

Barry Matthew Kudrowitz

Assistant Professor
Director of Product Design
Department of Design, Housing and Apparel
College of Design
University of Minnesota

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Research Interests

Perception, Evaluation, and Testing of Creativity
Play and Humor in Design
Creativity and Idea Generation Tools
Design of Food
Concept Visualization and Sketching
Product Design Education

Education

PhD, Mechanical Engineering, Massachusetts Institute of Technology (MIT), 2010

Dissertation: HaHa and Aha! Creativity, Idea Generation, Improvisational Humor, and Product Design

Advisor: Dr. David Wallace

Minor: Comparative Media Studies

Exchange Student (*i.e.* Free Mover), Industrial Design Engineering, TU Delft, Netherlands, 2006

MS, Mechanical Engineering, Massachusetts Institute of Technology (MIT), 2006

Thesis: An Exploration of Concepts for Projectile Toys

Advisor: Dr. David Wallace

BS, Mechanical Engineering, University of Central Florida, 2004

Thesis: The Application of Pneumatic Capsule Pipelines in Conjunction with Linear Induction Motors towards the Enhancement of the Thrill Ride Industry

Positions Held

2011-present Assistant Professor, Product Design, University of Minnesota, Twin Cities, MN, USA
2011-present Affiliate Member, Mechanical Engineering Graduate Faculty, University of Minnesota, MN, USA
2014-present Affiliate Member, Human Factors / Ergonomics Graduate Faculty, University of Minnesota, MN, USA
2011-present Director of Product Design, University of Minnesota, Twin Cities, MN, USA
2011-2014 Creative Director, Popcorn Tuba LLP, Minneapolis, MN, USA
2011-2013 Fellow, Philadelphia University, College of Design Engineering and Commerce, Philadelphia, PA, USA
2011 Post Doctoral Associate, Mechanical Engineering, MIT, Cambridge, MA, USA
2009 – 2010 Instructor-G, Mechanical Engineering, MIT, Cambridge, MA, USA
2007-2008 Teaching Assistant, Mechanical Engineering, MIT, Cambridge, MA, USA
2005-2006 Research Assistant, Mechanical Engineering, MIT, Cambridge, MA, US

Awards

Teaching

Outstanding Teaching, College of Design, University of Minnesota (2015)

Founder's Day Teaching Award, Carlson School of Management, University of Minnesota (2015)

Goodwin Medal for Conspicuously Effective Teaching, MIT Institute Award (2009)

"Graduate TA or Instructor (G) who has performed above and beyond the norm, and whose teaching efforts can truly be characterized as "conspicuously effective."

Department Service Award, MIT (2009)

This award is related to the efforts in developing a class, Toy Product Design.

Academic

Research Slam, 2nd place, College of Design, University of Minnesota (2011)

The awarded presentation was of work leading to an app/software to teach basics of sketching

Lemelson-MIT Student Prize Finalist (2010)

MIT student, who has created or improved a product or process, applied a technology in a new way, redesigned a system, or in other ways displayed a portfolio of inventiveness.

Carl G. Sontheimer Prize for Creativity and Innovation in Design, MIT (2010)

Rohsenow Graduate Fellowship at MIT (2004-2005)

Top Honors Graduate/*summa cum laude* at the University of Central Florida (2004)

Order of Pegasus - Highest award offered to a student at the University of Central Florida (2004)

Extracurricular

1st Place in the First Annual Unuseful Competition for the "Catsup Crapper," MIT Architecture Dept. (2005)

"The Orlando Grand Slam Master" - Highest Ranked Slam Poet, Orlando, FL (2003-2004)

Publications

Refereed Journal Publications

- Kudrowitz, B. & Dippo, C. (2014). When Does a Paper Clip become a Sundial? Exploring the Progression of Novelty in the Alternative Uses Test. *Journal of Integrated Design and Process Science: Special Issue on Applications and Theory of Computational Creativity*. 17(4), 3-18.
Download: <http://dl.acm.org/citation.cfm?id=2692123>
- Kudrowitz, B., Te, P., & Wallace, D. (2012). The Influence of Sketch Quality on Perception of Product-Idea Creativity. *Artificial Intelligence for Engineering Design and Manufacturing: Special Issue on Sketching*. 26(3), 267-279. **Most downloaded of AI EDAM 2012.**
Download: <http://dl.acm.org/citation.cfm?id=2349427>
- Kudrowitz, B. & Wallace, D. (2012). Assessing the Quality of Ideas from Prolific, Early Stage Product Ideation. *Journal of Engineering Design: Special Issue on Design Creativity*. 24(2), 120-139.
Download: <http://www.tandfonline.com/doi/abs/10.1080/09544828.2012.676633>
- Ludden, G., Kudrowitz, B., Schifferstein, H., & Hekkert, P. (2012). Surprise and Humor in Product Design. *Humor: The International Journal of Humor*. 25(3), 285-309.
Download: <http://doc.utwente.nl/81647/>
- Kudrowitz, B. & Wallace, D. (2010). The Play Pyramid: A Play Classification and Ideation Tool for Toy Design. *The Journal of Arts and Technology*. 3(1), 36-56.
Download: <http://www.inderscience.com/info/inarticle.php?artid=30492>

Books/Book Chapters

- Kudrowitz, B. (2014). Emerging Technology in Toy Design. In J. Follett (Ed), *Designing for Emerging Technologies*. (237-254) O'Reilly Media.
Download: <http://shop.oreilly.com/product/0636920030676.do>

