cut with the web pattern and fused on top of the green satin to form a two-layer textile. A 3D printed corset was created to complete and amplify the design.
Above the Clouds

Mackenzie Llwelleyn; Mentor: Jennifer Ingram
Washington University in St. Louis

Above the Clouds explores applying contemporary methods of patternmaking to create a cocktail dress. My desired effect was to create a twist on the standard cocktail dress through adding dimensionality. Inspired by the elegant curvatures of gothic arches and tulips, I decided to use the nyokitto method of patternmaking, as it imitates the dimensionality of arches through the folds in fabric. This pattern modification is a result from slashing a flat pattern at an angle and adding fullness. This method was applied to both the bodice front seams, as well as the skirt center front, center back, and side seams. On the bodice, the nyokittos hit below the bust, arching downward creating points at center front and the arm hole. On the skirt, the nyokittos start at the hem and arch upward towards the waist. Inspired by the soft and elegant arches, I cut the crepe on the bias which resulted in a more rounded, subtle, nyokitto shape. Above the Clouds is a design that explores soft arches and dimensionality of these arches using the nyokitto method.
The design vision for this dress was to convey my experience of the acceptance stage of loss, which was inspired by my late-sister’s last football jersey. My design draws inspiration from the Kübler-Ross Grief Cycle, which includes five stages of grief: denial, anger, bargaining, depression, and acceptance. During the last stage, acceptance, which I represent in my design, is where individuals embrace the mortality of a loved one. This stage can be described as nearly void of feelings and emotionally stable yet does not magically complete the grieving process. Grief is not a sequential process, rather, it is a process that is repetitive and constant, as one experiences various stages at various times. My dress design intention was to bring light to and symbolize the various representations of grief that pop up, even after seemingly enduring each stage of the grief process. The LED materials of my design represent the continuous changes in emotional and cognitive states one experiences after losing a loved one. The colors of LED lights and fabric strips represent the often-differing states of grief one endures over a lifetime.
Although I Must Leave I Take A Part Of You With Me

Angelica Murillo; Mentor: Ashley Rougeaux-Burnes
Texas Tech University

Although I Must Leave I Take A Part Of You With Me was created in response to a course project which challenged students to research a chosen global theme/problem and utilize their research in the design of a garment. This dress intends to draw awareness to the issue of immigration from Latin America. This dress celebrates the designer’s ethnic background by illustrating the diversity of Latin America. The color palette of this dress represents the colors of Latin American flags and various skin tones. The designer created appliques stamped with hand-carved blocks in the shape of hands and monarch butterfly wings. The hands represent the different races and hard-working people of Latin America, while the butterfly symbolizes migration/immigration. This dress is meant to start a positive conversation about immigration and how allies can support those who are immigrating and starting fresh in a new country.
This dress is a part of a five-garment collection inspired by my personal experience of losing my younger sister. My collection parallels my designs with the Kübler-Ross Grief Cycle, which includes the following five stages: denial, anger, bargaining, depression, and acceptance. The Anger dress represents the second stage of grief, as it seeks to evoke emotions of sadness and anger, both while interpreting curiosity of experience from the viewer. The dress consists of a boned corseted bodice, multi-layered skirt, and various surface design features. The bodice and skirt are comprised of three layers: 1) an outer layer of red velvet, 2) an intermediate layer of cotton, and 3) a satin lining, all while being supported by handstitched techniques for the bodice and skirt of a layered netted petticoat, all conveying a sense of chaos and drama. The contrast of colors, fabrics, and juxtaposition of 3-dimensional surface designs of faces embody my experiences with grief, showing bursts of anger and agony through various elements of the design. The aesthetic elements in my design, coupled with functional components, create a powerful representation that will compel the viewer to empathize with one’s experience with grief.
ARUNIKA: Redefining Chinese-Indonesian Fashion for the Modern Generations
Lauryn Fiona Muljo; Mentor: Lushan “Sarina” Sun
The Hong Kong Polytechnic University, HK, SAR, China

Chinese-Indonesian is a culturally rich non-indigenous ethnic group in Indonesia that has long been underrepresented in the fashion industry. Often, this community must choose between either Indonesian or Chinese apparel, which externally separates their essence. Modern generations of women find available traditional cultural wear to be dated, thus, creating identity confusion and even social conflict. ARUNIKA means sunrise and draws elements from fashion heritages: Chinese qipao, Indonesian kebaya, and indigenous Bali ikat tenun endek textiles. This design research aims to develop ready-to-wear for the moderate special occasion, both while celebrating and redefining the Chinese-Indonesian culture for the modern-day woman and referencing the slow design approach. The design details highlight the silhouette for women’s body shapes and cultural confidence in the application of tenun endek. Ultimately, ARUNIKA embraces authenticity in the feminine, youthful, and relevant lifestyle.
Ashes to Ashes was created in response to a course project challenging students to research a chosen global theme/problem and utilize their research in the design of a garment. Ashes to Ashes intends to draw awareness to the issue of deforestation. Ashes to Ashes is a three-piece ensemble, including a black base dress, pecan bark over piece, and removable faux leather peplum, representing the effects of forest burning. The sculptural bodice was made from pecan seed pods to produce a piece that resembles the burnt appearance of desecrated forest land. This experimental process also represents an upcoming wood alternative: nut shells. A mixture was created using grinded seed pods and a non-toxic, acrylic pouring medium. This paste was then applied to a sewn fitted muslin dress and allowed to dry. Once dry, the designer was able to remove the entire piece and trim the edges to the desired shape.
Bandelier Mini

Amanda Gene Brown; Mentor: Xingqiu Lou
Washington State University

The goal of Bandelier Mini is to convey the strength that is found in femininity. This piece fits within the larger context of the designer’s work, which seeks to express female worth and empowerment. This dress merges two disparate identities: a feminine lightness bordering on infantilization and a brute masculinity. These two ideas are communicated with the baby doll silhouette adorned with leather belting. The inspiration for which was taken directly from a bandolier, a piece that is traditionally used to hold ammunition. In this case, these leather belts feature soft ruffles in place of bullets. The skirt portion is pleated, adding an air of structure to the whimsy of the hot air balloon fabric it is made of. This piece is worn with a decorative shirt collar featuring chains and a jeweled pendant that hangs between the shoulder blades. All together this garment speaks of the ability to hold the opposing truths of being soft and strong, grounded and empowered, and beautiful and utilitarian.
After a summer internship in Nashville, TN, learning western wear tailoring from legendary rodeo tailor Manuel Cuevas, also referred to as “Manuel”, a living legend who helped pioneer the country music aesthetic, I created this suit as part of my senior collection to put what I learned into practice. This suit is intended to marry my more modern design sensibilities to traditional western wear techniques, channeling my queer femme identity into a style of clothing that has real cultural meaning to my family’s over 200-year history in Tennessee. Hand detailing was involved from the ground up, as I hand dyed the Cone denim, rayon Bemberg lining, cotton piping, and silk chiffon that went into this suit, using both vat dyeing and ice dyeing techniques. Ice dyeing uses ice to melt powdered dye into the fabric, and this technique was used to create contrasting pants, trim, lining, and scarf. The interior structure was tailored by hand using traditional bespoke techniques.
Cadence II: Athleisure Designed for Females with Diabetes

Jaxson Metzler, Martha Hill, and Allison Nigg; Mentor: Yingying Wu
Kansas State University

Cadence II is a diabetic-friendly and sustainable athleisure design for females. People with diabetes struggle to find active and versatile apparel with proper adaptations for their needs. For instance, exercising is difficult and inconvenient for diabetic people as many of them must constantly wear insulin pumps, even to exercise. Cadence II fills their needs by 1) integrating various technical elements such as multiple pockets at specific locations for ease of use, and 2) creating tiny holes inside the pockets for tube insertions. As a research-based functional design, Cadence features sustainable high-quality fabrics, a bold color palette, and the extensive use of advanced apparel design and pre-production technologies, such as digital pattern drafting, digital print design, and 3D virtual fitting. Additionally, Cadence II is unique because it was engineered for diabetic people and carefully designed to be fashionable and appealing to a wide range of consumers at the same time.
Coalesce

