A total of 109 pieces were accepted through the peer review process for display in the 2019 ITAA Design Exhibition with a 39% acceptance rate. All jurying employed a double-blind process so the jurors had no indication of whose work they were judging. A double-blind jury of textile and apparel peers reviewed each submission including design statement and images. Further, a panel of Industry experts reviewed submissions and award eligibility of entries.
DESIGN EXHIBITION COMMITTEE

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Catalog: Chanjuan Chen, Erin O'Brien, and Mathilda Savocchia, Kent State University
V.P. for Scholarship: Youn-Kyung Kim, University of Tennessee

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Design Exhibit Committee
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Mary Simpson, Western Michigan University
Laura Kane, Framingham State University
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REVIEWS OF DESIGN

Reviewers for Creative Design Submissions

First Review
Review Chair: Belinda Orzada, University of Delaware
Co-Chairs: Casey Stannard, Louisiana State University
Laura Kane, Framingham State University

ITAA Review Members
Theresa Alexander, University of the Incarnate Word
Su Kyung An, Central Michigan University
Elizabeth Bye, University of Minnesota
Melanie Carrico, University of North Carolina at Greensboro
May Chae, Montclair State University
Chanjuan Chen, Kent State University
Deborah Christiansen, Indiana University
Bridgett Clinton-Scott, University of Maryland Eastern Shore
Kelly Cobb, University of Delaware
Rachel Eike, Iowa State University
Andrea Eklund, Central Washington University
Adriana Gorea, Syracuse University
Cynthia Istook, North Carolina State University
Laura Kane, Framingham State University
Eileen Karp, Fashion Institute of Technology
Eundeok Kim, Florida State University
Helen Koo, Konkuk University
Jung Soo Lee, Hongik University
Jung Eun Lee, Virginia Tech
Young-A Lee, Auburn University
Michael Mamp, Central Michigan University
Elham Maqsood, King Abdulaziz University
Addie Martindale, Georgia Southern University
Ellen McKinney, Iowa State University
Kristen Morris, Colorado State University
Colleen Moretz, West Virginia University
Linda Ohrn-McDaniel, Kent State University
Peggy Quesenberry, Virginia Tech
Della Reams, Miami University of Ohio
Kelly Reddy-Best, Iowa State University
Jessica Ridgway Clayton, Florida State University
Katya Roelse, University of Delaware
Ashley Rougeaux-Burnes, Texas Tech University
Donna Sapp, Louisiana State University
Milan Shahani, George Brown College
Nupur Sharma, William Rainey Harper College
Mary Simpson, Western Michigan University
Casey Stannard, Louisiana State University
Cathy Starr, Missouri State University
Lushan (Sarina) Sun, Auburn University
Sandra Tullio-Pow, Ryerson University
Angela Uriyo, West Virginia University
Mia Whang, Centenary University
Yingying Wu, Kansas State University
Eunyoung Yang, Meredith College
Ling Zhang, Iowa State University

**Apparel Industry Professionals**
Vanessa Andrew, Owner, Madam Chino LLC
Catherine Byrne, Program Coordinator, Danforth Art School
Mikelle Drew, Head Trainer, 383 Digital Design Studio
Alex Forestier, Operations Manager, Southern Costume Company
Nicole Haddad, Owner, Lobo Mau
Tiffany Rogers, Responsible Sourcing & Production Manager, Fair Labor Association
Abbie Small, Former Executive Vice-President (retired), Simplicity Creative Group
Elizabeth Way, Assistant Curator, The Museum at the Fashion Institute of Technology
Emma Zuckerman, Associate Technical Designer, Under Armour

**Entry Categories**
Design submissions were identified using descriptive criteria including:

- Accessory
- Conceptual/experimental
- Couture Techniques
- Cultural Reference
- Functional clothing
- Historic Reference
- New technologies (3-D printing, smart garment etc.)
- Non-Apparel 2-D or 3-D design (wall hanging, chair, etc.)
- Patternmaking
- Ready-to-wear (Market-Directed)
- Surface design
- Sustainability
- Textile innovation
Second Review

Onsite Judges
Karen LaBat, University of Minnesota
RuBen Permel, Head of Wardrobe, Cirque du Soleil
Kevin Smith, Vice-President, Las Vegas Fashion Council

Creative Design Awards
ATEXINC Award for Excellence in Marketable Textile Design
Claire Shaeffer Award for Outstanding Marketable Design
ESRAP Award for Sustainable Design
French European Inc. Innovative Design Award
ITAA Award for Creative and Innovative Employment of Techniques
ITAA Award for Innovative Design Scholarship
Sandra Hutton Award for Excellence in Fiber Arts
University of Fashion - Alvanon Sustainability Award

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The Soundless Outcry
Su Kyoung An, Hea Joo Lee, and Li Jiang, Central Michigan University

Wave for Independence
Su Kyoung An and Cassandra Wentela, Central Michigan University

Cutwork Ginseng-Translating the Novels of Gene Stratton-Porter into a Period Corset
Charity Calvin Armstead, Brenau University

Eacles Imperialis 1909 Evening Gown
Charity Calvin Armstead, Brenau University

Bat-wing Denim Dress
Melanie Carrico, University of North Carolina at Greensboro

Maternal Dress
Melanie Carrico, University of North Carolina at Greensboro

Yin-Yang Circles
May Chae, Montclair State University

Reinventing Traditional Dress: A Design Inspired by Chinese Sher Ethnic Costumes
Xu Chen and Shiyu Pan, Minjiang University; and Chuanlan Liu, Louisiana State University

The Sun Shines Through
Chanjuan Chen, Kent State University

Lenticular Flow
Chanjuan Chen, Kent State University; and Kyung-Hee Choi, Hansung University

Transformable Blossom
Chanjuan Chen, Kent State University

Repowering Women’s Hanbok
Seunghye Cho, Framingham State University

W=FT # 001: Tufted. Discovery Research and Development of Post- Market Textile Products
Kelly Cobb, University of Delaware; and Tim Eads, TIM EADS LLC
Neo-Heritage Ensemble #2 - Knowledge in the Eye of the Beholder
Kelly Cobb, Belinda Orzada, Dilia López-Gydosh, University of Delaware

Suit of the Youth: ‘Intentional Pattern-making’ Proof of Concept for Repurposing Apparel
Rachel J. Eike, Iowa State University

Sis Alligator Meets Trouble
Tameka N. Ellington, Kent State University

The Cut Dress
Hae Jin Gam, University of North Texas

Exoskeleton
Adriana Gorea, Jeffrey Mayer, and Todd Conover, Syracuse University

Beneath the Surface
Sherry Haar, Kansas State University

Mathmadness
Kim Hahn and Evelyn Rossol, Kent State University

Euclidean Resonance
Kim Hahn and David Hahn, Kent State University

Stash Monarch
Gwendolyn Hustvedt, Texas State University

Size-Adjustable Functional Maternity Hospital Gowns
Chanmi Hwang, Lindsay McCoy, and Carol J. Salusso, Washington State University

The Beauty of Modern Harmony “Jogakbo”
Jaeyoon Jeong, Drexel University

Vegetation: A Tribute to the Oregon Coast Part 4
Laura Kane, Framingham State University

ECG Monitoring via Apparel for Female Firefighter’s Safety (III)
Shu-Hwa Lin, University of Hawaii at Manoa; Ching-I Lai, National Yunlin University of Science & Technology, Taiwan; and Lynn M. Boorady, Oklahoma State University

Reflective Light Sport Suit
Shu-Hwa Lin, University of Hawaii at Manoa

Unicorn Colors
Addie Martindale, Georgia Southern University

Rhythmus 2019
Seoha Min, California State Polytechnic University, Pomona; and Hye Young Kim, Winston-Salem State University

Plaid Waltz
Seoha Min, California State Polytechnic University, Pomona; and Hye Young Kim, Winston-Salem State University

Synthesis Flow
Kristen Morris, Colorado State University; and Jean Parsons, University of Missouri

Adaptive Active -- Embedding Inclusion into Activewear
Kristen Morris, Colorado State University

100% Waste
Linda Ohrn-McDaniel, Kent State University
The Hive
Linda Ohrn-McDaniel, Kent State University

Plated Plaid
Linda Ohrn-McDaniel, Kent State University

6 Wire: Red and Black
Belinda T. Orzada, M. Jo Kallal, Cheyenne Smith, Mikayla DuBreuil, and Wing Tang, University of Delaware

6 Wire: Flow
Belinda T. Orzada, M. Jo Kallal, Cheyenne Smith, Mikayla DuBreuil, and Wing Tang, University of Delaware

Floral Fusion
Jean L. Parsons, University of Missouri; and Kristen Morris, Colorado State University

A Suit for Hoogstraten: Engineered Visual Trickery and a Deceptive Peascod Belly
Brianna Plummer, Independent Scholar

Digital Textile Design 101: Photo Stylized Floral Kimono
Brianna Plummer, Independent Scholar

Double Consciousness
Alexis Quinney, Central Michigan University

Hands and Holy Grail Mini Dress
Della Reams, Miami University of Ohio; Larry Rushing, Temple University; and Hisham Dawoud, Virginia Commonwealth University, Qatar

Pieced Back Together
Krissi Riewe, Kent State University

Controlled Cutting: An Original Garment Design Purposed as an Instructional Tool
Ashley Rougeaux-Burnes, Texas Tech University

ELIS- A Textile Smart Shirt That Gathers Medical-Grade Electric Signals from the Human Body
Mary Ruppert-Stroescu, Maggie Miller, Kristian Nilsen, Chandler Marten, Tommy Blackwell, and Andrew Waldherr, Washington University in St. Louis

VoltaFeet: A Sterile Foot Care Solution
Ashton Naumann, Logan Groneck, Matt Heiken, and Mary Ruppert-Stroescu, Washington University in St. Louis

Detachable Sleeves Doublet
Carolyn Schactler, Professor Emerita, Central Washington University

Functional Performance
Sherry Schofield and Meredith McQuerry, Florida State University

Perfect Imperfection
Jooyoung Shin, Indiana University

Counterpoise
Jooyoung Shin, Indiana University

From the Forest: Silk Lichen Jacket with Pleated Silk Dress
Diane Sparks, Colorado State University

Indigo Lantern
Eunyoung Yang, Meredith College

Tear of Volcano
Ling Zhang, Iowa State University
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**Constellation Guide**
Lida Aflatoony, University of Missouri  
Mentor: Jean Parsons

**Flex, Breath, Fit, and Walk: Exploring Technologies Accessible in Academia for Design and Production of a Custom Fit Shoes**
Lida Aflatoony, University of Missouri  
Mentor: Jean Parsons

**“The Suns of Indigo”- A Contemporary Interpretation of Adire Textile Art**
Maame Amoah, Kent State University  
Mentor: Tameka Ellington

**“Yaa Kuona” - An Exploration of the Origins of the Akan Matrilineal Family Structure**
Maame Amoah, Kent State University  
Mentor: Tameka Ellington

**Revitalize Responsibility**
Courtney Barbour, Minsu Kim, Stephanie Hubert, Burcu Bicak, and Cullen Anderson, Iowa State University  
Mentor: Chunhui Xiang

