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## CURRICULUM VITAE

### A. BIOGRAPHICAL INFORMATION

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#### 1. PERSONAL

**Name:** Maydianne Christine Beaumont Andrade

**Citizenship:** Canadian

Department of Biological Sciences  
University of Toronto at Scarborough (UTSC)  
1265 Military Trail  
Scarborough ON M1C 1A4  
Graduate appointments: Department of Ecology & Evolutionary  
Biology; Department of Physical & Environmental Sciences  
**Research webpage:** [www.utsc.utoronto.ca/labs/andrade](http://www.utsc.utoronto.ca/labs/andrade)  
**Equity & Outreach webpage:** [www.maydianne.com](http://www.maydianne.com)

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#### 2. DEGREES

**Ph.D. Neurobiology & Behavior 2000 Cornell University**

- Co-advisors: ST Emlen and PW Sherman
- Thesis title: *Male mating strategies in a cannibalistic spider.*

**M.Sc. Zoology 1995 University of Toronto at Mississauga**

- Supervisor: D.T. Gwynne.
- Thesis title: *Sexual cannibalism in the Australian redback spider (Latrodectus hasselti Thorell): Natural selection for female feeding and sexual selection for male sacrifice.*

**B.Sc. (1<sup>st</sup> class Honours) 1992 Simon Fraser University**

- Supervisor: B.D. Roitberg.
- Thesis title: *The effect of artificial selection on behavioural variation within clones of the pea aphid (Acrythosiphon pisum).*

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#### EMPLOYMENT & RELATED POSITIONS (2000 TO PRESENT)

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1 July 2022 – present: **University Professor**, University of Toronto's [highest academic rank](#), held by no more than two percent of tenured faculty.

1 July 2011 – June 2022: **Professor**, Department of Biological Sciences, University of Toronto Scarborough

2001 – 2006, 2010 to present: **Research Associate, Royal Ontario Museum**

1 January 2021 – 31 March 2021. **Special Advisor to the Dean on Inclusive Recruitment & Equity Education (UTSC)**. For more details, see [Administrative Service](#)

1 January 2017 – 31 December 2020. **Vice Dean Faculty Affairs & Equity**, University of Toronto Scarborough (UTSC)/ title changed to Vice Dean Faculty Affairs, Equity & Success (1 July 2020). For more details, see [Administrative Service](#)

1 July 2019 – 31 December 2019. **Acting Vice Principal Academic & Dean**, UTSC; (6 month sabbatical replacement). For more details, see [Administrative Service](#)

1 October 2018 – 1 July 2019. **Member, Board of Trustees, Royal Ontario Museum**, Designate of the President of the University of Toronto (U of T)

1 July 2006 – 30 June 2011: **Associate Professor** (with tenure), Department of Biological Sciences, UTSC  
 2004 – 2012: **Special (Associate) Graduate Faculty Member**, Department of Zoology, University of Guelph  
 1 August 2001. Appointed to the **School of Graduate Studies**, Department of Ecology & Evolutionary Biology, U of T  
 1 July 2000 – 30 June 2006: **Assistant Professor**, Department of Life Sciences, UTSC

#### CURRENT: VOLUNTEER LEADERSHIP POSITIONS

- Inaugural President & Co-founder, Canadian Black Scientists Network (2020 to present)
- Co-Chair & Founder, Toronto Initiative for Diversity & Excellence (2016 – present)
- Chair, National Killam Selection Committee (2023 – present)

#### 4. ACADEMIC HONOURS & AWARDS

2023. **Named one of Canada's Top 100 Black Women to Watch, 2023.** *CIBWE (Canadian Black Women's Excellence).*

2024. **Exemplar Award, 2024.** Center for the Integrative Study of Animal Behaviour, USA. This award recognizes the careers of scientists who set outstanding examples of integrating different perspectives in the study of Animal Behavior.

2021. **Lawrence J. Burpee Medal from the Royal Canadian Geographical Society.** "Awarded to recognize an outstanding contribution or other achievement that greatly enhances the ability of the Society to fulfill its mission of making Canada better known on a national or international level, and/or contributes to the general advancement of geography."

2021. **Honorary Fellow of the Royal Canadian Geographical Society.**

2021. **Exemplar Award from the Animal Behavior Society.** Awarded for [a major long-term contribution to the field of Animal Behavior](#).

2020. **Elected to the American Academy of Arts & Sciences** ([International Honorary Member](#)) for "...excellence in the field and a record of continued accomplishment." "Academy members are world leaders in the arts and sciences, business, philanthropy, and public affairs... These elected members join with other experts to explore challenges facing society, identify solutions, and promote nonpartisan recommendations that advance the public good."

2007 – 2013; 2013 - 2018. **Canada Research Chair in Integrative Behavioural Ecology (Tier 2)**, awarded by the government of Canada (<http://www.chairs-chaire.gc.ca/>).

2016. **Fellow of the Animal Behavior Society** (<http://www.animalbehaviorsociety.org/>). "Fellows are members who have engaged in research in animal behavior for at least ten years and who in the opinion of the elected officers and current Fellows of the society have made distinguished contributions to the field."

2016. **UTSC Principal's Research Award** (in [recognition of outstanding research achievements](#))

2015. **'Professor of the Year'**, UTSC undergraduate newspaper (the Underground), chosen from student nominations of UTSC "professors who have positively impacted students' lives, either in the classroom or a broader setting..."

2000 – 2002; 2003– 2006. **University Faculty Award**, Natural Sciences and Engineering Research Council of Canada. Value: \$40,000/year to the University of Toronto.

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2003. **Outstanding New Investigator Award**, Animal Behavior Society (USA). "...recognizes an outstanding contribution in animal behavior by a new investigator."
- 2001 – 2006. **Premier's Research Excellence Award (PREA)**, Ontario Ministry of Energy, Science & Technology.
2001. **Best faculty talk**, Department of Zoology Research Colloquium, University of Toronto.
2000. **Pitelka Award for Research Excellence**, International Society for Behavioral Ecology. Awarded for the paper: Andrade, MCB, 1998. *Behavioral Ecology* 9:33-42. This paper was judged by the editorial board to be the most outstanding contribution published in the journal by a young investigator in the previous 2 years.
1999. **Clark Distinguished Teaching Award**, College of Arts and Sciences, Cornell University.
1999. **Whittaker Award**, best oral paper in the annual Ecology & Evolutionary Biology Graduate Student Symposium, Cornell University.
1996. **Honorable Mention**, student paper competition, Arachnological Society of America annual meeting.

#### OTHER HONOURS & AWARDS

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2024. **President's Award for Excellence in Societal Engagement**. Canadian Society for Ecology & Evolution. Recognizing contributions towards reducing barriers to inclusion in science in general and ecology and evolution in particular, including a commitment to public communication of science, and leadership in co-founding the Canadian Black Scientists Network.
2023. **100 Black Women to Watch, 2023 awardee**. Presented by Canadian International Black Women Excellence
2023. **Community Champion Award**. Presented to the **Canadian Black Scientists Network** by the Black North Initiative, for a Black-led community organization that has demonstrated a strong commitment to the communities they serve. I am the inaugural President and co-founder of the network.
2022. **Award for Outstanding Service to Canadian Black Scientists**. Inaugural award from the Canadian Black Scientists Network ([described here](#)).
2022. **Equity, Diversity & Inclusion Award**. Department of Ecology and Evolutionary Biology (University of Toronto).
- 2021 **African Scholars Distinguished African-Caribbean Award**. From the University of Toronto African Alumni Association for dedication to accessible academics, community engagement, and to equity, diversity and inclusion within the University community.
2019. **Ludwik and Estelle Jus Memorial Human Rights Prize**. University of Toronto Alumni Association (for my work on Bias & Inclusion education across the University, and founding and co-chairing the Toronto Initiative for Diversity & Excellence). <https://alumni.utoronto.ca/events-and-programs/awards/awex/jus-memorial-prize>
2019. Named one of the 'Women worth Watching 2019' by *Profiles in Diversity*.
2014. Featured scientist from Canada: IANAS Committee on Women in Science publication on early and mid-career scientists, '*Woman Scientists in the Americas*'
2007. **African Canadian Achievement Award for Excellence in Science**
2007. Top 10 Finalist, **Television Ontario's Best Lecturer Competition**.
2006. Profile and interview on the **American Association for the Advancement of Science's** "Spotlight: African American Scientists" <http://www.scienceupdate.com/spotlights/african-american-scientists/>
2006. Named to **Macleans Magazine's 2006 Honour Roll**. 'Discoverers and Thinkers' category, July 1, 2006.

2005. Named as one of the '[Brilliant 10](#)' by **Popular Science Magazine**, October issue. List features 10 of "...the most extraordinary, dynamic, innovative and promising young scientists in North America."

2002. **Time Magazine** (Canada), June issue. Featured in: "Canada: the next generation. ...some of the Canadians who define the new frontiers of science".

1995. **Award for Academic Excellence**, the Black Business and Professionals Association of Toronto.

1992. **Dean of Science Undergraduate medal**, Simon Fraser University, awarded to one student whose cumulative grade point average places them in the top five per cent of their class (Faculty of Science).

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## 5. PROFESSIONAL AFFILIATIONS AND ACTIVITIES

### PROFESSIONAL SERVICE ROLES:

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**Chair, Killam Program Selection Committee (2022 – 2025).** In this role I lead the adjudication process for the national competition for the Killam Prizes and Dorothy Killam Fellowships (administered by the NRC for the Killam Trust starting in 2022). As Chair, I worked with the program office to create a new, rigorous process for adjudication of these awards that align with new guidelines for the Killam program following its movement to administration by the NRC. The process centred best practices from the equity and evaluation literature on how to avoid bias and ensure wholistic assessment of records from diverse fields of practice, including community-based work, and emerging fields.

**Appointed Member, Scientific Advisory Committee (SAC), Canadian Council of Academies (CCA, November 2021-present).** The CCA is a not-for-profit, non-partisan, national organization that convenes top experts across scholarly fields to assess evidence on complex scientific topics of public interest to inform decision-making in Canada. The Scientific Advisory Committee provides advice to the CCA Board of Directors on research proposals (most of which are received from federal government agencies), nominates appropriate researchers for each commissioned study, oversees and coordinates their research efforts, solicits peer review of outputs and ensures adequate response, and vets the final research report. SAC-nominated experts are typically from a range of disciplines in the natural, social, and health sciences as well as engineering and the humanities. <https://cca-reports.ca/>

**Co-founder & Inaugural President: Canadian Black Scientists Network/ Réseau Canadien des Scientifiques Noirs (<https://www.blackscientists.ca/>), CBSN/RCSN, August 2020 - present.** This national coalition of Black Canadians in Science, Technology, Engineering, Mathematics and Medicine/ Health (STEMM) was formed in June 2020 with the goal of connecting, making visible, mentoring and supporting Black Canadians in STEMM, while advocating for programs for inclusion and equitable treatment. As President I have led development of all online communications (website, logo, social media), media campaigns, membership drive, and engagement with federal granting agencies. I schedule, organize and Chair Steering committee meetings (monthly), all-members meetings (quarterly), and manage and direct three work-study students (weekly). Membership is now at over 500 people, the network is a registered region with Youth Science Canada (CBSN-Youth / RCSN-Jeunesse), we have partnerships with Statistics Canada and Mitacs, and have presented our network goals and mission to the VPs of the National Research Council, and VP's from NSERC, SSHRC, CIHR and the CRC.

**Host and Chair of the Organizing committee, Black Excellence in STEMM virtual conference (2022, 2023, 2024 in progress).** I led the design, organization and fundraising for each year of this 4-day conference, which is unique in Canada (see <https://be-stemm.blackscientists.ca/>). The conference was successful with over 20 sponsors, including universities, colleges, research institutes from across Canada, in addition to grants from CIHR, NRC, and NSERC. Programming included over 80 Black-identifying speakers for keynotes, public talks, contributed talks and posters, in addition to over 20 panelists and daily networking sessions. BE-STEMM attracted over 1500 registrants in 2022, and 1200 in 2023. Prime Minister Trudeau provided closing remarks in 2022 and Minister Champagne provided opening remarks in 2023.

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**Steering committee member and co-founder, Black Research Network at University of Toronto. (2021-present).** The mission of this Institutional Strategic Initiative is to promote Black excellence at University of Toronto and enhance the research capacity of Black scholars within the university and on the world stage. As a co-founder and member of the steering committee, I co-wrote the proposal that secured university funding for this initiative, and support oversight of the network's activities and administration <https://brn.utoronto.ca/>

**Co-organizer, 'BlackInEnto' (Black in Entomology/Arachnology) Week (Feb. 22-26, 2021, online).** <https://www.blackinento.com/> <https://www.maydianne.com/blackinento>. Under the leadership of Dr. Jessica Ware (American Museum of Natural History), I co-organized a week of online events with the goal of profiling the work of Black Entomologists/Arachnologists, engaging others in their work, and increasing understanding of the challenges of racism for Black Entomologists/Arachnologists, while building a community of support for Black students engaged in this work. My role included online engagement and website registration management; participation as a [panelist](#) (California Academy of Sciences Breakfast club); and coordinating, moderating, hosting, and producing an online international webinar panel on Colonialism in Entomology. Viewed live by over 100 attendees, the [YouTube recording](#) has over 800 views to date.

**Member, Inter-institutional Advisory Committee and member, University of Toronto Planning Committee for the [National Dialogues & Action Conference on Inclusive Higher Education & Communities](#), October 2020.** I played a key organizational role in creating the structure of this two-day, national, virtual conference on actions against Anti-Black racism, and providing support materials for panelists and volunteers. Attended by over 3000 faculty, staff, student and community members from across Canada, this conference was the basis for the [Scarborough Charter](#) on anti-Black racism & Black inclusion in Canadian higher education.