Cindy Gonzalez; Mentor: Hae Jin Gam
University of North Texas

To coalesce is to unite, blend, and combine, much like two different concepts working together as one. Coalesce merges the past and future, represented by silhouette and digital printing, in my design. The silhouette draws inspiration from a myriad of historical traditions and practices, such as the kimono (Japanese), the cowl (monks), the cassock (priests), the pinafore apron (nurses), and the toga (Romans). The digital print is abstract and comprised of my hand-drawn art that emphasizes both women’s empowerment and environmental issues. I was inspired to create a garment that highlighted issues facing our society and the global fashion industry today. Themes of size inclusivity, gender equality, and sustainability are incorporated into the design and represented through functional and aesthetic design processes. Coalesce promotes inclusivity and environmentally conscience approaches to design, as it was designed and constructed to fit sizes 0 to 18 and utilized a zero-waste draping technique. The digital print incorporated brings awareness to the symbiotic nature of the fashion worlds, imposing upon the viewer a perplexing nature to receive significant meanings and interpretations of the fashion industry.
The Disco Comet Dress was inspired by the visual aesthetic that comets emit while flying through the night sky. As a comet orbits closer to the sun, chunks of it break off and radiate the dazzling tail for which they are known. A combination of the comet tail and Bob Mackie circa 1970s serve as inspiration for Disco Comet. The goal of the garment was to create a stunning, red carpet-worthy evening gown, that utilized high-quality materials, haute couture techniques, and surface design experimentation, that would rival Mackie’s Flame Dress, worn by Cher. The garment consists of a fully boned corset connected to a knit skirt with embellishments completed by hand, such as boning, grommeting, tasseling, sequinning and beading, all of which consisted of a beguiling five weeks to complete. The features and techniques utilized in Disco Comet embody the movement and contrast of materials and techniques to create an exceptionally stunning garment that strays away from the modern-day fast fashion apparel production methods.
A novel waterproof membrane system is explored in this research project and its potential for advanced functionality capabilities for outdoor sports, specifically rock climbing. Rock climbing possess specific functionality needs of clothing due to the climbing harnesses and high degree of mobility required for the sport. For outdoor climbing the wearer is also highly exposed to weather when on a rock face and protection from the elements is a large concern. The base layers in this outfit are designed for comfort and a wide range of motion featuring a compression top with a unique carbon yarn material for muscular support. The lamination system used in this jacket allows for a unique partial waterproof system, combining waterproof protection with air flow for a high-performance garment that is not possible with current waterproof technologies.
The fashion industry is the world’s second major polluting industry. The degradation includes large amounts of textile waste filling landfills and use of chemicals. Sustainable designers use biodegradable textiles to bring their ideas to life. The purpose of this research was to construct a handbag made from biodegradable bacterial cellulose. With this product, the designer aimed to spread awareness about the negative impact of the textile industry on the environment and to promote sustainable textiles. Inspired by nature and its complexity, the designer experimented with geometrical shapes. The hexagon shapes were observed in beehives. The intricate configuration of hexagon patches was complemented with bees to mimic a honeycomb. The body and straps of the bag were made from bacterial cellulose grown in black tea and dyed with natural ingredients. This handbag was constructed to be unique and distinctive as it depicts elements of biomimicry, couture techniques, and sustainable textile dyeing.

Mackenzie Sayers; Indiana University of Pennsylvania
Mentors: Mercan Derafshi, University of Tennessee at Martin and Pao Ying Hsiao; Indiana University of Pennsylvania

Drink and Wear Kombucha? A Sustainable Approach to Fashion
Elegant, modest, timeless, and detailed best describe and ageing woman and the Established dress. As one might approach an older age, one must not sacrifice fit for function and beauty, as demonstrated in this dress. The garment exemplifies elegance through surface design, modesty in silhouette, timeless in fabrication and use of color, and detail in pattern development and garment construction, specific to age and fit. The cut and pattern features are complimented with delicate machine embroidery, which makes this design suitable for many occasions from office to social events. Tailored to fit areas the body, not previously identified as problem areas that come with older age, the exceptional shape and fit was addressed through pattern development, tailored techniques, and outstanding garment construction. A loose or relaxed fit can be identified in areas that may be of issue for the more mature consumer, thus making this a timeless transitional garment.

Anthony Bartalo; Mentor: Angela Uriyo
West Virginia University
The Eye-Spot jacket was inspired by the complex bilateral symmetrical patterns found on moth wings. The jacket was made to specific measurements and constructed following production tailoring techniques. It is made of muted cool grey wool with symmetrical vibrant red and blue wool embellishments throughout which created a sense of life and personality in the coat. Each spot was carefully and intentionally planned to complement the others. This jacket is an entirely unique in that it creates cohesion out of embellishment shapes and overall symmetry.
French Flare

Madison Hess; Mentor: Colleen Moretz
West Virginia University

French Flare is inspired by the elegance of the conquest of the new French time period. In 1760, the Toile De Jouy print represented the French landscapes, sceneries and figures in a delicate style. The toile pattern has carried on to being one of the most timeless fabrics in history, continuing to be used for garments, interior decorations, and even wallpaper. The purpose of my design was to take the history of the toile print and turn it into a wearable gown. The challenge was to feature an element of transformation in some way. Not only did the concept engulf the wearer in the print, but the silhouette also featured removable sleeves and matching cape. Capes and hand beading elements have been trending for this year’s season of evening wear, so the decision was made to express these characteristics in the design.
The consumer base for plus-size garments is rapidly expanding at twice the rate of general women’s clothing. Additionally, clothing that is technically designed for women’s outdoor recreation is lacking in the market. Not only do women need garments that function in the outdoors, but they also need garments that reflect individual style and fit, while allowing for ease to switch between layers or garments. This look caters to the plus-size outdoor enthusiast consumer base, as it is both functional and conceptually, aesthetically informed. The Geode-inspired engineered quilting serves a purpose in combining insulation for the wearer made of HD Wool batting, a more sustainable alternative to synthetic fills, and nylon ripstop that keeps the wearer dry and protected. Aesthetically, it stands apart from what is currently in the market for insulative outdoor wear garments, especially for the women’s plus-size market.

Rachel Houle; Mentor: Lori Wahl
University of Idaho

Geode Quilted Convertible Jacket and Pant
Hallowed Shores

Hannah Trostle; Mentor: Ashley Rougeaux-Burnes
Texas Tech University

Hallowed Shores was created in response to a course project asking students to push their design skills beyond their previous experience and create engaging, marketable, and competition-worthy designs. Hallowed Shores features a cage bodice and attached cloak, made entirely from panels of Free Standing Lace embroidery (FSL). FSL embroidery is designed to hold its shape without fabric. The digital embroidery files are comprised of multiple overlapping layers of stitching that work to create a frame for the embroidery to sit on. Once these pieces have been designed, they are embroidered onto a water-soluble stabilizer which can then be washed out, leaving behind only the thread.
Heart on Her Sleeve

Mackenzie Llewellyn; Mentor: Jennifer Ingram
Washington University in St. Louis

Heart on Her Sleeve is inspired by the femininity and warmth that radiates from Valentine’s Day. Curves are a reoccurring motif that symbolizes the feminine spirit and are a slight nod to hearts, a common symbol of love. Along the front and back of the bodice, curved style lines are emphasized with silk organza piping. The billowing of the organza on the sleeves creates an arched edge, and where it meets the wool, another slight curve is created. Curvature is also on the collar and lapel, creating a feminine touch to a traditionally rigid look. The silhouette of the coat is quite feminine through the curved lines and the cinched waist, creating dramatic volume in the skirt and sleeves. Furthermore, Heart on Her Sleeves explores the juxtaposition of the soft, thick wool and the transparent, light-weight silk organza. While these two fabrics vary in nature, they create a tender and cohesive feeling that displays that even a winter coat can possess femininity, love, and warmth.
In Bloom

Jordan Spears; Mentor: Collen Moretz
West Virginia University

In Bloom is a zero-waste garment featuring an original digitally engineered print for my design. It was inspired by the work of Vincent van Gogh’s Almond Blossom painting. I wanted my design to reflect the movement that is present throughout the painting by the flow of the draped piece that move from the upper left of the body down to the train. My inspiration came from seeing the Immersive van Gogh Exhibit where all his art was projected around a room and flowed from one artwork into another. The scenes shown with the painting were breathtaking thus beginning my desire to incorporate it into my own design work. I wanted to pull from van Gogh’s painting for my digital print by taking branches, cutting them, and splicing them together to create my own work.
Individuality and Collectivity, An Investigation Through Indigo Dyeing and Taoism

Benjamin Acklin; Mentors: Elizabeth Shorrock and Jordon G
West Virginia University