Refereed Conference Publications

- Alfalah, S., Kudrowitz, B., & Vickers, Z. (November 2015). Playful Design and Children's (dis)Liking of Vegetables. Proceedings of the *Second International Conference on Food Design*. New York, NY.
Download: *Coming Soon*
- Pilgrim-Rukavina, N. & Kudrowitz, B. (November 2015). Exploring the effects of warm-up games, criticism and group discussion on brainstorming productivity. *IASDR InterPlay 2015*, Brisbane, Australia.
Download: *Coming Soon*
- Johnson, K. & Kudrowitz, B. (November 2015). A Relationship Between Physical Construction Play as Children and Adult Creativity Scores. *IASDR InterPlay 2015*, Brisbane, Australia.
Download: *Coming Soon*
- Dippo, C. & Kudrowitz, B. (2015). The Effects of Elaboration in Creativity Tests as it Pertains to Overall Scores and How it Might Prevent a Person From Thinking of Creative Ideas During the Early Stages of Brainstorming and Idea Generation. *ASME Proceedings of the 27th International Conference on Design Theory and Methodology 2015*, Boston, MA. (word count: 3086)
Download: <http://proceedings.asmedigitalcollection.asme.org/proceeding.aspx?articleid=1830520>
- Kudrowitz, B., Oxborough, A., Stover, E. & Choi, J. (2014, June). The Chef as Designer: Classifying the Techniques that Chefs use in Creating Innovative Dishes. *Design Research Society Conference 2014*, UMEA. (word count: 5348)
Download: <http://www.drs2014.org/media/654516/0375-file1.pdf>
- Kudrowitz, B. & Dippo, C. (2013, August). Getting to the Novel Ideas: Exploring the Alternative Uses Test of Divergent Thinking. *ASME International Design Engineering Technical Conferences 2013*. Portland, OR. (word count: 2719)
Download: <http://proceedings.asmedigitalcollection.asme.org/proceeding.aspx?articleid=1830520>
- Kudrowitz, B., Te, P., & Wallace, D. (2011, October). The Influence of Sketch Quality on Perception of Product-Idea Creativity. *IASDR2011, the 4th World Conference on Design Research*. Delft, Netherlands. **Reviewer's Favorite.** (word count: 5252)
Download More Recent Publication: <http://dl.acm.org/citation.cfm?id=2349427>
- Kudrowitz, B. & Wallace, D. (2010, October). Improvisational Comedy and Product Design Ideation: Making Non-Obvious Connections between Seemingly Unrelated Things. *International Conference on Design and Emotion*. Chicago. **Nominated for Best Paper.** (word count: 5032)
Download: <http://www.designandemotion.org/library/page/viewDoc/127>

- Kudrowitz, B. & Wallace, D.** (2010, August) Assessing the Quality of Ideas from Prolific, Early Stage Product Ideation. *ASME 2010 International Design Engineering Technical Conferences*. Montreal, Canada. Pg. 381-391.
Download: <http://proceedings.asmedigitalcollection.asme.org/proceeding.aspx?articleid=1612353>
- Kudrowitz, B. & Wallace, D.** (2008, July). The Play Pyramid: A Play Classification and Ideation Tool for Toy Design. *International Toy Research Association 5th World Congress 'Toys and Culture'*. Napflion, Greece.
(word count: 7246)
Download More Recent Publication: <http://www.inderscience.com/info/inarticle.php?artid=30492>
- Gutowski, T., Taplett, A., **Kudrowitz, B.**, et al. (2008, May). Environmental Life Style Analysis (ELSA). *IEEE International Symposium on Electronics and the Environment*. San Francisco, USA. (word count: 2589)
Download: <http://web.mit.edu/ebm/www/Publications/ELSA%20IEEE%202008.pdf>

Other Publications

- Kudrowitz, B.** (in press). Radical Innovation and Toilet Paper. *Minnesota Magazine*.
Download: Coming Soon
- Dippo, C. & **Kudrowitz, B.** (2015). Elaboration in Creativity Tests. *NCUR National Conference of Undergraduate Research 2015*, Spanoke, WA.
Download: Coming Soon
- Pilgrim-Rukavina, N. & **Kudrowitz, B.** (2015). Exploring the effects of warm-up games, criticism and group discussion on brainstorming productivity. *National Conference of Undergraduate Research*, Spanoke, WA.
Download: Coming Soon
- Johnson, K. & **Kudrowitz, B.** (2015). A Relationship Between Physical Construction Play as Children and Adult Creativity Scores. *National Conference of Undergraduate Research*, Spanoke, WA.
Download: Coming Soon
- Kudrowitz, B.** (2014). Toy Product Design. In The Toy Association of India (Ed). *Toys of Tomorrow (16)*. The Toy Association of India Seminar Booklet.
- Kudrowitz, B.** (2013). How (some) board games can help us be (more) innovative. In C. McCarthy and T. Rawson (Eds.). *Insights Magazine*, Vol 7 (12-16). Innovation Learning Network.
Download: http://api.ning.com/files/4iqR7n6daXV6-YLpQD6YJgsDR96hzR3zrSWyi7G*j185-eaiVJopmJY4hCb3IO0wV8aJhF2luf61JPtFmaLPmmi3kF5S-LOE/InsightsVol.7web.pdf
- Dippo, C. & **Kudrowitz, B.** (2013, April). Evaluating the Alternative Uses Test of Creativity. *National Conference of Undergraduate Research*. UW La Crosse, WI.
Download: <http://ncurproceedings.org/ojs/index.php/NCUR2013/article/view/547>

Intellectual Property

Patents

Toy Projectile Launching Device, US Patent Number 7,673,625, March 9, 2010

Patent Applications

Beverage Bottle Lanyard Clip, in preparation

Endoscopic Biopsy Needle Design, US20080300507, December 4, 2008

Technical Disclosures

Air Strum: an air guitar that registers hand positions to play music, 2012

Seated Controller: a means of interacting with digital device using a rotating seat, 2012

Marble Snap: a set of connector clips to attach cardboard tubes, 2012

Stack Track: marble run composed of wood blocks with internal grooves and connectors, 2012

Invited Presentations

International

- “Creative Methods in Modernist Cuisine.” Talk. University of Twente. Enschede, Netherlands. August 12, 2015.
- “How Play and Humor Help us Innovate.” Talk. BMW Guggenheim Lab. Berlin, Germany. June 23, 2012.
- “Designing Discovery-Enriched Curriculum.” Keynote. City University of Hong Kong. April 18, 2011.
- “Creative Toy Design and Engineering.” Talk. The Hong Kong Institute of Vocational Education (IVE). Hong Kong. June 21-25, 2010.
- “Design for Play. Play for Design.” Keynote. International Conference on Toys and Children's Products. Alicante, Spain. May 14, 2009.
- “Gathering Ideas: Product Design and Innovation.” Speaker. Design Cork Seminar. Lisbon, Portugal. May 16, 2008.