**Founder & Inaugural Co-Chair, Toronto Initiative for Diversity & Excellence (TIDE), 2016 - present.** This University-wide, grassroots coalition of senior faculty members collaborate to deliver talks and workshops on Bias, Equity and Inclusion across all University of Toronto academic units (<https://www.toronto-tide.ca/>). TIDE mounts two sessions each year for tri-campus leaders and assessors through the [Office of the Vice Provost Faculty & Academic Life](#), and also offers bespoke engagements with academic and some staff units on request. Engagement with these offerings has increased steadily over the past 5 years, with over 50 separate requests and consultations from 2019 to 2021. My role, together with my co-chair and staff administrator, includes development and creation of new educational materials for presenters, consultations with units requesting sessions, assignment of leaders and facilitators, and soliciting support from the central administration for our activities, as well as mapping out, together with my co-chair, the progressively developing goals of the group. In recognition of the value of this work as central to the University's strategic plan, the Provost has allocated a 0.6 FTE staff position to support our work, and in 2023/24, TIDE received a \$50,000 grant from the Canada Research Chair (CRC) EDI fund to support our work, including targeted programming for CRCs.

**Co-host, 54<sup>th</sup> Annual Meeting of the Animal Behavior Society, 2017, lead local organizer.** Held at UTSC from June 12 -17, 2017, attended by 750 registrants from 12 nations, this conference ran for 5 days with 6 concurrent talk sessions (over 300 talks), 200 posters and over 15 workshops and focal-topic round-table meetings. In conjunction with this event, I co-organized a one-day outreach event at which 30 volunteer scientists from labs across the USA and Canada presented hands-on displays to >75 elementary school children visitors on the UTSC campus. I also co-organized an academic symposium at the conference: "*Behavioural Biodiversity: What can under-studied lineages tell us about Behavioural Ecology?*"

**Member, Diversity committee, Animal Behaviour Society (USA). 2014 - 2020**

**Program-Officer elect & Program Officer, Executive Committee of the Animal Behavior Society (USA). 2009 – 2013.** Nominated by the executive committee, I was elected by membership of this international society (February 2009). Duties include organizing the academic program for the annual conference, soliciting, judging and scheduling symposia, overseeing program flow and room assignments, preparing conference program, managing budget for symposia and plenary speakers, and securing sites and outlining the preliminary program for future meetings.

**Councillor, Executive Committee of the International Society for Behavioral Ecology.** 2008 – 2012. Nominated by executive committee, elected by membership of this international society (March 2008). Duties include judging student grant applications, serving on search committee for executive editor of the journal *Behavioral Ecology*, and contributions to decisions regarding policies and constitution of the society.

Professional service nominations declined due to competing commitments (2017-2022):  
President, Animal Behavior Society; President, American Society of Naturalists

## CREATIVE PROFESSIONAL ACTIVITIES: KNOWLEDGE TRANSLATION & PUBLIC OUTREACH

### 1. 2017 – 2021. **Creator, Unconscious Bias Online Education Modules.**

#### **Creative Commons license (CC BY-NC-ND, MCB Andrade 2021)**

I wrote, narrated, and then worked with an illustration company and a UTSC staff member to co-create three animated online education modules on bias and inclusion. These modules are data-centred education tools designed for a Canadian academic audience. Each module includes illustrative animations, transcripts, discussion questions, resources, and a quiz. Module 1 explains the concept of Unconscious bias. Module 2 highlights evidence for how biases can manifest in the academic context. Module 3 outlines actions individuals can follow to interrupt biases in common academic processes. Development from concept to launch of the third module occurred over a 3 year period.

#### **Evidence of Uptake/Impact:**

**University of Toronto.** I secured funding for these modules from the Provost of the University of Toronto, the Dean and Principal at UTSC, the Dean of the Faculty of Arts & Sciences, the Dean of the Faculty of Applied Science & Engineering, and the Dean and Principal at UTM. Three modules are now mounted on the University of Toronto's faculty & staff learning management system. Their launch was announced in [a joint memo](#) from the Vice President Human Resources & Equity, and the Executive Director of Equity, Diversity and Inclusion. They are now available for use by the public across Canada through the TIDE website (<https://www.toronto-tide.ca/education-modules/>).

**Humber College.** I worked with the Centre for Human Rights, Equity & Diversity at Humber college to mount these modules on their learning management system. They completed a 'soft launch' pilot to positive reviews from 200 users in winter 2022. Humber has now released them for staff and as mandatory education for search committee members.

**2. Original Concept creator, Story Editor and Cast member** for the nature documentary [Bug Sex: It's Complicated](#), Red Trillium films under contract to *The Nature of Things* (CBC). First aired: March 2023

**3. Podcast host & content co-creator:** [The New Normal with Maydianne Andrade](#) (April 2020 to April 2021) with producer Lisa Lightbourn and a team from University of Toronto Communications, the podcast has over 500,000 views to date. In 2021, the podcast team won the **Best School or College Social Media Campaign of the Year** from [Higher Ed Social](#) (international professional organization).

**4. Cast member and on-screen host** for the for the nature documentary [First Animals](#), Red Trillium Films, under contract to *The Nature of Things* (CBC). First aired: October 2019.

**5. Cast member (arachnologist)** for the nature documentary [The Great Wild Indoors](#), 52 Media under contract to *The Nature of Things* (CBC). First aired: February 2017.

## ADVOCACY FOR INCLUSIVE SCIENCE & INNOVATION POLICY

Since 2020, Professor Andrade has engaged in activities aimed at informing public policy and practice for increased inclusion and anti-racism in academia, funding agencies and the government.

1. National Dialogues & Action for Inclusive Higher Education & Communities, 2020
  - a. Lead Academic on the Organizing committee.
  - b. Member, Inter-institutional Advisory Committee on the [Scarborough Charter](#)

2. Canadian Science Policy Conferences 2022 and 2023 (Ottawa):
  - a. Panelist, [2022](#), *Equity and Anti-Racism in Science – An Approach for Augmenting Canadian Science and Technology*, invited by NRC who organized the panel.
  - b. Co-Organizer (with Visions of Science) and Moderator, 2023 pre-conference symposium panel and co-author on related [conference editorial](#): *Acting at all levels to reverse negative impacts of Anti-Black racism in STEM: A call to build pathways through barriers for Students, Graduates & Professionals*.
3. [Testimony](#) as a witness called by the House Standing Committee on Science & Research as part of their investigation into graduate student scholarships and awards. 2022.
4. Consultations with tri-council grants and awards senior staff regarding Black Scholars funding. The definition of 'Black' adopted by the CIHR's REDI program was drafted by me in consultation with the Canadian Black Scientists Network (see: footnote 3 <https://cihr-irsc.gc.ca/e/53272.html>)
5. Board of Directors: Support Our Science:
  - a. Speaker at the May 1<sup>st</sup> 2023 national walkout
  - b. Represented the Canadian Black Scientists Network at a Meeting with Hon Minister Champagne (Minister of Innovation, Science and Economic Development Canada)
6. February 2024. Keynote remarks at the African Canadian Senator Group Black History Month reception. Ottawa. I was the only speaker who was not a politician who provided keynote remarks at this event. The other two speakers were the Honorable Greg Fergus, Speaker of the House of Commons and the Honorable Raymonde Gagné, Speaker of the Senate. My remarks focused on the need for targeted programs for Black science innovators and entrepreneurs.
7. March 2024. Invited participant, "CIHR Dialogue on Anti-Black Racism and Black Health in the Research Funding System". One of 12 invited participants from across the country in a dialogue to inform the CIHR anti-racism action plan.

#### SERVICE FOR PEER-REVIEWED JOURNALS

**Review Editorial Board, *Frontiers in Ecology and Evolution*, September 2014 – 2019.**

**Editorial Advisory Board, *Canadian Journal of Zoology*. February 2014 – February 2017.**

**Editorial Board (Associate Editor), *The American Naturalist*. July 2008 – January 2011.**

Additional requests declined due to competing commitments (2017 through 2023):

Editorial Board, *Proceedings of the Royal Society, B*; Editorial Board, *Evolution*; Editorial Board, *Behavioral Ecology*; Editorial Board, *The American Naturalist*, Editorial Board, *Frontiers in Arachnid Science*.

#### REVIEW ACTIVITY

Reviewer for the following international journals:

The American Naturalist	Animal Behaviour
Annales Zoologici Fennici	Behaviour
Behavioural Processes	Behavioral Ecology and Sociobiology
Behavioral Ecology	Biological Journal of the Linnaean Society
Biological Reviews	Canadian Entomologist
Current Biology	Ethology
Evolution	Journal of Arachnology
Journal of Ethology	Journal of Evolutionary Biology
Journal of Insect Behaviour.	Nature
Naturwissenschaften	PloS One
PloS Biology	Proceedings of the Royal Society, B
Science	Proceedings of the National Academy of Sciences, USA

Reviewer for the following granting agencies:

Australian Research Council, Australia  
 National Science Foundation, USA  
 Natural Environment Research Council, UK

Deutsche Forschungsgemeinschaft (German Research Foundation)  
 Natural Sciences and Engineering Research Council of Canada  
 United States-Israel Bi-National Science Foundation  
 Macquarie University fellowships program

Reviewer of the following Book/Textbook Chapters:

- Eberhard, WG & Huber, BA. Spider genitalia: precise maneuvers with a numb structure in a complex lock. *The evolution of primary sexual characters in animals* (working title). JL Leonard and A. Cordoba-Aguilar, eds. In preparation for Oxford University Press. (April 2008)
- Alcock, J. Development of Behaviour, *Animal Behaviour: An Evolutionary Approach*, 8<sup>th</sup> ed. (June 2008)
- Gwynne, DT, Chapter: Behavioural Ecology. In: *Ecology: A Canadian Context*. Publisher: Nelson Education Ltd.

#### MEMBER OF THE FOLLOWING PROFESSIONAL SOCIETIES:

- (1) Canadian Society for Ecology & Evolution (lifetime member)
- (2) Entomological Society of Canada
- (3) Animal Behavior Society
- (4) American Arachnological Society
- (5) International Society for Behavioral Ecology
- (6) Sigma Xi

## B. ACADEMIC HISTORY

### 6.A. SCHOLARLY ENDEAVOURS

**The goal of my fundamental research is to understand how the reproductive behaviours of males and females arise from the interaction of sexual and natural selection in variable ecological and social contexts, and how this shapes individual phenotypes and population-level characteristics.** Work in my research group incorporates laboratory and field studies to examine sexual selection, contextual determinants of phenotypic and life history traits that affect reproduction, and how these link to fitness in nature. My earlier insights regarding the evolution of self-sacrificial mating investment by males (terminal investment, published as a sole-authored paper in *Science*) and high mortality during mate searching have been used as a foundation to examine how the evolutionary ecology of mating is linked to individual development and adult traits (morphology, physiology, behaviour), as well as how these relate to demography. I have worked throughout my career to establish widow spiders (*Latrodectus*) as a model taxon, used to advance broad knowledge in evolutionary ecology. Work has now expanded to the closely related genus *Steatoda*. One long term goal is to examine links among mating systems, flexible gene expression (plasticity), invasiveness, and divergence among populations distributed across wide geographical ranges. Current efforts include a new molecular phylogeny of the black widow spiders (genus *Latrodectus*), and analyses of population genetic structure, gene flow and evidence for inbreeding across widely distributed populations of the western widow (*L. hesperus*) using next generation sequencing.

**My second area of scholarship is in knowledge translation, leadership consulting, and organizational change in support of increased equity and inclusion in academia and other professional contexts.** I have led a research-informed approach to effective engagement in education about equitable practices in the academic career arc. Using data on promising practices for faculty education as a model, I founded the *Toronto Initiative for Diversity and Excellence* in 2016 ([www.toronto-tide.ca](http://www.toronto-tide.ca)). I created a process, baseline content, and format for modular talks and workshops that have received positive reviews in more than 90 sessions for academic units and leaders across the University of Toronto. I created online education modules about bias to enable first-level education at scale. This included developing content and narration, and collaborating to create animations illustrating complex concepts. To date, the modules have been completed by over 1500 faculty and staff at the University. Under my creative commons license they have also been deployed for education across Humber College (after favourable review by a pilot group of 200). My expertise in this area, deep understanding of the literature, and ability to translate insights for different employment contexts, has led to high demand for my work as a professional speaker and workshop leader across diverse sectors in addition to academia. This

includes talks and workshops for organizations and conferences in medicine, banking, law, manufacturing, trade unions, municipal governments, and most recently, the federal government.

## 6B. RESEARCH AWARDS

Principal applicant/investigator(s) in bold, Andrade-group trainees underlined>.