**Out There Barkley Marathons Women’s Race Kit**
Chrissy Bettencourt, University of Oregon  
Mentor: Susan Sokolowski

**Dre-jacket**
Sunhyung Cho, Iowa State University  
Mentor: Ellen McKinney

**What’s Left Over**
Kelsie Doty, Cornell University  
Mentor: Denise Green

**Converging Threads**
Kelsie Doty and Amanda Denham, Cornell University  
Mentor: Denise Green

**Art is the Flower, Life is the Green Leaf**
Erin French, Iowa State University  
Mentor: Eulanda Sanders

**Distortion**
Li Jiang, Central Michigan University  
Mentor: Ling Zhang

**Water Ripples on Fabric**
Li Jiang, Central Michigan University  
Mentor: Su Kyoung An

**Customizable Surface Contour and Coloring for Pile Fabrics**
Uikyung Jung, North Carolina State University  
Mentor: Traci Lamar

**The Death Valley Kit: A Racing Uniform for the Elite Women of the Speed Project**
Sarah Klecker, University of Oregon  
Mentor: Susan Sokolowski

**Farvasi: A Response to Ecological Concerns**
Mona Maher, Texas Tech University  
Mentor: Ashley Rougeaux-Burnes

**Flori Decidenti**
Michelle Park and Courtney Yadon, Kent State University  
Mentor: Chanjuan Chen
Just Go Cerebral Palsy Race Day Tights and Arm Sleeves
Nate Roese, University of Oregon
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Altered
Megan Romans, Iowa State University
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Wine Dyed: Multi-wear Sustainable Wedding Dress
Evelyn Rossol, Kent State University www
Mentor: Kendra Lapolla

Knot My Shirts: Women’s Wear Dress from Post-consumer Men’s Wear
Evelyn Rossol, Kent State University
Mentor: Chanjuan Chen

Hijabi Runner Recreational Apparel for Muslim Women
Jessie Silbert, University of Oregon
Mentor: Susan Sokolowski

Coral Wars
Kathryn Elizabeth Simmons and Erin O’Brien, Kent State University
Mentor: Linda Ohrn-McDaniel

Gender is a Drag
Kathryn Elizabeth Simmons, Kent State University
Mentor: Linda Ohrn-McDaniel

Optimal Anxiety
Cheyenne Smith, University of Delaware
Mentor: Belinda Orzada

Futurism Meet Sustainability: Exploring Underutilized Materials and Silhouette
Bingyue Wei, Iowa State University
Mentor: Ellen McKinney

Design and Development of a Visual and Tactile Garment Therapy for Children with Autism
Haobo Zhang, University of Delaware
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Weaving Sustainable Footwear
Quinn Ahrens, University of Central Missouri
Mentor: Melissa Abner

Yaqt Modernistic Dress
Kawthar Alibrahim, University of Idaho
Mentors: Sonya Meyer and Lori Wahl

Interstellar Voyager
Rodrigo Calderon, University of Arkansas
Mentor: Stephanie Hubert

Striped Cuirass
Sara Cho, University of North Texas
Mentor: Hae Jin Gam

Mystic Forest Coat
Brooke Connolly, North Carolina State University
Mentor: Traci A.M. Lama
Imprints of My Past
Emily Dillard, University of North Texas
Mentors: Janie Stidham and Hae Jin Gam

Mrs. Duo
Bre Ferrara, University of North Texas
Mentor: Janie Stidham

Under the Microscope
Bre Ferrara, University of North Texas
Mentor: Janie Stidham

A Starry Starry Night: Integrating Hand-Painted Textile Surface Design with Wearable Technology
Adrienne Howell, Jenna Matson, and Chaise Zahrt, Iowa State University
Mentors: Ellen McKinney, David Bis, Samuel Vande Loo, and Colin Willenborg

Through to Gold
Madeline Kim, Iowa State University
Mentor: Ellen McKinney

Evangeline
Anne Landau, Auburn University
Mentors: Young-A Lee and Dawn Michaelson

Porcelain
Elise Lee, Iowa State University
Mentor: Ling Zhang

Consecration
Jiayu Li, Central Michigan University
Mentor: Su Kyoung An

Illusive
Kasie Lung, Ryerson University
Mentors: Tarah Burke and Sandra Tullio-Pow

Hiemal
Kasie Lung, Ryerson University
Mentors: Danielle Martin and Sandra Tullio-Pow

A Progression in Color and Couture Style for the Traditional White Wedding Gown
Margaux Neborak, Cornell University
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Printing Our History and our Future: Using Wax to Illustrate Double-Consciousness
Zehna Odwar, Ryerson University
Mentors: Glynis Dupuis and Sandra Tullio-Pow

Eclipse
Serah Park, Cornell University
Mentor: Fatma Baytar

Pristine
Ryan Platt, Cornell University
Mentor: Huiju Park

As You Are II
Nicole Soriero, Centenary University
Mentor: Mia (Mikyoung) Whang

Architecture x Margiela
Wing Tang, University of Delaware
Mentor: Katya Roelse
Eclectic
Wing Tang, University of Delaware
Mentor: Katya Roelse

Nostalgia
Qiyao Xiong, Iowa State University
Mentor: Ling Zhang

Retro-spection
Mayra Yanez, University of North Texas
Mentor: Hae Jin Gam

The Resurrection
Mayra Yanez, University of North Texas
Mentor: Hae Jin Gam

Hidden Beauty
Yiming Yiliminuer, Ryerson University
Mentors: Danielle Martin and Sandra Tullio-Pow

Mondrian’s Chutes and Ladders
Erin Zhang, California State University-Long Beach
Mentor: MyungHee Sohn

Lucca’s Water
Eleonore Zurawski, Kent State University
Mentor: Linda Ohrn-McDaniel

Cover design by Bingyue Wei, Iowa State University,
“Futurism Meet Sustainability: Exploring Underutilized Materials and Silhouette.”
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The Soundless Outcry was an ensemble that was inspired by the Declaration of Korean Independence, which was announced by 33 ethnic representatives in Korea on March 1919, for Korea’s independence (Kim, 2019). This announcement was the largely peaceful speech in the world and followed more than a million Koreans’ non-violent and democratic uprising. It also became the spark of the March 1st civil movement that led Korea to independence. Nearly thirty years later, Korea gained independence after the defeat of the Empire of Japan in World War II. As the design scholars, The Soundless Outcry was designed to commemorate 100 years of March 1st Movement and to remind the importance and meaning of Korean’s nonviolent and democratic uprising through the Declaration of Korean Independence.

References:
The purpose of this design was to publicize an official Korean flag, which was established with symbolic meanings and remarkably used in the Korean independence movement in 1919, called March 1st Movement. The design shows the origin and meaning of the March 1st Movement and Korea’s independence from Japanese colonial rule by inspiring Korean flag into the design that was created. 2019 is the 100th anniversary of the March 1st Movement, and it should be a very important year to remember Korea’s independence once again (Kim, 2019). The Wave for Independence is a wearable garment to honor the origin and meaning of the March 1st Movement, which fought peacefully for the nation’s independence by using the Korean flag symbolically.

References:
For this project, I decided to combine Stratton-Porter’s promotion of unusual plants in design with her love of fine clothes and fabrics, expressing her unconventionality that operated (mostly) within acceptable boundaries of femininity in her period. To represent the strictures of the social norms within which Stratton-Porter lived, I chose to create a corset set in the period of one of her novels. Integrating the materials and techniques with my design concept, I deliberately selected a silk taffeta woven with a trite rose design (a fabric that Stratton-Porter would have found unoriginal) and overlaid it with an unconventional, bold interpretation of a ginseng plant that adorned the cover of one of Stratton-Porter’s novels. This corset represents the streak of rebellion and unconventionality, expressed in her nature work, that was intertwined with Stratton-Porter’s attempts to fit her societal expectations of a good wife and mother.
Perhaps the most striking of the designs, was a dress mentioned in Stratton-Porter’s book A Girl of the Limberlost inspired by the Eacles Imperalis moth (Stratton-Porter, 1909, pp. 337-338). For this project, I chose to create my own interpretation of the Eacles Imperalis dress as described in the book. The dress is designed to suit the publication year of the book, 1909. As Stratton-Porter educated the public about natural history through her novels, this dress is intended to increase interest in moths and provide inspiration for the viewer to learn more about them.

Eacles Imperialis 1909 Evening Gown

Charity Calvin Armstead  |  Brenau University, USA
Bat-wing denim dress

This dress was a response to a challenge of avoiding traditional seam placement and incorporating technology into the designing or making of the garment. The idea emerged from my associating the denim fabric with western wear and from the nontraditional seam placement challenge. Vintage western shirts have “bat-wing” shaped yoke seams with scallops and points similar to those in this dress. The pieces were laser cut, then seams and edges were topstitched with the golden hued thread found on most blue jeans today. The contrast color of the thread emphasizes the unique shapes of the seam lines and neckline. The denim was left raw, or unwashed, to maintain the crisp hand and uniform dark color. The designing and patternmaking were done exclusively using V-Stitcher, a 3D visualization program. This was a risk I assumed since I had not previously executed an original design exclusively using V-Stitcher.
Maternal Dress

Maternal Dress is a 1960’s inspired dress made from layered silk organza. The bottom, gray layer of fabric has personal statements about my life as a wife and mother handwritten forming stripes while the top layers have repeated statements reflecting society’s prescription for being wife and mother: traditional wedding vows on the bodice and parenting tips on the skirt. The layering order visually veils the personal statements and symbolically places the intimate thoughts against the body; the public vows and tips on the outer layer of the dress are a buffer between what is felt by the wearer and what is portrayed. Maternal Dress serves as a commentary on the complexities of one woman’s identity with layers of meaning, some public and some hidden. Focusing in interactions of past and present, the dress bridges the decades between 1960’s housewives and 21st century working mothers.
The purpose of the design was to demonstrate visually the connection between a cultural symbol and artistic fashion. The objective of this design was to create a wearable avant-garde look satisfying both the aesthetics and wearability of women’s strapless dresses and accessories by using handmade and 3D-printed yin-yang circles. The shape and color contrast of yin-yang circles on this garment have aesthetic properties viewers will appreciate. The yin-yang circles consist of contrasting colors, with black on one side and light gray/black on the other, which generates a strong visual impact. To elevate the overall concept of yin-yang into a wearable avant-garde look, 3D-printed yin-yang circles were also created and made into a necklace. This necklace consisted of different-sized yin-yang circles, which resemble Asian hanging wall art; it accents and completes a wearable avant-garde look. This wearable avant-garde strapless dress, inspired by a cultural symbol, the yin-yang circle, can help upgrade the use of yin-yang in both art and fashion.
This design intends to present a creative method of conveying the culture of the ethnic group of Sher in southeastern China. Sher nationality is an ethnic minority in the Fujian Province of China, and their beautiful costume is an important cultural heritage of China that should be preserved. This design inspired by the profile and culture of the Sher was created using wool line embroidery, laser engraving, and other technology. This dress design combines the cultural elements of Sher with western design principles. The garment displays the symbolic meaning of a Sher phoenix totem, creating stunning visuals while representing the cultural values through a creative fashion expression.

Reinventing traditional dress:
A design inspired by Chinese Sher ethnic costumes
Modular design has been explored by textile and apparel designers. However, most designers who explored modular textile and apparel designs focused on two-dimensional products or more boxy silhouettes that did not contour closely to the body since most of their works were made from modular shapes of one size. This research exploration focused on creating modules that can be used to create fitted garments combined with digitally printed fabric for dramatic and changeable surface design. To investigate, the researchers created one modular shape based on a polygon shape with inspiration from elements found in nature. By gradually increasing the size of the modular shapes to fit the three measurements of a dress-form, those modules could be interlocked together through the slots on the sides to create a textile and fitted garments. An image was used in Adobe Photoshop and digitally printed on silk charmeuse fabric to create the final design.