This collection was inspired by key elements of Taoism, balance, harmony, and a connection to nature. Composed of over 900 raw silk rectangles in an array of five hues of indigo, this dress is influenced specifically by Taoist principles of individuality and collectivity. Originally inspired by the fluttering of suspended prayer flags, the dress embodies the visually spectacular sight of hundreds of prayer flags encompassing a mountainside. The different shades of indigo influenced the idea of individuality & collectivity. As a human species that differ in cultures, ethnicities, and races, we are nevertheless united by the underlying factor of the human experience. To include all people, this dress was patterned with ease provided in the armhole, neckline, and waist region to allow gender neutrality. In order to keep this collection connected with nature, this dress is 100% natural fiber-based, naturally dyed, and utilizes excess scraps material from the collection.
This ensemble was designed as part of a senior capstone product development collection focusing on marginalized consumers with adaptive apparel needs. User-centered design methods were utilized to develop the designs. For this study, an adaptive design was created to respond to the needs of blind or visual impaired (BVI) individuals within the mass-market apparel segment. The designer focused on a design that would fit within the brand culture of H&M, a fast-fashion trend-focused mass-market apparel brand. Inspiration for this design came from the designer’s research into adaptive apparel that accommodates the needs of BVI individuals. The designer focused on addressing a few critical issues, including proper apparel identification for the BVI by size, color, pattern, and category. In addition, the designer focused on features that would make it easy to find garment openings and pockets using braille and QR codes. Similar techniques are not evident in the current marketplace.
Mental Illnesses are among the most common health conditions in the United States, yet taboo to fully acknowledge and embrace conversation in various contexts. Early adverse life events contribute to one in five children experiencing a debilitating mental illness. Animals, live or taxidermized, may aid children and adults to express emotions in a safe manner, while providing unconditional love. “Plushies” may substitute for the emotional security otherwise offered by friends or family members early in life. A psychological disorder may make one as though they are constantly rebuilding and destroying oneself. This type of emotional patchwork may be arduous and scary for some, but our unique stories are what make our resilience multifaceted. This accessory communicates a message about the struggles associated with childhood trauma by drawing the viewer in with its larger-than-life aesthetic. I reclaimed thrift store toys and attached them to a baby blanket using whip and blanket stitches.
This ensemble aims to convey the feeling of fighting to reconcile neural impulses and neurotic emotions into a partially functional order so they can be channeled into usable outputs. The idea stemmed from creating a wearable ensemble that advocates awareness of mental health as well as the challenges of neurodiversity, thus destigmatizing the term “neurotic”. Garment development was created in a four-pronged approach: digitizing and manipulating a size 8 sloper set through flat patternmaking techniques using Optitex PDS; laser cutting to cut and finish the edges of all the pattern pieces, including the lace-like hem of the camisole and engraving surface details of the jacket and dress. TinkerCad was also utilized to create the STL files of two-layer stereoscopic butterflies for 3D printing.

Alli Park; Mentor: Fatma Baytar
Cornell University
The Naiad was inspired by the naiad, a type of water nymph that lives in a lake or river. The silhouette of the dress was designed to mimic the shape of the adult dragonfly. The wings of the dragonfly were incorporated as four godets in the skirt, inserted at knee level and falling to the floor. The rounder, fuller bodice added more volume to the top of the dress, similar to the much larger thorax of the dragonfly. The prints for the skirt pieces were developed by hand. The blue water at the hem, the dragonflies, and the aquatic plants were painted with watercolors and accents were drawn with micron pen by the designer. The hand painted prints were engineered on the garment patterns and digitally printed on the silk fabrics. The top of the dress was heat felted using Corriedale wool in three shades of green.
Fashion is by nature referential and consistently calls back to previous times periods and the people and communities that existed within it. Within my design philosophy, I look towards history, communities, and shared cultural experiences to create designs that highlight and examine the world of the familiar and the understood. New Americana is an ensemble that draws inspiration from 19th-century expansionism in the United States and creates a modern aesthetic utilizing traditional materials and techniques. The overall piece is meant to evoke feelings of nostalgia, familiarity, and comfort while providing a deeper understanding of the complicated history of our country and what impacts these frequently celebrated ideals had on its land and its people.

**New Americana**

*Will Humphries; Mentor: Karla Teel and Minsu Kim
Auburn University*
Pandemonium

Michelle Yatvitskiy; Mentor: Katya Roelse, Kelly Cobb, Huantian Cao, and Adriana Gorea
University of Delaware

Pandemonium was designed to find an innovative way to upcycle fabric waste into unique textiles and ready-to-wear separates. In 2018, U.S. consumers purchased a total of more than 22 billion garments, which consequently generates a large quantity of textile waste. In the same year, the U.S. generated 17 million tons of textile waste with only 2.5 million ton recycled. Textiles can be recycled either mechanically or chemically, however the industry does widely practice textile recycling to date. The purpose of this design was to mechanically recycle donated clothes by first disassembling and shredding the clothes. I applied shredded scraps to a variety of black deadstock fabric sourced from FabScrap to create new textiles by implementing needle felting, knitting, and quilting techniques. The goal of this design was to create a look that focuses on recycling both pre- and post-consumer waste, and various construction techniques.
Polluted Waters

*Connor Serger; Mentor: Mary Ruppert-Stroescu*

*Washington University in St. Louis*

The ever-present environmental issue of water pollution has implications both in the present and the future. To shed light onto this ecological catastrophe, *Polluted Waters* is the personification of Earth’s afflicted marine ecosystems. Through the adaptation of Suminagashi, a traditional Japanese paper marbling technique, and dry felting of hand spun yarn, the designer sets to illustrate the tainting of Earth’s water supplies. These processes culminate into a garment which reflect the harmful human effect onto Earth’s most precious resource.
An objective of this project was to design a bridge-level garment for the mass market consumer. The designer intended to create a quality dress for the spring season for the 25-35 age group. The overall design question to answer with this project was how to seamlessly marry design aspects and color palettes from the psychedelic 60s and 70s with design aspects and color palettes of the modern day. The design was inspired by the playful shapes and colors of iconic British 60s designer, Mary Quant. Looking at older designers during the 60s and 70s helped me focus my designs and inspire something completely different that I believe is cohesive with my trend and fashion history research. Creating a unique yet appealing design, using a large-scale print for the noted target market, created several learning opportunities. The silhouette remained the same from the start of the project. However, the neckline and sleeves underwent several changes before settling on a design that looks overall visually cohesive and appealing.
Re. Doll Haus XY

Cara Yoshimi; Mentor: Minako McCarthy
The University of Hawai‘i at Mānoa

Re. Doll Haus XY is the juxtaposition of incorporating cultural garments, kimonos and contracting different fabrics with an upcycling method to create stylish outfits. Provided by a local cultural center, a pre-owned kimono was to be turned into menswear-inspired Lolita fashion for the annual fashion show. Narrowing the scope to Gothic Lolita fashion, the garments were designed to be bold and elongated, highlighted by a contrasting color scheme of black and red. Inspiration stemmed from pants worn by ninja, a type of spy-like warrior during the Samurai age, to highlight the Japanese cultural aesthetic. The use of the recycled kimono strategically placed throughout the shirt, vest, and pants ties the cohesive look together. Pulling inspiration from Lolita fashion and using recycled kimono fabric presented an opportunity to enhance the creator’s reconstructing innovation of cultural sensitivity and awareness of sustainable practices in fashion.
Recuerdo was created in response to a course project challenging students to design and construct a four-look collection of clothing centered around their selected theme or problem. The student designer in this study chose to focus their collection on memories of their upbringing in an immigrant family and the feeling of melancholy. The student pushed the needle to incorporate techniques that were outside their previous experience. The main technique of tailoring was incorporated for this collection. This garment combines a suit jacket and skirt into a single garment. The dress has a back opening in the suit jacket that represents the past and missing memories. On the other hand, the sleeves are curved and sculptural, representing comfort, safety, familiarity, and relaxation. Recuerdo draws from the designer’s experiences to create a meaningful object that narrates a story in the hopes that the wearer can feel and understand it.