Applicants	Title & Funding Source	Amount	Year awarded (duration)
<b>Kalocsai, Csilla; Kuper, A (Co- PI)</b> <b>Collaborators (in alphabetical order):</b> <b>Andrade, MCB;</b> Norris, M; Oshan, F; Timmouth, J; Weiss, S.	Sunnybrook Program to Access Research Knowledge (SPARK) for Black and Indigenous Students – An Evaluation Study  Black Physicians of Ontario	\$19,365	2022 (1 year)
<b>Co-PI:</b> Andrews, Nathan; Duchesne, Annie <b>Co-applicants:</b> Shea, Joseph; Smith, Malinda <b>Collaborators:</b> <b>Andrade, Maydianne;</b> Kong, Jude; Hamieh, Alia; Judy Thompson; Dryden, OmiSoore; Radar, Stephen	"Hidden Figures" in the Social and Natural Sciences: Exploring Racism, Whiteness, and Epistemic Oppression in the Canadian Academy  New Frontiers in Research Exploration Fund (SSHRC)	\$244,187	2021
<b>Andrade, MCB &amp; the Canadian Black Scientists Network</b> (lead author on all grants listed except for CIHR and FRQ on which I was a contributing author)	A National Virtual Conference for Black Excellence in Science, Technology, Engineering, Mathematics & Medicine/Health (BE-STEMM). <ul style="list-style-type: none"><li>• NRC</li><li>• NSERC</li><li>• CIHR</li><li>• FRQ</li></ul>	\$25,000 \$20,000 \$30,000 \$10,000	2021 (2 year)
<b>Adams, JD (lead PI)</b> <b>Co-authors in alphabetical order:</b> <b>Andrade, MCB;</b> Jerome-Majewska, L; Gordon, S; Kong, J; Ware, J.	<b>US Embassy Grant for Cross-border cooperation.</b> Provides for a year-long series of virtual workshops to bring together experts in Black inclusion in STEM programs from the USA and Canada to develop recommendations on best practices and actions.	\$25,000 USD	2021 (2 years)
<b>Sentenská, L;</b> Andrade, MCB; <b>Uhl, G</b>	Immature mating as a novel tactic of an invasive widow spider (Marie Skłodowska-Curie Global Post-doctoral fellowship)	\$16,000/yr (research funds), plus salary to L. Sentenská	February 2020 – 2022 (Andrade lab); 2022- 2024 (Uhl lab)
<b>Mowery, MM;</b> Lubin, Y; Mason, AC; <b>Andrade, MCB</b>	<i>Understanding invasive potential in brown widow spiders.</i> (Mitacs Globalink Research Award)	\$6,000	Sept – December 2018
<b>Andrade, MCB</b>			
<b>Andrade, MCB</b>	<i>Examining links between behaviour, plasticity and diversification under environmental heterogeneity using broadly distributed spider species</i> (NSERC Discovery Grant)	\$33,000/year	May 2017 – April 2022
<b>Castilho, L;</b> Andrade, MCB; <b>Macedo, R</b>	Emerging Leaders in the Americas Scholarship for visiting international graduate students. (Government of Canada International Scholarships)	CD \$7,200	January 2014 – April 2014
<b>Andrade, MCB</b>	Canada Research Chair in Integrative Behavioral Ecology (Tier 2 renewal)	CD 100,000/yr	May 2013 – April 2018
<b>Andrade, MCB</b>	<i>The role of mating systems in plasticity &amp; divergence across variable environments</i> (NSERC Discovery Grant)	CD 41,000.00/yr	May 2012 – April 2017
<b>MacGowan, P. ,</b> Erb, S. Ito, Y. & <b>Andrade, MCB</b>	<i>Exploring Drugs of abuse and transgenerational phenotypes</i> (UTSC Research Competitiveness fund)	CD 13,600	2012 (OTO)

<b>B. Treanor, R. Harrison, M. Andrade</b>	<i>Biological Irradiator</i> (NSERC Research Tools & Instruments, Category 1)	CD \$14,2059	2012 (OTO)
<b>Baruffaldi, L &amp; Andrade, MCB</b>	Sectorial Commission of Scientific Research (Uruguay) (visiting studentship)	CD \$5,500	January – April 2010 (OTO)
<b>Andrade, MCB</b>	Canada Research Chair in Integrative Behavioural Ecology (Tier 2, <i>Canada Research Chairs Program</i> )	\$100,000/yr	2007-2013 (1 year extension)
<b>Andrade, MCB</b>	Title: Integrative Behaviour & Neuroscience Research & Rearing Facility <i>Leaders' Opportunity Fund (Canadian Foundation for Innovation, Ontario Research Fund)</i>	\$460,000	Awarded 2007 (OTO)
<b>Andrade, MCB</b>	Influence of mating system and variable selection on adaptive variation within and across species of black widow spiders ( <i>NSERC</i> )*	\$29,450/yr	2007-2012
<b>Andrade, MCB</b>	Untangling effects of choice, behavioural syndromes & conflict on mating system evolution using black widow spiders ( <i>NSERC</i> ) <sup>†</sup>	24,000/yr	2003-2006
<b>Andrade, MCB</b>	Sexual selection's holy grail: Identifying physiological bases of quality and honest signalling in black widow spiders. (Connaught, New Staff Matching Grant)	\$17,933	2002-2003 (OTO)
<b>Andrade, MCB</b>	Sexual selection and mating strategies in black widow spiders (NSERC University Faculty Award)	\$40,000/yr	2000 – 2006
<b>Andrade, MCB</b>	<i>Sexual selection and mating strategies in black widow spiders (NSERC Discovery Grant)</i> <sup>‡</sup>	\$23,600/yr	2000 - 2004
<b>Andrade, MCB</b>	<i>Automatic Start-up Grant</i> (Connaught Fund, University of Toronto)	\$10,000	2000 (OTO)
<b>Andrade, MCB</b>	<i>Premier's Research Excellence Award</i> (PREA, Government of Ontario)	\$20,000/yr	2001 – 2006
<b>Andrade, MCB</b>	<i>Assessment of auditory transduction and vibrational signalling using laser vibrometry (NSERC Equipment Grant)</i>	\$65,000	2001 (OTO)
<b>Andrade, MCB</b>	<i>Multi-level analysis of mating system evolution in cannibalistic black widow spiders</i> (New Opportunities Grant. Canadian Foundation for Innovation & Ontario Innovation Trust)	\$139,996	2000-2002
<b>Andrade, MCB</b>	<i>Olin Graduate Fellowship</i> (Cornell University)	US\$22,000/yr	1997-2000
<b>Andrade, MCB</b>	<i>Benefit of repeated mating in redback spiders</i> (Student Research Grant, Animal Behavior Society).	US\$1,000	1998-1999
<b>Andrade, MCB</b>	Costs of self-sacrifice in cannibalistic redback spiders (Doctoral Dissertation Improvement Grant, NSF)	US \$14,000	1996-1998
<b>Andrade, MCB</b>	<i>Is finding females risky for male redback spiders?</i> (Research Travel Grant, Olin Foundation, Cornell University)	US\$750	1997
<b>Andrade, MCB</b>	<i>The Cost of Sexual Cannibalism for Male Redback Spiders: Is Every Copulation Equally Valuable?</i> ( <i>President's Council of Cornell Women Research Grant</i> )	US\$500	1997
<b>Andrade, MCB</b>	<i>Assessing risks of mate search in wandering male spiders (Grant-in-Aid of Research, Sigma Xi, USA)</i>	US\$880	1996
<b>Andrade, MCB</b>	<i>Marion and Percy A. Leon Graduate Fellowship, Cornell University</i>	US\$1,000/yr	1995 & 1996.
<b>Andrade, MCB</b>	<i>NSERC 1967 Science and Technology Graduate Scholarship</i>	\$21,000/yr	1992 – 1994 & 1995 – 1997

## C. SCHOLARLY AND PROFESSIONAL WORK

### 7. REFEREED PUBLICATIONS

For multi-authored contributions: **Andrade** and trainees are **bolded with graduate students or post-doctoral fellows** underlined, \***undergraduates starred**, and the **senior author(s) in italics**. In my field, the senior author is most commonly the last author. Up-to-date citation information can be accessed via [Google Scholar](#) or [ORCID](#) (orcid.org/0000-0002-2931-5378)

#### 7A. REFEREED ARTICLES PUBLISHED (CAREER TOTAL PEER-REVIEWED: 67)

1. **L Sentenská, C Scott, L. Baruffaldi, MCB Andrade**. 2023. Pre-copulatory choices drive post-copulatory decisions: mechanisms of female control shift across different life stages. *BMC Ecol Evo* 23, 25 (2023). <https://doi.org/10.1186/s12862-023-02138-6>
2. Z Luo, **MA Mowery**, X Cheng, Q Yang, J Hu, ***MCB Andrade***. 2022. Realized niche shift of an invasive widow spider: drivers and impacts of human activities. *Frontiers in Zoology* 19, 1-15.
3. **MA Mowery**, SE Anthony, AN Dorison, AC Mason, ***MCB Andrade***. 2022. Invasive Widow Spiders Perform Differently at Low Temperatures than Conspecifics from the Native Range. *Integrative and Comparative Biology*. Volume 62, Issue 2, August 2022, Pages 179–190, <https://doi.org/10.1093/icb/icac073>
4. **L Sentenská, C Scott**, P Mougnot, ***MCB Andrade***. 2022. Risky business: males choose more receptive adults over safer subadults in a cannibalistic spider. *Behavioral Ecology* 33, 688–697
5. **MA Mowery**, Y Lubin, A Harari, AC Mason, ***MCB Andrade***. 2022. Dispersal and life history of brown widow spiders in dated invasive populations on two continents. *Animal Behaviour* 186, 207-217
6. ***Andrade, M.C.B., Baskaran, A\*, Biaggio, MD & Modanu, M***. 2021. Juvenile experience with male cues triggers cryptic choice mechanisms in adult female redback spiders. *Insects*, 12, 185.
7. **Mowery, M.A.**, Vink, C., Mason, A.C. & ***Andrade, MCB***. 2021. Behavioural, morphological, and life history shifts during invasive spread. *Biological Invasions*. <https://doi.org/10.1007/s10530-021-02593-6>
8. **L Baruffaldi, MCB Andrade**. 2021. Female control of a novel form of cannibalism during copulation in a South American widow spider. *Behavioural Processes*, 188: 104406.
  - Popular press coverage of this paper: New Scientist. <https://www.newscientist.com/article/2276085-female-black-widow-spider-mates-with-and-eats-multiple-males/>
9. ***LB Castilho, MCB Andrade, RH Macedo***. 2021. Males mate indiscriminately in the tropical jumping spider *Hasarius adansoni* (Audouin, 1826). *Ethology* 127 (1), 83-90
10. **Scott, CE**, McCann, S, ***Andrade, MCB***. 2020. Black widows as plastic wallflowers: female choosiness increases with indicators of high mate availability in a natural population. *Scientific Reports*. 10 (1), 1-9.
11. **LB Castilho, MCB Andrade**, RH Macedo. 2020. Testing the differential cost assumption of the handicap hypothesis with a tropical jumping spider, *Behaviour*. DOI: 10.1163/1568539X-bja10008
12. **L Baruffaldi, MCB Andrade**. 2020. Immature mating as a tactic of polygynous male western widow spiders. *The Science of Nature* 107 (1), 1-4.
13. **LB Castilho, RH Macedo, MCB Andrade**. 2020. Individual preference functions exist without overall preference in a tropical jumping spider. *Animal Behaviour* 160, 43-51.
14. A Elbassiouny, P DiSordi, S Guay, A Hamilton, S King, J Brown, P Molnar, ***MCB Andrade, CDRiggs, I Stehlik, A Ashok***. 2020. The Whole Is Greater than the Sum of the Parts: A Research Poster Project Provides an Integrative Framework for Learning across Foundation Courses in Biology. *Bioscene: Journal of College Biology Teaching* 46 (1), 27-35
15. **L Baruffaldi, H Siddiqui\*, A Thambiappah\*, MCB Andrade**. 2019. Male responses suggest both evolutionary conservation and rapid change in chemical cues of female widow spiders. *Animal Behaviour* 157, 61-68
16. **CE Scott**, S McCann, ***MCB Andrade***. 2019. Male black widows parasitize mate-searching effort of rivals to find females faster. *Proceedings of the Royal Society B* 286 (1908), 20191470
  - Selected media coverage: [U of T News](#), [The New York Times](#).
17. Simkovic, V, ***Andrade, MCB***. 2019. Seasonal variation in sexual behaviour and web aggregation in a little-known long-jawed spider (*Tetragnatha straminea*). *Journal of Arachnology*.
18. **Castillho, LB, Andrade, MCB, Macedo, RH**. 2018. Mating and egg-laying behavior of *Hasarius adansoni* (Araneae: Salticidae) and the influence of sexual selection. *Journal of Arachnology* 46(3), 398-403. <https://doi-org.myaccess.library.utoronto.ca/10.1636/JoA-S-16-091.1>

19. Fischer, M Ayasse, **MCB Andrade**. 2017. Natural Compounds as Spider Repellents: Fact or Myth? *Journal of Economic Entomology* 111 (1), 314-318. <https://doi.org/10.1093/jee/tox339>
20. **Baruffaldi, L & Andrade, MCB**. 2017. Neutral fitness outcomes contradict inferences of sexual 'coercion' derived from male's damaging mating tactic in a widow spider. *Scientific Reports* 7, Article number: 17322. doi:10.1038/s41598-017-17524-6
21. **Rosenthal, MF**, Gertler, M, Hamilton, AD, **Prasad, S\*** and **Andrade, MCB**. 2017. Taxonomic bias in animal behaviour publications. *Animal Behaviour*. 127:83-89. doi.org/10.1016/j.anbehav.2017.02.017
  - Also see invited (non-refereed) commentary: Rosenthal, MF & Andrade, MCB. 2017. [Opinion: Address Taxonomic Skew](#). *The Scientist*. July/August 2017.
22. **Biaggio, MD**, **Sandomirsky, I**, **Lubin, Y**, Harari, AR and **Andrade MCB**. 2016. Copulation with immature females increases male fitness in cannibalistic widow spiders. *Biology Letters*, 12 20160516; DOI: [10.1098/rsbl.2016.0516](https://doi.org/10.1098/rsbl.2016.0516).
  - Popular press features include [Science News](#), [The Guardian](#), [National Geographic](#), [The Smithsonian](#), [Popular Science](#), [USA Today](#)
  - [Altmetric Attention Score](#) = 322 (top 5% of all Altmetric-scored research outputs)
23. **Baruffaldi, L & Andrade, MCB**. 2015. Contact pheromones mediate male preference in black widow spiders: avoidance of hungry sexual cannibals? *Animal Behaviour*. 102: 25-32.
  - Featured on BBC Earth. (<http://www.bbc.com/earth/story/20150213-male-black-widows-spot-cannibals>)
24. DeLuca, PA, **Stoltz, JA**, **Andrade, MCB**, **Mason, AC**. 2015. Metabolic efficiency in courtship favors males with intermediate mass in the Australian redback spider, *Latrodectus hasselti*. *Journal of Insect Physiology*.72: 35-42. doi: <http://dx.doi.org/10.1016/j.jinsphys.2014.11.004>.
25. Elias, DO, Sivalinghem, S, Mason, AC, **Andrade, MCB**, **Kasumovic, MM**. 2014. Mate-guarding courtship behaviour: tactics in a changing world. *Animal Behaviour* 97: 24-33. DOI: 10.1016/j.anbehav.2014.08.007
26. **Modanu, M**, **Li, L DX\***, **Said, H\***, **Rathitharan, N\***, **Andrade, MCB**. 2014. Sibling cannibalism in a web-building spider: Effects of density and shared environment. *Behavioural Processes*. 106:12-16. DOI: 10.1016/j.beproc.2014.03.011
27. **MacLeod, EC & Andrade, MCB**. 2014. Strong, convergent male mate choice along two preference axes in field populations of black widow spiders. *Animal Behaviour*. 89, 163-169. [DOI 10.1016/j.anbehav.2013.12.023](https://doi.org/10.1016/j.anbehav.2013.12.023)
  - Featured by *Nature* as a 'Research highlight' (<http://www.nature.com/nature/journal/v506/n7488/full/506269a.html>)
  - Featured on Quirks & Quarks (CBC Radio) in interview with former PhD student (and current post-doc) EC MacLeod (April 19, 2014, <http://www.cbc.ca/player/Radio/Quirks+and+Quarks/Full+Episodes/ID/2450005034/>).
  - Featured on the University of Toronto homepage: <http://news.utoronto.ca/picky-male-black-widow-spiders-prefer-well-fed-virgins>
28. **Modanu, M**, Michalik, P & **Andrade, MCB**. 2013. Mating system does not predict permanent sperm depletion in black widow spiders. *Evolution & Development*, 15(3): 205-212.
29. **Stoltz, J. A., M. C. B. Andrade**, and M. M. Kasumovic. 2012. Plasticity in metabolic rates reinforces morphological plasticity in response to social cues of sexual selection. *Journal of Insect Physiology*. 58: 985-990
30. Kasumovic M.M., **Andrade, M.C.B.**, Mason and A.C., **Elias, D.O**. 2011. The relative importance of RHP and resource quality in contests with ownership asymmetries. *Behavioral Ecology*.22:39-45.
31. **Sivalinghem, S\***; Kasumovic, MM; Mason, AC, **Andrade, MCB**; **Elias, DO**. 2010. Vibratory communication in the jumping spider *Phidippus clarus*: Polyandry and male mating success. *Behavioral Ecology*. 21 (6): 1308–1314.
32. **Elias, DO**, **Sivalinghem, S\***, Mason, AC, **Andrade, MCB** & Kasumovic, MM. 2010. Vibratory communication in the jumping spider *Phidippus clarus*: Substrate-borne courtship signals are important for male mating success. *Ethology*. 116:990-998.

