60th ANNIVERSARY OF INDUSTRIAL DESIGN
The 60th Anniversary of Industrial Design at Georgia Tech

This catalogue documents an exhibition held from January 24 through February 8, 2013 in the Stubbins Gallery of the College of Architecture at the Georgia Institute of Technology.

The exhibition was organized to celebrate “The Anniversary of 60 Years of Design” in the School of Industrial Design based on a juried submission of design work from the alumni, to honor this historic benchmark.

The pages that follow present a brief history of the program and include the actual work presented in the exhibition together with brief description of each project.
In 1952 the Bachelor of Science with an Industrial Design Option was established; what had been a promise in the 1940s with the offering of a curriculum of industrial design courses within the Department of Architecture, became a reality. Located in a large “Lab” on the ground floor of the new East Architecture Building, the new Industrial Design Program was led by Hin Bredendieck, a Bauhaus designer who brought with him a direct link to the Bauhaus and the modern movement. The original brochure for the program reads:

The function of the Industrial Designer consists of relating and adapting the structure-form-position of objects to man and to other objects in man’s environment.

The Constitution (Aug. 15, 1952) reported that courses “will deal with the expanding field of object design –including such items as furniture, lighting fixtures, kitchen equipment, toys and other living accessories.” By 1970, the “9 upper classmen” registered in the “new course in Industrial Design” (1941), had become a degree program and graduated 59 students with the designation Bachelor of Science in Industrial Design. Together with other Industrial Design schools in the south, Georgia Tech’s program brought a new approach to design that considered user-centered research as “a prerequisite for intelligent and responsible product development.” From 1976 through 2010 under the direction of Frank Beckum, Lee Payne, Bill Bullock, Lorraine Justice, Abir Mullick, and Stephen Sprigle the program evolved new research initiatives in the areas of digital fabrication and health and assistive technologies, and interdisciplinary collaboration that helped elevate the Georgia Tech Program to national and international prestige as one of Business Week’s top design schools. In 2010 the program became the School of Industrial Design. Under the direction of Jim Budd, the first School Chair, the curriculum has been revised, the school has strengthened ties to engineering and computing, and the School has settled into a new home on the second floor of the Architecture Building. Part of this consolidation included the creation of a new “Lab.” The Interactive Product Design Laboratory opened in the fall of 2011 with support from the College and the Institute, heralding a cutting edge approach to design and design education. The 900 square-foot lab supports the exploration, and development of “intelligent” products and systems. Students can leverage the capabilities of a new generation of sensor-based technologies for portable, wearable, and networked applications.

