



4TH INDUSTRIAL

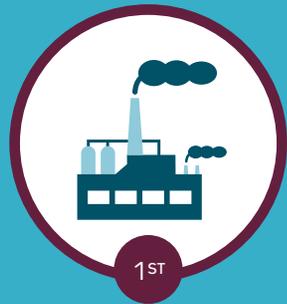
Revolution?

DEPARTMENT OF HUMAN ECOLOGY
ANNUAL REPORT 2018-19



UNIVERSITY OF ALBERTA
FACULTY OF AGRICULTURAL,
LIFE & ENVIRONMENTAL SCIENCES

Industrial Revolutions



1ST

18-19th Century in Europe and North America, featuring steam engines



2ND

1870-1914, featuring steel, oil, electricity, and combustion engines



3RD

1980s Digital Revolution, featuring personal computers and the internet



4TH

21st Century advance of AI, big data, robotics, IoT, blockchain and crypto



5^{TH?}

Responsive 21st Century connection of frontier tech to purpose and inclusivity

Source: 5th Element

Human Ecology in Today's World

The study of Human Ecology explores the relationships between humans and their natural, social, and built environments. Reflecting concerns with diverse problems of human welfare, the basic orientation of Human Ecology research and practice is to improve everyday life.

So, what does this look like in 2019? What issues and problems influence current human welfare? How is knowledge of these reflected in the work of Human Ecologists to meet new challenges?

The very survival of Earth's natural environment resulting from clashes with the built environment, and a looming global climate crisis, broadly set the stage for concerns about human welfare. In fact, the present geological era is named the Anthropocene, reflecting a period where the changes to the planet are caused by significant human impact.

The march of successive industrial revolutions is a related issue, providing insight into periods of successive dehumanizing economic growth and threats to the environment. The World Economic Forum

asserts that there are four distinct periods of industrial revolution throughout history, where for each there was "the appearance of new technologies and novel ways of perceiving the world that triggered a profound change in economic and social structures" (Schwab, 2016).

The transforming events of the First through Third Industrial Revolutions included steam power and the mechanization of production; the introduction of mass production aided by electricity in the early 20th C; and lastly, the digital/computer revolution and globalization. Schwab (2016) writes that we're now in the next phase of dramatic technological expansion and social change—the Fourth Industrial Revolution (robotics, artificial intelligence, genetic editing). It is suggested that rapidly accelerating technology will now become an even more important part of society with significant impacts on the future of work as major skills gaps occur, and on family life and education. Increasing income and gender inequalities are also predicted.

Schwab, K. (2016). *The Fourth Industrial Revolution*. World Economic Forum.

Our Relevance?

Concerns about the dehumanizing effects of the fourth industrial revolution elicited calls for ideas about how to strive for a flourishing future. Of particular interest was the introduction of the United Nations Sustainable Development Goals (SDGs) in 2015. These United Nations SDGs are remarkably consistent with the underlying values and aims of today's Human Ecology scholarship within our department. From work in areas such as the sustainable challenges of the fashion industry, research on the needs of marginalized populations across the lifecourse, changing family structures, gender equality, and the study of production and consumption in several of our courses, there are clear alignments with the SDGs.

Human Ecology, with its roots in Home Economics, is an area of study that has long been relevant to the activities and issues of everyday life, but perhaps never more so than today. It is reported that when Cornell University underwent its department name change from Home Economics to Human Ecology in 1969, their Dean at the time noted that "the time is now at hand to direct past traditions of problem-solving toward a new focus." In today's world context, this directive is newly meaningful. In reading about the research activities, accomplishments, events and awards of Human Ecology faculty and students contained in this year's 2018–2019 Annual Report, you will see evidence of this.

SUSTAINABLE DEVELOPMENT GOALS



Schwab, K. (2016). *The Fourth Industrial Revolution*. World Economic Forum.