Melissa Rosales; Mentor: Ashley Rougeaux-Burnes
Texas Tech University
Rise and Grind

Jillian Smith; Mentor: Colleen Moretz
West Virginia University

Rise and Grind is an athletic inspired streetwear piece that represents strength, diversity, and the devotion to the hustle of the game: basketball. This design breaks the barrier between sports and the design philosophy, integrating contrasting fields of work through design. Rise and Grind absorbs the passion for hustling and staying dedicated to the path of success through a basketball player’s mindset. Kobe Bryant, five-time NBA Championship winner and influential activist before his passing, plays a substantial role in the inspiration of this design. He had a persistent drive to play the game of basketball with 110% effort and also used his platform to speak on behalf of diversity within the system; that is how you have to pursue life, with passion for what you love to do with an inclusive mindset. My design focus was to spread the message of never giving up.
The purpose of this design was to explore the potential of hemp textiles and to create a seasonless, genderless, and size-inclusive sustainable garment. Hemp is a sustainable textile that has been a favored alternative to cotton. A dyeing technique that is sustainable is rust dyeing, while it is sustainable, it is also underutilized. By using found rusted objects collected from local landfills to dye my fabrics, I wanted to call attention to the issues around sustainability while finding a new and creative use for the discarded objects. This garment incorporated patterning methods inspired by sacred geometrical patterns that are found throughout nature and based on the Fibonacci sequence.
The purpose of the creative-wear design piece, Seasons of Life, was to accentuate childhood adolescence, the evolution of art, and the inspiration we gain through our peers. Over the past twenty years, my mother, has summarized our life as a family of six, through her hand painted calendar. This calendar has captivated family loss, new life, change in economy, family secrets, our significant life events and so much more. My mother’s artwork has been able to capture all of this through whimsical figures, eccentric color pairings, and the mixture of patterns. For the construction of the dress, the work was inspired by my childhood. I dared to be unconventional when it came to choosing outfits out for school, because blending in would be unbearable. My work combines my inspiration of my mother, while paying respect to my younger self through unconventional textiles, and fun designs.

Grace Brown; Mentor: Karla Teel
Auburn University
This project explores how upcycling can be elevated through advanced construction and piecing techniques. Japanese Kintsugi inspires the design, while sustainability trends inform material sourcing. The project demonstrates an approach to sustainability with the use of existing garments while increasing valuation in the design. With the push for solutions to pollution issues, sustainability is becoming key in apparel manufacturing. Another trend is a growing popularity of DIY and upcycling. These trends rethink devalued items to introduce new value. This principle of recycling is supported by Kintsugi practices, which reassemble broken pottery pieces using precious metal-covered lacquer. As a result, the piece is reintroduced as a beautifully restored piece with a greater value. Denim is a noteworthy candidate in this framework, owing to its notorious reputation as fast fashion. Thus, Kintsugi’s principle of beautified piecing is applied to denim upcycling processes for an inspirational garment that promotes sustainability.
The Hideaway Set

Gene Brown; Mentors: Armine Ghalachyan and Manal Shaheen
Washington State University

This design symbolizes the difference between our internal worlds and experiences that we may choose to Hideaway from the outside world and those that we choose to share. Both pieces feature understated details that are not immediately evident but reveal themselves upon closer observation. This is a parallel concept to the changes seen when getting to know a person over time. The person becomes more complex but also easier to understand. The intention is to propose a bridge in the “empathy gap” that is so prevalent in the turbulent times we are currently experiencing. The jacket features pleating, pockets, intricate paneling details, and an asymmetric belted closure along with a magnetic button that can be worn unfastened to reveal bright teal laser-cut flowers or fastened to hide the detail away. The set is made of 100% wool, with contrasting teal polyester lining used in the jacket to match the flowers.
This design serves as a wearable memorial to a woman, named Beauty, that lost her life in the Rana Plaza Factory Collapse in Bangladesh in 2013. Beauty’s face is replicated through laser cutting and is featured to be floating on the back of the jacket amongst water lilies, the national flower of Bangladesh. Guided by emotionally durable design concepts, the garment is used as a medium to shed light on the [un]ethical issues in apparel manufacturing and to connect the consumer to people and processes involved in the making of clothing. A QR code incorporated among the flowers on the back can be scanned, directing consumers to a website with information on the makers, materials, and processes utilized in the garment creation. This bridge from creator to consumer serves to share the process and importance of understanding where our clothes come from and the importance of caring for the humans behind our clothing.
The fashion industry is a large producer of textile waste, that in turn negatively impacts the planet. Now, more than ever, it is important to create sustainable designs that will conserve resources and reduce waste. The purpose of this design was to upcycle a provided leftover piece of fabric into a sophisticated garment that exudes femininity and power, while using zero-waste design approaches. I decided to interpret the thin stripes with a touch of pink as a powerful woman in the workplace- a more feminine take on the infamous “power suit”. The structured collar, modest length, and silhouette display the power, while the flowers, pink fabric, and long flowy sleeves illuminate feminine aspects of the garment. The design leaves the wearer feeling empowered as it also contributes to a more sustainable industry.

Sydney McClintock; Mentor: Cheyenne Smith
University of Missouri
The purpose of this project was to create a pant or skirt suit integrating innovative design. My inspiration stemmed from the hyper geometric forms and shoulder pads of the 1980s-style. Therefore, I aspired to synthesize the idyllic vintage look of the 80s into a modern-day ensemble. Two fabrications and colors, cream polyester and black/gold wool tweed, were selected for the symmetrical skirt and mi-parti coloring of the jacket. Various techniques were implemented in order to create the uniquely designed jacket, such as cutting at the waist, adding fabric yarns, grommets, and gold metal zippers. One half of the asymmetrical skirt is that of a pencil silhouette, uniquely balanced with a pleated high to low, from centers front and back, A-line silhouette on the other side. The combination of shapes and lines of the design resemble that of a pyramid, exuding strength and power of women who adorn this suit.
The Restrictive Dress, Experimental and Modern Take on the French Revolution

Kennedy Lor; Mentor: Jongeun Rhee
University of Wisconsin-Stout

Restrictive Dress was inspired by Marie Antoinette Led to Her Execution (David, 1793), a drawing in the Musee du Louvre. The last living moments of then-Queen of France, Marie Antoinette, are depicted in the drawing, bringing to light her simple white chemise and rough haircut, seated on a wooden plank, calmly awaiting her demise. The purpose of this design was to reimagine and create a dress that embodied what victims felt and experienced in those moments leading up to the blade of the guillotine. My goal was to design a beautiful dress that was also restrictive, as victims were restricted and tied down before their decapitation. Restrictive Dress is cumbersome in nature and requires assistance to place on and off the body; it must be untied at the top of the gown to be loosened. This feature represents, what I believe, victims felt when they were restricted and faced their execution, as only their executioners could set them free.
Environmental protection advocacy has attracted significantly more attention from the public and scholars in recent years, due to increased awareness of detrimental environmental impacts and spread of infectious diseases. Sustainable fashion efforts may significantly contribute to the reduction of waste, carbon dioxide, and other greenhouse gases every year, as the fashion industry is one of the most pollutive industries to date. Redesigning, recycling, and upcycling are beneficial and valuable attempts to maintain or raise the value of discarded products. For this research, a sustainable design was created using existing textile waste. The inspiration for this design was not only sustainability, but also Gilded Glamour, the theme of the 2022 Met Gala. Zipper Got Stuck is a modern adaptation or interpretation of a particular historical period, the Gilded Age of the 1870s. The purpose of this design was to create a sustainable design by using discarded zippers as the main material source, drawing upon historical and modern-day influences, both while implementing couture techniques to create a three-piece ensemble derived from unconventional material.
GRADUATE STUDENT DESIGNS
The chambered nautilus, also called the pearly nautilus, is the best-known species of nautilus. In 2018, the National Marine Fisheries Service (NMFS) and National Oceanic and Atmospheric Administration (NOAA) listed the chambered nautilus as a threatened species under the Endangered Species Act. The goal of this design project was to use apparel design as an expressive language, in the form of a wearable art vision, to showcase the art of one of the world’s oldest creatures, the chambered nautilus. Simultaneously, this design project calls for nautilus shell collectors to appreciate and celebrate the beauty of nautilus shells in other ways than collecting; it is also a call for audiences to avoid buying them at will. Maintaining species diversity is an important means of achieving sustainable development. Publicity and appeals in the form of clothing to raise public awareness of nautilus protection are as important as actual conservation actions.
Beyond Abaya