U.S.

- “TBD.” Keynote. Association of Educational Communications and Technology. Las Vegas, NV. October 17, 2016.
- “How Play and Humor Fuel Innovation.” Talk. Miami University. Oxford, OH. February 26, 2016
- “How Play and Humor Fuel Innovation.” Talk. Big 10 Housing Conference. Minneapolis, MN October 27, 2016.
- “Creativity and Innovation.” Keynote. Boston Scientific. Maple Grove, MN. October 20, 2015.
- “Food and Design.” Talk. Minneapolis Institute of Art. September 19, 2015.
- “Everyday Superpowers.” Talk. Science Museum of Minnesota. St. Paul. MN. August 6, 2015.
- “Radical Ideas Today Will Be Commonplace Tomorrow.” Talk. Fast Horse. Minneapolis, MN. July 16, 2015.
- “Radical Ideas Today Will Be Commonplace Tomorrow.” Talk. Creative Mornings. Weisman Art Museum, Minneapolis, MN. June 25, 2015.
- “Facilitating Creativity Through Humor and Play.” Talk. University of Oregon. Corvallis, OR. May 27, 2015.
- “Creative Methods in Modernist Cuisine.” Talk. University of Oregon. Corvallis, OR. May 27, 2015.
- “Creativity, Play and Improvisation.” Keynote. Minnesota Library Association Institute for Leadership Excellence. Sugar Lake, MN. May 11, 2015.
- “Facilitating Creativity through Humor and Play.” Talk. Society of Women Engineers Minnesota Section Spring Seminar. Boston Scientific, Maple Grove, MN, March 28, 2015.
- “Facilitating Creativity through Humor and Play.” Keynote. John Tate Academic Advising Conference. University of Minnesota. March 12, 2015.
- “An Introduction to Design Thinking.” Talk. Boston Scientific Campus Visit. UMN. March 10, 2015.
- “Fueling Innovation at the University of Minnesota.” Talk. University of Minnesota Foundation Board of Trustees Meeting, UMN. February 18, 2015.
- “Creative Design: Harnessing the Power of Play.” Webinar. College of Continuing Education, UMN. November 17, 2014.
- “Creative Methods of Chefs,” Keynote. HEIB Home Economists in Business Meeting. Land O'Lakes, MN. Nov 6, 2014.
- “Problem Finding and User Needs.” Keynote. Minitex CALD Day. St. Cloud, MN. October 27, 2014
- “The Importance of Play and Humor in Creative Design.” Talk. Georgia Tech. Atlanta, GA. October 23, 2014.
- “Why Technical Leaders Should Embrace Playfulness and Humor.” Talk. Technical Speaking Leadership in Action. University of Minnesota. Oct 16, 2014.
- “How Humor can Fuel Innovation.” Keynote. Minneapolis Idea eXchange. Minneapolis, MN. Oct 2, 2014.
- “The Importance of Play and Humor for Creative Design.” Talk. Medical Devices Center, MN. Sept 12, 2014.
- “Inspiring Creativity Through Play and Humor.” Talk. Minitex Staff Day. St. Paul, MN. July 29, 2014.
- “The Importance of Play and Humor in Creative Design.” Talk. Capstone Publishing. Edina, MN. July 15, 2014
- “Culinary Applications of Rheology.” Talk. Rheology Measurements Short Course. Minneapolis, MN. June 11, 2014.
- “Using Play and Humor for Innovation and Collaboration.” Talk. Collegis Education. Edina, MN. June 24, 2014.
- “Ha Ha and Aha! Play and Humor in Design.” Talk. SEE CHANGE Conference. Minneapolis, MN. May 13-14, 2014.
- “How Humor Can Fuel Innovation.” Talk. TEDxUMN. University of Minnesota. April 27, 2014.
- “Seinfeldian Design: Observation and Problem Finding.” Keynote. Minnesota Library Association Institute for Leadership Excellence. April 25, 2014.

"Where Creativity Comes From." Talk. Boston Scientific. McNamara, UMN. Apr 15, 2014.

"Play Humor and Creativity." Talk. Exploring the Fundamentals of Engineering. Mahtomedi Engineering Open House. Apr. 5, 2014.

"The Creative Methods of Chefs." Talk. Architecture Catalyst Series. University of Minnesota. March 12, 2014.

"How Play and Humor Fuel Innovation." Talk. University of Texas A&M, Mechanical Engineering Department. College Station, TX. November 27, 2013.

"Inspiring Creativity through Humor and Play." Talk. American Institute of Architects (AIA) 79th Annual Convention & Exposition. Minneapolis Convention Center, MN. November 15, 2013.

"How Play and Humor Fuel Innovation." Talk. University of Illinois, Champaign Urbana. Colleges of Engineering and Art and Design. Champaign, IL. September 13, 2013.

"The Importance of Play." Convocation Keynote Speech. Minneapolis, MN. August 29, 2013.

"Sketch Your Ideas!" Talk. College of Design, Welcome Week/College Day. Minneapolis, MN. August 29, 2013.

"How Play and Humor Help Us Innovate." Talk. 11th Annual Society of Concurrent Product Development (SCPD) Conference. 3M, St. Paul, MN. June 26, 2013.

"The Importance of Play and Humor in the Creative Design Process." Talk. Product Development and Management Association (PDMA-MN). Blaine, MN. May 15, 2013.

"The Importance of Play and Humor in Creative Design Practice." Talk. Target Women's Business Council Event. Target Headquarters. Minneapolis, MN. March 8, 2013.

"How Play and Humor Help us Innovate." Keynote. Medtronic. Minneapolis, MN. January 25, 2013.

"The Importance of Play and Humor in Creative Design Practice" Talk. War Memorial Hospital. Sault Ste. Marie, MI. January 15, 2013.

"The Importance of Play and Humor in Creative Design Practice." Talk. RetailGreen. Phoenix, AZ. Nov 27. 2012.

"Sketch Your Ideas!" Talk. University of Minnesota Backstage Pass: An Event for National Merit Semifinalists. Minneapolis, MN. November 2, 2012.

"The Importance of Play and Humor in Creative Design Practice." Talk. American Society of Mechanical Engineers (ASME). Plymouth, MN. October 10, 2012.