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33. **Stoltz, JA, Hanna, R\* & Andrade, MCB.** 2010. Longevity cost of remaining unmated under dietary restriction. *Functional Ecology*. 24 (6), 1270-1280
  34. **JC Johnson, Kitchen, K & Andrade, MCB.** 2010. Family affects sibling cannibalism in the Black Widow Spider, *Latrodectus hesperus*. *Ethology*. 116: 770–777.
  35. **Elias, DO, Botero, CA, Andrade, MCB, Mason, AC & Kasumovic, MM.** 2010. High resource valuation fuels "desperado" fighting tactics in female jumping spiders. *Behavioral Ecology*. 21(4):868-875
  36. **Jerhot, E., Stoltz, J.A., Andrade, M.C.B. & Schulz, S.** 2010. Acylated Serine Derivatives: A Unique Class of Arthropod Pheromones of the Australian Redback Spider, *Latrodectus hasselti*. *Angewandte Chemie*, 49(11): 2037-2040. (IF: 10.879)
    - Featured in 'Chemical & Engineering News' (<http://pubs.acs.org/cen/news/88/i07/8807news4.html>)
  37. **Kasumovic M.M., Elias, D.O., Sivalinghem, S\*, Mason, A.C, Andrade, M.C.B.** 2010. Examination of prior contest experience and the retention of winner and loser effects. *Behavioral Ecology*. 21(2):404-409 (doi:10.1093/beheco/arp204). (IF: 3.224)
  38. **Stoltz, J.A. & Andrade, M.C.B.** 2010. Female's courtship threshold allows intruding males to mate with reduced effort. *Proceedings of the Royal Society of London, Series B*, 277:585-592. (IF: 4.248).
    - Cover photo feature
    - Featured as a 'Research Highlight' in *Nature*. 2009. 461: 1177
  39. **Kasumovic, MM, Brooks, RC & Andrade, MCB.** 2009. Condition but not dietary restriction prolongs life in a semelparous capital breeder. *Biology Letters*. 5:636-638 (IF: 3.000)
  40. **Kasumovic MM, Elias DO, Punzalan D, Andrade MCB, Mason AC.** 2009. Experience affects the outcome of agonistic contests without affecting the selective advantage of size. *Animal Behaviour*. 77:1533–1538 (IF: 2.282)
  41. **Stoltz, J.A., Elias, D.O. & Andrade, M.C.B.** 2009. Male courtship effort determines female response to competing rivals in redback spiders. *Animal Behaviour*. 77:79-85.
  42. **Kasumovic, MM, Bruce, MJ, Herberstein, ME & Andrade, MCB.** 2009. Evidence for developmental plasticity in response to demographic variation in nature. *Ecology*. 90: 2287-2296.
  43. **Kasumovic, MM & Andrade, MCB.** 2009. A change in competitive context reverses sexual selection on male size. *J. Evolutionary Biology*. 22: 324-333. [10.1111/j.1420-9101.2008.01648.x](https://doi.org/10.1111/j.1420-9101.2008.01648.x)
  44. **Mahmoudi, N\*, Modanu, M, Brandt, Y and Andrade, MCB.** 2008. Subtle pedipalp dimorphism: a reliable method for sexing juvenile spiders. *Journal of Arachnology*. 36: 513-517.
  45. **Kasumovic MM, Bruce, MJ, Andrade MCB, & Herberstein, ME.** 2008. Spatial and temporal demographic variation drives within-season fluctuations in sexual selection. *Evolution* 62: 2316-2325.
  46. **Elias, D.O., Kasumovic, M.M., Punzalan, D., Andrade, M.C.B. Mason, A.C.** 2008. Male assessment during aggressive contests in jumping spiders. *Animal Behaviour*. 76: 901-910.
  47. **Perampaladas, K\*, Stoltz, JA and Andrade MCB.** 2008. Mated redback spider females re-advertise receptivity months after mating. *Ethology*. Volume 114:589 – 598.
  48. **Stoltz, J.A., Elias, D.O. & Andrade, M.C.B.** 2008. Females reward courtship by competing males in a cannibalistic spider. *Behavioral Ecology and Sociobiology*, 62 :689-697.
  49. **Stoltz, J.A., McNeil, J. & Andrade, M.C.B.** 2007. Males assess chemical signals to discriminate just mated females from virgins in redback spiders. *Animal Behaviour*, 74:1669-1674.
  50. **Brandt, Y & Andrade, MCB.** 2007. What is the matter with the gravity hypothesis? *Functional Ecology*. 21. 1182-1183. (counter-rebuttal)
  51. **Brandt, Y & Andrade, MCB.** 2007. Testing the gravity hypothesis of sexual size dimorphism: Are small males faster climbers? *Functional Ecology*. 21(2): 379-385.
  52. **Kasumovic, MM, Bruce, MJ, Herberstein, ME & Andrade, MCB.** 2006. Risky mate search and mate preference in the golden orb-web spider (*Nephila plumipes*). *Behavioral Ecology*. 18: 189-195.
    - Top-cited paper in the Journal for 2007 (see <http://www.behavecol.com/pages/journal/citations.html>)
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53. **Kasumovic, MM & Andrade, MCB.** 2006. Male development tracks rapidly shifting sexual versus natural selection pressures. *Current Biology*. 16:R242-R243.
54. **Snow, LSE, Abdel-Mesih, A\* & Andrade, MCB.** 2006. Broken Copulatory Organs are Low-Cost Adaptations to Sperm Competition in Redback Spiders. *Ethology* 112: 379-389.
55. **Andrade, MCB & Kasumovic, MM.** 2005. Terminal Investment Strategies and Male Mate choice: Extreme Tests of Bateman. *Integrative & Comparative Biology* 45: 838-847.
  - Cover photo feature
56. **Andrade, MCB, Gu, L\* & Stoltz, JA.** 2005. Novel male trait prolongs survival in suicidal mating. *Biology Letters* 1(3): 276-279.
57. **Snow LSE & Andrade MCB.** 2005. Multiple sperm storage organs facilitate female control of paternity. *Proceedings of the Royal Society, Series B* 272: 1139 – 1144.
  - Cover photo feature
  - Featured in a *Current Biology* " Gage MJG 2005. *Current Biology*. 15: R630-R632.
58. **Kasumovic, MM & Andrade, MCB.** 2004. Discrimination of airborne pheromones by mate-searching black widow males: species- and population-specific responses. *Canadian Journal of Zoology* 82: 1027-1034.
59. **Snow, LSE & Andrade, MCB.** 2004. Pattern of sperm transfer in redback spiders: implications for sperm competition and male sacrifice. *Behavioral Ecology* 15(5): 785-792.
  - Cover photo feature
60. **Laird, G, Gwynne, DT and Andrade, MCB.** 2004. Extreme repeated mating as a counter-adaptation to sexual conflict? *Proceedings of the Royal Society B (Suppl)* 271: S402-404.
61. **Andrade, MCB.** 2003. Risky mate search and male self-sacrifice in redback spiders. *Behavioral Ecology* 14: 531-538.
62. **Andrade, MCB & Banta, EM.\*** 2002. Value of male remating and functional sterility in redback spiders. *Animal Behaviour* 63: 857-870.
63. **Andrade, MCB & Mason, AC.** 2000. Male condition, female choice, and extreme variation in repeated mating in a scaly cricket, *Ornebius aperta* (Orthoptera: Gryllidae: Mogoplistinae). *J Insect Behaviour* 13: 483-497.
64. **Andrade, MCB.** 1998. Female hunger can explain variation in cannibalistic behaviour despite male sacrifice in the Australian redback spider. *Behavioural Ecology* 9:33-42.
65. **Andrade, MCB.** 1996. Sexual selection for male sacrifice in the Australian redback spider. *Science* 240:70-72.
66. Brown, WD, Wideman, J, **Andrade, MCB**, Mason, AC, & Gwynne, DT. 1996. Female choice for the songs of larger males in the black-horned tree cricket, *Oecanthus nigricornis* (Orthoptera: Gryllidae: Oecanthinae). *Evolution* 50:2400-2411.
67. **Andrade, MCB & Roitberg, BD.** 1995. Rapid response to intra-clonal selection in the pea aphid (*Acyrtosiphon pisum*). *Evolutionary Ecology* 9:397-410.

## 7B. INVITED REVIEWS & BOOK CHAPTERS (5)

1. **Andrade, MCB.** 2019. Sexual selection & social context: Web-building spiders as emerging models for adaptive plasticity. *In Advances in the Study of Behavior*, Vol 50, Naguib, Podos, W. Simmons, Barrett, Healy & Zuk (Eds.). Academic Press. 78 pages. [invited, peer reviewed]
  - Cover photo feature.
2. **Scott, CE, Anderson, AG, Andrade, MCB.** 2018. A review of the mechanisms and functional roles of male silk use in spider courtship and mating. *The Journal of Arachnology* 46 (2), 173-207. <https://doi-org.myaccess.library.utoronto.ca/10.1636/JoA-S-17-093.1> [invited, peer reviewed]
3. **Andrade, MCB & MacLeod, EM.** 2015. Potential for Cryptic Female Choice in black widows (genus *Latrodectus*): Mechanisms & social context. *In Cryptic Female choice in Arthropods: Patterns, Mechanisms & Prospects*, Peretti, AV & Aisenberg, A, (Eds). Springer International Publishing. [invited, peer reviewed]

4. **Schneider, J** and **Andrade, MCB**. 2011. Chapter 7: Mating Behaviour & Sexual selection. In: *Spider Behaviour: Flexibility and Versatility* (ed Herberstein, M.E.). Cambridge University Press. ISBN-13: 9780521749275. [invited book chapter, peer reviewed]
5. **Elias, DO, Andrade, MCB, Kasumovic, MM**. 2011. Dynamic Population Structure and the Evolution of Spider Mating Systems. In: *Advances in Insect Physiology, Vol. 41* (ed Jérôme Casas), Burlington: Academic Press, 2011, p. 65-114. [invited, peer reviewed].

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#### 8. NON-REFEREED PUBLICATIONS (6)

1. **MF Rosenthal, MCB Andrade**. 2017. Widening the Web. *SCIENTIST* 31 (7-8), 22-23.
2. **Andrade, MCB**, Blagoev, G, Hubley, B, Mason, T. Spring 2012. *Spiders of Toronto*, City of Toronto Biodiversity booklet series (Reprinted, Spring 2014, 2018). (Invertebrate biodiversity working group, authors listed in alphabetical order). Volunteer outreach effort, this guide is available free to the public at city of Toronto libraries and online (This series has been the recipient of the OALA award for Service to the Environment). See <https://www.toronto.ca/explore-enjoy/parks-gardens-beaches/ravines-natural-parklands/biodiversity-in-the-city-2/>
3. **Andrade MCB & Stoltz, JA**. 2010. *Glowing sperm illuminate post-copulatory sexual selection in Drosophila*. *Bulletin of the Entomological Society of Canada*, September 2010. Invited review.
4. **Andrade MCB**. 2003. Terminal investment strategies and male mate choice: Extreme tests of Bateman. *Integr Comp Biol*. 43:833. (Abstract)
5. **Mason, AC & Andrade, MCB**. 2002. Review of: A spider's world: Senses and Behavior (FG Barth). *ISBE Newsletter* 14(2): 9 – 10.
6. **Sharp, JC & Andrade, M**. 1994. Investigations of behaviour in the pea aphid, *Acyrtosiphon pisum*. pp. 335-345, in *Tested Studies for Laboratory Teaching, Volume 15* (C.A. Goldman, Editor). Proceedings of the 15th Workshop/Conference of the Association for Biology Laboratory Education (ABLE).

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#### 9. MANUSCRIPTS

##### Revision underway:

**Baruffaldi, L & Andrade MCB**. Does female control and male mating system predict courtships and mating investment? A comparative study in five widow spider species (genus *Latrodectus*) under identical laboratory conditions. *BMC ECOLOGY & EVOLUTION*. Submission ID 0f081ac4-a5cc-4ee5-96a4-21e33d775b95.