The Sun Shines Through

Chanjuan Chen | Kent State University
Lenticular Flow

Modular design has been explored by textile and apparel designers. However, most designers who explored modular textile and apparel designs focused on two-dimensional products or more boxy silhouettes that did not contour closely to the body since most of their works were made from modular shapes of one size. This research exploration focused on creating modules that can be used to create fitted garments combined with digitally printed fabric for dramatic and changeable surface design. To investigate, the researchers created one modular shape based on a triangle shape with inspiration from the aquatic life. By gradually increasing the size of the modular shapes to fit the three measurements of a dress-form, those modules could be interlocked together through the slots on the sides to create a textile and fitted top on lenticular fabric sheets. A print was developed in Adobe Illustrator and digitally printed on silk charmeuse to create the skirt of the design.

Chanjuan Chen | Kent State University, USA; Kyung-Hee Choi | Hansung University, South Korea
As a type of transformable designs, modular garments can be changed into multiple looks and create personalized designs by consumers. While designers can use the modular concept to create original garments, some customers with low levels of skill may find it difficult to rearrange a whole garment. The goal for this project was to create a modular garment which could be easily transformed by consumers of all skill levels. The researcher used inspiration from the art of Chinese paper cutting to create a flower module. A dress pattern was then drafted on Optitex with all darts being transferred from the basic sloper pattern into seams so that the edges could be used for joining the flower modular pieces. The final design can be worn as a simple sheath dress or transformed to be different looks by attaching the modular shapes provided, such as adding flared sleeves or lengthen the skirt on the hem.
Fashion trends or items that once nearly vanished revive when they regain cultural, religious, social or economical significance in the given society during the specific time period. Hanbok almost disappeared as the everyday clothing due to the drastic westernization of Korea during the early to mid-twentieth century. This design scholarship is aimed at developing designs that adhere to aesthetics of women’s hanbok but emphasize independence, initiative, and confidence of contemporary women. Overall visual image of this design is intended to emphasize empowerment along with harmony and balance of modern women’s lives. This design represents independent and confident identity of contemporary women by employing see-through fabrics, angular lines, high standing collar, and fitted cuffs while adhering to elegant and classy aesthetics of traditional Korean women’s hanbok by introducing wide pants in place of a skirt and using sheer silk organza fabrics, simplified straight lines, and handmade-fabric corsage as aim.
The W=FT initiative is an design collaboration aimed at determining post-market manufacturing opportunities that re-define the textile waste stream (i.e. deadstock textile and post-consumer garments) as a value stream. The research/discovery team specifically focused on fast-fashion “fancy” polyester crepe blend, while designed with “luxe” appeal, this blended textile is extremely problematic and difficult to recycle. The design challenge for W=FT # 001: Tufted was to (1) develop systems of processing W=FT materials, retrofit or re-develop machinery that can develop W=FT product and post-market (2) W=FT textile yardage (3) textile product artifact with a focus on redefining waste as value. This phase solely focused on discovery and textile production and engineering. While future phases will focus on the development of three-dimensional textile products, they will not be discussed in this abstract. The design should be reviewed as a textile design development.

Kelly Cobb | University of Delaware, USA; Tim Eads | TIM EADS LLC, USA
Through collaborative practice, the authors (as designers) found an opportunity to mesh skills and expertise in the areas of textile creation, apparel design and fashion history, and shared design exploration. The collaborators worked jointly to generate a shared process that resulted in The Neo-Heritage Ensemble. In this design scenario, a collaborative team looked at the past, to understand the present, shaping the future through creative scholarship. Our aim was to invigorate the University College or “Class” blazer and to engage a new generation. This style of blazer evolved from the Ivy League university jacket, an early 20th century adaptation of the late 19th century British rowing club blazer. Furthermore, the University College blazer has historically serve as an identifier of status. We adopted the collection as our primary inspiration as we conceptualized a wearable ensemble that exists simultaneously as an archive and innovation.
The rate of apparel consumption and disposal has increased over recent years, resulting in an abundance of functional unwanted clothing, much of which ends in landfills. Transforming unwanted goods gives renewed value to these products and is one solution for diverting textile waste. The purpose of this design was to trial the ‘repurposing design process’ in order to suggest recommendations for continued research. The repurposing level focused in Suit of the Youth was intentional pattern-making, which involves deconstructing a garment and developing new patterns which are purposefully drafted and cut to utilize available fabric to ultimately produce a minimal waste new design. Original materials included a men’s suit jacket and slacks. Silhouette inspiration was influenced by active wear and patterns were created and placed to feature original garment components such as pockets and belt loops. Control of excess material was addressed through pleats, flanges, and darts.

Suit of the Youth: ‘Intentional Pattern-making’ proof of concept for repurposing apparel

Rachel J. Eike  |  Iowa State University, USA
This piece is a reinterpretation of the Gullah Geechee fable Bruh Alligator Meets Trouble, where Bruh Rabbit sought revenge against Bruh Alligator for bragging about his “perfect” life. In the beginning God created the alligator with beautiful smooth white skin; and during the confrontation Bruh Rabbit set Bruh Alligator’s white skin on fire. The blaze on the alligator’s smooth white body transformed it to the rough dry shell we know of today. Most lead characters in African fables are male; thus, it was important to interpret this story in the form of designed art from a feminine perspective. This piece was created by draping/drafting the pattern, then cutting the dress from leather. To allude to the transition of soft smooth skin to rough bumpy skin, white lambskin was used on the main body of the dress and alligator leather was sewn behind openings of the lamb skin.
The purpose was to experiment with the relationship between leather materials and a laser-cutting technique to broaden the depth of my creative scholarship. Thus, I wanted to create a dress that is historically inspired yet that employs a new technology on leather material that I have not used before. The laser-cutting method has been used by various fashion designers to create unique looks and finishes. Leather is one of humanity’s oldest materials to be used for clothing and is a durable material, so garments made with it can withstand decades of use and wear quite well, which is reflected in my inspiration coming from historic costumes. The motivation for this design came from a donation of leathers from a local handbag company to the university. As leftover leather samples, there were many different colors, textures, and sizes, and I recovered materials once viewed as useless to create a new design.

The Cut Dress

Hae Jin Gam  |  University of North Texas, USA
This design submission is the collaborative artifact created by three fashion design instructors and practitioners that aimed to combine their design skills via social interactive practice. A Japanese story, that of princess Takiyasha the Witch and the Skeleton Spectre, painted on woodblock by Kuniyoshi, U. (c. 1843 - 1847), captured the imagination of the designers. In the painting, the princess summons a giant skeleton to help her revenge her father's death. Words derived from the story, such as ‘mystery,’ ‘power,’ ‘presence,’ and ‘deep black,’ were translated into materials and construction techniques after a two-month conceptual development process. The result is a high fashion look with an intriguing mix of crafted details that highlights each designer's expertise, as well as a material reflection of the rich creative experience and innovative employment of techniques inspired by ethnic storytelling.

Reference:
A particularly cold winter had me pondering the historical quilted petticoat. Created as both a thermal undergarment and decorative skirt (Cunningham & Cunninghman, 1992), temperature-controlled environments have removed the need for such skirts. However, with energy consumption awareness growing, an underlying purpose was to create a thermal and decorative skirt that applied and expanded on methods in my repertoire (plant pounding, free-motion stitching, natural dyeing) while exploring techniques new to me (reverse appliqué).

Reference:
This design project integrates technology, handcraft weaving techniques, and sustainable design practice creating a sophisticated outfit. This is the second time one of the designers has used triaxial weaving, where three different strips are intertwined to create the illusion of a three-dimensional cube pattern after the weaving has completed. This time, the designers have created a surface pattern more complex than the basic cube using triaxial weaving by studying ‘mad weave’. This project was created to inspire others to think about using hand craft techniques that has been practiced by various cultural groups for many years. As the most significant trends of contemporary fashion trends are in technology and sustainability, this design project was developed to demonstrate creative and innovative ways to change how we view the current existing fashion paradigm from where consumers demand for fast, low priced, trend fashion products to a more humanistic, sustainable, and craft culture.

Mathmadness

Kim Hahn & Evelyn Rossol | Kent State University, USA
The purpose of this design was to create a woven surface wearable inspired by spiral radial cleavage patterns that occur through cell division as well as in ancient historic tile/ornament art. The fascination of topological equations of intersecting dimensions creating patterns that were mirrored in our physical world has led to the creation this design. Using similar algorithmic rules and modularity that have been used over the history, designers developed and created the large-scale interference patterns by weaving an opaque gradient pattern of four tangentially touching spheres to be overlaid on an offset orientation of the first pattern. The cocoon shaped coat was constructed to emphasize newly developed woven pattern as the back of the coat. This design innovation comes from the use of both digital textile printing and hand weaving techniques to create an elegant wearable art piece that highlights Euclidean geometry and ancient cultures.
The goal of this conceptual project was to build a garment that would find itself at the intersection between the best instances of full fashioning (seamless knitting), cut & sew (zero waste) and A-POC. Using a seamless knitted spine, admittedly handknitted but a model for future machine knitting none the less, the two sleeves that followed the zero-waste principle while remaining essentially an A-POC style tube was an attempt to find this center. It was also, finally, an attempt to use up the remainder of a stash of yarn from a previous project and a piece of cloth too small to use elsewhere but too special to waste or discard. The result is the Stash Monarch, a butterfly rising from the cocoon of forgotten fiber.

The Stash Monarch is an exploration of zero-waste design within the domain of knitwear. Attempting to combine the best strategies of waste reduction by integrating seamless knitting with zero-waste cut & sew, the design also incorporates the knit-tube aspects of A-POC design, as the sleeves could have been made with knitted tubing instead of the flat cloth chosen from the bottom of the stash for its amazing color congruity with a ball of yarn that emerged from dye bath calibration.
The purpose of this design is to develop functional maternity hospital gowns that meet the user needs for both patients and practitioners. To determine key design features of both patient and practitioners’ user needs for maternity gowns, a user-centered design (UCD) framework (Morris, Park, & Sarkar, 2015) was adopted. The final design is a separate two-piece gown with a ¾” wide adjustable knit buttonhole elastic band on the waist that can fit a variety of both laboring and postpartum women’s body sizes (size 4-40). The top piece features overlapping front panels with underlying washable nursing breast pad insert pockets. All of the design features enhance physical comfort (easy access, texture), functional comfort (e.g., medical device access, skin-to-skin contact with newborns, breastfeeding), and psychological comfort (e.g., modesty, aesthetics).
In this study, I used the “Sambe” that is the Korean traditional fabric. “Sambe” was the primary textile fiber used in clothing for commoners and the “Hanji” is the traditional handmade paper in Korea. The “Hanji” made by the paper mulberry which is a commonly grown plant in Asia. This is a paper but it is very durable paper so it was used to cover floors, walls, and windows. The neoprene fabric is conflicting materials with “Sambe” and “Hanji”. However, I’ve got inspiration from “Jogakbo”, originally it made from different fabrics and colors but it shown the beauty of harmony. The beauty is a perfect consonance like the aesthetic colors and fabric through “Jogakbo” technic. Three colors made gradation that shown color harmony with the traditional materials and neoprene. Also, the fabric texture is opposite but it blended that “Sambe” and “Hanji” have rough texture but neoprene has smooth.

