
Education

Master of Environmental Design in Industrial Design

University of Calgary, Canada, 1997

Master's Degree Project:

“Death: Artefact and Process in the Last Rite of Passage”

Advisors

Dr. Ron Wardell, Industrial Design

Dr. Stuart Walker, Industrial Design

Dr. Edna McHutchion, Nursing

Honors

Gold Medal, The Faculty of Environmental Design, 1997

Best Master's Degree Project in Industrial Design, 1997

Bachelor of Arts in Applied Psychology

University of Calgary, Canada, 1986

Concentration: Human Factors and Industrial Psychology

Academic Positions

Professor, Tenured July 2007

Carnegie Mellon University School of Design

Pittsburgh, Pennsylvania, 1998–present

Appointments

Professor, 2019–present

Associate Professor, 2004–2019

Assistant Professor, 1998–2004

Administration

Head of School, June 2019–December 2022

Director of Graduate Studies, 2011–2019

Director of Executive Education, 2017–2019

Program Chair of Undergraduate Industrial Design, 2005–2011

Director of Graduate Studies, 2003–2005

Area Head of First Year Undergraduate Program, 1999–2003

Undergraduate Teaching

Human Centered Design, Sophomore Industrial Design Studio,

Design and Policy, First Year Design Studio, Senior Design Projects

Graduate Teaching and Advising

Research Methods for Design, Design Principles and Practices,

Thesis advising in Interaction Design and Communication Planning

and Information Design

PhD Advising

Comprehensive examinations and doctoral dissertation advising in

New Product Development and Interaction Design

Visiting Designer and Project Director

Innovative Design Lab of Samsung, Seoul, South Korea,

May–August 2000

Advised an interdisciplinary studio project and provided lectures and

lab support to a team of Samsung employees from industrial design,

engineering, and marketing.

Academic
Positions
continued

Adjunct Instructor

Faculty of Environmental Design, University of Calgary, Canada,
Winter 1998

Taught an interdisciplinary graduate course on qualitative and quantitative research methods for students in industrial design, planning, and environmental science.

Design
Consulting &
Practice

Researcher and Designer

Designation Design, Calgary, Alberta, Canada, Contract 1997–1998

Analyzed signage and way-finding patterns and proposed program for existing hospital facility and future expansion, using photography, mapping, client and user input. Completed a similar project for University of Calgary and City of Calgary.

Designer-Installer

Books on Cassette, Calgary, Alberta, Canada, Summer 1994, 1995

Designed, built and installed a 400 square-foot retail store, all store fixtures, cash desk, and display units. Designed, built and installed a free-standing, securable retail kiosk for a satellite location.

Professional
Education

Team Instructor

“Catalyst 19: Applying Design Methods & Practices to Inspire Business Innovation”

Two-day workshop for 250 MBA students in the Tepper School of Business, Carnegie Mellon University, March 2019.

“An Immersive Introduction to Design Thinking”

One-day workshop for the Pittsburgh Food Bank, March 2019.

“Crossing the Creative Divide: Using Design Thinking to Foster Innovation”

MBA Accelerate Program, Tepper School of Business, Carnegie Mellon University. Over 20 Leadership Immersion Workshops spanning 2014–2019.

“Design Thinking: Methods and Practice for Innovative Products and Services”

Micro-course for Heinz College, Carnegie Mellon University, Spring semester 2017, 2018.

“An Immersive Introduction to Design Thinking”

Two-day workshop for the Software Engineering Institute (SEI), Carnegie Mellon University, January 2018.

“Design Thinking: Methods + Practice for Human-Centered Design”

One-day workshop for the Leadership and Negotiation Academy for Women, Tepper School of Business, Carnegie Mellon University, October 2017.

“Human-Centered Design: Methods + Practice”

Two, one-day workshops for Highmark Health, July–August 2017.

