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## 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

### **Head of School**

#### **Professor, Tenured July 1, 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, 2019–present

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, Freshman 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.

**Executive  
Education**

**Team Instructor**

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

MBA Accelerate Program, Leadership Immersion Workshops, Tepper School of Business, Carnegie Mellon University, 20 half-day workshops spanning 2014–2018.

“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.

“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.

Executive  
Education  
*continued*

“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–present  
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.

**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: 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions.*

Co-authored with Bella Martin. Beverly, MA: Rockport Publishers, 2012. Co-editions published in German, Dutch, French, Russian, Korean, Japanese, Mandarin and Chinese. Sales: English edition 29,504 print + 5433 e-books; Foreign editions 27,530; Total worldwide sales 62,467.

*Universal Methods of Design: 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions.*

Pocket Edition.

Co-authored with Bella Martin. Beverly, MA: Rockport Publishers, 2017. Sales: 2,910 print + 73 e-books.

**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.

“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.

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

“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.

“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.

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

“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 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” Skype presentation by invitation to the Korean Advanced Institute of Science and Technology (KAIST), Department of Industrial Design, November 26, 2014.

**Presentations &  
Workshops**  
*continued*

“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.

“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.

**Presentations &  
Workshops**  
*continued*

“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.

“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**

**External 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



Professional  
Service  
*continued*

**External Program Reviewer**

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

**Editorial Board**

*Design Issues*, 2011–present.

**Editorial Advisory Board**

*The Design Journal*, 2004–2014.

**Reviewer**

*International Journal of Design*, 2013.

**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.

Conference  
Service  
*continued*

**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.

**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.

University  
Service

**School of Design**

Chair, Graduate Programs Committee, 2011–present  
Chair, Graduate Admissions Committee, 2011–present  
Graduate Admissions Committee, 2004–present  
Area Heads and Directors, 2000–present  
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, 2010–2012, 2002–2003  
College Review Committee (CRC), Fall 2009  
Research Committee, 2008–2009

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

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

University Service  
*continued*

**Carnegie Mellon University**

Graduate Support Programs Office (GPO), Grant Review Committee,  
2002–present

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–present

Professional  
Memberships

**Industrial Designers Society of America (IDSA)**

1998–2017

**Design and Emotion Society**

2002–present

**Design Research Society**

2006–present

**Human Factors and Ergonomics Society (HFES)**

1998–2003