Dr. Strickfaden, centre, Donghua University, China

Promoting Local and Global Community Well-being

Central to Dr. Megan Strickfaden's research program is working with local and global communities to promote well-being, quality education, sustainable communities, and economic growth through design. She was recently honored for her ongoing work with the University of Alberta Community Scholar award (May 2019). The award was based on her long term, ongoing collaborations with scholars in Australia, Belgium, China, France, and the USA, and her research program that focuses on collaborating with older adults and persons with disabilities.

Dr. Strickfaden's research program includes work in Edmonton to improve dementia care through the re-design of care environments and a week-long engagement as a visiting scholar in the School of Industrial and Graphic Design at Auburn University in the USA (Feb 2019); Design for All week (Apr 2019) and a two year engagement as adjunct professor in the School of Design at QUT in Brisbane, Australia (2018-20); and a one month engagement as adjunct professor in the Department of Fashion Design and Engineering at Donghua University in Shanghai China (June 2019).

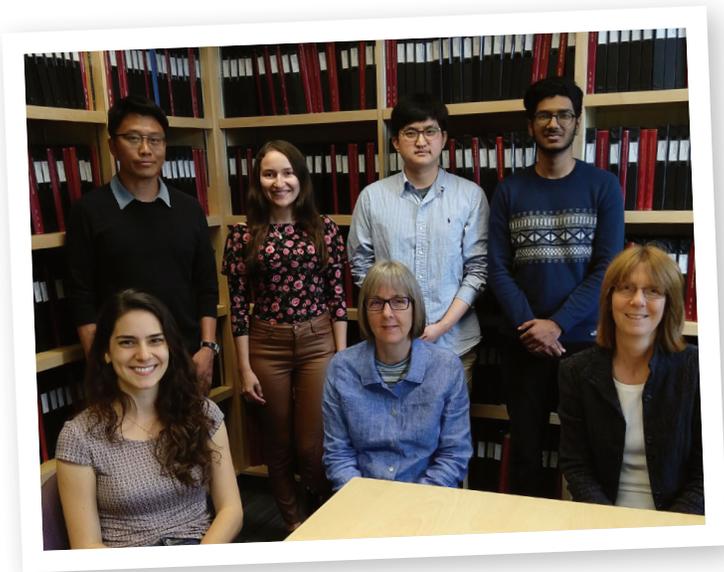
New Book on Social and Technological Innovations in Experiential Learning

Dr. Arlene Oak was recently involved as a co-applicant in the SSHRC Partnership Grant titled "Thinking While Doing: Connecting insight to innovation in the construction sector." This \$2.5 million project involved students and professors at four university architecture programs in Canada and the USA as they undertook the experiential learning of designing and constructing innovative buildings for use by local communities. Dr. Oak and post-doctoral fellow, Dr. Claire Nicholas, worked on an ethnographic study that followed the students and other participants through the processes of creating and making from initial design to construction of the completed projects. Part of Dr. Oak's role was co-editing the book that resulted from this project, "Thinking While Doing: Explorations in Educational Design/Build" with fellow editors, Professors Stephen Verderber (University of Toronto), and Ted Cavanagh (Dalhousie University). Published by highly-esteemed Swiss publisher, Birkhäuser, the TWD book will become a standard text on the social and technological innovations that underpin experiential learning in the world of architectural education and design.



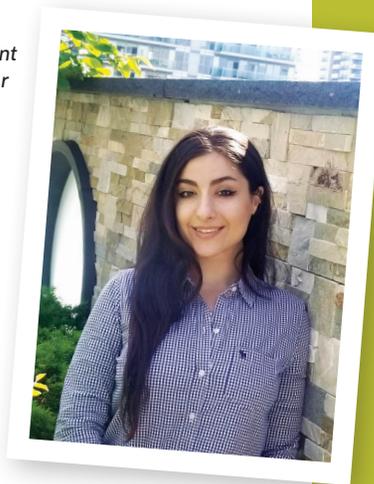
Dr. Oak with new book, "Thinking While Doing"