Fatimah Hakeem; Advisor: Sibei Xia
Louisiana State University

This creative project used a Shima Seiki knitting machine to create a unique abaya. Abaya is a traditional Arabian Gulf woman’s garment. The garment is a loose, full-length dress with long sleeves, covering the body entirely, except for the head. Beyond Abaya silhouette was inspired by the bisht, an Arab men’s gown, worn on specific occasions by elders or men with prestige and position. The design consists of two pieces: a sleeveless, ribbed maxi dress and a long kimono-style gown with an opening on both sides to insert the hands. The ribbed dress was knitted with a seven-gauge machine, and the gown was knitted with a 14-gauge machine.
The designers challenged to create a multi-functional 3D printed wearable jacket by developing a novel 3D printed material containing a strong elasticity and an appropriate joint mechanism for different parts. A commercial fused deposition modeling 3D printer was used to print all the panels using thermoplastic polyurethane filaments which have high elasticity and flexibility. Integrating a transformable design approach, this jacket features a convertible concept, which allows wearers to conveniently have versatility in use. Various functionalities and styling options of this jacket not only fulfill a wearer’s functional, expressive, and aesthetic needs, but also address sustainability practices in the 3D printing (3DP) process through extending the product lifespan and reducing material waste. With the use of flexible 3DP material, adhesive joint technique, and continuous wave and lattice structures in the 3D printed textiles, this design well simulated traditional fabrics and maximize wearer’s various needs.
Flora

Aditi Galada; Advisor: Fatma Baytar
Cornell University

Flora was inspired by the symbolically and culturally preeminent tree of life. It represents the unique experiences one undergoes in their lifetime and how these experiences make individuals stronger and wiser. Making the most of these opportunities requires strength that is symbolized through the bold color and design of the jacket. The unique play of textures, colors, and design in the ensemble motivates the wearer to embrace her inner confidence. The smocking on the sleeve creates an aura of power. Life is also about love, which is conveyed through the romantic hourglass silhouette, strapless neckline, and light shades of pink. The dress helps the wearer express herself, at the same time, reminds her to enjoy every moment of her precious life. The message conveyed through the dress is further amplified using several new technologies including laser engraving, laser cutting, and 3D printing.
Apparel is a means for people with disabilities (PWDs) to express multiple identities to others and themselves. Finding functional underwear for PWDs may be difficult. Thus, creating a barrier between PWDs, apparel needs, and social participation. This product adopts the principle of “user-centered” design and PWDs are the core users. The design aims to use a hook closure to ensure that the underwear is more accessible and easier to don and doff. A user-centered issue addressed in this design is that of sitting in a wheelchair for a long time, which can cause skin tissue fragility and sensitivity. Therefore, this design used functional fabrics, such as medical antibacterial fabrics, to alleviate the problem of the skin. Another user-centered issue addressed in this design is that existing menstrual panties are not as easy to replace as sanitary napkins. Based on this, this design combined the convenience of sanitary napkins and the environmental friendliness of menstrual panties to create a panty with replaceable pads.
This project produced a novel pleated ensemble using a creative pattern cutting technique to achieve a three-dimensional (3D) look in the finished garment. In this design, basic pleats are twisted and evolved into a puffed structure. The 3D zigzag surface was adopted from a ball-shaped accordion (Jabar) technique from Nakamichi’s Pattern Magic 2. The ball shape was accomplished through alternating folded layers of fabric in the shape of crescent moons. Thus, Japanese design aesthetics and postmodern pattern construction offer guidance to create this jumpsuit design. The Glamor of Jabara design is a jumpsuit with short sleeves and full-length pants. The ball-shaped Jabara technique is applied to the sleeves and pants to create a sculptural silhouette. The sharp accents of Jabara create a delicate design.
Like many great artists before me, I wanted to inspire and evoke thought based on my artistry, creative ability, and to not be stifled by one specific medium. This design is multifunctional, and I imagine it being worn by a pop star at Coachella or even in an African art museum. The collection is cohesive and tells a story of culture, perseverance, and innovation. We braid our hair as a means of survival and acceptance, and it turns into a trend that you can see cross-culturally. My inspiration for this look came from my own personal experiences and cultural background that have shaped the thriving industry of beauty supplies and Black-owned beauty salons.

Her Crown

Kai Stephens; Advisor: Amy Dorie
San Francisco State University
In 1869, the production of billiard balls from ivory was threatening to exterminate the elephant population. A challenge was issued for a suitable substitute for ivory. The answer was celluloid, the first industrial plastic. 150 years later that savior has become the nemeses of the animals it was meant to save. Africa is a leading continent in population growth and plastic use. The resultant mismanagement of millions of metric tons of plastic is threatening the environment and her animals. This design is a wearable art piece that brings together the two parts of the problem, cause and effect. The overall design accomplishes what the designer intended perfectly, charmingly. By using authentic African fabrics and Uganda straw weaving with the use of plastic grocery bags as the subject matter, the design brings the issue of the elephant into full view for a discussion to be had by all viewers.

Ivory and Irony

Constance R. Spotts; Advisor: Eulanda Sanders
Iowa State University

In 1869, the production of billiard balls from ivory was threatening to exterminate the elephant population. A challenge was issued for a suitable substitute for ivory. The answer was celluloid, the first industrial plastic. 150 years later that savior has become the nemeses of the animals it was meant to save. Africa is a leading continent in population growth and plastic use. The resultant mismanagement of millions of metric tons of plastic is threatening the environment and her animals. This design is a wearable art piece that brings together the two parts of the problem, cause and effect. The overall design accomplishes what the designer intended perfectly, charmingly. By using authentic African fabrics and Uganda straw weaving with the use of plastic grocery bags as the subject matter, the design brings the issue of the elephant into full view for a discussion to be had by all viewers.
Through the ages the concept of “what is art” has changed but one thing has not changed, the reward of displaying the art. From master painters to photographers, the mark of making in your chosen art medium is having your art displayed for others to view. This reward is no different for children.

This design explored the idea of using digital printing technology to create a three-dimensional cape while keeping the motif a true representation of a child’s drawing. The cape silhouette was chosen for the representation of faerie tales and adventure. The resultant cape had two digitally printed dragons, one of which operated as the front closure with magnets. The entire cape was free motion quilted and created added texture and interest. Various sized dragons were also quilted into the design. The exploration into digital printing was a success showcasing a wonderful dragon and its creator’s talent.

Joya’s Dragon

Constance R. Spotts; Advisor: Ling Zhang
Iowa State University
The Leaf Speed Suit was designed for athletes competing at the Paralympics, in men’s three-track single-leg downhill ski events. The athletes participating in these events are known as “Locomotor Winters” or “LW2”. Currently, suits provided to Paralympic athletes by sport apparel brands were developed for athletes with two full legs. These suits do not consider aerodynamic performance asymmetries or fit needs. Paralympic three-track single-leg downhill skiers are left on their own to alter and mend their suits for competition, ultimately sacrificing aerodynamics and comfort in the process. The Leaf Speed Suit focuses on improving performance for LW2 athletes through ergonomic patterning and strategic placement of seams, and zippers, along with engineered aerodynamic textures mapped over the body and residual limb.

Mary-Gwynedd Taylor; Advisor: Susan Sokolowski
University of Oregon

Leaf Speed Suit
The design is one of 11 full ski looks in a collection, Girl Powder, that centers on the celebration of femininity in outdoor apparel through a direct response to identified consumer need for thoughtful functional properties. Girl Powder addresses the need in the outdoor apparel market for snow sports apparel designed, fitted, constructed, and produced for women by women with emphasis and celebration of the female form and preferences for functionality. This look is a direct response to consumer preference in terms of functionality. The Suit includes functionality-centered design elements such as intentionally placed pockets, ease of use and comfortability, garment security and fixedness, waterproof findings, and a contoured fit designed for the female body. On the center back of the base-layer, Rumi’s quote, “It is rain that grows flowers, not thunder,” echoes the symbolism of the pearl zipper pull in this ski look. Pearls, the ultimate symbol of femininity, symbolize the simultaneous strength, resilience, and delicacy that women embody.
Minimal to Zero

Ha Eun Chae; Advisor: Ling Zhang
Iowa State University

Minimal to Zero aimed to integrate the minimalism art movement in the 1960s with fashion design by exploring minimalism artists and artworks, and zero-waste patternmaking methods. The project initiated with the question of how we can incorporate minimalism into modern clothing to create an original and creative garment. This creative design scholarship applied these two artists’ designs to integrate minimalism with zero-waste fashion. The project consisted of four phases: 1) design ideation, 2) zero-waste patternmaking, 3) pattern digitizing and print engineering, and 4) pattern assembly. Minimal to Zero established an innovative design process using a variety of digital technologies including pattern digitizing, print engineering, and digital textile printing. The essence of minimalism was executed by zero-waste patternmaking and textile print design focusing on the design style of two symbolic figures of minimalism, Frank Stella and Rudi Gernreich.
Wenjia Zong; Advisor: Fatma Baytar
Cornell University