The beauty of modern harmony “Jogakbo”
Vegetation is the fourth garment in a series of creative scholarship pieces dedicated to the natural elements found along the Oregon Coast. The purpose of this garment is to bring awareness to the growing kelp farming industry and its impact on helping reduce ocean acidification and creating sustainable farming initiatives, and to do so through the lens of a ready to wear garment in a personally previously unexplored target market. The kilt is made of cotton sateen with asymmetrical pleating, welt pocket, and a side patch pocket with piped edging details. The shirt print was created using a photograph of the Oregon Coast. The jacket is made of leather and lined with satin. The shoulders of the jacket are embellished with leather appliques. The collar is constructed with rows of piping and long handing tendrils to mimic the wrapping and tangling of the kelp when washed ashore.
Heat stress is being exposed to extreme heat and the body is unable to cool itself properly which can result in a life-threatening condition such as a heat stroke or heart attack. Electrocardiogram (ECG) monitoring becomes essential as an early warning sign to detect related to heart conditions. Fire fighters are a high-risk group working in a high stress environment and need a specially designed smart clothing solution to monitor their health. For this project, smart clothing was created aimed at developing future solutions to support the management of heart disease as well as provide support for daily health monitoring for fire fighters.
Many pedestrians are injured by automobiles as a result of drivers’ visual limitation. Pedestrians at dawn and night are more at risk than in full sunlight. Researcher suggested that pedestrians’ apparel and poor visibility is likely to be a major contribution to these accidents. This project includes a full-length sleeve sports jacket and long jogger pants with reflective fabric to create V effects on joining. A 100% polyester black interlock fabric was used to create upper portion of the pants. The purpose of this garment is to bring outdoor safety issues in the dark environment such as jogging or any sport activities in the early morning and late evening when visibility is low. This outfit can be visible in darker environments when exposed to flashes of light to circumvent accidents. The reflective properties in this outfit provide better visuality under a dark environment.

Reflective Light Sport Suit

Shu-Hwa Lin | University of Hawaii, USA
Unicorn Colors confronts the over-sexualization of young girls in the current market selection of formal wear for tween girls through the presentation of an age-appropriate functional option for wear to a middle school dance. Using the FEA consumer needs model (Lamb & Kallal, 1992), this 3-piece ensemble consisting of a short sleeve convertible jacket, reversible sleeveless blouse, and culottes was developed in a comfortable stretch fabric. Functional needs were addressed through design characteristics that allow the wearer to dress without assistance, fit her cell phone in her pockets, reverse the top should a spill occur and covert the jacket into a purse for easy carry. Expressive needs were met as the tween felt self-confident and not exposed to unwanted sexual attention. Aesthetic needs were met by the bold colors inspired by unicorns and the blouse yoke, straps, and jacket back design features.
In the future, we believe that AR-assisted fashion will be a popular means to express one’s identity and messages to others. In this regard, we utilized AR technologies in apparel design to communicate the theme of the design. To demonstrate, we developed a prototype for an augmented reality app by utilizing AR tracking and registration techniques through Vuforia (AR software development kit), Blender (3D animation software), and Unity (game engine software). The purpose of the design was twofold: 1) Show by means of a concrete example that people can create AR for their garments and embed messages that they would like to communicate to others using the app; and 2) Provide insight into its potential for designers who would like to apply AR technology to their design.
The main inspiration for the dress came from waltz. Waltz is a dance performed by a couple in triple time. The designers attempted to convey the inspiration by the physical fabrics of the dress and Augmented Reality (AR) added to the dress. By using five different plaid fabrics, the designers visualized the rhythmical movement of waltz. In addition, viewers are able to see numerous geometric 3D shapes moving along with waltz music via the AR app. To communicate the inspiration more clearly, we focused on various colors of different plaid fabric and augmented 3D animations of cubes with AR technology. Along with the plaid’s pattern and colors, the animations highlighted dynamic motions of colorful cubes with sounds of waltz like dancing cubes. If viewers detect the plaid fabrics of the dress with the AR app through their mobile device, they can interact the cube animations associated with the shapes.
Synthesis Flow has a distinct visual impact resulting from the combination of digital printing and laser cutting. The design aesthetic of this work is intended to create an experimental art-wear garment with unique, organic shapes that draw attention to the wearer’s face. The laser cutouts are organic shapes that reflect the lines in the digital textile print. These cut shapes inspired possible directions for the garment silhouette and with the fabric fusing process, resulted in a textile with a stiff body that could support the lifts and tucks made possible with the laser cutting.
Adaptive Active builds on research that explores reducing apparel-related barriers for people living with disabilities by exploring adaptive apparel features for inclusive activewear. By including adaptive features, the author feels that these garments are marketable to a wide variety of people, regardless of ability. This design adds value to the existing body of work about the apparel needs of people living with disabilities and adaptive apparel by implementing functional features into ready-to-wear activewear garments. Mainly, this work reflects on need for activewear that is inclusive of people living with disabilities and cogitates that people with disabilities are physically active individuals. Designers should consider the needs of people living with disabilities in the design of ready-to-wear clothing as to not unintentionally develop apparel that excludes certain user groups from participating in activities that enhance well-being.
The significance of this design approach is more valuable than the design itself. It is important to find value in material and look at creative solutions to using textiles. Naturally this is not the first approach to using scraps in designs people have been doing this since fabric was first cut into, to make clothing. We are at a point in time where we have to re-educate people on the value of material things. Values that were once natural to everyone have become insignificant to many. As designers and design educators it is our responsibility to help our students see the creative options they have by leading by example. The initial reason for this dress was to start thinking in new ways about the waste in the fashion industry this dress was created as a component of a larger body of work that focused mainly on the waste in fashion and ways in which we could find our way back to the value of the materials. Through the process of playing with waste I am learning to look at the materials with new eyes, it is about seeing opportunities rather than challenges and that is what pushes the design process forward.
The Hive was created as an exploratory experience where the space of making was in focus. The purpose of this design was not to create a ready to wear garment but to make a one of a kind design that was simple in color yet pushed boundaries by knitting technologies together through the use of equipment found in a fabrication lab. The design of The Hive was a natural continuation of my work where I am trying to explore the areas of knit technology and digital applications in fashion. It has pushed my line of inquiry forward and added to my knowledge through the application of multiple digital technologies. As educators and researchers it is important for us to move forward in our work and push our boundaries to keep learning and exploring even if at times it seems challenging. We can collaborate and work with experts in these technologies but in order to be able to communicate we need a basic understanding. Such an understanding will develop through exploration.

The Hive

Linda Ohrn-McDaniel | Kent State University, USA
Digital technologies create never ending challenges and opportunities and sometimes the challenges are what bring new opportunities to light. In this design the idea of the final dress changed many times before the dress was completed and in the end it was a mix of challenges and opportunities that drove the decision making process. The focal point of this design is on the surface of the dress. The exploration of playing with the expectations of knitted and woven textiles and what the benefits of each are a way to look at the future of textile innovation. The development of this dress fits within my body of work which is exploring developments of knitted textiles in a more commercial market segment. The explorations of plating in single jersey allows for future steps in development of lightweight knitted textiles with interesting patterns.

Plated Plaid

Linda Ohrn-McDaniel | Kent State University, USA
An evening dress for an erhu musician’s performance attire was inspired by the east-west composition of the musical groups’ heritage and the origins of their instruments. The impetus for this design came from a call from a colleague in the music department at my university requesting performance attire for a major venue for the three-person musical ensemble. The group usually wears garments purchased from retail stores for performances, and had never had coordinating ensembles. However, this event was special; a premiere, so custom performance wear was requested. With the assistance of a design team, I ultimately designed and executed two garments for each of the three musicians to wear at this and future performances; this paper shares the design development of a custom dress for the female musician who plays an erhu.

6 Wire: Red and Black

An evening dress for an erhu musician’s performance attire was inspired by the east-west composition of the musical groups’ heritage and the origins of their instruments. The impetus for this design came from a call from a colleague in the music department at my university requesting performance attire for a major venue for the three-person musical ensemble. The group usually wears garments purchased from retail stores for performances, and had never had coordinating ensembles. However, this event was special; a premiere, so custom performance wear was requested. With the assistance of a design team, I ultimately designed and executed two garments for each of the three musicians to wear at this and future performances; this paper shares the design development of a custom dress for the female musician who plays an erhu.

Belinda T. Orzada, M. Jo Kallal, Cheyenne Smith, Mikayla DuBreuil & Wing Tang | University of Delaware, USA
The flow of notes on sheets of music were visually translated to an undulating ribbon effect on an evening dress for an erhu musician’s performance attire. The impetus for this design came from a call from a colleague in the music department at my university requesting performance attire for a major venue for the three-person musical ensemble. The group usually wears garments purchased from retail stores for performances, and had never had coordinating ensembles. However, this event was special; a premiere, so custom performance wear was requested. With the assistance of a design team, I ultimately designed and executed two garments for each of the three musicians to wear at this and future performances; this paper shares the design development of a custom dress for the female musician who plays an erhu.

6 Wire: Flow

Belinda T. Orzada, M. Jo Kallal, Cheyenne Smith, Mikayla DuBreuil & Wing Tang | University of Delaware, USA
Floral Fusion explores the creative possibilities for integration of digital textile print with laser cutting. We previously experimented with the use of laser cutting as a tool to create techniques for adjusting fit and as a beginning point for shape development. The goal of this design inquiry was to use print design as a guide to create textures within the garment and as a tool to create individual print motifs for additional 3-dimensional shapes. The intersection of digital print with laser cutting offers many dimensions for creative work, but also presents challenges when aligning the print with the cutting pattern. The use of silk fabric for printing required supplemental layers to prevent unraveling of cut edges. The design aesthetic of Floral Fusion is intended to create a flow of movement through transitions in print scale, and through the placement of individually laser cut flowers on the dress collar and jacket.

Jean Parsons | University of Missouri, USA; Kristen Morris | Colorado State University, USA
A Suit for Hoogstraten is part of a series of experience prototypes (EPs) designed to promote digital textile printing (DTP) acceptance in costume and theatrical fashion and part a larger study that uses the results of a DTP trend analysis and costume educators’ perceptions of DTP use to frame the experience prototyping activity. Through EPing both the process and the product can be explored, evaluated, and communicated as an experience-driven system in order to present a more robust understanding of the technological integration (Buchenu & Fulton Suri, 2000; Campore & Bordegoni, 2016). The purpose of this EP was to: (a) investigate existing skills of costumers to generate context and understanding; (b) develop an easy to use theatrical fashion design process integrating digital textile design and DTP for engineered surface designs, and (d) design and build a costume to communicate the results and significance of the aesthetic and functional attributes and the user experience of integrated process.
The purpose of Digital Textile Design 101 was to develop a simplified digital textile design method that would exploit the digital textile printing high degree of aesthetic specificity while relying only on very basic digital skills and the use of an online digital textile printing service company. A simple large-scale photorealistic mirrored repeat pattern for a full body geometric garment with only a few seams was planned. Kimonos have historically been a canvas that many types of artists have explored, due to the large areas of rectangular 2-dimensional spaces within the garment pattern. Kimono garment patterns, also considered low waste patterning, have very little textile scraps, therefore, the digital print would be economized and the expanse of the print would be easily seen.
Double Consciousness