"A Playful Product Design Process." Talk. 3M Tech Forum. Lake Elmo, MN. August 16, 2012.

"The Importance of Play and Humor in Creative Design Practice." Talk. Innovation Learning Network (ILN). Detroit, IL. May 15, 2012.

"Play, Humor and Creativity." Talk. Vanderbilt University. Nashville, TN. March 26, 2012.

"Importance of Play and Humor in Creative Design Practice." Talk. 3M Tech Forum. St. Paul. March 2, 2012.

"The Importance of Play and Humor in Creative Design Practice." Talk. Target Engineer Week. Target Headquarters. Minneapolis, MN. Feb 20, 2012.

"Creativity and Leadership." Talk. 2011-2012 President's Emerging Leaders Program. St. Paul. February 17, 2012.

"The Importance of Play and Humor in Creative Design Practice." Talk. Mayo Clinic, Systems Engineering and Operations Research Collaborative. Rochester, MN. Jan 13, 2012.

"Play and Creative Design." Talk. The Works, Science and Engineering Museum. Bloomington, MN. Dec 8, 2011.

"Play, Humor and Creativity." Talk. Pixel Farm Digital. Minneapolis, MN. Dec 8, 2011.

"Play, Humor and Creativity." Talk. Logic Product Design. Minneapolis, MN. May 25, 2011.

"Play, Humor and Creativity." Talk. Philadelphia University. Philadelphia, PA. May 19, 2011.

"Design of a Nerf Blaster in 7 Minutes." Talk. Design in 7. University of Minnesota. Minneapolis. April 14, 2011.

"A Playful Product Design Process." Talk. Design Intersections Symposium. Minneapolis, March 31, 2011.

"Increasing Creativity and Fluency in Product Design Idea Generation." Talk. MIT, Mechanical Engineering. Cambridge, MA. March 14, 2011.

"The Humor of Innovation." Talk and Panelist. Making, Selling, Buying, Using: Emerging Issues in Product Design. Minneapolis, MN. September 17, 2010.

"Real Toys for an Increasing Virtual World." Panelist. Sandbox Summit: iPlay, YouPlay, WiiPlay. MIT, Cambridge, MA. May 18-19, 2010

"Fueling Design Innovation: Relationships Between Creativity, Humor and Play." Talk. MIT Media Lab. March 10, 2010.

Exhibits and Museum Installations

"America's Monsters, Superheroes and Villains." *Goldstein Museum of Design*. St. Paul, MN. October 2015-2016
Display of Student Work from Toy Product Design

"Tune Toy." *The Works Museum*. Bloomington, MN. June 2012-2013
Exhibit Co-Designed with James Cosper, Jesse Purvey, Colin Nelson, Annice Larkin (contract)

"Toy Product Design." *MIT Museum*. Cambridge, MA. June 2008-2010.
Exhibit of History of Class and Student Work

"Toys and Games: More than Amusement." *Revolving Museum*. Lowell, MA. 2008.
Exhibit of History of Class and Student Work

"Elevator Simulator." *Spy Museum*. Washington DC. 2006-present.
Co-Design of an elevator simulator for Operation Spy with 5-Wits Entertainment (juried & contract)

Products

Physical Products and Mechanisms

2014 - "Putt Pong" (Juried)

Walker Art Center: Artist-Designed Mini Golf. Minneapolis, MN. 2014, 2015
Co-Designed with Trevor Anderson

2013 - Oreo Separating Machine #2 (Juried/Invited)

Development of a machine that disassembles OREO cookies for an Internet advertisement campaign
Sponsored by Widen+Kennedy, 2 Million+ views.

2012 - Manhattan Toy, Motorworks Ramp and Garage

Conceptual Design and Design for Manufacture, Currently on the Market
With UMN students: Adam Poetter, Andrew Maxwell-Parish, Colin Nelson
<http://www.manhattantoy.com/p/motorworks-tri-level-super-garage>

2006 - Nerf® Atom Blaster®

Hasbro sponsored research and design, product on the market for 5 years
Research performed with William Fienup and Advisor Dr. David Wallace

2005 - The Catsup Crapper, AuTomato or Ketchup Robot

A ketchup bottle that roller skates to a plate and dispenses ketchup
Co-developed with William Fienup
First place recipient in the first annual MIT Unuseful Competition
Featured on *The Martha Stewart Show* (2008) and *Conan* (2011)
<http://www.catsupcrapper.com> and <http://www.automato57.com>

Digital/Software Design

2012 – Food and Design: Video Series and Blog exploring connections between food and design
<http://food.design.umn.edu>

2012 – Sketch-Off: Digital Sketching Game/Teaching Tool

Developing software and apps for tablet computers to teach basic sketching skills

2011 - Word Bounce App

Iphone/Ipad word game available on iTunes
Developed by Popcorn Tuba LLP

Entertainment Design

2014 – Soap Factory 25th Anniversary Party

Food Design Catering with Students from PDES 3715 Design and Food

2006 - Design Squad, PBS

Design work for PBS show targeted at high school students to promote engineering
Prototyping musical instruments: *Rock On*, Episode 2

2005 - 5 Wits Interactive Entertainment

Storyboarding, set design, and animatronics for interactive "*Tomb*" show in Boston

Teaching

University of Minnesota, Courses Developed and Taught

Creativity, Idea Generation and Innovation (PDes 3701/5701)

Creator and Course Instructor, 2011, 2012, 2013, 2014, 2015

3 Credits, Fall Semester

Introduction to a variety of creativity and idea generation tools with an emphasis on product concept development

<http://product.design.umn.edu/courses/pdes3701/index.html>

Concept Sketching and Rendering (PDes 3702/5702)

Creator and Course Instructor, 2011, 2012, 2013, 2014

3 Credits, Fall Semester

Introduction to freehand sketching and rendering for communication of conceptual product design

<http://product.design.umn.edu/courses/pdes3702/>

Toy Product Design (PDes 3711/5711)

Creator and Course Instructor, 2011, 2012, 2013, 2014, 2015

4 Credits, Spring Semester

Project-based, community of practice course that introduces product design process and techniques

<http://product.design.umn.edu/courses/pdes3711/>

Food and Design (DES 3715)