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#### IN PROGRESS

##### Late stage draft manuscripts:

**C Condy\***, **MCB Andrade**, JA Miller, NR Lovejoy. Untangling the Web: 'Wreck of the *hesperus*': Cryptic Lineages Discovered within Western Black Widow Spider Populations (*Latrodectus hesperus*) using mitochondrial and nuclear DNA.

**Singh, N\***: Beaudry, FEG, **Andrade, MCB**. *Elevated inbreeding coincident with group-living in a population of western widow spiders*.

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#### 10. CONFERENCE CONTRIBUTIONS

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CONTRIBUTED TALKS & POSTERS (2016- present in detail [51]; >200 career total)

(supervised trainees underlined, undergraduates starred\*, first author is presenter unless otherwise noted, contributions are talks unless noted as a poster<sup>p</sup>)

## 2023

1. **Baruffaldi, L; Condy, CE; Andrade, MCB.** Is species discrimination under female or male control? An experimental approach using widow spiders. International Congress of Arachnology. Montevideo, Uruguay. March 2023
2. **Condy, CE;** Krehenwinkel, Henrik; Hitchcock, Katie\*; Beaudry, Felix; Gillespie, Rosemary; **Andrade, MCB & Lovejoy, Nathan.** Testing for sex-differences and considering the phylogenetic context for opsin expression patterns in widow spiders. International Congress of Arachnology. Montevideo, Uruguay. March 2023

## 2019-2022

3. **Condy, CE; Lovejoy, NR; Miller, JA; Andrade, MCB.** 'Wreck of the hesperus': Cryptic species discovered within the Western black widow spider (*Latrodectus hesperus*) using mitochondrial and nuclear DNA. European Congress of Arachnology. Greifswald, Germany. September 2022.
4. **MCB Andrade, A. Baskaran, MD Biaggio, S Fry, S. McCann, M Modanu, CE Scott.** Control, context, and choosiness: Flipping the lens to see female plasticity in *Latrodectus* species. European Congress of Arachnology. Greifswald, Germany. September 2022.
5. Jeremy Miller, **MCB Andrade, Charmaine Condy,** Nathan Lovejoy, Jessica Garb, Siddharth Kulkarni, Tamas Szuts, Charles Griswold. A revised phylogeny of the widow spider genus *Latrodectus*. European Congress of Arachnology. Greifswald, Germany. September 2022
6. **Taylor, L, Scott, C and Andrade, MCB.** It Takes Two to Colonize: Choosiness of founders under variable sex ratios may decrease invasive potential. Annual Meeting of the Animal Behaviour Society. Costa Rica, July 2022.
7. **Andrade, MCB; A. Baskaran, MD Biaggio, S Fry, MM Kasumovic, S. McCann, M Modanu, C Scott.** Widow spiders untangle adaptive plasticity: Juveniles that detect cues of future sexual competition develop more competitive adult traits. National virtual conference for Black Excellence in STEM, Jan 30 – Feb 2, 2022.
8. **N Singh,** FEG Beaudry, **C Condy,** LS Miles, **BC Verelli, MCB Andrade.** Behavioural and genomic differentiation in a transitionally social widow spider. Animal Behavior virtual conference, 2021
9. **Mowery, MA,** Harari, A, Lubin, Y, **Andrade, MCB.** Behaviour and life history shifts across brown widow spider invasion fronts. 19-23 January 2020. Talk, African Arachnology Society, Bela-Bela, South Africa.
10. **Mowery, MA.** Harari, A, Lubin, Y, **Andrade, MCB.** Invasion in the light of evolution: an integrative approach using two widespread widow spider species. 31 December 2019. Invited talk, Hebrew University of Jerusalem, Israel.
11. **Mowery, MA.** Harari, A, Lubin, Y, **Andrade, MCB.** Dispersal and fecundity in invasive brown widow spiders. 11-12 December 2019. Israel Society for Evolutionary Biology. Tel Aviv, Israel.
12. **Mowery, MA.** Harari, A, Lubin, Y, **Andrade, MCB.** Invasion in the light of evolution: an integrative approach using two widespread widow spider species. 3 December 2019. Invited talk, Mitrani Department of Desert Ecology, Ben-Gurion University of the Negev, Israel.
13. **Mowery, MA,** Lubin, Y, Mason, AC, **Andrade, MCB.** 23-27 July 2019. Dispersal and life history at the invasion front. Talk, Behaviour. Chicago, USA.
14. **Scott C,** McCann S & **Andrade MCB.** Sexual selection in western black widow spiders: the role of chemical signals and social information. (Talk) Joint meeting of the Entomological Society of Canada and the Canadian Society for Ecology and Evolution. 18-21 Aug. 2019. \*Talk in the Graduate Student Showcase (inclusion by competition)
15. **Scott C,** Anderson A & **Andrade MCB.** Spider silk and sex: from mating threads to veils and gift-wrap. (Talk) XXI International Congress of Arachnology, Christchurch, New Zealand. 10-15 Feb. 2019. \*Invited symposium talk: Sexual Strategies and Reproductive Morphology in Arachnids

## 2018

**Joint meeting of the Entomological Society of America and the Entomological Society of Canada, Vancouver, BC, Nov 11-14, 2018**

16. **Andrade, MCB**. Widows as windows on Evolutionary Ecology. **Invited symposium talk**
17. **Scott, SE, McCann, S & Andrade, MCB**. You take the high road and I'll take the silk road: Male widow spiders follow draglines of rivals to find females faster
18. McCann, S, **Scott, SE & Andrade, MCB**. Evil candy stripers: Diverse predation tactics of the introduced theridiid spider *Enoplognatha ovata*.

**17th International Behavioral Ecology Congress, Minneapolis, MN, 11-16 Aug. 2018.**

19. **Andrade, MCB & Stoltz, JA**. Natural remating intervals alter sperm use and costs of polyandry.
20. **Mowery, MA, Dorison, AC\*, Andrade, MCB**. Cool cannibals: behavioural and fecundity advantages of invasive spiders
21. **Scott C, McCann S & Andrade MCB**. You take the high road and I'll take the silk road: scrambling male widow spiders find females faster by following silk trails of rivals.
22. **Singh, N & Andrade, MCB**. Kissing Cousins: Population Density Predicts Effects of Kinship on Mating Outcomes in Widow Spider Populations.
23. <sup>P</sup>**Luo, Z, Mowery, MA, Andrade, MCB**. Invasive spiders shift climatic niche and increase tolerance to human disturbance.
24. **Scott C, McCann S & Andrade MCB**. The amazing race: how male black widows find females faster. Toronto Entomologists' Association Student Symposium, Toronto, ON, 24 March 2018.

**2017**

**54<sup>th</sup> Annual Meeting of the Animal Behaviour Society, University of Toronto Scarborough, June 2017**

25. **Baruffaldi, L. & Andrade, MCB**. Why do males spend so much time courting?]
26. **Fry, S & Andrade, MCB**. Abiotic cues linked to adaptive male development in male western black widow spiders. Competitor: Allee symposium for top PhD thesis paper (competitive admission)
27. McCann, S, **Scott, C, Baruffaldi, L. & Andrade, MCB**. Immature mating of *Latrodectus* in the lab and field: implications for sexual selection research.
28. Mower, M, Pakirathan, R, Mason, AC & Andrade, MCB. Internal state and behavioural variation in the redback spider.
29. **Scott, C, McCann, S & Andrade, MCB**. Finding females in a sensory storm: How do male western widows localize mates?
30. **Taylor, L.\*, Mowery, M., Rosenthal, M. Andrade, MCB**. Jack-of-all-Trades, Guarder on none? Does guarding require trade-offs with sperm counts in jumping spiders?
31. **Rosenthal, M, Gertler, M, Hamilton, A & Andrade MCB**. Taxonomic skew in research: defining the issue
32. <sup>P</sup>**Dano, S\*, David, A\*, Javaid, N\* & Srikanthan, D\*, Yee, A\*, Singh, N, Scott, C & Andrade, MCB**. Eaten out of house and & home? Effects of cohabiting offspring on fitness of female widow spiders
33. <sup>P</sup>**Dorison, A\*, Joshua, M\*, Mowery, M & Andrade, MCB**. Behavioural & Developmental responses of invasive Japanese redback spiders to new temperature challenges. Winner: Honourable Mention in Undergraduate poster competition.
34. <sup>P</sup>**Rajmohan, A\*, Baruffaldi, L. & Andrade, MCB**. Heterospecific matings in widow spiders: Do males use different sperm allocation strategies? Winner: Honourable Mention in Undergraduate poster competition.
35. <sup>P</sup>**Rosenthal, M, Taylor, L.\*, Mason, AC & Andrade, MCB**. Examining fitness effects of signals across contexts in a mate-guarding jumping spider.

**2016**

36. **Scott C, McCann S & Andrade MCB**. The mating dynamics of western black widows: new insights from field observations. Annual General meeting of the Entomological Society of Ontario, Sault Ste. Marie, ON, 14–16 Oct. 2016.
37. **53<sup>rd</sup> Annual Meeting of the Animal Behaviour Society, University of Missouri. Columbia Missouri. July 2016.**

38. Rosenthal, M, Prasad, S, Gertler, M, Hamilton, A, Andrade, MCB. Taxonomic representation in Animal Behaviour: tracking research biases & trends
39. Castilho L, **Macedo R, Andrade MCB**. Feeding regimen affects offspring quality to adverse conditions in a tropical jumping spider.

#### 20<sup>th</sup> International Congress of Arachnology, Golden, Colorado July 2-9, 2016.

40. Baruffaldi, L, Condy, C, Lovejoy, N, Andrade, MCB. Phylogenetic pattern of sex pheromone discrimination in widow spiders
41. Condy, C, Miller, JA, Garb, JE, Andrade, MCB, **Lovejoy, NR**. Untangling evolutionary relationships of widow spiders (*Latrodectus*, Theridiidae, Araneae): *Latrodectus* phylogeny revisited
42. Fisher, AS, Ayasse, M, Andrade, MCB. Volatile chemical communication in female *Latrodectus* sp
43. Fisher, AS, Ayasse, M, Andrade, MCB. Fact or myth: Do natural substances repel invasive spiders? (POSTER)
44. **Foellmer, M**, Modanu, M, Mondoux, C, **Andrade, MCB**. Male mating success, locomotory performance, and metabolic rate in *Argiope aurantia*
45. Scott C, McCann, S, Baruffaldi, L and Andrade MCB. New directions in *Latrodectus* sexual selection research inspired by recent field and laboratory observations.

#### Ontario Ethology, Ecology and Evolutionary Biology Colloquium, University of Toronto, May 5-7, 2016

46. Pakirathan R\*, Mowery M, Andrade MCB. The Effects of Sibling Cannibalism in Australian Redback Spiders (*Latrodectus hasselti*).
47. Alvares, D\*, Javeed, I\*, Thaveswaran, K\*, Singh, N\*, Andrade, MCB. Effects of Temperature, Boldness, and Aggression on Dispersal Propensity of Redback Spiderlings (Poster)
48. **\*Rajmohan, A, \*Baruffaldi, L**, Andrade, MCB. Heterospecific matings in black widow spiders: Do males use different sperm allocation strategies depending on their mating partner?
49. **Entomological Society of Ontario, 153rd Annual meeting, Sault Ste. Marie, Canada, October 14-16**
50. McCann S, Scott CE, **Andrade MCB**. Alien (spider) invaders: *Enoplognatha ovata* wreak havoc on a coastal arthropod community
51. Scott CE, McCann S, **Andrade MCB**. The mating dynamics of western black widows: new insights from field observations.

## 11. INVITED LECTURES & REMARKS

### PUBLIC KEYNOTE REMARKS

1. **Jayu Human Rights Film Festival**, post film-screening Q&A. The Space Race (National Geographic), Dec 9, 2023.
2. **Virtual Convocation address**: University of Toronto. This convocation was for the entire University. June 2020.
3. **Convocation address**: University of Toronto School of Graduate studies, June 2016

### ACADEMIC RESEARCH PRESENTATIONS [78 TOTAL]

#### NAMED SEMINARS OR KEYNOTE ADDRESSES (29)

1. **Andrade, MCB. Boyce Lecture**. University of California Riverside. Pending, May 2024
2. Andrade, MCB. Exemplar Awardee & speaker, Indiana University Pending March 2024
3. Andrade, MCB. Undergraduate Research Day Keynote, Algoma University Pending March 2024
4. **Andrade, MCB**. Distinguished Woman Scholars Lecture Series, University of Victoria, BC. Two talks. September 2023.
5. **Andrade, MCB**. International Congress of Arachnology, Montevideo, Uruguay. March 2023.