The ensemble started with the concept of overload, which was anticipated to extend from transportation carriers to the current post-pandemic mental and physical well beings. During the design process, the silhouette was particularly inspired by a photograph of a Vietnamese man riding a bike with hundreds of bamboo-made fish traps, which formed a unique aesthetic balance. The purpose of this design was to advocate for awareness of overload issues in transportation safety, global resource preservation, and impulse-consuming behaviors. Multiple layers of fish traps were constructed with shape manipulation techniques, laser cutting, and 3D modeling techniques to symbolize the overload concept. The top and dress patterns were first sketched in 3D garment design software and simulated on a realistic avatar, then cut the fabrics and assembled by a home-sewing machine and by hand. By incorporating 3D techniques in the design process provided an efficient and sustainable creation approach.
Regenerative garment design within a Colorado Fibershed

Katie Miller; Advisor: Kristen Morris
Colorado State University

This project prototyped a regenerative (i.e., environmentally beneficial) size-adjustable wrap dress using Corriedale sheep and Huacaya alpaca wool grown locally in Colorado. Guided by the Indigenous mindset of maintaining a mutually beneficial relationship with the Earth, the garment was designed to minimize harm and maximize benefit to the environment using the Fibershed approach. This is a circular soil-to-soil approach to creating local regenerative fiber systems and was specifically applied by using CLO3D, a computer-aided design (CAD) software, and zero-waste design methodology. Using a CLO3D-generated pattern, locally sourced yarn was woven to exact garment specifications on a four-shaft floor loom by hand. By communicating this process through design scholarship, this project addresses the need for regenerative creative scholarship within the apparel industry and exemplifies design for a Fibershed local and regenerative apparel system.
Slalom is an alpine skiing discipline and part of the winter Paralympics. It involves skiing between poles which are spaced closely together to drive quick and short turns. This race suit was specifically designed for Para-athletes with significant impairment in one leg and use of one ski. Through interviews with Para-athletes and observations, three problems were discovered among this group of Para-athletes. First, was impact protection and how could it be designed to be flexible. Secondly, was that turning to the direction of their stance leg is significantly more difficult than turning in the opposite direction during the slalom event which can lead to instability. Thirdly, the load on the knee is double, compared to skiers with two legs, which affects their stability. This race suit is meant to solve these three problems by implementing the laws of physics that has not been done before for slalom race suits.
Body-powered prostheses users have expressed a high rejection rate of the ‘Figure of 9’ harness connected to discomfort, such as excessive pressure in the shoulder and axillary areas, skin irritations, restricted movements, and/or the need to wear additional clothing layers or additional protective elements between skin and harness. The harness design itself can be very restrictive for women with aesthetic needs and certain expressive requirements, especially for special events that require formalwear occasion attire. Ultimately, The Delicate Awe was to be a beautiful dress that any consumer would want to purchase, but it would also function for adaptive, prosthesis user’s functional needs. This project also provided a hidden surprise for the prosthesis user and evoked a sense of awe.
The purpose of this design was to create a sustainable ensemble that reflects and embodies a key source of inspiration using the mind-mapping technique. The chosen source of inspiration was Artemis, the Greek goddess of the hunt, the moon, and nature. The mind map was digitally created using the XMind™ software. The various functionalities of the software enabled easy changes and adjustments to the map, and the organization of ideas in a unique way. The creation of this garment expands on existing designs that use a mind-mapping approach, with a concentration on novelty and sustainability. Applying Norman’s emotional design model of three levels of design as a guide for building the mind map incorporates an academic rationale into the design. Through this unique work, the designer emphasizes the importance of integrating creative thinking techniques to produce more effective and creative clothing that factors human emotions as well. The designer recommends improving the execution of the design through applying various of technological tools.
Toxophilite, an archery-inspired harness for body-powered prosthesis, is an experimental design to propose a redesign of the ‘Figure of 9’ harnessing system by exploring the functional features of the archery chest guard. Based on previous studies and interviews on unilateral amputees who use a body-powered prosthetic device with a ‘Figure of 9’ harness, three design themes were selected: self-adjustability, use of breathable fabric, and maintaining the ‘Figure of 9’ harness structure. The author adopted the structure of the archery chest guard for redesign and used a parachute buckle, 2-inch webbing, and performance power mesh to encompass the design aspects, which are self-adjustability, breathability, and stabilization. Prototype fitting and evaluation were conducted on the male participant with the redesigned harness with a prosthetic device simulator. Toxophilite successfully addressed the user’s needs, focusing on functional considerations in the FEA consumer needs model and achieved establishing design challenge guidelines, such as adjustability and breathability.
The purpose of this design was to combine the fabric manipulation techniques of laser cutting and digital printing. The surface design of the laser cut fabric layered on top of the digital fabric print emphasizes the designer’s inspiration: a personal journey in motherhood. The laser cut design on the blue suede fabric are the Pisces and Leo constellations. The digital fabric print is a galaxy painted digitally using colors of the mother and child’s birthstones. The combination of the blue suede with the colors in the digital print represent their child’s premature birth. The stars in the constellations are laser cut out, allowing the digital print of fabric to peek through the cut outs. The layering technique used for the different fabric manipulation creates visual interest in the design by emphasizing color and texture. The outcome of this design was successful in using fabric manipulation techniques in conjunction with each other.
PROFESSIONAL DESIGNS
In 1964, American designer Frankie Welch introduced her signature Frankie Dress, following a simple paper-doll-like pattern that became a canvas for her various textile designs. Therefore, this design research took on an historically informed analysis for the co-development of a digitally designed sublimation printed Frankie Dress for a child. The Frankie Dress became a canvas to experiment with various digitally created prints co-designed with, Mavis, a 4-year old, which allowed for the inclusion and participation of her wants and needs through her creative thought. Children as consumers are often time overlooked, underrepresented, and neglected, as their clothing is marketed specifically to their mothers. The digital print was created from a coloring sheet abstracted from Welch’s 1970 Cherry Blossom Scarf Pattern that Mavis colored, along with the writing of her name.

Laura McAndrews
University of Georgia

A Child’s Canvas
Actias Luna: A Temporal Reimagining of 1909
Literary Inspiration

Charity Calvin Armstead
Brenau University

This design explores a temporal and generational reimagining of literature and dress, referencing Gene Stratton-Porter’s 1909 bestselling novel, A Girl of the Limberlost. This design concept is twofold. First, this design transposes Stratton-Porter’s design inspirations through time to demonstrate their continuing relevance, parallel to the continuing relevance of her books to readers a century later. Second, in this dress design, the multigenerational appeal of Stratton-Porter’s novel has been woven with the concept of qualitative multiplicities expressed by French philosopher Henri Bergson. The color scheme, embellishments, and fabric choices were directly determined by the color and texture of the Actias luna moth detailed above, as inspired by a proposed dress theme in A Girl of the Limberlost. In keeping with the multi-decade concept for this garment, the dress was patterned and constructed using a variety of period sources ranging from the 19th Century to the present.
Consonance of 3D Printed Fiber Network

Young-A Lee and Yu Li
Auburn University

This design, consisting of a high waist skirt and a sleeveless vest, is the outcome of the designer’s 3D printing (3DP) textile innovation challenge, especially focusing on the seamless joint process of 3D printed panels for wearables and drapability of the newly developed 3D printed textile. The design comprised with 164 panels embedding two flower-inspired textile motifs. Considering wearers’ function and comfort, 3D printed fabrics were developed with lace pattern structures that provide better flexibility and stretchability. With the flexible 3DP filament, lace structured pattern, and seamless adhesive joint method, 3D printed textiles in this design were created to replicate traditional lace structured fabrics, considering high drapability. The wearables created by using this novel 3D printed seamless textiles opens the great potential of 3DP for the use in fashion. Fused deposition modeling 3DP method with thermoplastic polyurethane filaments was applied to create this design.
The purpose of this design was to add to the applied knowledge on the topic of zero-waste fashion design by contributing a method where shaping can be added to geometric pattern pieces using knitted rib in areas usually requiring fabric cutting and fabric waste to shape the garment. This design relies on the formal aesthetic properties of line and color to create visual impact, where the use of a single color adds visual coherence to the relationship between design features. Using a Brother™ KH-970 knitting machine with ribber attachment, the knitted rib shaping zero-waste concept resulted in a final contoured design that comprised of minimal and simple geometric shapes, easily assembled and with zero fabric waste.