Double Consciousness is a response to an exploration of identity and cultural expression through dress. Dress is used as a vehicle to make statements culturally and personally, it has long been used as an expression, a form of rebellion as well as a tool of conformity. The ensemble attempts to express concepts related to historical, cultural, and personal aspects of African identity and dress. It was developed to express the emotional and spiritual journey of understanding and appreciating one’s self. Various forms of technology such as 3D modeling and printing, and digital textile printing aided the designer’s process.
My intention is to illustrate how fine art can influence fashion design. Fine art painting inspires my textile designs. The integration of my two-dimensional designs into three-dimensional garments is my design challenge – to create an original 2-D design and form it into a unique and innovative 3-D form. Derived from parts of a painting that took three months to complete, this print was developed through dozens of Photoshop iterations. The painting was chosen because I was curious about how the series of hands that appear in it could wrap around the body in the shape of a dress. The title of the dress reflects the hands from the original painting around the chalice-shaped figure that resulted from the repeat technique of mirroring – used to evoke the painter’s surrealist style. The irregular but symmetric tucks near the midriff are intended to manipulate the print and form while adding surface texture.
Digital fabrication has become an important tool for design, introducing opportunities for changes, risk-taking, and creativity to be integrated into the design process. This is explored here through a focus on the reasons to include digital tools, both practical and aesthetic. Embracing the precision and repetitive capabilities of the laser-cutter, the garment was designed to be constructed using laser-cut denim components that would be hand-embellished with laser-cut acrylic, expired credit cards, and seed beads. The components were then washed and allowed to fray, removing the harsh digital aesthetic; the final step was assembling them into a tunic dress. This development process allowed creative risk to be harnessed in a successful garment, facilitating responsive creativity at each step of the making process. In this way, the machine and hand produced a combined aesthetic and revealed how digital tools empower hand-worked processes by eliminating tedious, repetitive activities.
Controlled Cutting was created as part of a collaborative creative design project including five designers from various universities. The project intended to evaluate the benefit of risk-taking throughout the creative design process and identify how technology can enrich a designer’s process. We intend to enhance or add to the conversation and scholarship about the creative design process by documenting and sharing the outcomes, including exhibiting all resulting garments as a visual representation of our various approaches to the challenge.
To address the need in both the literature and the commercial market for medical-grade Wearable Electronic Textile-based Systems (WETS), our research team developed ELIS, a shirt that gathers medical-grade electric signals from the human body. A team of mechanical engineers and apparel designers, in consultation with a cardiologist and a biomedical scientist, worked together over the course of four months. Our goals were to determine the most efficient and effective way to detect an EKG signal using textile electrodes and conductive thread, to determine the best way to construct conductive paths in stretch material using conductive threads, to source and develop an appropriate EKG monitor, and to design, make, and assess an inobtrusive shirt embodying the technology.
VoltaFeet was developed with the goal of creating a wearable smart textile device that addresses the need for a simple, effective, and long-lasting treatment that reliably eliminates toe/foot fungus and bacteria. Fungal growth, commonly known as athlete’s foot, can result in itchy, inflamed skin. Bacteria such as staph aureus (s. aureus) and e. coli have been determined to cause excess mortality rates during hospital stays. While several solutions for athlete’s foot exist, including creams, ointments, powders, socks and inserts, the market is devoid of products that are both actively antimicrobial and long lasting. Bacteria have become resistant to antibiotics and can resist on inanimate surfaces for months. Specifically, VoltaFeet incorporates electronic textile technology to address the need of the growing population of diabetics who are prone to chronic open ulcers on the foot, which increases risk of infection and amputation. Diabetes is the leading cause of non-traumatic limb amputation. A device capable of decreasing bacterial load for long-term ulcer protection would not only reduce the risk of infection but could also promote healing.
This design reinterprets the 16th century doublet as a couture garment for women. It can be worn with or without sleeves. A double-weave wool fabric forms the body of the doublet; faux leather comprises the sleeves, trim, buttonholes, and collar. Italian faux-antique brass buttons encircle each armscye. The fabric’s geometric pattern is perfectly matched. A bias strip of fabric and one of nylon “horsehair” provides structure and flexibility to the sleeve cap, preventing it from sagging or puckering between buttons. Bound, leather buttonholes are hand-crafted and cored, with two plies of the nine-ply cording removed to achieve the desired bulk. Pressing, steaming and the couture tailoring technique of pounding creates smooth intersections of bulky fabric, piping, and Pleather. Three tucks ornament the wrist-ends of each sleeves; the cuff is hand stitched and a tiny black bead is attached where otherwise a minute stitch would show inside the cuff.
Firefighters face a multitude of job hazards; however, improvements in protection have resulted in decreased comfort and mobility while increasing physiological stress. Semi-structured focus groups and a nationwide survey were utilized to determine user needs, then to incorporate identified needs into a firefighter turnout suit that enhanced functionality while also meeting the expressive and aesthetic requirements of the users. The major functional changes needed were for mobility when reaching, both vertically and horizontally, for ease in crawling, and for raising the knee. To address these concerns, the design team worked on maximizing joint articulation, reducing bulk and pinch points, and increasing movement while maintaining correct placement on the body. Once functional changes were incorporated, the team focused on reducing garment silhouette to more closely align with the visual identity of a firefighter (expressive needs) and included color blocking to provide visual impact and create a more athletic look (aesthetic needs).
The design of Perfect Imperfection aimed to realize the distinct “dress-body relationship” established in Eastern and Western cultures through the form of a single garment created to achieve formative balance and visual harmony between opposing design elements. The dichotomies included two-dimensional body-defying shapes vs. three-dimensional body-molding shapes, soft and smooth surface vs. coarse and tactile texture, and black vs. white. I began this project by deconstructing a particular type of traditional Korean women’s underwear and modifying each part before reassembling them. Sustainable design methods were employed; fabric waste was minimized by using the full width of the textiles and no-waste cutting. Korean traditional floral-pattern silk organza was cut to the desired length and each length of fabric was shaped to fit the body by gathering only. Inspired by this specific tweed’s intrinsic and unique fringed edges, I decided to utilize it as a design element. Less waste was produced!
Inspired by the profoundly distinct ‘dress-body relationship’ established in East and West, I aimed to demonstrate innovative ways in which two-dimensional body-defying shapes reveal and suggest three-dimensional body silhouette through the design of Counterpoise. An ambiguous boundary between dress and the body was introduced in the form of transformability. The top made of two long rectangles can transform into a variety of shapes and sizes by adjusting the volume of gathers with a drawstring. Its sheer and amorphous character created obscurity within the body-dress relationship. In contrast, the design of the trousers, inspired by traditional Korean women’s underwear, was constructed with various shapes resulting in a fixed and non-transformable form. Its waistband was made of strips introducing an asymmetry that subtly disrupts the symmetry of the outfit. The semi-transparency of the pants served two purposes; it blurred the boundaries between the body and dress and simultaneously revealed the three-dimensional body encaged in two-dimensional form.
Colors from nature in an autumnal range set the mood for this design. The colors in the digitally printed textile were taken directly from the photograph of lichen. The green, orange and purple are complementary secondary colors, and as such set up a natural contrast. The dark peat brown in the hand-dyed silk created a supportive background for the vibrant jacket colors. The linear patterning in the hand-pleated silk suggested the configuration of tree bark, and had an inherently irregular surface texture which is consistent with a Wabi-Sabi aesthetic preference for the irregular and the imperfect.
Indigo Lantern is one of self-exploration of surface design techniques using natural dyes. The purpose of this project is to synchronize the cultural design components through construction techniques and highlight the sustainable practice of using natural dye to create a modern look. The inspiration came from traditional Korean patchwork Jogakbo and Buddhist lantern festival. The ensemble is a unique interpretation of jogakbo and the sustainable practice of using natural dyes. The dress creates rhythmic characteristics with the structural patchwork fashioning a 3-D lantern shape. This design contributes to the expression of a sense of emphasis, harmony, and unity in the final design.
The goal of this design was to represent the rare scene of the Kilauea Volcanic eruption and the magnificence of nature. The textile and silhouette of this design were inspired by the power and brilliance of lava and the story of the goddess Pele. Textile print was emphasized the contrast of the black and bright colors to demonstrate the texture of the dried lava, ash, fire, and hot lava. The designer constructed simple shapes with straight and curvy lines to depict the stiffness of lava stones and lava ash. The extended arches formed over the shoulders and the skirt were inspired by the lava tube on the Hawaii Island, also embodying humanitarian protection during unstoppable natural disasters. The silhouette and color design illustrated the magnificence of the volcano eruption, and its consequential destruction of environment and human livelihood.

**Tears of Volcano**

Ling Zhang  | Iowa State University, USA
The goal of this design process was creation of a garment with imbedded guidelines, similar to a map, integrated into the surface design. These guidelines are intended to assist users in constructing their own garment shape variations, even when there are different and connected parts, or multiple ways to wear the garment. The goal of the design was to create a 2D to 3D process that places agency in the hands of the user. As a 2D garment it is a displayable artwork. The connection points are designed to look like star constellations connected with lines that are visible only when the garment is in the 2D format. The visible parts include the folding lines indicated by silver stitches, which guide the user in the direction they need to fold the pleats of the garment.
Flex, Breath, Fit, and Walk: Exploring Technologies Accessible in Academia for Design and Production of a Custom Fit Shoes

This exploratory design research was conducted to investigate the existing technologies accessible in academia to design and produce a sample pair of shoes with respect to standards implemented in footwear manufacturing. In this design, three factors were explored: flexibility in material and forms, breathability, and custom fitting. In this design, customized shoe sole and footbed was designed and 3D printed based on the customized foot form created from participant’s foot. The material used for 3D printing the shoe sole and shoe bed is a liquid base form called Tango which has a rubber-like quality to create a realistic prototype. In order to implement additional flexibility in shoe sole, the pattern of the sole followed the living hinge texture technique to guaranty the movement and bendability without breaking the material. Software used to develop this design include; Adobe Illustrator, Corel Draw, Autodesk® Fusion 360™, and Slicer for Autodesk® Fusion 360™. Technologies such as 3D printing and laser cutting used in this process.
"The Suns of Indigo" - a contemporary interpretation of Adire textile art

"The Suns of Indigo" dress is a beautiful contemporary interpretation of the traditional methods of Nigerian Adire textile art. This dress highlights the uniqueness and creative applications of fabric making with the aim of promoting the art of Adire to the wider fashion industry as a more sustainable approach toward fabric dyeing. With a unique storyline coupled with bold patterns, "The Suns of Indigo," aims to promote a curiosity of the Afrofuturism cultural movement currently on the rise in Black communities all through the African diaspora.
In this piece, the iconic Kente of Ghana is reimagined in a highly feminine silhouette that is representative of this matrilineal practice. The custom rayon/cotton monochromatic Kente was sourced directly from Ghana and handwoven on a traditional loom according to my specifications. In essence, this garment, titled “Yaa Kuona” seeks to recount the history of the Akan and to educate scholars in the textile and apparel field about the rich Akan culture while highlighting a different approach to traditional Ghanaian Kente fabric as a monochromatic indigo cloth.

“Yaa Kuona” - an exploration of the origins of the Akan matrilineal family structure

Maame Amoah; Mentor: Tameka N. Ellington | Kent State University, USA
Findings from this research contribute to advances in sustainability. Because of the importance of sustainability in the world today, this research proves to be beneficial both for academia and industry purposes. This design offers a practical approach to repurposing textiles through use of both recycling and upcycling methods to meet the needs of the elderly market. Furthermore, this research offers an innovative solution for textile waste collected from university campuses. Because textile waste is an abundant concern, this research could provide implications for future research and use of an innovative method for reclaiming textiles.
The product goal is to outfit the female ultra runner in a race kit that keeps her cool and protected from the terrain so that she can complete the Barkley Marathons. Given the insight from Anderson-Abbs, I knew that the number one problem to solve was thermoregulation, since athletes are choosing to be cool over protected and ending up with battered legs. The athlete feedback I received was that she liked the minimalist nature of the shorts and the convenience of the pockets. She also said that abrasion-resistant fabric felt protective without being overly heavy or obstructive. This project is significant because no one is designing apparel with this specific athlete in mind. Female ultra marathon runners have their own unique challenges, and my design looks to address these issues through the lens of arguably the world’s most intense ultra marathon.
As an approach to design sustainable clothing, this piece focuses on developing a multi-purpose garment for both a jacket and a dress. To represent the two types of garments in a garment, the pattern pieces were loosely predetermined through experimentation on a half-scale form. After the pattern pieces were decided, they were double-scaled for the first sample in an actual-size dress form and modified. To engineer digital printing patterns, the patterns were digitized through Optitex digital pattern-making software. Gradation which nature creates in our surroundings spreads several colors on the palettes. The designer picked three shades of blue, red, and yellow that can be found in natural and hand-painted abstract design motifs using watercolor. Naturally representing digitally printed patterns results in a strong aesthetic effect where the garment represents the deep and lighter colors throughout the whole piece.