Research team from top left clockwise: Dr. Hyun-Joong Chung (CME), Laura Munevar (HE), Chungyeon Cho, (CME), Muhammad Osama (CME), Dr. Patricia Dolez (HE), Dr. Jane Batcheller (HE), Ana Flavia Pimenta Bonatta (HE)

Graduate student Sara Vaezafshar



Why Cotton Clothes Don't Smell as Bad as Synthetic

Under the supervision of Dr. Rachel McQueen, graduate student Sara Vaezafshar studied the sorption and release of odorants from clothing fabrics that differed in fibre type. By applying odorants to fabrics in a sweat solution she examined how clothing may pick up underarm odour during use. Her findings showed that cellulosic fibres such as cotton and viscose rayon absorb less smelly compounds than synthetic fibres such as polyester and nylon. The water-loving cellulosic fibres prefer water to odorous compounds, and the hydrophobic synthetic fibres attract the odorants rather than water. Her results contribute to our understanding of why cotton and rayon clothes just don't smell as bad as synthetic clothing. Sara presented her research at the Aachen-Dresden-Denkendorf International Textile Conference in Germany in November 2018 and defended her Master's thesis in May 2019. Her research was supported through an NSERC Discovery Grant. Passionate about pursuing a career in research, Sara is now embarking on doctoral research at the University of Toronto in the Department of Earth Science. She will still be applying her textile knowledge as she investigates the presence of microplastic fibres and tracks the concentration of compounds over time within the home environment — much of which is covered by textiles!

NSERC Awards – Focus on Aging of Fire Protective Fabrics for Workers

From firefighters to workers in the oil and gas industry, those at risk of heat and flame exposure have no way of reliably knowing if their clothing is able to protect them from the hazards associated with their tasks. This is due to the fact that considerable loss in performance may occur before any sign of deterioration is visible to the naked eye. Thanks to two recent grants awarded by the Natural Sciences and Engineering Research Council of Canada (NSERC), Dr. Patricia Dolez will be addressing this problem by conducting research on the aging of fire protective fabrics. This question is critical as fibers used in fire protective clothing may see their performance decrease over time due to exposure to the severe conditions associated with the task: elevated temperatures, UV radiation, high moisture ratio, abrasion, repeated launderings, etc.

With her 5-year Discovery Grant, Dr. Dolez and her team will explore the mechanisms of aging of fabrics used in fire protective clothing to identify conditions that simulate performance loss and will then develop predictive models that are relevant to these conditions. Also, thanks to a Strategic Partnership Grant awarded last September including five industry partners and other professors in the departments of Human Ecology (HE) and Chemical and Materials Engineering (CME), end-of-life sensors based on graphene will be developed to alert users when the residual performance of their fire protective garment reaches the unsafe limit as a result of use.

Illustrating Life through Everyday Objects

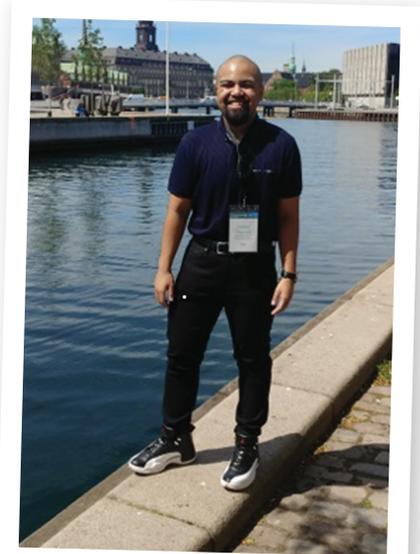
Older adults living in assisted living settings may witness or experience negative interactions with caregivers, or medical professionals in particular, related to the aging process. To provide some insight into improving interactions with older adults, five illustrated films were inter-generationally co-created with older adults, caregivers, staff, students, and a filmmaker who worked to communicate how designed things can support the aging process. Thirty-two resident artists (ages 60-101) were given voice through the development of a variety of media projects. Films that were produced are geared towards audiences who are (or are training to be) formal or family/friend caregivers to encourage them to think about how designed things can support the aging process. The project was led by Dr. Megan Strickfaden with Dr. Janet Fast, research associate Jacquie Eales, graduate students Lara Pinchbeck, Carlos Fiorentino, and former Human Ecology students Anne Thomas and Mari Bergen. The films are being used in curriculum in Canada, USA, Australia, Sweden, France, Israel, Russia, and Brazil. They have been shown in a film festival in Brisbane, Australia and will be featured over the coming months at the Metro Cinema at the Garneau Theatre in Edmonton.