Professional
Education
continued

- “Design Thinking Bootcamp”
Four-day workshop for the United States Air Force Academy USAFA, July 2016.
- “Design Thinking: Methods and Processes”
One-day workshops for the Kiev-IMI (International Management Institute) Summer Program Workshops, Tepper School of Business, Carnegie Mellon University, June 2013, July 2012, June 2011.
- “Fundamentals of Industrial Design”
One-day workshop for Moen Inc., North Olmstead, Ohio, July 9, 2012.
- “Design Thinking: Methods and Processes”
One-day workshop for Giant Eagle Inc. Executive Education Series, Tepper School of Business, Carnegie Mellon University, March 1, 2012.

Design
Research
Projects

- Co-investigator, with Associate Professor Peter Scupelli**
“Design Studio Learning Environments”
Carnegie Mellon University School of Design, 2012–2016
Studied use and behavior patterns, student satisfaction, and agency in a graduate studio suite comprised of individual, collaborative, and social spaces, using observational and participant-generated data.
- Co-investigator, with Associate Professor Mark Baskinger**
“Autonomy and the Aging Population: Human-centered Appliance Design”
GE Appliance, 2004–2006
Investigated physical, cognitive, social and sensorial issues of the aging population through field studies and research reviews. Translated research findings into test models and interfaces for universal design applications.
- Co-investigator, with Associate Professor Stephen Stadelmeier**
“Design for Prescription Skincare Compliance”
Johnson & Johnson Consumer and Personal Products, Summer 2005
Researched teen compliance with prescription skincare regimens, developed behavior maps and product design concepts for packaging of acne treatments.
- Advisor on User Research and Product Testing**
“Transformation of the Domestic Mail Manuals”
United States Postal Service, 2002–2005
Advised a large interdisciplinary research and design team on all aspects of contextual user studies and iterative design testing, to guide transformation of postal manuals for household consumers, businesses, and USPS employees.
- Co-Investigator, with Professor Dan Boyarksi and Liza Wellman**
“The New Design Studio: Understanding Collaborative Spaces”
Project funding from Pennsylvania Infrastructure Technology Alliance (PITA), 2000
Investigated qualities of human interaction influenced by office design using four case studies of local design firms; distilled observations into a framework for analysis.

Design
Research
Projects
continued

Researcher and Designer

“Ergonomic Analysis and Redesign of Patrol Car Interiors”
Calgary Police Service, University of Calgary Faculty of Environmental
Design, 1994

Researched contributing factors to injury rates in police vehicles
through field studies, observation and task analysis. Conducted
participatory workshops, designed new vehicle equipment and
configurations for improved ergonomics and workflow.

Publications:
Books

*Universal Methods of Design: 125 Ways to Research Complex Problems,
Develop Innovative Ideas, and Design Effective Solutions.*

Co-authored with Bella Martin. Beverly, MA: Rockport Publishers,
2019 (First edition *100 Ways*, 2012). Co-editions published in
German, Dutch, French, Russian, Korean, Japanese, Mandarin
and Chinese. Sales: English edition 51,007 print + 23,096 e-books;
Foreign editions 25,892. Total worldwide sales 99,995.

*Universal Methods of Design: 125 Ways to Research Complex Problems,
Develop Innovative Ideas, and Design Effective Solutions.*

Pocket Edition.

Co-authored with Bella Martin. Beverly, MA: Rockport Publishers,
2021 (First edition *100 Ways*, 2018). Sales: 12,956 print + 1012
e-books; Foreign editions 7350. Total worldwide sales 21,318.

Publications:
Articles,
Chapters, &
Proceedings

“Empathy, Values, and Situated Action: Sustaining People and Planet
Through Human Centered Design” Chapter in *The Routledge Handbook
of Sustainable Design*, Rachel Beth Egenhoefer, ed. Routledge, 2018.

“Design Sprints and Substance: Assessing the Spectrum of Design
Education Opportunities for Non-Designers” *Proceedings of the
International Association of Societies of Design Research (IASDR)
International Conference*, Cincinnati, Ohio, November 1–3, 2017.

“Design and Emotional Experience” Chapter in *Affective Sciences in
Human Factors and Human-Computer Interaction*, Myounghoon Philart
Jeon, ed. Elsevier, 2017.