Dre-jacket

Sunhyung Cho; Mentor: Ellen McKinney | Iowa State University, USA
The purpose of this project was to create a non-woven paper-like textile from my weaving and garment remnants. Building on previous creative design work that uses waste materials. Over the span of a year, I collected textile waste from my creative design work, amassing linen yarn, onion dyed cotton, avocado dyed silk, and white silk organza scrap pieces. The fabrics and yarns were made into a paper pulp slurry and pulled in a mesh frame to create a non-woven composite. Organic shapes were torn away from the composite and hand sewn with silk thread onto a silk organza dress. What’s Left Over contributes to work surrounding textile waste and reuse, by collecting and utilizing even the smallest pieces left over from garment creation. Future creative research will explore textile composites from various types of fibers and the use of natural dyes as a metamorphic colorant that can change and shift over time.
The purpose of Converging Threads was to develop hand-woven textiles from secondhand materials into a 100% biodegradable design. As co-designers we decided to work through the ideas of consumption, desire, and impermanence. Our garment was constructed through multiple weaving techniques, such as weaving on a floor loom, macramé, and pin weaving. The final garment used tubes of silk organza stuffed with secondhand textiles from Eileen Fisher to create a novel and innovative design. Future work will further explore the production of textiles with minimal waste and incorporate the use of discarded textiles into interesting weave structures.
This quilted triptych acquaints viewers with the devastating 2018 blaze at the Glasgow School of Art (GSA). I studied, lived, and worked in the Glasgow area for five years, and this work represents my struggle to comprehend the loss of the GSA while imagining an idyllic future. The design integrates aesthetic properties of the Glasgow Style, such as vertical lines, repeating squares, organic forms, and the Glasgow rose, which represents the GSA itself in each panel. By transforming the background colors and the color of the roses, each panel depicts the passage of time following the fire including the immediate aftermath, the transition from debris removal to fundraising, and finally a rebuilt school. Quilts are constructed by layering and connecting multiple parts, analogous to the way in which buildings are constructed, and therefore this medium, in combination with needlework, was chosen to advocate for rebuilding.

Art is the Flower, Life is the Green Leaf
The initial goal of the current wearable art design, Distort, was to explore more possibilities in designing motifs of geometrical-optical illusions on 2-D textiles and 3-D garment utilizing, digital embroidery, and laser cut technologies assisted by a handcraft technique. The purposes of this design research were to: (a) create geometrical-optical illusion motifs using textiles based on the artists’ works and to manipulate the motifs with laser cutting technology, and (b) experiment with methods of engineering the complexity motifs of digital embroidery and laser cutting on the digital garment patterns. Two artists’ works were selected as resources for this project, Descending by British artist Bridget Riley and Color Motion 4-64 by American artist Edna Andrade. This design project exhibits an innovative method for exploring the application of Optical Art concepts into textile design using laser cutting technology, previously rarely achieved with traditional hand cutting methods.
The goal of this project was to achieve a better understanding of the history of the Moiré pattern, as well as to spread and promote the interpretation in the arena of textile design as a common phenomenon that surrounds us. Many spectators have seen it but have no idea about how it was formed. The main purposes were to: (a) test the difference of visual effect between a fabric printed with two layers of overlapping patterns and two overlapped layers of transparent material with printed patterns, (b) experiment on the overlapping effect of lines with different gradient color tones on each layer, and (c) utilize the structures of pattern making to enhance the ripple effect of Moiré patterns. This design demonstrates a successful process for creating the best visual effect of Moiré patterns by overlapping two layers of vectors with different gradient color tones using textile prints.
The purpose of this design was to probe the design potential and effectiveness of two digital technologies for customizing textile substrates: CO2 laser treatment and inkjet textile printing. Multiple variations in texture and color can be created on a given substrate using these two technologies. Polyester velvet fabric was laser engraved for the top and digitally printed for skirt respectively. Erect piles on the foundation structure of velvet are suitable for sculpture with lasers through partial and controlled removal of portions of fibers, and its unique luster is competent to achieve the richness of color for printing. Barren moon surface craters and constellation concentration were a source of inspiration for the textile design. Both technologies are used in conjunction with computer-aided design, and the amount of laser energy and the colorant is controllable, thereby making this process highly apposite to mass customization systems in addressing sustainability and consumer demands.

Customizable Surface Contour and Coloring for Pile Fabrics

Uikyung Jung; Mentor: Traci Lamar  |  North Carolina State University, USA
The goal of The Death Valley Kit was to have a race uniform that combined reflective elements into a streamlined silhouette that allowed for variability in thermoregulation. The product achieved this by using ventilation in key sweat zones (for maximum heat dissipation during the day), having arm and calf sleeves that allow for increased coverage at night (when temperatures get colder), and having low profile reflective elements applied to the garment as to remove the need for an external reflective layer. The athletes I talked to who have competed in the event liked the idea of being able to get rid of their extra reflective layers, and they were attracted to the unique silhouette of the singlet. For next steps in the project, the kit would need to be wear tested, then graphic elements would need to be created to make the uniform unique to each team competing.
Farvasi is inspired by the most powerful spiritual symbol of Persian culture, Farvahar. The main purpose of this design was to bridge the contemporary world to cultural treasures, and importantly, to produce a zero waste and biodegradable dress. To address the goal, Nuno and 3D seamless felting techniques were utilized to reduce the energy consumption during the production using renewable fibers. Additionally, 2D and 3D CAD systems were applied to minimize the waste of paper and muslin in pattern making and fitting process to help with reducing environmental issues. The garment is intended to present a dramatic dress to the women who care about environmental issues in addition to the beauty aspect of clothes.
By reimagining and superimposing the hydrangea on the human form, this wearable piece acts as a metaphor on the state of the world. A distinctive feature of hydrangeas is their pH indicating abilities, through color changes in the blooms. This measurement through visualization acts as inspiration. Much of the information in contemporary society holds a visual component and belief in existence is often tied to what may be seen. Visual indication is translated by the transparent white to indicate microplastics read from the environment. To represent the poisoning of growth and the fragility of the ecosystem, a frail loose weave fabric was selected. A screen printed organza overlay depicts waves that represent the recent rise of plastic. The decision for the hydrangea petal to be turned into a wearable 3D model, alludes to the globular state of the problem and how we are comfortable in the midst of a crisis.

Flori Decidenti

Michelle Park & Courtney Yadon; Mentor: Chanjuan Chen | Kent State University, USA
The goal of this project is to create running tights that supported and counteracts the hypertonic and hypotonic muscles in the lower body of runners with cerebral palsy. These tights use an innovative and strategic solution of high tension thermoplastic polyurethane (TPU) bands that wrap around the legs which proved to be supportive as a result of product testing. The materials are a polyester and spandex blend but the design intent was also to include bioceramic minerals combined in the fabric. Bioceramics are made from a variety of minerals that activate far-infrared radiation which causes an increase in blood flow. By incorporating this into the tights and arm sleeves, this helps decrease strain in muscles and increase recovery speed. There isn’t a product today that is specifically designed to help people with cerebral palsy to run faster, efficiently, and more comfortably.
The purpose of Altered was to 1) investigate hemming waste created during bridal alterations and 2) explore methods of repurposing these materials with the intent of lessening the amount of solid textile waste produced by the bridal industry. Over a three-month period I collected roughly 120 bridal (white, ivory and champagne) and 6 special occasion dress hems (light and dark blue) that were at least 3” in width and between 1.5 and 3+ yards in length. Over 75% the dresses I hemmed were between five to seven layers meaning the current design was constructed from only 20-25 gowns. In peak alterations season (May-September) the department I worked in altered around 25-30 dresses weekly. Furthermore, since formal gowns consist of many layers of different fabrics my collection included: polyester satin, chiffon, light weight and heavy weight lining, crinoline net, tulle, mesh, organza, lace, and taffeta. In keeping with the purpose, the under dress was a discarded A-line wedding gown that was deconstructed, altered and remade.
Wine Dyed: Multi-wear Sustainable Wedding Dress

This design is an investigation in creating a sustainable wedding dress to be worn on more occasions beyond the wedding day. The bridal market is experiencing market shifts in which alternative dresses are gaining market potential. Wedding dresses are being designed with some elements of this process like transformability (hiding a short dress under a huge skirt), designing colored wedding dresses, or using sustainable fibers, but there is a lack of examples combining these multiple techniques to maximize sustainability. This design demonstrates that wedding dresses can be designed in a way that makes them sustainable in many different avenues. This practice can also be initiated in other formal wear apparel and other potential markets for garments normally considered as onetime use.
This dress was part of a collection of garments developed for a upcycle guidebook. The guidebook consisted of this garment and four others all upcycled from men’s dress shirts. The purpose of the guidebook was to develop upcycled garments with a consistent construction process so as to allow for production runs in a limited production setting. This design is a marketable piece for women’s contemporary wear that can be duplicated by production teams or local makers. It is also wearable and stylish. While identical garments in both material and design may be impossible to create using the upcycle process, it is possible to duplicate very similar looking garments when the original source of material is similar in cut and design. Another option would be for production teams to make unique garments by using different patterns and textures but in terms of construction and fit the garments would be the same. Developing standardized process for upcycling with certain materials, like this dress and its guidebook, would contribute to upcycling’s increase as a future mass market approach.
Islam is the World’s fastest growing religion. By the year 2050, one third of the world’s population will be Muslim... that’s almost 3 billion people. The Qu’ran advises modest dressing for both men and women, and different countries have deemed various means of coverage to be appropriate, from veiling the entire body and face as a burka does to wearing a hijab, a head scarf that covers the hair. Currently, the running apparel market is flooded with skin-baring, form-fitting garments likely to make Muslim women feel alienated. My goal was to provide Muslim women with an appropriate garment for recreational exercise. It is about time that garments are designed for their needs and perspectives, while respecting the requirements of their religion. The garment I designed is comfortable, performs in the heat, doesn’t look overtly athletic and has a secure allowing for mobility while preserving modesty.
The text on the garment celebrates the gay community in Cleveland, Ohio during the 1970’s and advertise gay bars and popular drag queens of this era. The images were extracted from vintage silk screens that were used to place designs on t-shirts. The t-shirt emits a sense of community and inclusiveness while simultaneously being cheap and disposable. This design plays on the positives of that concept but makes it larger and more extravagant. The overall garment design is inspired by the muumuu. It is a loose-fitting garment that fits all sizes. It originated in Hawaii and the pattern is usually bold and interesting. This highly adaptable garment allows for a great deal of movement and when executed correctly can be a statement piece. The entire garment was knit on a Stoll CMS ADF 7.2 knitting machine and sewn on an industrial sewing machine.