Image from the film The Necklace co-created with residents living at the Ashbourne assisted living facility. Here is film link: <https://vimeo.com/281122814>

The Global Sustainability of Care

The care of older, sick and disabled people is an important global issue: population aging, modernizing health and social care systems, and new ways of supporting care work (paid and unpaid) are critical issues for governments worldwide. PhD student Andrew Magnaye spent part of the summer engaged in an international exchange with partners from the University of Sheffield (UK) with funding provided by Mitacs International, the World Universities Network (WUN), and AGE-WELL Canada. One of the key objectives of the exchange was to connect with members of the University of Sheffield's Sustainable Care: Connecting People and Systems Research Programme. This research group comprises academics from seven universities as well as a network of academic partners in fifteen countries, to take a global and future-oriented look at current approaches to the care needs of adults living at home with chronic health problems or disabilities. Andrew writes that while there, he also attended the Debating the Future of Work Conference organized by the International Labour Organization and the University of Sheffield Management School's Centre for Decent Work. He also had the opportunity to participate in a WUN Workshop with international partners from the UK, Canada, Ireland, Ghana, Poland and Australia to develop innovative project ideas around the shifting migration of care. The exchange was capped off by a trip to Copenhagen where he attended the 4th Transforming Care Conference, which focused on Changing Priorities – The Making of Care Policies and Practices.



Doctoral Student Andrew Magnaye, Copenhagen

Sabbatical Year in Germany

Dr. Matt Johnson spent the 2018–2019 academic year on sabbatical in Germany working with members of the German Family Panel (pairfam) study team. Pairfam is the most ambitious large-scale study of families anywhere in the world, having followed upwards of 20,000 family members across three generations annually for a total of 12 years and counting. Dr. Johnson was based at Friedrich-Schiller-University Jena in the Department of Personality, Psychology and Psychological Assessment. During the year, he collaborated on research projects with colleagues around the world and took the opportunity to learn the logistics of running the pairfam study in hopes of launching a similar study focused on Canadian families in the future.



Dr. Matt Johnson (3rd from left with research team)



Dr. Rhonda Breitzkreuz

2019 Rhodes Trust Inspirational Educator Award

Rhodes Scholars completing their studies at the University of Oxford, UK, have been invited to nominate those professors who have had profound influence in their lives before they received the Rhodes Scholarship. Dr. Rhonda Breitzkreuz is a 2019 recipient of the Rhodes Trust Inspirational Educator Award, having been nominated by ALES alumna and Rhodes Scholar Carly-Jane Stanton who was pursuing a master of philosophy degree in economics and social history at Oxford. The award is given in appreciation of those educators who have inspired the next generation of leaders. Dr. Breitzkreuz serves as an adjunct professor in the Peter Lougheed Leadership College, in addition to her Human Ecology appointment.



2018-2019 GRADUATES - CONGRATULATIONS!