6. **Andrade, MCB.** Joint annual meeting of the Entomological Society of the USA and Canada, Research symposium talk & opening Keynote panel. November 2022.
7. **Andrade, MCB.** Virtual meeting of the Australasian Animal Behaviour Society, Keynote. September 2022
8. **Andrade, MCB.** Virtual meeting of the Animal Behavior Society, Keynote. August 2022.
9. **Andrade MCB.** American Arachnological Society annual meeting, Keynote. June 2022
10. **Andrade, MCB.** University of Washington. [Tommy Edmondson Endowed Lecture](#). April 2022
11. **Andrade, MCB.** Black Excellence in STEM & Health Research Symposium. Dalhousie University, March 2021.
12. **Andrade, MCB.** Carleton University Discovery Lecture. Joint Science/Journalism lecture. March 2021.
13. **Andrade, MCB.** Darwin Festival, February 2021, [Founders memorial Lecture](#). Salem State University.
14. **Andrade, MCB.** Ecology Live August 2020. <https://www.youtube.com/watch?v=Zs-dKcdrOYU>
15. **Andrade, MCB.** November 2017. **'Inspiring Women Among Us'**, University of Northern British Columbia.
16. **Andrade, MCB.** April 10, 2017. **Richard B Root Graduate student seminar**, Cornell University Department of Ecology & Evolutionary Biology
17. **Andrade, MCB.** 2016. **Ontario Ecology, Ethology & Evolution Colloquium. Keynote speaker:** The private lives of black widows: How behaviour links ecology & evolution.
18. **Andrade, MCB.** [NSF 50/50 Lecture](#). 2016. Biological Sciences, University of Massachusetts, Lowell
19. *Andrade, MCB. Invited Keynote address: Uruguayan Regional Animal Behaviour Meeting, Montevideo, Uruguay. March 2013 (declined for health reasons).*
20. **Clafflin University, Keynote address**, Undergraduate Research symposium, Orangeburg, SC, USA. March 2012.
21. **Plenary talk. 26<sup>th</sup> European Congress of Arachnology**, Ben Gurion University, Sede Boqer, Israel (Sept 2011)
22. **Darwin Keynote speaker**, Indiana State University. *Sexual selection and adaptive plasticity: extreme mating favours extreme tactics for doomed male black widows*. Terre Haute, IN, 26 April 2010.
23. **Helen Battle Memorial Seminar in Biology**, University of Western Ontario. 2010.
24. **Plenary talk.** Annual meeting the Entomological Society of Canada. Ottawa, Ontario. October 19, 2008.
25. **Plenary talk invitation** (declined due to scheduling conflict). 24<sup>th</sup> European Congress of Arachnology. Bern, Switzerland, 25-29 August 2008.
26. **Plenary talk.** XXX International Ethological Conference. Halifax, Nova Scotia. 15-23 August 2007 (400+ attendees).
27. **James P. Holland Memorial Lecture.** *Between a Rock and a Hard Place: Evolution of Self-Sacrificial Male Mating Strategies*. Indiana University. Bloomington, Indiana. 11 Oct 2004.
28. **Plenary talk:** Ontario Ecology & Ethology Colloquium. University of Toronto at Mississauga. Mississauga, Ontario, Canada. 11 May 2004.
29. **Women in Science: Distinguished Visitors Program.** University of New South Wales. Sydney, Australia. 6 Sept 2004. Research Lecture: *Constraints and Novel Solutions in a Self-Sacrificial Mating Strategy*; Workshop panelist: *Retaining women in the Science Pipeline* & guest teaching lecturer: *Male mate choice*

#### INVITED DEPARTMENTAL SEMINARS & SYMPOSIUM TALKS (45)

1. **UBC Okanagan Department of Biological Sciences**, September 2023. (2 talks: research & public career path & equity talk)
2. **UC Davis Animal Behaviour group**, Graduate student invitee. 14 October 2022
3. **McMaster Department of Biology** Departmental seminar. 5 March 2020.
4. **U of T Senior Alumni Lecture Series.** *Everything I need to know about Evolution, I learned from a cannibalistic spider*. 25 October, 2017.
5. **Senior College**, *Untangling the widow spider's web: plasticity and mating behaviour*. University of Toronto. January 25, 2017.
6. **Department of Biology, Duke University** (27 April 2016)
7. Dept. Ecology, Evolution and Behavior, University of Minnesota (24 Sept 2014)
8. Dept Biology, Carleton University (7 March 2014)
9. Dept Biology, Sir Wilfrid Laurier University (17 January 2014)

10. Dept Biology, Trent University (18 October 2013)
11. *ABS Presidential Symposium: 50 years since Hamilton*, invited speaker, 50<sup>th</sup> annual meeting of the Animal Behaviour Society, Boulder Colorado, USA. 28 July – 1 Aug 2013
12. Dept Psychology, Hunter College, CUNY (March 7 2012)
13. Dept Biology, Rutgers University (March 6 2012)
14. Boston University, Department of Biology Seminar Series. (March 28 2011).
15. University of Massachusetts Amherst, Seminar series in Organismic & Evolutionary Biology (3 Dec 2010).
16. Department of Neurobiology & Behavior, Cornell University (7 October 2010)
17. Biology Senior Project Symposium, Allegheny College, Meadville, OH. 28 April 2010.
18. Darwin Series, Department of Animal Behaviour Research Group. University of Chicago, Chicago, IL. 4 October 2009.
19. Dept Biology. Queen's College of City University of New York, Flushing, NY .11 Nov 2009.
20. Dept Ecology & Evolutionary Biology, Princeton University. 26 February 2009
21. **Symposium talk invitation** (declined due to scheduling conflict). Symposium on the **Evolution of Sex & Recombination: In Theory & In Practice**, Iowa City, June 16-19, 2008.
22. **Symposium talk invitation** (declined due to scheduling conflict). Topic: *Pathways to Novelty & Diversity: The causes & consequences of polyphenism*. Animal Behaviour Society Meeting August 2008.
23. Dept Ecology & Evolutionary Biology, UCLA, 12 November 2008.
24. Dept Biology, University of Western Ontario, 14 March 2008.
25. Dept Entomology, UC Riverside, 13 November 2008.
26. Dept Entomology Seminar Series, Rutgers University, 9 March 2007.
27. Dept Ecology & Evolutionary Biology, University of Kansas, Lawrence, Kansas. Nov 2006.
28. Dept Biology Colloquium Series, Akron University. Akron, Ohio, USA. 14 September 2006.
  - a. Dept Biology Seminar Series, Indiana University. Bloomington, Indiana, USA. 31 Jan 2006.
29. **Symposium talk invitation** (declined due to scheduling conflict). Topic: *Biology & Diversity of Arachnids*. Entomological Society of Canada Annual Meeting. Canmore, Alberta. 2-5 November 2006.
30. **Symposium talk** Topic: *Bateman's principles: Is it time for a re-evaluation?* Society for Integrative and Comparative Biology Annual meeting. New Orleans, Louisiana, USA. 6 Jan 2004.
31. Dept Biology Seminar Series, University of Nevada at Reno. Reno, Nevada, USA. 17 Nov 2005.
32. Dept Biology & Marine Biology Seminar Series, Dalhousie University. Halifax, Nova Scotia, Canada. 25 Sept 2003.
33. Dept Biology Seminar Series, Simon Fraser University. Burnaby, British Columbia, Canada. 13 Nov 2003.
34. **Symposium talk**. Topic: *Evolution of sexual and social behaviour*. Society for the Advancement of Chicanos and Native Americans in Science, National Conference. Phoenix, Arizona, USA. 29 Sept 2001.
35. Dept Biology seminar series, Brock University. St. Catherines, Ontario, Canada. 22 Mar 2001.
36. Evolution seminar series. McMaster University. Hamilton, Ontario, Canada. 12 Feb 2001.
37. Dept. Zoology seminar series. University of Guelph. Guelph, Ontario, Canada. 18 Jan 2001.
38. 'Evolunch' seminar series. University of Toronto (St. George Campus). Toronto, Ontario, Canada. 17 Jan 2001.
39. Dept. Biology seminar series. University of Toronto at Mississauga, Mississauga, Ontario, Canada. 6 Oct 2000.
40. 'Entomaniax'(undergraduate entomology club) seminar series. Cornell University. Ithaca, New York, USA. April 1999.
41. Wildlife Biology Club (undergraduate club) meeting. Cornell University. Ithaca, New York, USA. April 1998.
42. Department of Entomology seminar series, New York State Agricultural Experimental Station, Cornell University. Geneva, New York, USA. March 1998.
43. Entomological Study Group of Western Australia. King's Park, Perth, WA, Australia. February 1997.
44. Dept. Biology Seminar Series, University of Western Australia. Perth, WA, Australia. January 1997.
45. Evolution and Ecology Seminar Series. Queens University. October 1996.

#### EQUITY & DIVERSITY PRESENTATIONS & WORKSHOPS (80+):

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*I have delivered or co-delivered presentations, workshops, and provided resources on addressing bias and supporting inclusion to a wide range of audiences, including academic leaders, HR professionals and others within and outside the University (sample of titles: 'Unconscious bias & challenges to fair assessment'; 'Inclusive practices in faculty recruitment'; 'Unconscious bias in the classroom: Cautions for conscientious educators'; 'Bias and inclusion'; 'Understanding and Mitigating Bias in Performance Reviews'; Recognizing and Interrupting Bias in Academia). Each talk and workshop is tailored to the group to which I am speaking (inclusion of data, examples and best practice relevant to the audience, drafting and co-editing of scenarios to engage discussion of participants).*

External to the University of Toronto (all solo delivery)

2024

1. National Research Council address to research scientists: the Canadian Black Scientists Network, February
2. Hatch Ltd. Engineering firm, Black history month event. Unconscious bias & challenges to fair assessment. February
3. Agriculture & Agrifood Canada, Black history month panel: disaggregated data & new employment equity groups

2023

1. Department of Justice Canada 1 talk and 9 workshops. I provided 1 general introductory talk and then individual , workshops customized for managers, and to employees in 8 different divisions of the ministry. October 2023.
2. Durham Region Leaders Retreat, Part of a Rotman leadership program. November 2023
3. CPA Ontario annual conference keynote. September 2023.
4. Ontario Medical Association. February 2023.

2022

5. 3M Canada, February 2023
6. Agriculture and Agri-food Canada, Women in STEM forum, 2022
7. PHACTually speaking- Public Health Agency of Canada national seminar series, 2022
8. Alstom Women of Excellence, 2022
9. Qualico Canada, 2022
10. AGM investments, 2 talks (mandatory for all employees), 2022
11. Halton Municipal Region (mandatory for all employees), 2022
12. Teamsters National congress, 2022 (Keynote)
13. Talk. University of Saskatchewan, Department of Anatomy, Physiology, and Pharmacology. College of Medicine, University of Saskatchewan. February 2022
14. Association of Professional Engineers & Geoscientists of Alberta (APEGA) Annual meeting, June 2022 (Keynote)
15. Institute of Municipal Assessors, Fall Virtual Symposium. 2021.
16. Danone Lunch and Learn talk series. Unconscious Gender bias. November 2021
17. Magna/Cosma International, HR Division heads. Interrupting bias in performance reviews. November 2021
18. Torys LLP, Professional development series. Bias in Performance Reviews. October 2021
19. Manitoba Association of Professional accountants. August 2021
20. Talk & workshop\*: Waypoint Centre for Mental health care. January 2021
21. University of Ottawa Faculty of Medicine Symposium. Racism, Bias & Challenges to Inclusion. April 2021
22. Talk & Panel. UBC Vancouver. Where are all the Black people: Under-representation in the Academy. April 2021
23. Talk & Panel. UBC Okanagan. Science & systemic racism series. Perspectives of Black scientists. March 2021
24. Talk & Workshop. Humber College (progressive series of engagements). Feb 2020, Oct 2020, Feb 2021.
25. London & Middlesex Local Immigration Partnership (LMLIP). March 12, 2020. Talk. Ontario Ecology, Ethology & Evolution Colloquium, 2019
26. Centennial College, Illuminate: Women's empowerment network. June 2019
27. Durham College professional development day for faculty & staff, 2018
28. Talk & Workshop. University of Northern British Columbia, faculty, students, and administrators from across campus. November 2017
29. Talk and Discussion. Cornell University. staff, faculty, graduate students in Departments of Ecology & Evolutionary Biology, Neurobiology & Behaviour, and Materials Science, April 2017

30. Talk & Discussion. Duke University. Graduate Student's Women in Science group. April 2016
31. Keynote address. COWALY Gender workshop, University of Toronto. Keynote speaker: *Gender Bias in Science: Manifestations, Effects & Countermeasures*, July 2015
32. Main panelist: Panel on the status of Women in Science & Technology. Canadian Science Policy Centre. April 2013. <http://sciencepolicy.ca/women-in-science-technology-panel>.
33. Invited workshop: Ursula Franklin High School, Black history month symposium. *Unconscious bias and how to fix it(?)*. 2010.

Internal: University of Toronto (co-delivered presentations are starred\*)

1. Talk & Workshop, Department of Chemistry (September 2023)
2. Talk & Workshop, Department of Radiation Oncology (August 2023\*, October 2023\*)
3. Talk & Workshop, Division of University Advancement (June 2023)
4. Talks & Workshop, Faculty of Dentistry\* (June 2023)
5. Talk Wellness seminar series: Department of Cell & Systems Biology (Part 1, Dec. 2022; Part 2, March 2023)
6. Inclusive Recruitment. Talk & Workshop- UTSC & UTM search committees and Decanal Assessors. June 2022
7. Inclusive Recruitment. Talk & Workshop-Mechanical & Industrial Engineering. Aug 2022\*
8. Talk and Workshop: Unconscious bias and challenges to fair assessment: Vice Provost's fall training session for Assessors on search committees and Academic Administrators leading searches (2016, 2017\*, 2020\*, 2022\*, 2023\*)
9. Talk and Workshop: "Unconscious bias & challenges to fair assessment", "Bias, Inclusion & Culture Change: a call to leadership": Vice Provost's workshop for new Academic Administrators (2017, 2018\*, 2019\*, 2020\*, 2021\*, 2022\*, 2023\*)
10. Presentations to search committees for new Chairs and Vice Deans at the University of Toronto Scarborough (8 presentations in 2017 & 2018)
11. Talk & Workshop\*. Department of Historical Studies, UTM. (Dec 8, 2021)
12. Talk. Faculty of Music, UTSG, EDI Director search committee (Dec 6, 2021)
13. Talk & Workshop\*. Department of Computer Science, UTSG (Nov. 18, 2021)
14. Talk\*. University Health Network (Sept 9, 2021)
15. Talk\* Department of English, UTSC. (Sept 1, 2021)
16. Talks & workshops\*: University of Toronto Libraries, sessions for a. Senior leaders, b. Librarians/ staff (April 2021)
17. Talks & workshops\*: Department of Sociology (separate sessions for faculty and graduate students) May 2021
18. Talks & workshops: 'the500', professional development course for graduate students & post-docs centred on teaching development: Feb 4 and 13, 2020, October 21 2020, Feb 23 2021
19. Talks & Workshops\*: Instructional & Information Technology, UTSC; August 2020 (part 1); March 2021 (part 2)
20. Talk\*: Forensic Psychiatry: August 2020
21. Talk & workshop\*: Dalla Lana School of Public Health. February 2021 (2 sessions)
22. Talk & facilitated discussion. Department of biological sciences August 2020.
23. Talk & facilitated discussion. Psychology (UTSC) September 2020
24. Talk: Feb. 2020. Grand rounds, Odette Cancer Research Centre (Sunnybrook). Feb 2020
25. Talk & Workshop: Departments of Laboratory Medicine & Pathobiology and Medical Biophysics, University of Toronto, July 2019 (faculty)\*, May 2020 (trainees)\*
26. Talk: Institute for the History and Philosophy of Science & Technology. Dec 2019.
27. Talk: Department of Economics, Fall 2018
28. Talk & Workshop: Department of Anthropology, Fall 2018 (St. George)
29. Talk : Department of Psychology Search committee members, Fall 2018
30. Talk: Health & Safety and Athletics & Recreation Retreat (UTSC, May 2018)
31. Talk: Campus Safety & Security Retreat (UTSC, April 2017)
32. Talk: Department of Anthropology/Health search committee, February 2017
33. Talk: Faculty of Kinesiology & Physical Education (University of Toronto St. George), December 2016