Gender is a Drag

Katheryn Simmons; Mentor: Linda Ohrn-McDaniel | Kent State University, USA
Coral Wars

Coral reefs are the inspiration for this garment. The word “coral” is abstracted by altering the size, font, and direction, to create a fabric resembling the textural qualities of coral reefs. These are tourist destinations that harbor a multitude of sea life, yet we continually deconstruct them. Upon closer inspection we see the chaos we have induced upon them through trash and chemical pollutants, physical damage, and industrial fishing. The yarns vary in weight and texture much like a coral reef, working together to create a cohesive unit. This was knit on a Stoll CMS 520 C+ 1.5.2 gauge machine using every other needle in order to create a less dense fabric. The garment pieces were hand sewn using the same yarn and the shoulder line was hand knit to create a rolling structural focal point.
Subtraction cutting is a method of zero-waste design in which the resulting garment is created by the removal of fabric in a process of completely random experimentation. The purpose of Optimal Anxiety was to experiment with subtraction cutting as a means to produce a zero-waste garment, while drawing inspiration from WGSN’s Spring/Summer 2019 report, “Creative Manifesto.” The WGSN report identified the term “optimal anxiety” to describe being outside of one’s comfort zone. Inspired by this phrase, the final garment creates a state of optimal anxiety for the designer through the inherently unpredictable nature of the subtraction cutting process, and for the wearer and viewer through the print and asymmetric silhouette of the garment. The colorful print of the silky woven polyester fabric was chosen to elicit anxiety as a bold juxtaposition to the sheer royal blue polyester fabric. Details include bias binding edge finishes and a knotted back.
The overall purpose of the design project was to create an adult jacket by mainly using unwanted kids’ backpacks and demonstrate the aesthetic of the artwork of Giacomo Balla. To achieve this goal, aesthetic properties, such as unifying color, texture, and emphasis on the scales were considered in the design process. The study contributed a new way of upcycling, especially, how to use the material from the kids’ backpacks to make an adult’s jacket. This method may be can inspire other designers to create the innovative sustainable design in the field of fashion or other fields.
Traditionally, mass market clothing is designed for the typical population. However, few clothing companies target specific vulnerable groups like people with autism spectrum disorder (ASD). Individuals with ASD may repeat the same behaviors and have extreme or exaggerated sensory perceptions. Extreme behavior may be reduced by addressing over-stimulation by inducing calmness in the individual. Based on a review of literature and observation of children with ASD, I ideated design components aimed to alleviate ASD symptoms. In order to minimize the potential for anxiety caused by complicated designs, I decided to keep the garment designs simple. Therefore, I just put two design points on this item of clothing. The garment presented in detail below has the design focus of colorful fringe, with the intention of providing the child with interesting visual and textural sensory experience.
Weaving Sustainable Footwear

This shoe takes inspiration from the Nike Free Inneva Woven, which consists of multiple strands of nylon webbing hand woven back and forth on each other to create a solid upper with an integrated lacing system (Nike, 2012). The use of Walmart bags through the midfoot creates a mostly white upper with hints of blue. The toe box and heel area use Woods Supermarket bags, which keep the white and blue look consistent throughout, but also add red for more dimension. The bags are semitransparent and folded over themselves to give the upper more dimension and show layers of color all over. The plastic strips were looped through a heel counter from a Nike Free Inneva Woven to create a sturdy shoe. The blue from the leather pairs well with the rest of the blue throughout the upper and the laces. A black tongue from a Nike EXP-X14 was used because the color keeps it inconspicuous in the overall design of the shoe.
Yaqut Modernistic Dress

Yaqut dress merges culture and technology. The embellishment of architectural surfaces in Saudi Arabia was the initial inspiration with special focus on interior designs for houses and ceilings. These ideas were transformed through laser cutting and 3D printing into a 3-dimensional garment leveraging both negative and positive space. The flexible, 3D-print bodice is composed of NinjaFlex, a thermoplastic polyurethane, and the knit jersey skirt was developed using a Glowforge laser cutter. Twenty-four unique pieces create the shape of the bodice and attached peplum. Each was printed individually and represents more than 140 hours of print time over four months. The final product was created for a consumer who values creativity and has an individual artistic style while representing elegance, femininity, and modernism. The integration of 3D printing into apparel design allows for easy configuration and editing of designs while producing product in a sustainable additive manufacture approach.
Interstellar Voyager

Created as a final project with the theme of Universal Elements, Interstellar Voyager looks to interstellar space travel to pay homage to millennia of human survival and evolution on planet Earth. Each fabric and detail included in the design showcases different technological advances humans have borrowed from various species on the planet. From reptiles and their survival techniques in harsh climates to bees as the ones that pollinate and bring life to the planet, each species has helped humans create different technologies that have aided our survival in and out of our atmosphere. Some of these technologies have also fashioned clothing, creating trends worn by masses unbeknownst to the amount of research and time taken to create them. Interstellar Voyager looks to the past to create a future fit for human survival in unknown universal elements.
The purpose of this ensemble was to experiment with lines to create an effective design while adding rhythm and movement to the viewer’s eye. I also wanted this ensemble to have a casual sporty aesthetic. The top is made with one type of striped fabric given by the instructor. The overall inspiration for this project was images of medieval fortresses and palaces. The silhouette of the top resembles the cuirass worn for protection during medieval times as body armor. The lines created by the stripe piecing technique were used to change the direction of the line. The challenge was matching the lines for a smooth, continuous transition. The line continues to the pants not by stripes, but by the seam lines created by piecing. Eyelets were added to break up the lines, but not too many were added to avoid distracting the movement of the stripes.

Striped Cuirass

Sara Cho; Mentor: Hae Jin Gam | University of North Texas, USA
Mystic Forest Coat

Inspired by illustrations from the mid-20th century, specifically the work of Edward Gorey, the Mystic Forest coat is a study in working to enhance the artistic quality of a composition while also using the chosen medium to an advantage. The coat began as an 18” x 24” charcoal piece, was manipulated using Adobe Photoshop and Lectra Kaledo Print and eventually translated to a woven design with EAT Designscope Victor jacquard software. Weave structures were chosen specifically to affect the texture and subtle colors of the coat to create a greater overall visual impact. The fabric for the coat was woven on a 54” Dornier rigid rapier loom with a Staubli JC5 electronic jacquard head. The chosen “swing” coat silhouette and fit of the garment, reminiscent of a historic traveling cloak, further develop the inspiration to create one cohesive and original garment.

Brooke Connolly; Mentor: Traci A.M. Lamar | North Carolina State University, USA
Fashion plays a crucial role in conveying sense of identity. As an art form, fashion tells a story. As a beginning designer I seek to explore my own story and identity through fashion. In this particular garment, I included clues to my background through two and three-dimensional embellishments. Since my university provides laser-cutting technology for art students, I was able to create a radial design in Adobe Illustrator inspired by traditional Uzbek ceramics. Uzbekistan is one of several countries in which I spent a significant part of my childhood. Additionally, an assortment of blossoms flower out from the waist and over the bodice. The varying colors and shapes of flowers reflect the Ottoman tulip and the Texas bluebonnet. Turkey and Texas have also been places that I have called home. This design is fluid, organic, and asymmetrical, reflecting the nature of transition. It is not straightforward, predictable, and uniform; instead the design is enchanting in its inclusion and mixing of various colors, patterns, and cultures.

Imprints of My Past

Emily Dilard; Mentors: Janie Stidham & Hae Jin Gam | University of North Texas, USA
Ms. Duo is a unique piece that is inspired by the work of Takashi Murakami’s. Through the use of recycling, piecing, dyeing, and hand embroidery I was able to create an innovative asymmetrical design. Creating looks that promote and utilize sustainability are the way of the future and crucial part in saving the environment. Ms. Duo used recycled denim from donated and thrifted jeans. I used 100% cotton denim to avoid unwanted stretch in this garment. The legs of the jeans where pieced them together to make a wide striped fabric and then stitched on top to accentuate the lines of the stripes and then bleached the denim to get different ranges of colors from the blue denim. Circles were traced and cut out on the skirt and blanket stitched the edge to keep the circles from stretching. Circles were appliqued on the crop top with a blanket stitch. Recycled white cotton fabric was used with a circular weave on it that complimented the denim circle cut outs.
In Under the Microscope, I use materials I created myself by utilizing quilting, recycling, and burning I was able to create one of kind fabrics. A lot of handwork and manipulation went into creating this unique dress and it’s collection. This dress is a fun representation of a microbial world. The details are intricate enough to resemble that of bacteria or viruses under the microscope. This dress looks and feels otherworldly and is aesthetically pleasing to be seen worn. This tactile garment is a playful A-line dress that is representational of an object Underthe Microscope. When on the wearer she turns into a whimsical puff almost floating while she walks. The bust curves up toward the neck creating an exaggerated neck. The colors in the bust are recycled yarn that plays well with the black top stitching. This stitching unifies the black straps at bust and black tulle on the skirt. A unique harmony has been created using intricate handmade textiles that utilize quilting, burning, and embroidery.
Our inspiration was Vincent Van Gogh’s painting Starry Night. Our intentions were not to recreate his painting, but rather use the color scheme as well as the swirling brushstrokes that he used. The serti process of silk painting was used to hand apply vibrant oranges and deep blues to silk chiffon with expressive brushstrokes similar to Van Gogh. We sewed 100+ LED sequins with conductive thread in a parallel circuit to light up our garment’s starry night scene. We coded the Adafruit Circuit Playground Express (microcontroller) using MakeCode to transmit the desired color to and turn on and off the LED sequins in a way that simulates twinkling stars. We intentionally placed the microcontroller, which contained a ring of lights, underneath the sun. The battery and microprocessor are easily removed from the fully lined garment for laundering.
The purpose of this garment is to display the drastic contrast in painting styles and ideologies of Italian Art seen between the Dark Ages (500-1000AD), rooted in spiritual iconography and flat compositions, to the Renaissance or “Golden Age” (1271-1600AD) of humanism, with realistic painting techniques. Primary research was conducted at Pinacoteca di Brera in Milan, Italy. Crivelli’s (1488) Madonna of the Candeletta served as the main source of silhouette and beading inspiration. The asymmetric design was achieved through draping techniques. Asymmetric elements include a tailored sleeve on the right side and added fullness with tulle on the left side of the garment. A stiff polyester satin was selected for the main dress and sleeve to create a powerful stance against the soft gathered tulle. Hand beading was completed on the skirt trickling up the bodice by threading each bead on in the pattern interpreted from Crivelli’s painting.

Through the Gold

Madeline Kim; Mentor: Ellen McKinney | Iowa State University, USA
Inspired by historical costume with corseting, intricate beading, and a detailed overdress, the look, Evangeline, emphasizes the goal of my collection to seek the spotlight and embrace femininity of the wearer. This design is unique because it balances femininity and structure harmoniously. This look follows the aesthetics of Eli Saab through the use of couture techniques while still creating something that feels new and unique. This highly delicate design is also transformable, which can be worn differently.
The goal of this design was to pull inspiration from mid-century architecture and designs and give it a futuristic look. Intrigued by the delicate print on a tea cup made by Thomas in the 1960s and the structure of the Executive Armless side chair designed by Eero Saarinen in 1950, Porcelain was constructed. Using draping tape, a key hole cutout on the front bodice was created to represent the cutout on the Executive chair. To modernize the garment, the neck was extended well above the average height to just below the chin. Ultimately the idea of a half peplum skirt was used, tying back into when the peplum skirt was most popular—mid-century. Three panels of the peplum emerge from the princess lines on both the front and back of the skirt, having a layered affect. The garment is meant to be art, just like the pieces it originated from.