FALL 2018 CONVOCAATION

Andrea De Ocampo	MSc (CB) Family Ecology & Practice
Michelle Furnald	MSc (CB) Textiles & Clothing
Namami Nath	MA (CB) Material Culture
Paz Orellana-Fitzgerald	MA (TB) Material Culture
Adolfo Ruiz	PhD Human Ecology



Spring Convocation reception for graduate students, June 2019

SPRING 2019 CONVOCAATION

Helana Afroz	MSc (CB) Family Ecology & Practice
Josée Chartrand	MA (TB) Material Culture
Fatemeh (Elma) Faezi	MA (CB) Material Culture
Mary Glasper	MSc (TB) Textiles & Clothing
Patricia McNiven-McKenna	MSc (CB) Family Ecology & Practice
Jasneet Parmar	MSc (CB) Aging
Mariko Wakefield	MSc (TB) Textiles & Clothing

*CB (course-based) TB (thesis-based)

Graduate Program

GRADUATE STUDENT RESEARCH AND SCHOLARSHIP AWARDS

PhD STUDENTS

Shanika Donalds	<i>Engberg Graduate Scholarship in International Home Economics</i>
Carlos Fiorentino	<i>Queen Elizabeth II Graduate Scholarship; SSHRC Doctoral Award; Mary Louise Imrie Graduate Student Award</i>
Andrew Magnaye	<i>Queen Elizabeth II Graduate Scholarship; Dianne Kieren Graduate Award; Mitacs Globalink Research Award; World Universities Network Research Mobility Fund Award</i>
Hui (Tori) Ren	<i>J. Gordin Kaplan Travel Award</i>
Robyn Stobbs	<i>Doris Badir Graduate Research Fellowship in Human Ecology</i>

MASTER'S STUDENTS

Lauren Degenstein	<i>Joseph -Armand Bombardier SSHRC Canadian Graduate Scholarship; Walter H. Johns Graduate Fellowship</i>
Shiva Kiras	<i>Queen Elizabeth II Masters Scholarship</i>
Jonathan Lai	<i>Govt. of Alberta Graduate Student Scholarship</i>
Laura Munevar	<i>Helen DeSilva Buchanan Memorial Graduate Scholarship in Clothing & Textiles</i>
Julia Roy	<i>Queen Elizabeth II Graduate Scholarship</i>
Pat Siferd	<i>ALES Graduate Student Teaching Award</i>
Jennifer Yurkiw	<i>Queen Elizabeth II Graduate Scholarship; Joseph-Armand Bombardier SSHRC Canadian Graduate Scholarship; Walter H. Johns Graduate Fellowship</i>
Mariko Wakefield	<i>Betty Crown Graduate Scholarship; Edmonton & District Quilters' Guild Graduate Scholarship</i>
Johana Zuluaga	<i>Louise Davies Graduate Scholarship</i>



Graduate student Pat Siferd receiving 2019 Graduate Student Teaching Award

GRADUATE STUDENT PROFILE

Johana Zuluaga

Johana Zuluaga recently completed a thesis-based MSc in Family Ecology & Practice under Dr. Adam Galovan's supervision. Her studies started in engineering because it was a field that promised to try to solve problems by using scientific techniques. Exposure to sustainability concepts narrowed down that scope considerably, and she pursued a post-graduate certificate in social management. With a focus on financial education, she heard stories about individuals blaming or applauding their parents' financial lessons. In 2016, she gravitated naturally to the Department of Human Ecology because of its holistic and systemic approach.

Drawing on family systems theory, Johana's community-based research examined Latino family financial socialization processes—that is, the process of teaching financial literacy within the family context. It is often taken for granted that parents recognize their important role in teaching children about finances. Her study did indeed find that the participants had positive attitudes towards financial literacy. However, they assumed that modeling is the main mechanism to teach money

management. She notes that parents also needed to overcome individual and contextual barriers in order to engage in financial socialization. Although parents can have their own attitudes and self-confidence towards financial socialization, which arise independently of their partner, these characteristics have implications for their partners and their children.

Now that she has finished her MSc, Johana wishes to build on her teaching and research experience and so will commence a PhD in Human Ecology with hopes of having an academic career.