Contouring Method for Zero-Waste Design

Jeremy Bernardoni
Louisiana State University
It is essential that designers practice environmentally sustainable strategies through pre-consumer and post-consumer fabric waste. Some design scholars have designed with pre-consumer textile waste, while others have designed with post-consumer textile waste. There is a gap in the previous design scholarship of designers using both pre-consumer and post-consumer textile waste in one design. In addition, there is a lack of upcycled fashion inspired by African American cultural references. Thus, the purpose of this design was to create contemporary garments made from pre-consumer and post-consumer waste that are inspired by African American cultural references. Ebony and Ivory contributes to the knowledge of cross-referencing pre-consumer and post-consumer textile waste with inspiration from traditional Bogolanfini and contemporary African American cultural references by applying traditional textile design techniques. Through the artistry of patchwork and embroidery, these garments celebrate African American culture, identity, and style in a modern wearable piece.

Jennifer Ingram
Washington University in St. Louis

Ebony and Ivory
Creative designs combining 3D printing and 3D pen with flexible materials is still limited. 3D printing materials such as thermoplastic polyurethane (TPU) filament have elasticity and are flexible, providing designers unlimited opportunities to explore fabric-like textures for creative designs. Additionally, as most fused deposition modeling (FDM) printers have limited printing bed size, adhesives are often used to assemble smaller pieces of printed materials together to form a larger size textile. Previous studies by the researcher have explored modular designs which are formed by slotting together pieces of modular textiles to create garments without sewing. Therefore, the purpose of the design research was: 1) to explore a new digital handmade technique by merging the state-of-the-art tools, 3D printer and 3D pen, into one design, and 2) to combine modularity with 3D printing technologies with flexible filament to create a wearable design.
Entrapment represents the woman’s body and feminine sexuality as a symbol of control and desire by exploring the devices developed to represent such ambivalent aesthetics in the Western and Korean dresses and manipulating them. The designer references the 19th-century off-the-shoulder style that embodied sensuality and physical entrapment. The woman’s movement is confined by a red silk pleated band and a black ramie band between her body and the dress. Another reference for this design is the traditional Korean women’s underpants that symbolize chastity and sensuality. By converting underwear to outerwear, the device designed for convenience (i.e., the open crotch that allows women to relieve themselves without taking the garment off) is transformed into a means to highlight feminine sexuality because the legs are partially exposed and then hidden again with the wearer’s movement. Entrapment suggests the inseparability between concealment and exposure within women’s dress in various forms throughout history.
Floating World

Sun Young Choi
The Hong Kong Polytechnic University

Ukiyo-e(s) are woodblock prints and paintings in Japanese art that flourished from the 17th through 19th centuries. Kachō-ga is a theme representing flora, fauna, and birds popularized in the 19th century. The term ukiyo-e translates as “pictures of the floating world. Ukiyo-e has profoundly influenced Impressionism and industrial design throughout art history. This study aims to interpret and utilize historical and artistic sources of inspiration by transferring traditional woodcut printing images of Ukiyo-e to modern digital printing on garments. In addition, by combining Ukiyo-e’s flatness without depth in space and a graphic created with a linear perspective, the outfit integrates an oriental view of the world and a Western approach to present two different worlds, the past and the present, the East and the West, in harmony.
The present design represents a unique approach to zero-waste (ZW) design by incorporating the grading method developed by Carrico and adding transformable components. The inclusion of transformable components allows wearers to create a multitude of looks. This bridal jumpsuit creates a sleek, fitted silhouette inspired by old Hollywood glamour, atypical of ZW designs which tend to be loose to accommodate more sizes of wearers. The grading approach was considered when designing the garment. The designer flat patterned a pair of wide-legged trousers for the jumpsuit and draped the Grecian-style bodice from the remaining fabric in the marker. All remaining fabric in the marker was utilized to create the seven transformable components. The design was constructed from silk dupioni underlined in cotton batiste and lined in polyester crepe. The appliques were chosen for their silver color and subtle star patterns which reflected the inspiration of 1930s silver screen starlets.
Gradable Zero-Waste Trench Coat

Ashley Rougeaux-Burnes
Texas Tech University

Gradable Zero-Waste Trench Coat was created as part of Phase II of a project started in 2011 to explore and refine the Carrico Zero-Waste Banded Grading (CZWBG) technique. Phase II of the project included incorporating the feedback given by the industry expert consulted on the project and refining the technique, so it may be utilized in a small batch production test in the future. Gradable Zero-Waste Trench Coat addresses three of the comments made by the industry expert. Bands of self- and contrasting fabric were strategically placed and grade scales were selected to allow for a consistent appearance throughout the production size range. Additionally, the garment type and textile chosen created a classic and functional piece. The trench coat produced is highly marketable and reduces the environmental impact by limiting the need for laundering and extending the use phase of the garment’s lifecycle.
Kaleidoscope: Spiraling Patterns and Color

Colleen Moretz, West Virginia University and Sandi Keiser, Mount Mary University

Kaleidoscope: Spiraling Patterns and Color is a collaborative design that features silk organza on which successive shibori techniques have been layered to create a complex reflective pattern that changes as it spirals around the body allowing light to reflect off the fabric as the grain shifts; the fabric was then cut using an original spiral pattern cutting technique that eliminates the pre-consumer textile waste usually created during the cutting process. This design is part of a design series utilizing a unique double spiral pattern. This pattern, that resembles a yin-yang, is cut apart leaving the square edges attached to the bottom areas of each spiral resulting in a zero-waste pattern that can be adapted to any fabric width. Future collaborations will continue using fabric remnants, natural dyes, and continued experimentation with the size and number of spiral patterns used to achieve a variety of silhouettes.
The purpose of making *Leave No Trace* was twofold. First, to create zero-waste garments for the outdoor enthusiast. Second, to validate the application of a recently published method of grading garments to the pants. The publication showcases six different applications of the method that utilizes strategically placed bands as a means of achieving different sized garments from one zero-waste pattern. This builds on my previous design research working to find a way to grade zero-waste patterned garments. While there are different ways for a manufacturer to be zero-waste, my focus was to create a pattern layout for the garment(s) that leaves no scraps behind once the garment has been cut. Most zero-waste patterned garments on the market are not offered in a range of sizes customary for their category. Offering the designs in a range of sizes continues to be a barrier for bringing zero-waste patterned garments to market.

Ellen McKinney
Iowa State University

The research problem was to test the narrow fabric sizing method for zero-waste patterns (Carrico, 2019; 2020) on a children’s denim jacket. The style was selected for its timelessness, ubiquity, and gender neutrality, giving potential findings broad applicability. The research questions were: (1) Can a children’s denim jacket pattern be created with zero-waste? (2) Can a zero-waste children’s denim jacket pattern be graded to a larger size using fabric strips? and (3) How does the strip grading method impact garment production? This design research quantifies the advantages and limitations of zero-waste pattern design and strip-method grading (Carrico, 2019) for a children’s denim jacket. Findings have a broad potential impact on sustainable apparel manufacturing, given the style’s timelessness, ubiquity, and gender neutrality. Findings may apply to other classic styles with similar pattern shapes.
The purpose for this design research is to explore modular design with 3D printing technology using a fused deposition modeling (FDM) printer with flexible thermoplastic polyurethane (TPU) materials. Through modifying the modular unit, the design could easily be transformed to provide a bigger section of coverage for any long or loose designs. In addition, the integration of 3D printing technology into modular design allows for easy configuration and editing of designs while increasing the module design’s durability. The 3D printed module’s interlocking ability can stay functional over numerous actions of connecting/disconnecting. The 3D printed modular units are stronger than common fabric units. The outcome of the design achieved the goals of creating a loose modular design with 3D printing technology using an FDM printer with flexible TPU materials. This piece adds knowledge to the existing body of work regarding transformability in modular design with the use of 3D printing technology with flexible material.