Creator and Course Instructor, 2013, 2014

4 Credits, Fall Semester

Co-taught with local chefs, students learn a variety of design theories and tools through a food medium

<http://food.design.umn.edu>

First Year Experience (CSE 1001)

1 Credit, Fall 2014

Introduction to design for freshmen in CSE

Project Based Inquiry (CSE 1002) – Product Development and Production

1 Credit, JTerm 2015

Study abroad in Hong Kong/China to tour toy manufacturing industry

Architecture Catalyst: Modernist Cuisine

Creator and Course Instructor, 2014

1 Credit, Spring Semester

Applying design principles to food with Prof Randy Ewoldt and local chefs

Architecture Catalyst: Old School Toys, New School Tools

Creator and Course Instructor, 2013

1 Credit, Spring Semester

Developed prototypes of Weisman Art Museum themed puzzle block toy for sale in gift store

University of Minnesota, Courses Co-Developed, but Not Teaching

Designing for Manufacture (PDES 3706/5706)

4 Credits, Fall 2015

Hands-on introduction to a variety of tools and practices for designing manufactured goods

The History and Future of Product Design (PDES 3705/5705)

3 Credits, Spring 2014

Examining the history, evolution, and trajectory of modern industrial/product design

Designing Characters, Worlds and Immersive Experiences (DES 3160)

3 Credits, Fall 2013

Using characters and worlds as a means to develop immersive environments

Innovative Computer Modeling and Rendering for Design (PDES 3704/5704)

4 Credits, Spring 2013

Introduction to making high quality digital models of existing and conceptual objects

Product Form and Model Making (PDES 3703/5703)

4 Credits, Fall 2012

Introduction to 3-dimensional form for product aesthetics and usability

MIT, Department of Mechanical Engineering

Toy Product Design (2.00b/SP.778)

Co-Creator and Course Instructor, 2005, 2006, 2007, 2008, 2009, 2010

Project-based course that introduces undergraduates to product design process and techniques

Product Engineering Processes (2.009)

Lab Instructor and Teaching Assistant, 2005, 2006, 2007, 2008, 2009, 2010

Mechanical engineering capstone undergraduate product design process course

Product Design (2.744)

Teaching Assistant, 2006, 2008

Graduate project-based course emphasizing user experience, product form, and human factors

Short Courses for Industry

3M, The Art of Enhanced Communication

Drawing and visualization skills for engineers and scientists

8 Week course, June-August 2012, 2013

3M, Tools for Innovation

A hands-on idea generation and development class for designers and engineers

7 Week course, January-February 2013, 2014

Minneapolis Institute of Art, Game Design

Consulting and co-teaching a week long game design class for elementary school children

5-Day course, 2013

University of Minnesota, Program Development

Product Design Bachelor of Science, 2014 – present

Undergraduate Product Design Minor, 2013 - present

http://design.umn.edu/prospective_students/programs/productdesign_ug.html

Graduate Product Design Minor, 2011 - present

http://product.design.umn.edu/program/grad_minor.html

Product Design Master of Science, 2014 - present

Innovation Center Programming, 2014 – present

Guest Lectures, UMN

- "A Hand-on Introduction to a Creative Design Process." Graduate School. Minneapolis, MN. 2015
- "A Hand-on Introduction to a Creative Design Process." ME 4054W Design Projects. Minneapolis, MN. 2012, 2013, 2014, 2015
- "A Humorous, Playful Brainstorming Process." ME 8221 New Product Design and Business Development. Minneapolis, MN. September 9, 2011, 2012, 2013, 2014, 2015
- "The Importance of Play and Humor in Creative Design Practice." Talk. DES 1101W Design Thinking. St. Paul, MN. 2012, 2013, 2014, 2015
- "The Importance of Play and Humor in Creative Design Practice." Talk. ARCH 1281 Design Fundamentals 1. Minneapolis, MN. 2014, 2015.
- "Sketch Your Ideas!" Talk. College of Design, Welcome Week/College Day. Minneapolis, MN. August 2012, 2015.
- "Blue Sky Idea Generation." IDES 4608. Interior Design Thesis Studio. Jan 27, 2015.
- "How Play and Humor Fuel Innovation." DES 1000. Design @ MN. 2013, 2015
- "Engineering for Design." ARCH 3250. Farm Tech. Apr 3, 2014.
- "Design of Food." DES 3141 Technology, Design and Society. Minneapolis, MN. Feb 12, 2014.
- "Creativity and Ideation" MATS 4400 Senior Design Project. Minneapolis, MN. Feb 4, 2011, 2012, 2013, 2015
- "The Importance of Play and Humor in Creative Design Practice." DHA Lunch Meeting. St. Paul, MN. Dec 13, 2012.
- "Opportunity Finding, Observation, and Ethnography." Kin 3505 Human-Centered Design. Minneapolis, MN, 2011, 2012.
- "Design of Nerf Blaster." Talk. PSY 1905 Psychology of Design. Minneapolis, MN. April 28, 2011.
- "Play, Humor, and Creativity." DES 1111 Creative Problem Solving. Minneapolis, MN. April 28, 2011.
- "Play." LA 8205 Urban Form Options Studio. Minneapolis, MN. March 4, 2011.
- "Product Design Interaction." GDes 2385W Design and Factors of Human Perception. St. Paul, MN. Feb 3, 2011.

Invited Workshops, International

- "Food and Design." 2-Day Workshop. University of Twente. Enschede, Netherlands. August 11, 2015
- Toy Product Design Process." 5-Day Workshop. The Hong Kong Institute of Vocational Education (IVE). Hong Kong. June 21-25, 2010.
- "Ideating Discovery-Enriched Curriculum." Workshop. City University of Hong Kong. April 19-20, 2011.
- "Idea Generation Through Improvisation." Workshop. BMW Guggenheim Lab. Berlin, Germany. June 23, 2012.