“Design Studio Desk and Shared Place Attachments: A Study on
Ownership, Personalization, and Agency” Co-authored with Peter
Scupelli, *Proceedings of the Design Research Society (DRS)
International Conference*, Brighton, England, June 27–30, 2016.

“People as Connectors” Chapter based on interview in *Change Ahead:
How Research and Design are Transforming Business Strategy*. Carola
Verschoor, BIS Publishers, 2015.

“Making Methods Work: 10 Rules of Thumb for Design Research”
Archives of Design Research (ADR). Vol. 28 (1), Korean Society of
Design Science, February 2015.

**Publications:
Articles,
Chapters, &
Proceedings
*continued***

“An Evidence-Based Design Approach for Function, Usability, Emotion, and Pleasure in Studio Redesign” Co-authored with Peter Scupelli, *Proceedings of the Design Research Society (DRS) International Conference*, Umea, Sweden, June 16–19, 2014.

“Combining Approaches in Design Research” and “Pilot Testing Gauges Kits, Timing, and Comfort for the Session” Section contributions in *Convivial Toolbox: Generative Research for the Front End of Design*. Liz Sanders and Pieter Jan Stappers, BIS Publishers, 2013.

“Relevant and Rigorous: Human-Centered Research and Design Education” *Design Issues*, Vol. 26, No. 3, Summer 2010. MIT Press.

“Understanding How People Work: Teaching the Value, Practice, and Integration of Human Factors in Design” Co-authored with Stacie Rohrbach, *Proceedings of the University and College Designers Association (UCDA) Design Education Summit, Designing Designing: Examining How We Do What We Do*, Lawrence, Kansas, June 2–4, 2010.

“Sustaining Autonomous Living for Older People Through Inclusive Strategies for Home Appliance Design” Co-authored with Mark Baskinger, in *Designing Inclusive Futures*. Patrick Langdon, John Clarkson, Peter Robinson, eds. London: Springer, 2008.

“Generative Research in Design Education” *Proceedings of the International Association of Societies of Design Research (IASDR) International Conference*, Hong Kong, November 12–15, 2007.

“Human Centering Design Across Dimensions” *Proceedings of Wonderground: Design Research Society (DRS) International Conference*, Lisbon, Portugal, November 1–5, 2006.

“Digital Death: Tradition and Technology in Design for Human Experience” *Proceedings of the International Conference on Design and Emotion*, Goteborg, Sweden, September 27–29, 2006.

“Interface in Form: Paper and Product Prototyping for Feedback and Fun” *Interactions: New Visions of Human Computer Interaction*. The Art of Prototyping, special section edited by Michael Arent. vol. XIII.1, January + February 2006. ACM.

“Research Education by Design: Assessing the Impact of Pedagogy on Practice” *Proceedings of the International Conference, Joining Forces: Design Research, Industries and a New Interface for Competitiveness*, Helsinki, Finland, September 22–24, 2005.

“Death and Catharsis: Re-Defining Pleasure by Design” *Proceedings of the International Conference on Design and Emotion*, Ankara, Turkey, July 12–14, 2004.

“Methods in the Making: A Perspective on the State of Human Research in Design” *Design Issues*, Vol. 19, No. 4, Autumn 2003. MIT Press.

**Publications:
Articles,
Chapters, &
Proceedings
*continued***

“Framing Human Factors: In Search of Definition in the Classroom and Beyond” *Proceedings of the National Education Conference*, Industrial Designers Society of America (IDSA), New York, August 10–12, 2003.

“On the Relationship Between Emotion, Experience, and the Design of New Products” Co-authored with Jodi Forlizzi and Carl DiSalvo. *The Design Journal*, Summer 2003.

“An Accessible Framework of Emotional Experiences for New Product Conception” Co-authored with Jodi Forlizzi and Carl DiSalvo, in *Design and Emotion: The Experience of Everyday Things*. Deana McDonagh, Paul Hekkert, Jeroen van Erp, and Diane Gyi, eds. London: Taylor & Francis, 2003.