Modular Illusion

Chanjuan Chen
University of North Texas
The purpose of this design was to seek an efficient means to salvage and utilize narrow strips of discarded sari silk scraps. Formerly, many strips were likely used in their original strip form by crafters, in which the strips may not have reached their value potential. Although remnant scraps, they were laden with vibrant colors, consisted of a lightweight hand, and were airy in texture, which made them unique to yield a higher valued and repurposed garment. A repurposing process was implemented to employ additive repurposing and intentional patternmaking techniques, whereby the strips were separated and pressed, fabricated into textiles, then scanned to create digital images. Developed digitally, the pattern pieces were strategically placed on the scanned fabrics to create interesting directions of lines and to use fabric efficiently, resulting in minimal waste. The design exhibits a creative repurposed design solution that enhances the value of discarded fabric scraps. Ultimately, reforming them into a transformational repurposed garment that reflects the true beauty of sari silk.
The goal of this research was to create a 21st century garment inspired by the jaw-dropping armor designs of the 15th and 16th centuries. The challenge was to edit myriad armor features and to adapt them to a cohesive fabric design, without producing costume wear. The resulting design features innovative fabric structures and a unique silhouette with careful editorial consideration of various armor components and applications. This design uses a new multiple-layer binding technique and modernizes and combines six armor elements in a cohesive presentation. Draping the jacket established the form required for a pattern that could replicate the continuous flow of the lines of armor seams. Flat-pattern techniques and muslin drafts prescribed the sleeve cap and gauntlet dimensions, the hang of the sleeve, and seam matching. A beautiful finish results from handsewn hems and waist-lining seams, gauntlet bias binding, and inside seam allowances.

**Renaissance Armor as an Inspiration for 21st Century Clothing Design**

*Carolyn Schactler, Professor Emerita*  
*Central Washington University*
The purpose of this project was to use digital knitting technology to create textiles that explored human interactions with space, through interdisciplinary collaboration between architecture and apparel design. Here, a collaborative research process resulted in digitally knitted items spanning scale and application to define space, personally connecting the user/wearer to their environment. In this project, digital knitting was used to produce a system of temporary enclosure and furniture, with the use of the same knitted systems in apparel design. Reflection on this research suggests that digital knitting and further interdisciplinary collaborations can be used to produce a highly tactile, transformable sense of space existing within a structure as well as an item of clothing. Digital knitting allows the designer to imbed values of function and aesthetics into the product throughout the process.

Soft Boundaries

Krissi Riewe Stevenson and Jennifer Meakins
Kent State University

The purpose of this project was to use digital knitting technology to create textiles that explored human interactions with space, through interdisciplinary collaboration between architecture and apparel design. Here, a collaborative research process resulted in digitally knitted items spanning scale and application to define space, personally connecting the user/wearer to their environment. In this project, digital knitting was used to produce a system of temporary enclosure and furniture, with the use of the same knitted systems in apparel design. Reflection on this research suggests that digital knitting and further interdisciplinary collaborations can be used to produce a highly tactile, transformable sense of space existing within a structure as well as an item of clothing. Digital knitting allows the designer to imbed values of function and aesthetics into the product throughout the process.
Green burials allow for the care of the dead while preserving or restoring the environment. This care involves wrapping or clothing the body with biodegradable textiles. The Tall Grass Prairie Burial Gown focuses on place-based natural dyes and contact prints from the prairie contributing to a soil-to-soil coloration system. The garment design was influenced by Ukraine and Slovakia folk-wear along with 15th century features of lacings, shirring, and proportion which contribute to garment coverage, size-ability, and ease of dressing.

Tall Grass Prairie Burial Gown

Sherry Haar
Kansas State University
In academia, we have the responsibility to focus on education and service to bring about awareness and encourage change. The button dress was created to first, to provide a teaching tool for an experiential learning college-level classroom project intended to explore the role of designer as activist. Activists believe in direct action to achieve change. Learning by doing is at the core of experiential learning. It stresses active involvement. Since experiential learning is an emotional experience, a student cannot generate creative ideas and solutions by being in an environment that fosters hands-on learning. Rather, creative ideas and solutions stem from relationships that foster dialogues and collaborations between students, instructors, and even the community. The second purpose of the project was to display the dress in an exhibition where it would serve as a messenger and educate about sustainability, by teaching how to sew on a button.

The Button Dress Project

Sandra Starkey and Venn Veronica Jemkur
University of Nebraska-Lincoln
People living with disabilities (PLWD) possess approximately $490 billion in discretionary income yet continuously have difficulties finding stylish adaptive apparel to meet their attire needs. With that in mind, the goal of this project was to incorporate multiple adaptive features while also being able to be fashionable throughout the day without a complete garment change. The ensemble “a two-part jacket, pants, skirt, and handmade laser cut flowers” allows a PLWD or non-PLWD to wear different components of the ensemble while also being able to dress independently. This ensemble contributes to the growing adaptive design research and scholarship through garment modularity, wearability in multiple apparel categories, and high-end design through detailed pieces. The ensemble was fitted and evaluated in seated and non-seated positions along with ease of walking with aids or a wheelchair before the final ensemble was constructed.

Tulipa ‘Rococo’ I

Dawn Michaelson
Baylor University
The design challenge for this research collaboration was to create textile prints to be implemented into a reversible kangaroo care garment designed with the simultaneous use dyad (mother-infant) in mind. This research collaboration aims to contribute to a growing body of design research raising awareness by visualizing community experience. This reversible kangaroo care garment combines aesthetic exploration and a user-centered design approach.

Two Sides to Every Story: A Reversible Kangaroo Care Garment Designed for a Mother and Infant’s Shared Lived Experience in the NICU

Jessica Ridgeway, Florida State University
And Kelly Cobb, University of Delaware

The design challenge for this research collaboration was to create textile prints to be implemented into a reversible kangaroo care garment designed with the simultaneous use dyad (mother-infant) in mind. This research collaboration aims to contribute to a growing body of design research raising awareness by visualizing community experience. This reversible kangaroo care garment combines aesthetic exploration and a user-centered design approach.
Unvested Waste represents a removal of symbolic vestments of waste and obsolescence and a donning of life and resurgence. This design models multiple levels of sustainable practice, upcycling, cutting floor scraps, and projects discards, and creates a spectaculatively fresh perspective in contemporary design styling and process. Scholars began this piece utilizing deconstruction as foundation and layered with eco-sourced natural fibers. Wool and leather were selected to create the vivid design aesthetic, utilizing scrap wool remnants from a college student’s tailored jacket and leather from upholstery remnants. The sheath dress for deconstruction came from a vintage collection being discarded at end of life. Embellishments were sourced from craft bins and supplemented. The design process took a blended approach with zero waste cutting and design and a post-consumer waste (secondhand garment upcycling) reuse approach. The designers explored technologies and approaches within the sustainable design framework to create the near zero waste design.

Unvested Waste: Sustainable Design Practice in Upcycling

Sheri Dragoo and Jaynie Fader
Baylor University
The present design explores the application of handwoven basketry techniques to apparel design. Basketry typically falls into three types of construction approaches: (a) twined, (b) coiled, and (c) woven. Thus, the purpose of this design was to explore the application of handwoven split reed basketry techniques to create a wearable art piece. Further inspiration was drawn from the 1980s silhouettes of designer, Arnold Scaasi. Inspiration for the overall silhouette of the wearable basket design was dictated by the rigidity of the basket materials and the need for donning and doffing of the final design. The designer felt that a basket that could be pulled over the head was the best approach. The panniers of the design were based on a traditional egg basket. An oversize bow was also added to create cohesion in the design. Finally, a plum-colored jersey underdress was created with a high-low tulle skirt for balance.

Wearable Basket
Casey Stannard
Louisiana State University

The present design explores the application of handwoven basketry techniques to apparel design. Basketry typically falls into three types of construction approaches: (a) twined, (b) coiled, and (c) woven. Thus, the purpose of this design was to explore the application of handwoven split reed basketry techniques to create a wearable art piece. Further inspiration was drawn from the 1980s silhouettes of designer, Arnold Scaasi. Inspiration for the overall silhouette of the wearable basket design was dictated by the rigidity of the basket materials and the need for donning and doffing of the final design. The designer felt that a basket that could be pulled over the head was the best approach. The panniers of the design were based on a traditional egg basket. An oversize bow was also added to create cohesion in the design. Finally, a plum-colored jersey underdress was created with a high-low tulle skirt for balance.
The current design furthers creative scholarship in zero-waste (ZW), while creating a ZW design using conceptual inspirational elements from the historical 1930s cocoon coat silhouette and visual aspects of British barrister robes. The resulting design was simple to cut and to construct departing from difficult assembly operations which is often synonymous with ZW designs. The prevailing formal aesthetic properties used in this design are shape, line, and color. Although the pattern is rectangular, the overall formal aesthetic property of shape is round and circular. The black color was chosen to evoke the British barrister robe. Knitted ribbing was used to shape the sleeve at the forearm. The current design advances knowledge in ZW design and pattern principles and offers an example of the use of combined and varied design inspirations that can be applied to ZW methods while maintaining simplicity of garment construction.