Alumni of the Industrial Design program have been successful in multiple areas of business and industry and have become industry leaders, entrepreneurs and inventors, winning many awards along the way. Georgia Tech’s continuously evolving Industrial Design “Lab” brings the opportunity to each new class of students to follow in the footsteps of these outstanding alumni.
The Vela chest protector is All-Star’s first women’s specific chest protector designed with a new cut for the competitive female athlete. Making use of extensive research on female catchers’ range of motion and movements, protective needs, and ergonomic measurements, the design focuses on safety, mobility and comfort. Credit to Stan Jurga, Jr. of All-Star Sporting Goods, Ampac Enterprises Inc.
As part of a “Live Positively” platform, The Coca-Cola Company partnered with Emeco to develop a chair that supports the company’s vision to reduce waste and give its packages an "afterlife". The 111 Navy Chair is constructed from over 111 recycled PET bottles. Attribution to Coca-Cola Worldwide Licensing and Emeco.
The 52 oz. Bubba Keg is a hot or cold beverage container. Originally designed for “refill” programs at convenience stores this product was first sold to Wal-Mart who actually placed a significantly sized order for it after having only seen a concept rendering. Since its first rendered design 10 years ago, this product has inspired its own line of Bubba Keg designs (ranging from small to large). A separate “Bubba Keg” focused business has emerged and “millions” of units have been sold. Collaboration with Jim Scott, owner, IN ZONE Inc., and Ken Kreafle.
This table is made of 23 layers of solid walnut that were designed and then cut on a CNC machine and held together via wooden dowels.
A 60’x255’ tradeshow exhibit was designed to support and answer the question “Why TOTO?” The answer was provided by a specific journey through five unique product zones, each themed to emphasize one of TOTO’s brand pillars (Design, Value, Innovation, Quality and Ecology). In collaboration with Jeff Janes, Stephanie Recalde, Heather Camardello, Mindy Euphosin.
The B.O.W.A. (Big Orange Wilderness Aid) is a wilderness medical support tent storage bag which can also be repurposed as a sling, splint, ankle wrap, or signal flag in case of some adverse event on the trail. The bag is able to conform to various body regions while the compression strap secures the fabric either around the limb, or acts as a strap for use as an arm sling. Designed in collaboration with thesis advisor Kevin Shankwiler.
Earendil, a forty-nine foot sail boat design, has twin 360 degree rotatable soft wings with horizontal ribs that allows for accordion style fold down storage; it also has alternate inside steering and wing control during foul weather. The power drive pod is steerable and stores inside the boat and out of the water where it is accessible for maintenance, reduces drag, and prevents barnacle growth.
Design South managed a creative collaboration between Nike, Design South and several sub-contractors to create a 50,000 square foot environment within the Georgia World Congress Center where retailers reviewed top footwear and apparel lines for the 1998 fall season. The exhibit featured an 18’-0” wide replica of the new Air Citizen shoe, hand sculpted from foam and suspended 22’-0” in the air. Six individual pavilions showcased product lines for basketball, running, ACG (All-Conditions Gear), women’s sports, soccer and golf. Collaboration with Joel Katzowitz, Jason Beaulieu, Les Capouya, Alan Brabo, Michael Mancini, John Hoke.
Design Samaritan’s business concept and corporate identity was designed through a new logo mark, business cards, and other promotional products.

PAUL BOWMAN 1999

Design Samaritan logo design, 2012

Design Samaritan’s business concept and corporate identity was designed through a new logo mark, business cards, and other promotional products.
The Kawneer 1600 PowerShade is an innovative photovoltaic sunshade that merges PV technology with the growing movement towards sunshades. This pre-engineered system with built-in design flexibility is a balanced approach to cost and aesthetics and offers a solution that would shade a wide range of window sizes while simultaneously optimizing solar harvest. Awarded the IDSA Gold Award in 2001. Collaboration with Greg McKenna, and Dave Hewitt of Kawneer Co. Inc.
This home system produces, stores and delivers oxygen to the patient without the need for cylinders or bulk, heavy, battery powered devices.

**RICK BURNS 1979**

*HomeLox Liquid Oxygen System, 2011*

This home system produces, stores and delivers oxygen to the patient without the need for cylinders or bulk, heavy, battery powered devices.
The unique patent pending design for the KidWise Gridiron Football Challenge Gameday Bounce House integrates the theme of a Football Helmet bouncer with an obstacle entrance, plus a slide and play area that also can be used as a ball pit. This bouncer is recommended for kids 4-12 years of age.
The Popadu blanket was founded with a desire to create a unique experience for not only babies but parents as well. The activity blankets’ understated simplicity and delightful curiosity meet to bring parent and baby a playtime experience outside the ordinary.

RACHEL WINDERWEEDLE CAMPBELL 2005

Popadu Baby Activity Blanket Set, 2005

The Popadu blanket was founded with a desire to create a unique experience for not only babies but parents as well. The activity blankets’ understated simplicity and delightful curiosity meet to bring parent and baby a playtime experience outside the ordinary.
A hybrid of two classic guitar tools, the slide-capo allows musicians to create new sounds and push their creative limits. Daniel writes: “Playing the guitar as a hobby allowed me to experience the weaknesses of existing products in the market, and recognize the potential value of a device that offered the flexibility of a guitar slide, as well as the function of a capo.” After winning Georgia Tech’s Inventure Prize, he continued to build and test prototypes, and design for manufacturing. A patent is pending and development is ongoing. Collaboration with Mark McJunkin.
The iPad becomes an animated drawing and coloring friend with Griffin’s LightBoard case for iPad. It’s a protective case and art table all in one. The iPad is surrounded in a shatter-resistant polycarbonate shell with openings for the speakers and headphone jack. A built-in polycarbonate screen shield protects the Multi-Touch display against scratches and impacts from even the most ardent artists. Collaboration with Jose Longoria, Mike Poppe (Ga. Tech, 1997), and George Campbell (Ga. Tech, 1998) from Griffin Technologies; Rich Draper, illustrator.