“Lessons Taught and Learned: A Cross-cultural Experience in Design Education” *Proceedings of the National Education Conference, Designing Your Life*, Industrial Designers Society of America (IDSA), Boston, August 12–14, 2001.

“Factoring the Human in Design Education” *Proceedings of the International Conference on Affective Human Factors Design (CAHD)*, Singapore, June 27–29, 2001. Martin Helander, Halimahtun Khalid, Tham Ming Po, eds. London: Asean Academic Press, 2001.

“Innovation and Method in Design Research” *Proceedings of the International Conference, Design (plus) Research*, Politecnico di Milano, Milan, Italy, May 18–20, 2000. Silvia Pizzocaro, ed. Milan: The PhD Programme in Industrial Design at Politecnico di Milano, 2000.

“Keeping in Touch in Design Education” *Proceedings of the National Education Conference, Repeating the Future*, Industrial Designers Society of America (IDSA), Chicago, July 11–13, 1999.

“Life and Death Matter(s) in Industrial Design” *Proceedings from the Twenty First Industrial Design Seminar, Human-Object Relationships*, School of Industrial Design, Carleton University, Ottawa, Canada, January 6–8, 1999.

**Publications:
Book Reviews**

“Designing Pleasurable Products: An Introduction to the New Human Factors” by Patrick Jordan. *Design Issues*, Vol. 18, No. 1, Winter 2002.

**Presentations &
Workshops**

“Design Education and Practice for Civic Engagement and Social Change: Trends in Methods and Approaches” Keynote Address, *International Association of Societies of Design Research (IASDR) International Conference*, Hong Kong (Remote), December 7, 2021.

“Ascent: The Rise of Design Methods and Approaches for Civic Engagement and Social Change” Lecture, The Hong Kong Polytechnic Autumn School, Hong Kong (Remote), October 22, 2020.

**Presentations &
Workshops**
continued

“Design Sprints and Substance: Assessing the Spectrum of Design Education Opportunities for Non-Designers” Poster Presentation, *International Association of Societies of Design Research (IASDR) International Conference*, Cincinnati, Ohio, November 1–3, 2017.

“Educating Non-Designers on Design: Principles and Practices in a Master of Arts Degree” *International Conference on Design Principles and Practices*, Toronto, Canada, March 2–4, 2017.

“Design Studio Desk and Shared Place Attachments: A Study on Ownership, Personalization, and Agency” Co-presentation with Peter Scupelli, *Design Research Society (DRS) International Conference*, Brighton, England, June 27–30, 2016.

“Life, Death, and Design in Transition”
The Futures of the End of Life, International Symposium, Lancaster, England, January 21–22, 2016.

“Making Methods Work: 10 Rules of Thumb for Design Research”
Remote presentation by invitation to the Korean Advanced Institute of Science and Technology (KAIST), Department of Industrial Design, November 26, 2014.

“An Evidence-Based Design Approach for Function, Usability, Emotion, and Pleasure in Studio Redesign” Co-presented with Peter Scupelli
Design Research Society (DRS) International Conference, Umea, Sweden, June 16–19, 2014.

“Design Thinking: Research Methods in Academia and the Real World”
3M Form+Function, lecture by invitation, 3M, St. Paul, Minnesota, September 28, 2011.

“Generative Research in Design Education”
International Association of Societies of Design Research (IASDR) International Conference, Hong Kong, November 12–15, 2007.

“Human Centered Research and Design: Methods and Models from Design Education” *International Congress on Design Research*, Rio de Janeiro, Brazil, October 11–13, 2007.

“Human Centering Design Across Dimensions”
Wonderground, Design Research Society International Conference, Lisbon, Portugal, November 1–5, 2006.

“Emotion and Product Design: Treasured Objects”
Workshop co-conducted with Dr. Ron Wardell, by invitation, Faculty of Environmental Design, University of Calgary, Canada, October 11–13, 2006.