Invited Workshops, US

- "A Hands-on Introduction to a Creative Design Process." Workshop. NSF EngrTEAMS. St. Paul, MN July 7, 2015.
- "A Hands-on Introduction to a Creative Product Design Process." University of Oregon. Corvallis, OR. May 28, 2015.
- "A Hands-on Introduction to a Creative Product Design Process." Milestone AV. Eden Prairie, MN. May 14, 2015.
- "Creative Product Design Process." Minitex CALD Day. St. Cloud. October 27, 2014.
- "Blue Sky Idea Generation." Workshop. Architecture Graduate Orientation. St. John's University, MN. August 9, 2014
- "Design and Prototyping with Technology." Architecture and Design Education Network. Cranbrook Academy, MI. August 1, 2014.
- "Ideation Workshop: Blue Sky Idea Generation." Minnesota UXPA (User Experience Professionals Association). University of Minnesota. June 12, 2014.
- "Brainstorming for Medical Devices." Design of Medical Devices Conference Medical Device Innovation. April 2015, 2014, 2013, 2012.
- "An Abbreviated Hands-On Introduction to Creative Idea Generation." Vascular Solutions. Nov 22, 2013. Maple Grove.
- "Transforming Education with Design Thinking." Forum on the Sustainability of Higher Education. October 14, 2013.
- "Blue Sky Idea Generation for Fluid Power Storage." NSF Center for Compact and Efficient Fluid Power (CCEFP) Annual Meeting and ASME/Bath Symposium on Fluid Power and Motion Control. Sarasota, October 9, 2013.
- "Improvisation for Innovation." Boston Scientific. Young Leadership Association. July 22, 2013, Maple Grove.
- "A Creative Product Design Process" and "Structured Ideation." ATK. May 21-22. 2013
- "Idea Generation Through Improvisation." Minnesota Library Association Institute for Leadership Excellence. Breezy Point, MN. May 16, 2013.
- "Improvisation for Idea Generation." University of Minnesota Communicators Forum. Minneapolis, MN. Feb 1, 2013.
- "A Hands-on Introduction to a Creative Product Design Process." War Memorial Hospital. Sault Ste. Marie, MI. January 16-17, 2013.
- "A Hands-on Introduction to a Creative Product Design Process." Starkey. Eden Prairie, MN. January 8, 2013.
- "Improv and Idea Generation for the Classroom." Design Lab for Educators. Minneapolis, MN. Dec 6, 2012.
- "Target Brainstorm: Future of Target Store Experience." University of Minnesota. November 15, 2012.
- "A Humorous, Playful Brainstorming Process." Curb Center Creative Practice Bootcamp. Vanderbilt. Nashville, TN. August 31, 2012.
- "Improvisation for Idea Generation." Walker Kitchen Lab. Minneapolis, MN. June 18, 2012.
- "A Hands-on Introduction to a Creative Product Design Process." Innovation Learning Network (ILN) InPerson. Detroit, IL. May 16, 2012.
- "Mash-Up: Transforming Education with Design Thinking." Council of Educational Facility Planners International, Midwest Regional Conference. Minneapolis, MN. April 25-27, 2012.
- "Innovation and Brainstorming." 3M Skin/Wound Care Division. St. Paul, MN. March 6, 2012. .
- "Improv and Idea Generation." Mayo Clinic, Center for Innovation. Rochester, MN. Jan 13, 2012.
- "Play, Humor and Creativity." Creative Kid Stuff Corporate, Minneapolis, MN. July 14, 2011
- "Play, Humor and Creativity." 3M. St. Paul, MN. May 18, 2011.
- "Play and Idea Generation." Seminar for Mechanical Engineering Students in Computer Aided Design. Purdue University, West Lafayette. January 28, 2011.

Annual Event Organization for Classes

2013 – present, **Eat Design**. Student designed food experiences, University of Minnesota.
Final event for DES 1715 Design and Food, attendees include chefs and the community

2012 – present, **Sketch-Off**. Improvisation design sketching show, University of Minnesota.
Final event for PDES 3702 Concept Sketching and Rendering,
Features local designers and students sketching ideas based on audience suggestions

2005 – present, **PLAYsentations**. Student designed toy products with theatrical performance, UMN and MIT.
Final event for PDES 3711 (UMN) and 2.00b (MIT) Toy Product Design

Students Advised

University of Minnesota – Graduate Advisor

Teddy Russell, Human Factors, MS, 2015-present
Dara Gruber, Human Factors, PhD, 2014-present
Xinyi Wang, Graphic Design, MS, 2014-present

University of Minnesota – Graduate Research Project Advisor

Dustin Schipper, Architecture, March, 2015
Sarah Alfalah, Graphic Design, PhD, 2014
Lane Phillips, Computer Science, PhD, 2011-2012
Michael Silvestrini, Architecture, March, 2014
Emily Stover, Landscape Architecture, MLA, 2012
Krishna Natarajan, Computer Science, MS, 2012

University of Minnesota – Graduate Design Project Advisor

James Cospers, Graphic Design, PhD, 2011
Andrew Carlson, Mechanical Engineering, MS, 2012

University of Minnesota – Undergraduate Research Advisor/UROPs

Alex Leeds, ICP, 2015
Aaron Free, Computer Science, 2015
Josh Halvorson, Mechanical Engineering, BS, 2015
Alexander Schmies, Mechanical Engineering, BS, 2015
Evelina Knodel, Architecture, BS, 2014
Krystianna Johnson, ICP, 2014
Nel Pilgrim-Rukavina, Economics, 2014
Jacob Haug, Psychology, 2014
Maria Brososke-Wires, ICP, 2014
Daniel Rezekulov, Mechanical Engineering, 2014
Austin Granger, Computer Science, 2014
Katrina Mutuc, Mechanical Engineering, 2014
Micah Lindstrom, Mechanical Engineering, 2014
Arthur Oxborough, Retail Merchandising, BS 2012
Catie Jo Pidel, Inter-College Program, BS, 2013 – present
Alex Hambrook, Mechanical Engineering, BS 2012-2013
Amy Marcus, Communication, BS, 2012 – 2013
Matthew Munson, Inter-College Program, BS, 2012 -2013
Conner Murphy, Graphic Design, BS, 2012
Lucas Keading, Electrical Engineering, BS, 2012

University of Minnesota – Undergraduate Design Project Advisor/Directed Studies

Ross Neumann, ICP, 2015
Zachary Fadness, Mechanical Engineering, 2015
Michael Rosplock, Mechanical Engineering, 2014
Conner Cowling, Computer Science, BS, 2012
Andrew Maxwell Parish, Mechanical Engineering, BS, 2011
Colin Nelson, Mechanical Engineering, BS, 2011