Porcelain

Elise Lee; Mentor: Ling Zhang | Iowa State University, USA
“Consecration” was inspired by the The Metropolitan Museum of Art’s (MET) exhibition “Fashion and the Catholic imagination” held in New York City in 2018. The exhibition features a dialogue between fashion and medieval art from The Met collection to examine fashion’s ongoing engagement with the devotional practices and traditions of Catholicism.” (The MET, 2018) This garment applied the Catholicism feathers by using the stained glass from St. Joseph Catholic Church in Petersburg, Virginia. This garment focuses on the historical reference, cultural reference and surface design. The originality and innovation for this design is the print and the engineered print technique. The bottom skirt applied two different stained-glass designs on every other pattern and the bodice applied the print by using the engineered print technique. The whole garment gives the audience a luxurious and magnificent feeling by the prints and technique.
This coordinate suit features a utilitarian aesthetic embodied through a jacket with a semi-fitted silhouette coordinating with a pair of high-waisted pants. This outfit was constructed around the trend of dysfunctional tailoring and theme of optical illusions. Drawing influence from optical illusionist M.C. Escher and the concept of Penrose stairs, many design elements exhibited in the coordinates reflect the inspiration. The idea of an endless staircase is echoed through accordion pleated panels and the stepping motion of the jacket darts and asymmetrical hemline. The theme of illusions is further portrayed through an invisible button closure and transforming collar, which was designed as a half shawl and half stand collar. Aside from more obvious optical illusion design aspects, some subtle elements referencing Jessica Lee Ridgway's illusionistic garments dissertation were also integrated. Such elements include utilizing the Helmholtz illusion, Muller-Lyer illusion, and contrasting colour theory to accentuate certain parts of the body.
This eveningwear gown was fabricated through experimentation with draping techniques and pleating different shapes. Triangular shapes were selected due to interesting folds created at the edges of the pleated pieces. From this, further exploration was conducted using different sizes, formations, and placement of triangles. This eveningwear dress was largely inspired by winter, specifically the freezing of waterfalls and glaciers. Upon seeing the light peau-de-soie fabric, the inspiration of frozen waterfalls was evoked. The pleated panels are meant to imitate frozen water and icicles, paired with the jade green skirt which simulates flowing water that has yet to freeze. Essentially, the concept is that the dress is becoming frozen starting from top to bottom, just as freshwater does. This gradual effect was integrated since frozen waterfalls are formed as a result of gradual process and development. The beaded fabric contains embroidered branches and leaves that replicate frozen greenery surrounding frozen waterfalls.
This bridal gown design challenges the current marketing of full color bridal gowns by many leading designers, and it bridges the gap between the industry trend and consumer demand. The ensemble challenges traditional bridalwear by combining functional, aesthetic, and conceptual innovation. It incorporates functional aspects in the lasercutting of fabric and the easily removable cape-veil, which is attached to the gown with hook-and-eyes. The gown and cape-veil still include traditional aspects of a bridal gown with the bridal preferred fit and flare silhouette and the white floral-like vine appliqués. However, by using less-conventional colors and materials like the bronze-colored underlay, net fabric overlay, and iridescent sequins, an American bride is subtly introduced to change.
Over time, descendants of the African diaspora have created myriad languages of self-expression through dress, telling a story of triumph, perseverance, and creative wealth. Using tools of dress from one’s physical Western environment and cultural traditions, the diaspora embodies William Edward Burghardt Du Bois’ definition of double-consciousness (see Du Bois, 1903). The casual shirt and short design focus on presenting self-expression through acceptance of cultural colonization and the emerging creativity despite it. Using traditional textile techniques to achieve the print, the design authentically encodes cultural memories into a current menswear silhouette. These engineered prints began as hand-painted artwork created with the methodical intention of east African artisan tradition. The story behind the print was laid onto the print thoughtfully to evoke Du Bois’ double-consciousness theory. Combining traditional with new technologies to create Afro-centered designs may be the new future of the diaspora.
The outfit was designed to express how I recognize and define truth. Truth has always been an important value for myself, as I believed truth is an essential element necessary for trust, belief, and faith to exist between people. Thus, in my opinion, truth needs to be transparent and intrinsic. In addition to my own interpretation of truth, I contemplated on “why do we believe what we believe,” through researching the concept of fake news. Specifically, I decided to focus on selective exposure, which states that “people prefer information that confirms their preexisting attitudes.” This explains the concept of fake news, in which people only see what they want to see, and accept ‘truth’ as what they want to believe. All combined, truth can be manipulated and reinterpreted based on what people want to accept it as, resulting in distorted, non-transparent form from the original, pure truth.
The word “Pristine” implies something that appears untouched, fresh, and pure. With the task of creating avant-garde bodywear with stretch fabric, I designed a bodysuit to challenge the traditional notion of idealism. The garment incorporates clean elements juxtaposed with harsher features to showcase how perfection can come in many forms. As pianist Vladimir Horowitz once said, “Perfection itself is imperfection” (Today’s Quote, 2018). Though opposites, these concepts are more alike than people realize. The thin line between perfect and imperfect is depicted through the simultaneously contradictory and harmonious components of this garment. I drew inspiration from burning and aging paper, transforming properties with negative connotations into art.

Pristine

Ryan Platt; Mentor: Huiju Park | Cornell University, USA
I was inspired to create “As You Are II” because of the well-known country artist Carrie Underwood. She is a role model to many women, as she promotes feeling confident in your own skin. Her newest album “Cry Pretty” was the inspiration to create a sexy, fun, and functional jumpsuit with a detachable skirt. This piece was created keeping her new album’s colors in mind. Many different techniques were used to create this piece such as flat pattern, draping, and hand sewing. Notions such as an invisible zipper and snaps are used as closures for this piece. This piece is designed to be worn in two different ways, which gives women more opportunities to shine. Though this piece is quite flashy, it symbolizes how women should feel confident in their own skin.
The fast fashion industry in the U.S. generates over 15 million tons of textile waste due to the rapid disposal rates of garments each year. This industry is moving at such a rapid pace that consumers cannot appreciate and value what they wear. By incorporating Haute Couture sewing techniques and fabric manipulation, my garments can offer a less wasteful alternative and provide more meaning for consumers. This look was inspired by the Parisian Neo-Byzantine architecture of Galeries Lafayette and the experimental fabric manipulations often used at Maison Margiela, who are known for deconstructive design (displaying the inside of the garment as the outside) and mixing of unconventional fabrics. The bustier is made out of a silver green Veneta lace and has smocked, off-the-shoulder sleeves and ruffled trim along the princess seams. The high-waisted, Neoprene shorts are pleated, and the pockets expose the inside of the garment.
The fashion industry has a tremendous amount of influence in the marketplace and its manufacturing practices have been environmentally and socially devastating. The industry is underutilizing sustainable design methods and it’s more important than ever to create more meaningful designs. This can be accomplished by incorporating zero-waste patternmaking and Haute Couture techniques. I was inspired by the Parisian Neo-Byzantine dome architecture of the Galeries Lafayette and Maison Margiela’s use of mixing surface design with unconventional materials. The dress is draped both organically and structurally and is produced using a variety of silk and vinyl fabrics. I layered and smocked the surfaces to create shape and dimension and mimic the structure and stained glass of the dome. This fabric manipulation also allowed me to utilize all of my fabric, while creating a collage of layers and transparencies.

Eclectic

Wing Tang; Mentor: Katya Roelse | University of Delaware, USA
The purpose to create this design was to bring out the intrinsic power and the feeling of reminiscence of the wearer via pattern manipulation and digitally printed engineered prints. Monochromatic colors are used to emphasize the reminiscence and red is included in the color scheme to break up gloom. The prints are formed by a mixture of the “Cloud Gate” in Chicago, the drawing of a lizard eye, and the photograph “Little Prince”, which implies the story behind it that every encounter and farewell are part of life, and people learn from them, then grow up through these moments. Each print seems to be unrelated to others, yet everyone conveys a message from the designer’s life path along with subtle sentiments. The slightly curved sleeves were to resemble the arch of the bean, and the image was copied four times and reflected horizontally to generate the overlay effect.
With efforts in sustainable and ethical practices, I as a designer wanted to create a garment which addressed the sustainability practice in the fashion industry. Widely inspired by the eco-fashion movement, Retro-spection aims to reflect on past industry standards and start the conversation on how change is essential in moving forward. When tasked with the challenge of only working with two yards of striped fabric and minimal outlier fabrics, I felt compelled to attempt something similar. I wanted to craft a piece that was centered in the idea of optimal fabric utilization and it represents the premise of the project in its efforts to be sustainable. I was inspired by my young memory growing up in the slums of Los Angeles before moving to current state. I witnessed many women in that town would repurpose their old clothes by cutting them apart and weaving them into new accessories.
The Me Too movement was founded by Tarana Burke to bring awareness to sexual misconduct in the workplace. Throughout the years, the movement has gained widespread exposure as more and more men and women have come forward as sexual assault survivors. As a survivor myself, I have felt the importance of identifying and addressing core societal issues in my work. I wanted my personal experience, and the stories of many others who have been affected by sexual misconduct, to guide me in creating something important and meaningful. Therefore, this suit celebrates a new breed of powerful, fearless women who have risen amidst the Me Too movement. Conceptually, the overall garment bridges feminine and masculine elements to highlight how far we have come in the Me Too movement. I combine historically defined femininity, princess lines and corsets, to juxtapose the masculine nature of the classic suit.
This design - Hidden Beauty - began with inspiration from the simplicity of my mother’s everyday outfits and my nostalgic memories of a recent visit to Japan. Visions of two random pieces of paper hanging in front of a temple are seen but not seen. To me, it shows the freedom that’s under control by waving in any direction when the breeze flows yet secured to not fly away. The dress design is structured, yet elegant, supported by a boned under structure. Sketches were developed in tandem with experimental draping exercises to create the dress design. A flat pattern was traced after draping the dress on a body form. Hours of hand stitching were necessary to achieve the final result, the edges of the organza were hand rolled to 1/8” for a clean, minimal finish. The creative process of the Hidden Beauty dress evokes feelings, thoughts and emotions through its narrative and design details.
My design emulates the expressions of structural harmony and visual aesthetics inspired by Piet Mondrian’s color blocked paintings. I utilized the transformational reconstruction method of pattern making to create continuous horizontal lines, independent color panels and vertical lines. Proportional and visual placement for each line and block were all mathematically calculated. I manipulated the pattern so all seams fall on the left side, leading into a side slit. Separating zippers are in between the last three blacks stripes of the dress, with the pull facing the backside. Keeping mathematical proportioning and visual balance the red and blue sectioning on the left and right sleeves are shifted up and down an equal amount on the jacket. The dress conveys structural masculinity, but is juxtaposed with femininity extracted from the jackets usage of wool, giving a softer perception. All the dress colors are also hand-dyed from a white, heavy-weight, twill weave cotton.

Mondrian’s Chutes and Ladders

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The purpose for the collection that this design is a part of was to design looks with travel, adaptability to environment and situation, as well as, comfort, in mind. The hope is that if one wears a view of nature, they will think of its presence in the world. We live in a time when our actions will have a tremendous effect on the wellbeing of nature and the human race. I saw digital printing photographs taken in nature as an opportunity to carry a reminder and view for others to appreciate the natural world around us. The surface design in this look was inspired by the movability and adaptability of nature. While spending a semester abroad I took a lot of pictures. This design was inspired by photographs I had taken in Lucca, Italy. With those photographs as a base I created the digital textile prints. Within these captured details of a mountain side and stream, there is a range of saturated colors, movement and serenity.