Graduate student Johana Zuluaga

Undergraduate Program

Roger S. Smith Undergraduate Research Award



Undergraduate Student Jaira Dyckerhoff

Family Science majors, Jaira Dyckerhoff and Jamie MacDonald are the 2019 Roger S. Smith Undergraduate Research Award winners. The \$5000 competitive award aims to cultivate research partnerships between students and faculty and provides funding for research-based activity over the summer. Working with Dr. Rhonda Breitkruez on the topic of maternal employment in Alberta and Canada, Jaira comments that she is excited to learn more about the research process and to have the opportunity to relate her theoretical knowledge about families (especially experiences of mothers with young children) to the real world. Jamie MacDonald, who has an interest in aging, is working with Dr. Janet Fast on a project which examines young carers of persons with physical or cognitive limitations or other problems related to aging. The project examines how young carers' lives are impacted by their caregiving, including health, social relationships, education, and employment.



UNDERGRADUATE PROGRAM

Practicum Program

Our students are the next generation of professionals; however, they are not alone in meeting society's challenges. Generations of home economists/human ecologists welcome them into the profession along with community partners who have provided field sites for over 40 years through the Human Ecology Practicum Program. The program provides a practical learning experience to help students to transition from academic studies to professional practice.

Thanks to our Practicum partners! The Department gratefully acknowledges the 2018–2019 community partners who supervised 44 students.

- Alberta Milk
- ATCO Blue Flame Kitchen
- Boyle Street Community Services
- Boys & Girls Clubs Big Brothers Big Sisters
- Change for Children
- Duval Canada
- e4c – Clareview Head Start; Financial Empowerment Program
- EPCOR – Human Resources
- Edmonton Community Legal Centre
- Edmonton Mennonite Centre for Newcomers
- Edmonton Seniors Coordinating Council
- G-Star RAW – Amsterdam, The Netherlands
- Goodwill Industries of Alberta (2 students)
- Government of Alberta – Alberta Health; Children's Services; Service Alberta (3 students)
- Government of Canada – Health Canada (Healthy Environments & Consumer Safety Branch)
- Greater Edmonton Foundation (GEF) Seniors Housing
- Heart and Stroke Foundation – Edmonton
- iHuman Youth Society
- Jasper Place Wellness Centre – Food4Good
- KLAR INTERIOR DESIGN
- LUXX Ready to Wear
- Multicultural Health Brokers Co-op
- NSTEP – Calgary; Edmonton (2 students)
- New Classics Studios
- Qj Creative
- RCMP Uniform & Equipment Program
- Special Olympics Alberta - Edmonton
- Stollery Children's Hospital – Patient & Family Centred Care
- Strathcona County – Parent Link Centre
- Strathcona Place Senior Centre / 55+ Activity & Outreach Centre
- Taabish Zaver Designs
- Terra Centre – Braemar School (2 students)
- The Creamery – Vancouver
- The Family Centre
- Theatre Garage
- University of Alberta – Faculty of Agricultural, Life & Environmental Sciences (Student Services); University Wellness Services (Healthy Campus Unit)

Unique International Practicum Opportunity

Clothing, Textiles & Material Culture major, Gabriella Sequeira, completed her Winter 2019 Practicum placement at G-Star RAW, a global denim brand known for its innovation in denim design and production. Working at their headquarters in Amsterdam, among some 400 G-Star employees, Gabriella worked in the Sustainability Department conducting preliminary research on how to best implement the brand's goal to provide fair wages for factory workers within their supply chain. In speaking of her experience there, she notes that her project supervisors were impressed with the depth of her understanding of sustainability and apparel production issues gained from her studies, which allowed her to become immediately immersed in her research. Reflecting on the need for increased social sustainability, Gabriella said that an important insight that she gained from her Practicum was that "issues in the fashion system do not exist in a vacuum. It takes collaboration from brands, governments, labour unions, factory managers and consumers to change the status quo."