Adam Poetter, Bio-Product Engineering/Architecture BS, 2011

Jesse Purvey, Mechanical Engineering, BS, 2011

MIT – Thesis Committee Member

Geoff Tsai, Mechanical Engineering, PhD, 2014-present

Marlous Nacken, Industrial Design Engineering, MS, 2008

Paula Te, Mechanical Engineering, BS, 2011

University of Minnesota – Graduate Thesis Committee Member

Joungyun Choi, Graphic Design, PhD, 2015-present

Augie Park, Graphic Design, PhD, 2015-present

Mary Ellen Burglund, Apparel Design, MS, 2015-present

Shivaram Poigai, Biomedical Engineering, PhD, 2014- present

Drew Blom, Graphic Design, MFA, 2014-present

Cory Schaffhausen, Mechanical Engineering PhD, 2012-2015

Emily Marti, Graphic Design, MFA, 2012-2015

David Schroeder, Computer Science PhD, 2013-2014

Shawn Wilhelm, Mechanical Engineering PhD, 2012-2014

Brett Jackson, Computer Science PhD, 2012-2014

Ellen Schofield, Graphic Design, MFA, 2012-2013

Mark Meredith, Mechanical Engineering, MS, 2014-2015

Shelley Thurk, Mechanical Engineering, MS, 2014-2015

William Besser, Mechanical Engineering MS, 2012-2014

Sachin Bijadi, Mechanical Engineering, MS, 2013-2014

Jon Hjaltason, Mechanical Engineering MS, 2012-2013

Arya (Made) Adiartha, Architecture MS, 2012-2013

Brenton Steinmann, Mechanical Engineering MS, 2012-2013

Evan Leingang, Mechanical Engineering MS, 2012-2013

Kasey Grim, Mechanical Engineering MS, 2013

Andrew Carlson, Mechanical Engineering MS, 2012

Mat Waddell, Mechanical Engineering MS, 2012

Travis Burkstrand, Graphic Design MA, 2014-2014

Service

Editorial Boards

Associate Editor, Food and Design Journal, 2014-present

Curatorial Boards

Guest Curator, Minneapolis Institute of Art, 2014-2015, "Thinking on Paper, Leonardo da Vinci's Codex Leicester"

Conference Boards

International Food Design Conference Review Board, 2014

Journal/Conference/Grant Reviewer

ASME Design Theory and Methodology, 2012-present

CHI, 2014

Design and Emotion Conference, 2014

International Journal of Design Creativity and Innovation, 2013, 2014, 2015

Journal of Engineering Design, 2013, 2014

Natural Sciences and Engineering Research Council of Canada, Chair in Design Engineering Committee, Toronto, 2013

2nd International Conference on Design Creativity (ICDC), 2012

Professional Board Membership

Minnesota Children's Museum, STEM Advisory Board, 2014

WAM Weisman Art Museum, Colleagues Advisory Board, 2011 - Present

Leonardo's Basement, MSP Workshop, Advisory Board, 2014 - Present

CogCubed, Cognitive Toy Start-Up, Advisory Board, 2013-Present

YOXO, Toy Company, Advisory Board, 2012-Present

Professional Competition Judge

Toy of the Year Awards (*i.e.* TOTY), 2011-Present

FIRST Robotics, Minneapolis, 2011

Society Memberships

Industrial Designers Society of America (IDSA), 2011-Present

American Society of Mechanical Engineers (ASME), 2004-2005, 2012-Present

Design and Emotion Society, 2014-Present

International Food Design Society, 2012-Present

University of Minnesota Committees

Chair, Innovation Space Committee, 2014-Present

Chair, Product Design Graduate/Undergraduate Minor Committee, 2011-Present

Chair, DHA Curriculum Committee, 2014-2015

Member, CDES Dean Search Committee, 2015

Member, Committee for Change, CDES, 2015

Member, Product Design Faculty Search Committee, 2012, 2013, 2014

Member, MNDrive Product Design Faculty Search Committee, 2014

Member, CDES Interdisciplinary Design Committee, 2012-Present

Member, Design Graduate Faculty, 2011 - Present

Member, Digital Fabrication Laboratory Committee, 2011-2012

Member, DHA Curriculum Committee, 2011 - 2014

Member, UROP Review Committee for Fall 2012, Spring 2013

Member, College of Design Lectures Committee, 2011 - 2012

Member and Facilitator, Target & UMN College of Design New Collaborations Team, 2011

Professional Consulting Services

Retained by Dunlap Bennett and Ludwig, *Case is private*, 2015

Retained by Collins Edmonds Pogorzelski Schlather & Tower, *Battle toys, LLC v LEGO Systems Inc.* 2013

Gardening Product Idea Generation. Tricam Industries. Eden Prairie, MN. 2013

Dog Toys Expert Review Panel. Ideas To Go. Minneapolis, MN. 2013

Media Exposure

Television/Film/Radio

- "U of M Students Mix Apples and Design" *KSTP Channel 5 Eyewitness News*. October 15, 2014.
- "University of Minnesota Students Take Culinary Arts to the Next Level" *KSTP Channel 5 Eyewitness News*. November 28, 2013.
- "Twister Inventor Dies in MN" *Fox 9 News*. July 11, 2013
- "Food, Space and 3D printing." With John Hines on *WCCO*. May 23, 2013
- Jeanne Moos. "How to Separate Your Oreo." *The Situation Room, CNN News*. March 12, 2013.
- "U of M Oreo Splitter." *Fox 9 News*. Friday March 1, 2013.
- "Design professor & toy lover Barry Kudrowitz talks toys, creativity, and why play matters." *The Roadhouse*. WTIP North Shore Community Radio 90.7FM. Nov 30, 2012.
- "Musical Toy Story." *Daily Planet*. Discovery Canada. January 18, 2012.
- "Good Question: What Toys Will Be Hot For the Holidays?" *Channel 4 News*. CBS Local. WCCO-TV. Sept 20, 2011.
- "Transformers 2 – Deleted Scene." *Conan*. TBS. June 28, 2011.
- "Food." *Off The Air*. Episode 2. Cartoon Network's Adult Swim. May 25, 2011.
- "Creating Toys for Credit at U of M" *Fox 9 News*. M.A. Rosko Interview. FOX. May 11, 2011.
- "Star Wars – Deleted Scene." *Conan*. TBS. Jan 11, 2011.
- "Barry Kudrowitz: Brainstorming in the MIT Toy Lab." *Imagine It! 2*. DVD. Infinite Loop Media LLC. July, 2009.
- "Unuseless Inventions." *Martha Stewart Show*. Fine Living Channel. New York. Feb 15th, 2008.
- "Rock On: Episode 2." *Design Squad*. PBS. Boston. 2007
- "Archimedes Death Ray: Episode 46." *Mythbusters*. Discovery Channel. San Francisco. January 25, 2006.