STEPHEN CHININIS 1998

The Draw + Write + Play- With-Your-iPad Case LightBoard, 2010
The Talkabout Radio established a category for Motorola of Family Radio Service which allows families to use two-way radio for connecting with each other. It won a best in class "Gold" in the consumer product category in the 1998 IDSA/BusinessWeek Industrial Design Excellence Awards (IDEA) competition. The Talkabout series of products also won a "Gold" award for the "Design of the Decade" issued by BusinessWeek and IDSA in 1999.
These gloves are designed to simulate the reduction in functional capabilities experienced by individuals with moderate to severe arthritis. Specifically, the gloves simulate common symptoms of Rheumatoid Arthritis (RA), including stiffness and reductions in grip strength, dexterity, range of motion, and tactile sensation. They can be used with a variety of consumer products including medicine bottles, beverage containers, office supplies, diabetes testing devices, and many other consumer products.
The One Motion Syringe simplifies the way vaccines are injected into the body. This syringe requires a pinching action to eject the vaccine which is unlike the traditional action of pushing in a plunger. The change in interaction with the tool minimizes the movement of the needle while in the patient, and prevents subsequent muscle damage. This syringe was designed for immunization outreach in rural areas of developing countries. Vaccines are packaged in pre-dosed plastic packets which are color-coded and clearly labeled. Enclosing the vaccines in packets allows the syringe body to be used safely thousands of times before eventually being discarded.
This is a modular storage system which uses the form of the milk crate as the base for multiplying storage possibilities with additional options that can be added to specialize its functions. These add-ons range from thumb-tack boards to wire management systems. There are also multiple leg, fabric, and soft elements available to increase its appeal.
A 3,500 square-foot historical exhibit, which opens in February of 2013. The exhibit traces the steps of Africans and their culture from captivity, to slavery in the Americas, to freedom and the modern quest for equality. Visitors are placed in immersive environments, interact with virtual safe houses and encounter life-size historical figures on their journey to freedom. In collaboration with Samuel Black, Anne Madarasz, Brad Burmeister, Lauren Uhl, Jaclyn Esposito, Bill Kindelan, Rachelynn Schoen, and Courtney Keel. Presented by BNY Mellon and funded in part by a grant from the U.S. Department of Education.
A light weight recreational boat with an efficient hull for propulsion by silent and clean electric motors and batteries. The boat’s battery bank recharges overnight by plugging into any 110 volt outlet and gives the boat a low speed range of over forty miles between charges. Motor controls and battery meter are located on the pedestal below the wheel. The hull and interior parts are constructed of Sapele mahogany from managed forests. The sixteen foot long boat accommodates four adults and complies with US Coast Guard safety requirements.
JOHN FOLDEN  1973

Exterior Theme for 1988
Pontiac Fiero, 1986

John writes: “I graduated from the Ga. Tech ID department in 1973 and started my career at General Motors Design Staff in Jan. 1974, retiring in 2008. I created this sketch, which was chosen as the theme for the 1988 Pontiac Fiero, in 1985/86. At that time, I was the Assistant Chief Designer for Pontiac Exterior studio and led a team of five other designers, seven/nine sculptors, and five studio engineers. I was later promoted to Chief Designer for Pontiac Exterior studio and ultimately to the position of Design Director for exteriors of all GM Front wheel drive/ all-wheel drive vehicles.”
A mobile cart designed for use in a medical environment which includes a removable touchscreen tablet computer and a self-cleaning UV unit for sanitizing medical supplies such as the on-board electronic thermometer, pulse ox, blood glucose & blood pressure machines. The cart is constructed out of high impact ABS plastic and can be retrofitted for military or educational applications. The basic cart design was conceived by Ms. June Agyeman, who sought to enhance & further develop a functional prototype of the design and thus enlisted the services of Equilibrium Concept Development.
MICHAEL GLUZMAN  2009