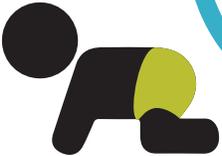


Gabriella Sequeira at G-Star headquarters in Amsterdam

March 2019 Empey Lecture

Dr. Thomas Weisner, Distinguished Professor of Anthropology, Emeritus, at UCLA, presented the spring 2019 Empey Lecture to more than 150 alumni, staff, students and community members. With research and teaching interests in families, culture and human development, he began his talk with the question, "if you could choose one thing that you think would significantly impact the health and well-being of a young child, what would it be?" Audience members offered several suggestions but the key answer from Dr. Weisner's view is geography. Where in the world a child is born is a critical predictor of later well-being. This observation led to a very interesting review of his international career researching sibling and nonparental care of children, and other psychological and cultural studies of families and children at risk, which has contributed to his strong advocacy for context and evidence-based policy making related to children's well-being.

Dr. Thomas Weisner



Télio Scholarship 2019

Apparel design student Yang Ling Zheng was awarded a \$1000 design scholarship sponsored by Montreal textile firm, TÉLIO for her product development project incorporating use of her own pearl embellished fabric design in creating a blouse and skirt (skirt & shorts combination). TÉLIO is one of North America's leading distribution companies of fashion fabrics.



Student Yang Ling Zeng wearing her award winning design.

Fashion Education/ Educators' conferences

The Department of Human Ecology hosted the 5th Annual Fashion Symposium of Canadian Fashion Scholars (September 2018) and the Apparel Affinity Group's annual conference (June 2019). These groups are comprised of fashion studies researchers and faculty members from across Canada.



Chair's Message

The activities, initiatives, and successes described in the previous pages only provide a glimpse of all that went on in the Department of Human Ecology during the past year. There is a remarkable range of interesting and important research and course projects engaged in by faculty members and students in collaboration with community, industry, and government partners! I am continuously impressed and inspired by my colleagues' commitment to innovative and rigorous scholarship that underscores the integral role that Human Ecology plays in addressing complex contemporary challenges and enhancing people's everyday lives. Our key purpose in Human Ecology is to change lives in positive ways. As is illustrated in the annual report, we fulfill our purpose through the generation, dissemination, and application of knowledge about topics that are central to people's quality of life at home, at work, and in the community. Importantly, our capacity to enhance people's everyday lives in ways that align with the United Nations Sustainable Development Goals does not relate solely to the substantive focus of our research and education programs. What positions us particularly well to have a positive social impact is our human ecological perspective—a holistic approach that enables awareness and understanding, as well as the ability to address multiple interrelated factors and conditions that characterize the complexities of human experience and contemporary challenges.

Dr. Deanna Williamson
*Department Chair,
Human Ecology*



Thank You to Our Donors!

CAMPAIGN FOR A TEXTILE CONSERVATOR

We are delighted to report that as the Department celebrated its 100th year in 2018, the centennial campaign for a Clothing and Textile Conservator raised just over \$199,500 with support from 150 donors including more than \$20,000 that was part of the Human Ecology Signature Quilt fundraising project. Thank you! Maintaining the unique Anne Lambert Clothing and Textiles Collection continues to be a priority for the Department, and as such, our fundraising efforts continue.

Alumni Weekend

SEPTEMBER 19-22, 2019

Two main events are scheduled for Home Economics/ Human Ecology Alumni on Friday, September 20, 2019.

- **Tours of the Anne Lambert Clothing & Textiles Collection**
1:00 and 2:00 pm
- **Alumni Reception**
4:30-6:30 pm at The Timms Centre, featuring a talk by Dr. Anne Bissonnette entitled "The Undress Paradox: Immorality, Propriety, and the Victorian Tea Gown."

Please check website for more details, fees to attend, and registration: <https://www.ualberta.ca/alumni/events/alumni-weekend>

Empey Lecture

MARCH 25, 2020

The spring 2020 Empey Lecture will be delivered by Faculty of ALES associate professor and Director of the Human Nutrition Research Unit, Dr. Carla Prado. Her research investigating ways to prevent and reverse muscle loss through nutrition has placed her at the forefront of nutritional assessment and clinical nutrition research. Dr. Prado was named one of Canada's Top 40 under 40 in 2019.



Dr. Carla Prado