“Digital Death: Tradition and Technology in Design for Human Experience”
International Conference on Design and Emotion, Goteborg, Sweden, September 27–29, 2006.

**Presentations &
Workshops**
continued

“Research Education by Design: Assessing the Impact of Pedagogy on Practice” *Joining Forces: Design Research, Industries and a New Interface for Competitiveness*, International Conference, Helsinki, Finland, September 22–24, 2005.

“Design Approaches in the School of Design at Carnegie Mellon” Workshop conducted for Johnson & Johnson Global Consumer Products Packaging Group, with Professors Steve Stadelmeier and Mark Baskinger, Skillman, NJ, January 5–6, 2005.

“Sketching and Modeling: Visualization for Non-Designers” Workshop conducted at the College of Information Science and Technology, University of Nebraska Omaha, October 2–3, 2004.

“Death and Catharsis: Re-Defining Pleasure by Design” *International Conference on Design and Emotion*, Ankara, Turkey, July 12–14, 2004.

“Artifacts and Information: Ethnographic Methods in Human-Centered Design” Workshop conducted for the *Antwerp Design Seminars and Lectures (ADSL)*, Higher Institute of Integrated Product Development, Antwerp, Belgium, January 26–30, 2004.

“Framing Human Factors: In Search of Definition in the Classroom and Beyond” *National Education Conference, Industrial Designers Society of America (IDSA)*, New York, August 10–12, 2003.

“Human Factors Education in Industrial Design at Carnegie Mellon University” Presented to the Office Ergonomics Research Group (OERC), at Carnegie Mellon University, Pittsburgh, Pennsylvania, September 16, 2002.

“An Accessible Framework of Emotional Experiences for New Product Conception” Co-authored with Jodi Forlizzi and Carl DiSalvo. *International Conference on Design and Emotion*, Loughborough, England, July 1–3, 2002.

“Lessons Taught and Learned: A Cross-cultural Experience in Design Education” *National Education Conference, Designing Your Life*, Industrial Designers Society of America, Boston, August 12–14, 2001.

“Factoring the Human in Design Education” *International Conference on Affective Human Factors Design (CAHD)*, Singapore, June 27–29, 2001.

“Innovation and Method in Design Research” *International Conference, Design (plus) Research*, Politecnico di Milano, Milan, Italy, May 18–20, 2000.

“Artefacts of Death: Product Meaning and Design” Université de Montréal, Faculté de l’aménagement, École de design industriel, Montreal, Canada, April 17, 2000.

**Presentations &
Workshops**
continued

“Artefacts, Ritual, Death and Design”
Southampton Institute, Southampton, England, February 14, 2000.

“Keeping in Touch in Design Education”
National Education Conference, Repeating the Future, Industrial
Designers Society of America (IDSA), Chicago, July 11–13, 1999.

“Life and Death Matter(s) in Industrial Design”
Twenty First Industrial Design Seminar, Human-Object Relationships,
Carleton University, Ottawa, Canada, January 6–8, 1999.

**Professional
Service**

Advisory Board

School of Design, The Hong Kong Polytechnic University, 2020–present

Reviewer

International Journal of Design, 2013–present

External Program Reviewer

University of Illinois at Chicago, Chicago, Illinois, November 3–4, 2022

Reviewer

Design Issues, 2022

Reviewer

She Ji, 2022

Reviewer

Dialectic, 2017

External Program Reviewer

Concordia University Design and Computational Arts, Montreal, Canada,
March 2–4, 2016

Pre-publication Book Reviewer

MIT Press, 2015

Reviewer

Design Studies, 2014, 2015

External Program Reviewer

Nova Scotia College of Art and Design (NSCAD University), Halifax,
Canada, March 28, 2014.

Editorial Board

Design Issues, 2011–2018.

Editorial Advisory Board

The Design Journal, 2004–2014.

Reviewer

CoDesign, International Journal of CoCreation in Design and the Arts,
2013–present.