Brutal Sexy Lamp, 2009

Designed and built under the study of lighting designer Christopher Moulder, the Brutal Sexy Lamp gets it’s name from a formal study in elegant, minimal, thick and thin composition embodied in abrasive materials. The lamp is a low voltage trick that deceptively translates electricity from the wire to the aluminum shade to power it’s Xenon bulbs.
This control room is where the transmission and distribution of electricity for the state of Georgia is monitored in a 24/7 environment. The consoles were designed to maximize ergonomics, walkways, and task based usage during normal operations as well as events like severe weather. Designed and built by Winsted Custom Division in Duluth, GA which has designed and built custom control rooms for nuclear & coal power plants for over 35 years.
This bed is designed to function as a crib, and then transform to a day bed or regular twin bed by using removable railings. The bed is designed to grow with the child by removable rails without the need to purchase new mattresses. In collaboration with Jason Quick (Ga. Tech, 2003).
The Jackal helmet, a new helmet design to reinvent the Z1R brand, was designed to incorporate new technology. Its unique feature is the Retractable Tinted Sunshield that reduces glare from the sun that can be removed at the touch of a button. The helmet went from the concept stage through 3d modeling before tooling and rigorous wind tunnel testing. The final product was a lightweight, affordable, technology driven helmet that continues to be a cornerstone for Z1R helmets. In collaboration with Amy Blackwell, Jamie Beckett.
A portable pulse oximeter for non-invasively measuring a patient’s arterial oxygen saturation and pulse rate; it has a protective boot that allows the monitor to be used in extreme conditions. It is currently still in use in hospitals around the world and has been used in critical care on Mount Everest expeditions. It is used in conjunction with a variety of sensors and has also been used in veterinary medicine, including use on large zoo animals during surgery.
A series of wearable planters that can be worn or attached to other objects.

COLLEEN JORDAN 2010

wearable planter series, 2010-2012

A series of wearable planters that can be worn or attached to other objects.
Mr. Joyner writes: “In 1967, I started the first in-house industrial design group in the RCA Corporation’s Computer Systems Division. We were all engaged mainly in the design of a line of main-frame computers - a small, medium and large version - and associated peripheral. While the designs were completed and prototyped, RCA abruptly went out of the computer business in late 1970 before any of the newly designed products were ever produced for sale. This poster, titled "A Computer of a Different Color" was part of the design concept to differentiate RCA from IBM (who then had 90% or so of the market) with a very different signature color scheme of light blue and gray.”
Firm Foundation is a pilot program which aims to provide a model for comprehensive slum upgrading by involving residents in the planning and design of public spaces and new water and sanitation infrastructure. This design of a new waterfront public space creates a gateway, restores a former port, provides flexible recreation areas, supports local economic activity with a seating area for a nearby food stall, and creates opportunities for residents to positively engage with the water. Winner of the 2011 AECOM Urban SOS Design Competition and the 2013 SEED Public Interest Design Award. Under construction, expected completion: Spring 2013.
This iron/ironing board organizer, designed for Rubbermaid, is made from phenolic compound that permits hot irons to be stored safely. It has obtained "ubiquity" as it is in a majority of hotel rooms around the world and is used in millions of households.
This collection presents a standard suit with options to disassemble it via zips into modular and interchangeable pieces made of standard and unnatural fabrics.

Photograph by Michael Meewis.

NICHOLAS KOMOR 2009

Copper Suit, 2011

This collection presents a standard suit with options to disassemble it via zips into modular and interchangeable pieces made of standard and unnatural fabrics.