34. Presentation to a general audience (faculty, staff and students, UTSC October 2016). This talk was recorded at the request of the Provost, and posted to the [Dean's website](#) and [Office of the Vice Provost website on Diversity](#) along with resources for units seeking training in unconscious bias.
35. Presentation to the meeting of the Principals, Deans, Associate Deans and Chairs (from across University of Toronto), invited by the office of the Provost to speak to this group, September 2016
36. Presentation: University Professor's nomination committee (invitation from the Provost), April 2016
37. Discussion Facilitator, University of Toronto, *Provostial workshop on Unconscious Bias (WISELI)*, August 2016
38. Presentation to senior academic leadership search committee (Chaired by the Provost), 2016

## 12. TEACHING & RESEARCH SUPERVISION

### 12A. UNDERGRADUATE COURSES TAUGHT [2 REVISED COURSES, 4 NEW COURSES]

In my department, the undergraduate teaching assignment is 1.0 FCE per year. To date, I have taught five different courses at UTSC, spanning first to fourth year, and this includes courses that are core to our programs as well as electives. Two of the courses were already part of the curriculum (pre-existing courses). I developed three new courses which were approved by the departmental curriculum committee and then governance, and which are still being taught. This past year, I developed a fourth new course which I taught for the first time in Winter 2023. I developed the syllabus, all lectures and all assignments for all of these courses (even those already pre-existing), which evolved to incorporate up to date materials and student feedback over the years. I also developed two new graduate courses. At UTSC, course levels are indicated by letters (A = 1<sup>st</sup> year through D = 4<sup>th</sup> year). In 2017, my teaching load was reduced to 0.5 FCE as I began a leadership role (Vice Dean). In 2019 through the end of 2020, I ceased teaching to manage the increasing demands of the Vice Decanal and then Acting Dean roles. I invest considerable time in my teaching, keep up to date with new pedagogical techniques, and renew my material regularly. In 2023 my teaching through the Toronto Initiative for Diversity and Excellence was recognized as 0.5 F.C.E. so my undergraduate teaching was reduced. My course evaluation scores are consistently above departmental averages.

#### **1. BIOB51. Evolutionary Biology. (Revised, Pre-existing course). Second-year core-course, required for most Biology programs (~400 to 600 students per year). Years taught: 2000-2002; 2004-2007; 2008-2014; 2015 - 2018**

This course is an introduction to the main principles of evolution; the study of the diversity, relationships, and change over time in organisms at all scales of organization (from individuals to populations to higher taxonomic groups). Term work has included: (1) A poster project. Student groups create posters to answer questions or outline current debates in evolution. Students use primary literature sources. The project is developed in several steps over the year then presented online or orally at a poster-session accessible to all members of the campus community or (2) An 'exam question' assignment. Students must write a (10-15 mark) short-answer question and answer key, (3) online quizzes and worksheets based on assigned documentary videos, video-shorts, and (4) low-stakes problem sets.

Average student evaluation, Fall 2018

**4.6/5** "The instructor created an environment that was conducive to my learning"

**4.3/5** "The course provided me with a deeper understanding of the subject matter"

#### **2. BIOA01. Life on Earth: Unifying Principles. (Revised Pre-existing course). First-year core-course, required for all Biology programs and several programs from outside our Department (~1100 students per year). Years: 2014, 2015, 2016**

This lecture and laboratory course provides an overview of the origins and cellular basis of life, genetics and molecular biology, evolution and the diversity of microorganisms. I provided 12 lectures, a multiple-choice exam, and online learning tools and assignments in a 1-month module on Evolutionary Biology. In my first year teaching this course, I stepped in and designed all materials from scratch after the usual instructor fell ill 2 weeks before the start of classes.

Average student evaluation, Fall 2015

4.5/5 “The instructor created an environment that was conducive to my learning”

3.9-4.3/5 “The course provided me with a deeper understanding of the subject matter”

**3. \*BIOC54. Animal Behaviour. New third-year elective course (~ 150 students per year).**

**Years taught: 2002, 2004-2007, 2009, 2011**

This survey of the study of animal behaviour emphasizes understanding behavioural patterns in the context of evolutionary theory. Topics include sexual selection and conflict, parental care, social behaviour, and hypothesis testing in behavioural research. Term work includes: (1) In-class writing assignments, (2) Bi-weekly written discussions of primary literature papers, (3) Hypothesis-generation assignment and/or (4) Research paper developed in several steps over the semester (including data collection and peer review of first draft).

Average student evaluation, Spring 2011:

5.93 /7 (question: “Overall, performs well as a university professor”).

**4. \*BIOD53. Special topics in Animal Behaviour. New fourth year elective course (~10 - 15 students/year).**

**Years taught: 2008, 2010, 2012, 2015**

An exploration into current topics in the study of the evolutionary and ecological influences on animal behaviour. Emphasis is on current research and the quantitative and qualitative reasoning needed to understand and predict animal behaviour. Term work has included a research proposal, annotated bibliography, oral presentation, peer review, public service announcement on the importance of behaviour in conservation, in-class discussions with problem solving exercises. In 2015 I added a 3-class laboratory exercise for which students collaborate to devise predictions, complete an observational lab exercise on mating behaviour of live spiders, then write up their results in a truncated research paper. All exam questions require written answers and the final exam is an open-book/open internet essay exam. Lectures are tailored to topics of student interest and based heavily on the primary literature.

Average student evaluation, Spring 2015:

5/5 “The instructor created an environment that was conducive to my learning”

4.9/5 “The course provided me with a deeper understanding of the subject matter”

**5. \*BIOD55. Experimental Animal Behaviour. New fourth year elective lab course, ~10 - 15 students/year.**

A hands-on course emphasizing the logic, creative thinking, and careful methodology required to conduct rigorous research on animal behaviour from an evolutionary perspective. Students devise and run behavioural experiments, primarily using invertebrate models. I created this course to bolster 4<sup>th</sup> year offerings in hands-on organismal biology and to support development of practical skills in experimental animal behaviour. This course was approved after I started my term as a Vice dean. To date, this course has been taught three times by personnel from my research group (senior PhD student, Post-doctoral fellows) under my mentorship.

**6. \*BIOC70H An Introduction to Bias in the Sciences. New third year elective course.** The design of this course was informed by the graduate course I co-developed with Prof. N Mideo (see below). **Winter 2023 semester: 75 students; Winter 2024: 90 students.**

Description: Research and practice in the sciences often rests on the unquestioned assertion of impartial analyses of facts. This course will take a data-informed approach to understanding how human biases can, and have, affected progress in the sciences in general, and in biology in particular. Case studies may include reviews of how science has been used to justify or sustain racism, colonialism, slavery, and the exploitation of marginalized groups. Links will be drawn to contemporary societal challenges and practices. Topics will include how biases can shape science in terms of those doing the research, the questions under study, and the types of knowledge that inform practice and teaching. Data on bias and societal costs of bias will be reviewed, as well as evidence-informed practices, structures, and individual actions that could ensure that science disrupts, rather than enables, social inequities.

Average student evaluation, Spring 2023

4.7/5 “The instructor created an environment that was conducive to my learning”

4.4/5 “The course provided me with a deeper understanding of the subject matter”

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## 12.B. GRADUATE COURSES TAUGHT [2 PRE-EXISTING COURSES, 2 NEW COURSES]

- 1. ZOO1002. Independent reading course.** I provide an initial reading list in some area of interest determined in conferences with the student. We develop a thesis together, I then guide reading and interpretation in weekly to biweekly meetings. Students give two oral presentations and produce a review paper (including several marked drafts) by the end of the course. **Students:** LSE Snow & G Laird (2001-2002); MD Biaggio (2004-2005); JA Stoltz & MM Kasumovic (2005-2006).
- 2. Contributions to: EEB1100. Faculty Research Course.** Core course in Ecology & Evolutionary Biology graduate program. My contribution involved one lecture and one discussion section based on assigned papers, and marking student commentaries on these papers. 2009, 2010, 2011.
- 3. \*EEB 1470. Special Topics: Integrative Biology of Behaviour. New Course.** I proposed and co-designed this course together with Prof. A. Mason. The course introduces graduate students to ways in which understanding behaviour at different levels of analysis could enrich their research. Each of four instructors discusses their work in a different sub-field of animal biology (e.g., genetics/genomics, phylogenetics, neurobiology, evolutionary ecology), and students are challenged to reinterpret their thesis questions from these different perspectives. I designed all of the evaluations for this course, including a 'talk self-reflection option' and 'real-time peer review', and shared rubrics with other instructors. I co-taught this class six times (it was offered every other year starting in 2004), and was the lead instructor and coordinator for four of those years. This included creating a homepage for the course, creating rubrics for all assignments, arranging for video recording of student talks to facilitate talk delivery self-reflection, coordinating feedback and assigning assignment marks as well as final grades.
- 4. \*EEB1456: Bias in STEM: History, Data and Progress. New Course.** I proposed, co-developed and co-taught this course in collaboration with Prof. Nicole Mideo, (modelled after a similar course offered at Cornell University by Prof. Corrie Moreau), this graduate module (7 weeks) was offered for the first time in summer 2021. Evaluations included seminars by students, and a collaborative knowledge translation project to provide education to peers and faculty on bias in STEM. The graduate unit is considering making this course a mandatory part of the graduate student curriculum.

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## 12.C. RESEARCH SUPERVISION

**Summary.** I have recruited 14 outstanding graduate students since appointment to the School of Graduate studies in 2001, 8 of whom have held major scholarships (7 NSERC, 1 OGS, 1 Trillium) including three who have held highly-competitive advanced fellowships (NSERC Alexander Graham Bell/ CGS fellowships). I have graduated five MSc students (two of these co-supervised) and five PhD students, and am currently supervising or co-supervising 2 PhD students and one MSc student. Two of my students have won prizes for their talks at national and regional conferences, two have won major University of Toronto research awards, and three have secured major post-doctoral fellowships. My first PhD student (Kasumovic) is now an award-winning researcher and lecturer at University of New South Wales. A recent PhD graduate (Mowery) held a competitive Zuckerman leadership post-doctoral fellowship and is now faculty at CUNY – York College. Several other former students are employed in careers that utilize the data analysis skills acquired through training in my lab, this includes careers at Health Canada (data analyst), the Royal Bank (HR data analyst), and a biomedical research (Michener Institute research associate).

I have supervised 4 post-doctoral fellows and one research associate. One of these (Johnson) held a highly-competitive NSF International Post-doctoral Research fellowship in my lab, and is now a Professor at Arizona State University West.

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 MSC STUDENTS (1 IN PROGRESS, 5 COMPLETED)

## ONGOING

(1) Mahmood, Susheen (BSc, U of T). Effect of mate value & individual status on mating behaviour & sexual selection in a false widow spider

## COMPLETED:

- (1) McPhee, Megan (BSc UBC). Co-supervised with AC Mason (UTSC). Alternative mating tactics and quality in jumping spiders.
  - September 2013 to July 2015 (graduated)
  - NSERC **Canada Graduate Scholarship** (CGSM) holder
- (2) Modanu, Marija (BSc Alberta). Adaptive sex ratio modification and sexual selection in cannibalistic spiders
  - July 2007 to 2009 (graduated)
  - NSERC **Canada Graduate Scholarship** (CGSM) holder
    - **Accomplishment:** Winner of competitive University of Toronto entrance fellowship, published 3 papers from her work in my lab (2 as first author). Completed a PhD at Cornell University and is now a post-doctoral fellow at Columbia
- (3) Biaggio, Maria D (BSc Bryn Mawr). *Effect of experience on mating strategies of male and female redback spiders (Latrodectus hasselti Thorell)*
  - Sept 2004 – Dec 2006 (graduated)
  - International student, supported by my Premier's Research Excellence Award
  - **Accomplishments:**
    - i. 2<sup>nd</sup> place (conference-wide) for outstanding talk at the 26th Annual Midwest Ecology & Evolution Conference, 2006
    - ii. Popular science article in *Science News* (26 Aug, 2006) based on her talk at the 43<sup>rd</sup> Annual Meeting of the Animal Behaviour Society (Snowbird, Utah).
    - iii. One paper published and one in preparation from her thesis
  - **Current position:** Conservation Manager, City council, Wellington, New Zealand.
- (4) Snow, Lindsay SE (BSc Guelph). *Post-copulatory sexual selection in the Australian redback spider (Latrodectus hasselti Thorell)*.
  - Sept 2001 – November 2003 (graduated)
  - NSERC Graduate scholarship holder
  - **Accomplishment:** Three publications from her thesis, two of which were cover photo features.
- (5) Glenn-Worrall, Gillian. (BSc Queens). *Repeat and multiple mating in an Australian scaly cricket, Ornebius aperta (Orthoptera: Mogoplistidae)*. Co-supervised.
  - Sept 2001 – December 2003 (graduated)
  - NSERC Graduate scholarship holder
  - **Accomplishments:** Publication in *Biology Letters*