Conference Service

Reviewer

CHI Computer Human Interaction Conference, *Engage with CHI*, Montreal, Canada, April 21–26, 2018.

Invited Delegate

Design Forge: Design Thinking for Student Learning. Center for Design Thinking, Elon University, Elon, North Carolina, March 29–30, 2018.

Reviewer

ACM/IEEE International Conference on Human-Robot Interaction (HRI 2016), Christchurch, New Zealand, March 7–10, 2016.

Program Committee

Design Research Society (DRS) International Conference, *Design's Big Debates*, Umea, Sweden, June 16–19, 2014.

Reviewer

CHI Computer Human Interaction Conference, *Changing Perspectives*, Paris, April 27–May 2, 2013.

Reviewer

PDC Participatory Design Conference, *Embracing New Territories of Participation*, Roskilde, Denmark, August 12–16, 2012.

Reviewer

DIS Designing Interactive Systems, Newcastle, UK, June 11–15, 2012.

Summit Member

Fathom Innovation Summit, Fathom LLC: Research-Design-Strategy, Pittsburgh, Pennsylvania, January 5, 2012.

Reviewer

Design Research Society (DRS) International Conference, *Design & Complexity*, Montreal, Canada, July 7–9, 2010.

Program Committee

IASDR International Association of Societies of Design Research Conference, Seoul, South Korea, October 18–22, 2009.

Panel Commentator / Discussant

Center for the Arts in Society Conference, *[Im]permanence: Cultures In/Out of Time*, session on “Place, Memory and History in Contemporary First Nations Art and Visual Culture”, Carnegie Mellon University, Pittsburgh, Pennsylvania, October 13–16, 2005.

Session Chair

Joining Forces: Design Research, Industries and a New Interface for Competitiveness, International Conference, session on “Research Education”, Helsinki, Finland, September 23, 2005.

General Conference Chair and Treasurer

DPPI03 International Conference on Designing Pleasurable Products and Interfaces 2003, Carnegie Mellon University, Pittsburgh, Pennsylvania, June 23–26, 2003.

Conference
Service
continued

Panel Member

Symposium on New Directions in Professional Development for Design Educators and Practitioners, panel on “New Faculty Design Perspectives and New Directions in Design Education”, Cal Poly Pomona, California, November 2–3, 2001.

Session Chair

Design (plus) Research, International Conference, session on “Perspectives on Research: The User-centered Approach”, Politecnico di Milano, Milan, Italy, May 18–20, 2000.

Academic
Service

School of Design

Co-chair, Curriculum Planning Committee, 2019–2022
Graduate Admissions Committee, 2004–2022
Chair, Graduate Programs Committee, 2011–2019
Chair, Graduate Admissions Committee, 2011–2019
Design Studies Committee, 2003–2005
Undergraduate Design Admissions Committee, 2002–2004
Design Career Days Committee Chair, 1999–2001
Human Computer Interaction Institute Admissions Committee,
Design Representative, 1998–2000

College of Fine Arts

College Council, 2019–2022, 2010–2012, 2002–2003
College Review Committee (CRC), 2019–2022, Fall 2009
Research Committee, 2008–2009

College of Fine Arts and Dietrich College of Humanities & Social Sciences

Center for Arts in Society (CAS)
Advisory Board, 2019–2022
Curriculum Committee, 2006–2008
CASH Grants Committee, 2005–2006
Community Committee, 2001–2005

Carnegie Mellon University

Graduate Support Programs Office (GPO), Grant Review Committee, 2002–2019
Undergraduate Research Office (URO), Grant Review Committee, 2009–2014
Faculty Senate, College Council Representative, 2002–2003
Innovation Seed Fund, Grant Review Committee, 2002
Environmental Practices Committee, 1999–2000

Institutional Review Board (IRB)

Expedited Reviewer, 2009–2019

Professional
Memberships

Design Research Society

2006–present

Design and Emotion Society

2002–2018

Professional
Memberships
continued

Industrial Designers Society of America (IDSA)
1998–2017

Human Factors and Ergonomics Society (HFES)
1998–2003