Photograph by Michael Meewis.
The Sears Craftsman DriverLight is a lighted hand tool which features an integral, removable light-module flashlight threaded into a one piece, light conducting optical grade polycarbonate hand grip. Introduced in 1998, the DriverLight was featured in a Bob Vila infomercial and selected for QVC’s “Craftsman’s Best Show” 2001. Boasting sales of over 3,000,000 units between 1998-2002, the DriverLight is covered by U.S. Utility Patents Nos. 6030092 and 6364500 as well as U.S. Design Patents Nos. 412760, 415300, and 431428. In collaboration with Gavin McCalla (Ga. Tech., 1978).
This a system of four tools (hedge trimmer, line trimmer, pole saw, and blower) which use a common battery pack and ergonomic control handle. It was designed at Slingshot Product Development Group, which included the collaborative efforts of the industrial design team, engineering team, and manufacturing team.
The G.U.T.S. First Responder tool was conceived as a highly destructive appliance that would allow building ingress and egress under the worst possible conditions. It has at least eleven functions that allow a first responder to free themselves from entrapments, open locked doors, penetrate walls, cut anything less than 1/4" diameter, serve as a window escape anchor and move heavy objects up to 2,500 pounds. This tool has been used in firefighting, EMT, rescue and military operations. Collaboration with Kris Nagy and Doug Cox.
The simple mechanism of this tea infuser provides a comfortable grip, and gives pleasure to the act of brewing a relaxing cup of tea by incorporating human factors considerations into the design. The tested lever system, selection of efficient materials, and best processes for manufacturing were also taken into account.
The Powerplant is an indoor lighting device that is powered by a microbial battery built into the soil of the plant it houses creating an energy efficient, educational light that teaches consumers about the possibilities of bioenergy. The Powerplant is able to produce power to light three bright white LEDs.

KRYSTAL PERSAUD 2010

*Powerplant indoor lighting device, 2009*
The Olympic committee selected this design because of its unique and symbolic form: it incorporates a glass crown and tapered body with vines that symbolizes a frozen icicle for the winter games. It is a working torch that withstood the tough environmental constrains. 17,000 torches were fabricated for the runners and officials.
Designed to be “adventure footwear for your vehicle,” this uniquely versatile all-season light truck tire delivers the best of two worlds: comfort and ruggedness. After four years of intensive research, the new design was launched in May 2011; over one million tires sold in the first year. The symmetric tread design features alternating width, wraparound shoulder blocks that extend onto the tire's upper sidewalls to generate traction on loose surfaces. Two large central circumferential grooves and multiple lateral grooves evacuate water to resist hydroplaning and enhance wet traction. Collaboration with John Hutz, Fang Zhu, and Yukinori Imai.
The washer and dryer resulted from the challenge to design and engineer a new product offering from the ground up, targeting the mass-premium market. It includes ‘Push-to-Open’ doors, allowing a simple push to open the door; it has the largest capacity, helping the consumer reduce the number of loads. The signature color, Turquoise Sky, which was launched in 2008 was used as a Consumer Good’s example by Lee Eiseman in Pantone’s selection of the 2010 Color of the Year, #15-5519 Turquoise. Collaboration with Bob Martin, Kent Crookshanks, Lotta Brundin, and Hayoung Coffman.
The Akorn Smoker and grill was designed as a low-cost alternative to more expensive ceramic smokers. To achieve the same cooking performance, the grill is constructed of double-wall sheet metal and high-temperature insulation, similar to oven ranges. An innovative integrated ash pan and inlet damper system increase maintenance and ease of ash removal over other kamado-style smokers. Proportion, materials and finish were carefully developed to enable the Akorn Smoker to fit visually within Char-Griller's existing lines of outdoor charcoal and gas grills. Collaboration with Michael Jourden and Jay Sims, Char-Griller.
A blend of function and beauty, credenza 003, is designed to showcase the movement hidden within wood as well as to facilitate the functional requirements of a media stand. A removable back with cord ‘pass-throughs’ and a sliding shelf ease cable management. The single piece of walnut used for the doors is highlighted by the thick white frame and further enhanced with subtle sculpting to highlight the movement in the wood grain.
A common problem for cardio enthusiasts is that they experience foot numbness while on cardio machines. New Balance looked at the underlying causes of numbness. The first issue of pressure points, created by the foot staying in the same position throughout the workout, was addressed through a dual density cushioning system underfoot which distributes pressure more evenly. Secondly, the stationary position of the foot, which causes blood to pool and the foot to swell, was addressed with the use of stretchable materials in an unconventional construction method to make an upper that can expand with the foot. In collaboration with Julie Belkus and Heather Kananowicz.
This project is the design / production of Coca-Cola vending machine panels by Allied Plastics Inc. in collaboration with American Graphics Inc. The graphics were intentionally distorted, silk screened to the sheet plastic, and thermoformed. The distortion screened / thermoformed process becomes a cost effective strategy compared to any post process for applying graphics.
The Cat® Power Edge™ trade dress is a branding and nomenclature system used on Cat product and parts packaging. It consists of a graphic lockup that includes the Cat trademark, product nomenclature and a red accent stripe. ID Alumnus Ed Stembridge manages product identity for Caterpillar and was the lead designer on the team that created and implemented the Cat® Power Edge™ trade dress; other designers included Gary Bryant (BSID ’87, Georgia Tech), Josh Whitmore with input from other members of Caterpillar Industrial Design.