Magazine

- Meleah Maynard. "Toy Story." *Legacy*: Alumni Magazine Cover story. Fall 2014.
- Quinton Skinner. "Prof's Food Design Class Really Cooks." *Minnesota Monthly*. March 2014.
- Jacqueline Detwiler, Best Buys. *Hemispheres Inflight Magazine*. November 2011
- Ledetta Wossen. "Toy Boy." *MADE Magazine*. Issue 2. Profile Feature. Pg. 42-45. 2011
- John. B. Carnett. "PopSci's 25 Most Awesome College Labs 2011." *Popular Science*. Aug 2011
- Thomas Grose. "Hot Courses." American Society for Engineering Education (*ASEE*) *PRISM*. Summer 2011.
- Rena Marie Pacella. "Mind –Blowing College Labs" *Popular Science*. September 2010.
- Paul McMorrow. "Good Bostonian: Barry Kudrowitz, Product Designer." *Boston's Weekly Dig*. Aug 2007.
- Etienne Benson. "Toy Stories." Association for Psychological Science *Observer*. December 2006.
- Paul McMorrow. "Bringing Cambridge What it Badly Needs: A Death Ray." *Boston's Weekly Dig*. Oct 19, 2005.
- "20 Coolest People in Orlando." *Axis Magazine*. November 2004.

Newspaper

- Thom Johnson. "Improv Doodling as Sport." *Minnesota Daily*. October 17, 2013.
- Richard Chin. "Orobot: One Solution to your pesky Oreo cookie-from-crème problem." *Pioneer Press*. March 6, 2013.
- Alex Gaterud. "U Students Share Their Toy Stories." *Star Tribune*. May 2011.
- Jessica Lussenhop. "The Land of GoBots, Pound Puppies, and Care Bears." *City Pages*. March 30, 2011.

Richard Chin. "Toys R' Him." *Pioneer Press*. March 1st, 2011.

Amanda Hamon. "Future Engineers Try Thinking Outside the Sandbox." *Lafayette Indiana News*. Jan. 29, 2011.

Katy Jordan. "Wily Wonks and the High-Tech Toy Factory." *Boston Herald*. May 16, 2010

Sarah Wright. "Toy Soldier: At Play with Barry Kudrowitz, MIT Toy Designer." *MIT Tech Talk*. Dec 12, 2007.

Anne Trafton. "Toy Designers Make Brushing Fun." *MIT Tech Talk*. May 24, 2006.

Online Publications and Blogs

Sally Koering Zimney. "009: Barry Kudrowitz – On Creativity and Innovation." This Moved Me Podcast. December 17, 2014

Eric Butterman. "Top 6 Mechanical Toys of All Time." *ASME.org*. September, 2014.

Mac Cameron. "3D Printing Unleashes Creativity at UMN's Toy Product Design Class Hosted by MIT Alumnus Barry Kudrowitz." *Stratasys Blog for a 3D World*. July 10, 2014.

Joe Berkowitz. "Two Toy Scientists Get Cremed By Another Oreo Separator." *Fast Co Create*. March 4, 2013.

Andrew Liszewski. "An Even Better Oreo Separating Machine Blasts Hot Crème in Your Mouth." *Gizmodo*. Mar 4, 2013.

Glen Tickle. "Second Oreo Separator Machine Surfaces, Sprays Hot Crème in Your face." *GeekoSystem*. Mar 3, 2013

Rusty Blazenhoff. "Toy Scientists Create Their own Machine to Separate Oreo Cookies." *Laughing Squid*. Mar 1, 2013.

Tim Nudd. "Toy Scientists are Much Better at Separating an Oreo Than Ad Guys" *ADFREAK*. March 1, 2013.

Bridget Aymar. "How to spark your creativity: tips from a toy designer." *Business @ the U of M Blog*. Oct 5, 2012.

Christine McLaren. "Ha ha, Ha ha ... Aha! How a Toy Designer Could Teach Us to Save Our Cities." *BMW Guggenheim Lab Log*. June 26, 2012.

John Cheese. "The 9 Most Brilliant Pieces of Comedy Hiding on YouTube." *Cracked.com*. June 21, 2012.

Bill Magdalene. "Prototype. Test. Repeat." *UMNews* Feature. May 31, 2012.

Jill Jensen. "University Professor Launches New Word Game for iPhone." *The Minnesota Daily*. Sept 29, 2011.

Elizabeth Giorgi. "Jumping into Toy Design." *UMNews* Feature. May 13, 2011.

Rain Noe. "Dangerous Toys and Other Different Thinking for UofM's New Toy Design Professor." *Core 77*. Mar 1, 2011.

Christa Meland. "U of M Debuts Toy Design Class; Local Co. to Advise." *Twin Cities Business*. Jan. 26, 2011.

Mark Frauenfelder. "Ketchup Dispensing Mobile Robot." *Boing Boing*. Jan 12, 2011

Michael Tedder. "Toy Story." *FLYP Media*. Issue 30. May 26 - June 7, 2009.

John Park. "Nerf Atom Blaster from Concept to Production." *MAKE*. Nov 27, 2008

Levi Fishman. "Get a B.A. in Toy Design (Batteries not Included)." *Columbia News Service*. Dec 6, 2007.

David Pescovitz. "Archimedes's Death Ray Realized." *Boing Boing*. Oct 6, 2005.

Barb Dybwad. "The Catsup Crapper." *Engadget*. Sept 1, 2005.