**ED STEMBRIDGE** 1986

*Cat® Power Edge™ Trade Dress Design, 2005*

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This prone stander was designed to appeal to children with mobility impairments. It allows children with mobility impairments to stand upright which aids in the prevention of osteoporosis, improves circulation, muscle tone and the functioning of internal organs. By positioning children just a few inches off the ground, this "peer-level" prone stander allows them to interact with peers, use a computer or work on a project on the removable plastic tray. Collaboration with Danny Corkran and Alan Harp (1988)
This aftermarket hood design was one element of a proposed SVT "Lightning R" concept car. The hood is not just a styling statement, it is fully functional and improves the performance of Ford's supercharged and intercooled 5.4-liter V8 through two different means: first, the central intake duct actively routes fresh air to the airbox, creating a pressurized ram-air effect at speed that increases the density of the intake air and thus improving horsepower and performance. Secondly, the louvered vents on either side of the hood offer passive cooling benefits.
The Jellyfish lamp is a LED Floor lamp which uses Cool White LED strips; the shade is made of two sheets of translucent orange Polyethylene. The lamp has two locking positions (open/closed) as well as a floating state. With the adjustable shade as well as a dimmer this gives the user freedom to select not only light output, but color, and pattern.
The ProVision 2 with Automatic Target Detection (ATD) quickly screens personnel using safe millimeter wave (MMW) technology to automatically detect concealed objects made of any type of material, both metallic and non-metallic.
This showroom within the World Market Center Las Vegas is conceptualized as experience-based zones which send the customer on a journey. Collaboration with Matt Lancaster, Chris Livaudais, Kate Schindel, Kevin Greer.
A series of protective cases for the iPhone 4 and iPhone 5, this design features a unique snap-fit enclosure and decorative elements of wood veneer and machined aluminum.
This lamp is a dynamic eco-friendly lighting solution; it is made from biodegradable plastic and comes in minimal packaging. It is inexpensive and takes just a few minutes to assemble after purchasing. It was inspired by the spiral appearance of the more eco-friendly CFL bulbs, which encourages their use in the product, and can be adjusted to produce different levels of ambience by sliding the "vines" up and down.
Designed as a monument, the Sony Ericsson Exhibit, at the 2002 CTIA Orlando Convention center, stands in stark white contrast, spelling out the two capital letters of the newly formed company it represents. The two level design accommodates the dual program of the exhibit: product demonstration and reception on the first level, and private conference on the second. In collaboration with Jan Lorenc (TECH MS Arch., 1994), Steve McCall (TECH MS Arch., 1985) and Rion Rizzo.
Electronic textile interfaces are made from conductive thread embroideries, which are applied in this design along the jacket’s sleeve. Capacitive sensing technology is used to locate user interactions within the embroidered fabric surface. For this jacket, the interface could be used to control an mp3 player or other device. This work was done in collaboration with Thad Starner and is modeled by Claire Porter (Ga. Tech, 2004).
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