## PHD STUDENTS (3 IN PROGRESS, 8 COMPLETED)

## CURRENT (4)

- (1) Laini Taylor (BSc, UofT). EEB Graduate entrance fellowship winner. Topic: *Linking mating system plasticity and invasive potential using spider models.*
  - Sept 2020 to present
- (2) Charmaine Condy (MSc, Toronto). Co-supervised with N Lovejoy (UTSC). *Molecular phylogenetics and genetic evolution of widow spiders (Genus Latrodectus)*
  - Sept 2012 –present (currently on leave)
- (3) Sheena Fry (MSc, Memorial). Causes and consequences of phenotypic variation in males.
  - Sept 2011 – present (currently on leave)

**COMPLETED (7)**

- (1) Nishant Singh (BSc, U Pittsburg). Trillium graduate award holder (University of Toronto). Topic: *Understanding the early stages of social behaviour using black widow spiders.* Currently a post-doctoral fellow at the Hospital for SickChildren.
  - Sept 2015 - 2023
- (2) Catherine Scott (BSc, SFU), NSERC Canada Graduate Scholarship holder (CGSD). Topic: *Mate searching and choosiness are shaped by spatial structure & social information in western black widows*
  - Sept 2015 – December 2019
  - **Accomplishments:** Published 2 first-authored papers and 1 review from thesis, with 2 others in preparation, currently a post-doctoral fellow in my lab, pending the start of an NSERC post-doctoral fellowship at McGill
- (3) Monica Mowery (BSc, Tufts). Co-supervised with AC Mason (UTSC). *Invasion in the Light of Evolution: An Integrative Approach Using Two Widespread Widow Spider Species*
  - Sept 2014 - November 2019
    - **Accomplishments:** 2 papers submitted and 1 in revision from thesis, winner of a Zuckerman Post-doctoral fellowship and extension, currently at Ben Gurion University of the Negev.
    - **Currently** an Assistant Professor at CUNY York College.
- (4) Leonardo Castilho. Universidad de Brasilia. Co-supervised with R Macedo. Honest signaling and female choice in a multimodal jumping spider. Sept 2014 to 2017.
- (5) Luciana Baruffaldi (BSc, MSc, Montevideo). *Function and evolution of chemical signals in widow spiders.*
  - May 2011 – October 2015
  - **Accomplishments:** Published 2 first authored papers and has 2 others in preparation from thesis work, numerous conference talks, 4 conference travel grants and a student research grant from the Animal behaviour society.
  - Currently a research associate in my lab and Lab Director
- (6) Emily MacLeod (BSc Guelph). *New insights in the evolutionary maintenance of male mate choice behaviour using the western black widow, Latrodectus hesperus*
  - Sept 2007 to Jan 2013
  - **Accomplishment:** Winner of competitive University of Toronto entrance fellowship and NSERC **Canada Graduate Scholarship** holder
  - Currently a research associate at the Michner Institute (University Health Network)
- (7) Kasumovic, Michael M. (MSc Queens). *Effects of developmental plasticity and antagonistic selection on phenotypic variation in spiders.*
  - Sept 2002 to October 2007.
  - NSERC Graduate scholarship holder
  - **Accomplishments:**

- i. 9 publications arising directly from work associated with his thesis, including papers in *Current Biology*, *Evolution*, and *Ecology*.
  - ii. Numerous popular science articles
  - iii. Winner, President's award for best talk in session, Annual meeting of the Entomological Society of Canada. 2-5 November 2005.
  - iv. Winner, Principal's Graduate Student Award, UTSC
  - v. Winner, Ramsay Wright Award, Department of Zoology (tri-campus award for most accomplished PhD student)
  - vi. NSERC post-doctoral fellowship holder
  - vii. Australian Research Council post-doctoral fellowship and research funding award holder
  - **Winner, American Society of Naturalists Young Investigator Prize, 2011**
  - **Current Position.** Senior Lecturer, University of New South Wales
- (8) Stoltz, Jeffrey A. (MSc Western Ontario). *Mechanisms, maintenance and function of female reproductive strategies in spiders*.
- Sept 2005 to 2010
  - NSERC Graduate scholarship holder
  - **Accomplishment:**
    - i. 9 publications arising directly from work associated with his thesis, including papers in *Proceedings of the Royal Society, B, Functional Ecology and Biology Letters*, with several others in preparation.
    - ii. Winner of Cas Linsday award for best EEB talk at CSZ 2009 conference
    - iii. Winner of NSERC post-doctoral fellowship
    - iv. 2x winner of Graduate Student research award, UTSC (cross-campus award)
  - **Current Position.** After completing his NSERC Post-doctoral fellowship at the University of Exeter at Cornwall (lab of Dr. Tom Tregenza), Jeff took up a position in 'big data' analysis in banking.

#### RESEARCH ASSOCIATE (1 ONGOING)

1. **Luciana Baruffaldi** (PhD UToronto, MSc Uruguay). Topics: Adaptive developmental plasticity and sexual selection; Diversification of pheromone function. Luciana is also my Lab Director, in which capacity I have trained her to oversee general lab operations and support supervision of graduate student research. Post-doc: 2016-2019; Research Associate: 2020-2021; Research Associate (independent funding): 2021 – 2024.

#### POST-DOCTORAL FELLOWS (6 COMPLETE)

1. **Lenka Sentenská** (PhD Masaryk, Czech Republic). Marie Sladowska Curie Global Post-doctoral Fellow. Primary (EU host) advisor: G. Uhl (Griefswald), I act as visiting host advisor (2020 – 2022). Topic: Immature mating as a novel tactic of an invasive widow spider.
2. **Catherine Scott** (PhD UToronto). Short-term post-doc pending start of NSERC fellowship in September 2021.
3. **Felix Beaudry** (PhD UToronto). May – July 2020. *Genomics of population differentiation in *L. hesperus**. Short term, part-time post-doctoral position bridged the gap between his PhD and full-time post-doc appointment. His expertise in bioinformatics and population genetics was leveraged to support training of PhD candidate Nishant Singh and development of collaborative work aligning with this expertise. Currently a post-doctoral fellow at the University of Rochester.
4. **Malcolm Rosenthal**. (BSc Oberlin, PhD Nebraska). Topics: *Context-dependent signaling and mating success in spiders, Taxonomic biases in the literature*. Sept 2015 – Dec 2016. I funded a one-year fellowship, but was unable to extend it due to financial constraints. Currently a post-doctoral fellow at University of California Berkeley

- 5. Brandt, JM.** (i) *Allometry, sexual dimorphism and locomotor performance in spiders*, and (ii) *Physiological ecology of aggressive signaling*. Sept 2004 – October 2006. Supported by my Premier's Research Excellence Award. Dr. Brandt took up several teaching positions after leaving my lab.
- 6. Johnson, J Chadwick.** *Behavioural syndromes in cannibalistic black widow spiders*. Sept 2003 – July 2005. NSF international Post-doctoral Research Fellow in my lab. Currently an Associate Professor, Arizona State University West.

#### RECENT SUPERVISORY & EXAMINING COMMITTEE MEMBERSHIP

##### Supervisory Committees. 2017-present, [career = 25]

1. Shegufta Rahman (MSc, Mason [UTSC])
2. Zaheer
3. Breanna Jordan (MSc, Columbia University, NYC)
4. Samara de Andrade (PhD, Miller, Architecture, Landscape & Design)
5. Terrence Chang (PhD, Mason [UTSC])
6. Erich Eberts (PhD, Welch).
7. AJ Masson (MSc, Mason [UTSC]). Graduated.
8. Paul Bzonek (PhD, Mandrak). Graduated.
9. Senthurran Sivalingham (PhD, Mason [UTSC]). Graduated.
10. Allan Edelsparre (PhD, Sokolowski/Fitzpatrick [UTSC]). Graduated.
11. Sankirthana Sathiyakumar (PhD, Richards). Graduated.
12. Courtney Leermakers (MSc, Mandrak). Graduated.

##### Examining Committees (Appraisals & Final thesis exams), 2017-present

*Examining committee member: 10 exams [career: 25]*

*MSc exam chair: 4 [career: 12]*

*PhD exam chair: 4 [career: 11]*

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## 12. D. OTHER TEACHING

### UNDERGRADUATE RESEARCH SUPERVISION

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**Summary.** I have supervised >75 full-year independent undergraduate research projects (equivalent to an Honour's thesis in my Department), 7 NSERC Undergraduate Student Research Award holders, and 68 additional research-course students at UTSC. Research contributions of eleven undergraduates have warranted authorship on refereed publications (Baskaran, Prasad, Rathitharan, Li, Said, Perampaladas, Sivalingham, Mahmoudi, Stoltz, Abdel-Mesih, Gu, Dorison), and several undergraduates have attended local (Stoltz [while an undergraduate], Perampaladas, Mahmoudi, Kottapalli, Stemberger, Rathitharan, Nithianandan, Pakirathan, Safar), national (Perampaladas, Mahmoudi, Stemberger) or international (Gu, Dorison, Rathitharan) conferences to present their work (see Research contributions and Conference contributions sections).

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### SUPERVISION OF LAB & RESEARCH ASSISTANTS

**Summary.** I have supervised over 200 undergraduate laboratory assistants since 2000. Each year, 8 - 15 undergraduates (work-study and volunteer) work in my, and I employ one part-time undergraduate research assistant. Assistants rear laboratory populations of spiders and their insect prey. Students are given the option of attending weekly discussion group meetings, and those with the ability and talent also contribute to research projects after training in animal husbandry and data collection. Since 2015, the Andrade lab group has also included high school coop students (1 or 2 each term during the school year). [The current lab complement is available on the lab website.](#)

## E. ADMINISTRATIVE SERVICE

### 13. A. WITHIN THE UNIVERSITY OF TORONTO: LEADERSHIP ROLES

#### SUMMARY: SPECIAL ADVISOR TO THE DEAN, INCLUSIVE RECRUITMENT & EQUITY EDUCATION (JANUARY 2021- APRIL 2021)

1 January 2021 – 31 March 2021. Responsible for oversight and implementation of the process for recommendations on the allocation of faculty positions for 2021/2022 cycle (including new, replacement, and diversity positions). This involved refining and implementing the second year of the Faculty Complement Committee (FCC) process (see below) and adding a second process for considering retirement replacements and Dean's discretion positions (EDI-focus). I was responsible for oversight of ongoing faculty recruitment during this time, and supported onboarding and transitional tasks with the incoming interim Vice Dean Faculty Affairs, Equity & Success.

#### SUMMARY: ACTING VICE PRINCIPAL ACADEMIC & DEAN (SEPT 1, 2019 - DEC 31, 2019)

I oversaw all aspects of the UTSC academic portfolio while the Dean was on a 6 month leave. This included the work of 19 academic units across scholarly fields in Humanities, Social Sciences, Sciences and Management. I took on this role while simultaneously continuing to oversee the portfolio of Vice Dean Faculty Affairs, Equity & Success (below).

In addition to the broad work of this office, my accomplishments during this 6-month term included:

- **Decanal Self-study.** To support a provostial external review of the Dean's portfolio, I oversaw the completion of a comprehensive self study and produced a document shared across the university.
- **Decanal portfolio restructuring.** To increase capacity in step with the increased size and complexity of UTSC, I consulted on, co- developed, and supported provostial approvals for a new Decanal structure, which increased the number of Vice Deans in the portfolio, and rationalized reporting relationships, including new dual reports to increase connections between executive portfolios.
- **UTSC Strategic Plan.** In a process led by the Vice President and Principal, I engaged in the final stages of writing, refining, and submitting to governance the new Strategic Plan for UTSC.
- **Searches for 6 academic leaders (1 Director, 2 Chairs, 3 Vice Deans).** I launched these searches during my acting term, two of which were successfully completed under my leadership.

#### SUMMARY: VICE DEAN FACULTY AFFAIRS, EQUITY & SUCCESS (JAN 1, 2017 TO DEC 31, 2020)

I was the inaugural holder of this new role, which included broad oversight of all 'academic HR' from faculty recruitment to retirement across the 16 academic units on campus across scholarly fields in Humanities, Social Sciences, Sciences and Management. I was also tasked with creating and implementing a new, transparent process for allocating faculty positions, and creating a program of hiring to increase the representation of Indigenous people among UTSC faculty.

#### Areas of oversight included:

**Faculty recruitment.** Development of yearly recruitment & replacement plan for the campus (16 academic units), approving short lists, reviewing requests to hire, approving and consulting on LOO's, overseeing appointment of Decanal assessors and training assessors, ensuring compliance with policy and procedures.

**Tenure, Continuing status & Promotion Dossiers (Sessional lecturers, teaching stream and tenure-stream faculty).** High-level review for completeness, close review of statement of evidence, statement of reasons, external letters to support counsel for Chairs.

**Truth & Reconciliation Commission of Canada (TRC) response commitments and Indigenous faculty recruitment.** Worked with the Dean, Indigenous Advisors, and the Associate Director of Indigenous Initiatives to create and launch a program for Indigenous faculty recruitment and cultural competency education at UTSC. Coordinated 7 related faculty searches over three years, and Chaired the search committee for one of these. Four of these searches were successful.

**Dean's assessors (Search Committees, Tenure & Continuing status) Training.** I created a modular training resource online that provided information on policy and practice to Decanal Assessors on search committees and career review committees.

**Academic Unit change:** I oversaw and led changes in faculty appointments associated with the creation of a new academic unit (EDU-B), then guided the applications for, and approvals through governance of two new academic Departments at UTSC (Centre for French and Linguistics became the Department of Language Studies; Interdisciplinary Centre for Health & Society became the Department of Health & Society).

#### **Policy/Procedure achievements include:**

I led revision of the *UTSC Guidelines for the Assessment of Effective Teaching* to ensure consistency with new University policies on promotion to Professor, Teaching Stream. The goal was a global update of the document to better serve faculty in practice, while ensuring continued alignment with policy. This was a widely consultative process with iterative feedback from faculty and the Office of the Vice Provost Faculty & Academic Life (VPFAL), which commenced in Fall 2017. The revised guidelines were approved through Governance in February 2018.

**Faculty Complement Committee new recruitment allocation Process (launched in 2019).** I designed, developed, and launched a new, transparent process for adjudicating requests for new faculty positions that engaged all academic unit Chairs across the campus. This process centered principles of Inclusive excellence in all proposals, and included a process for proposing Inclusive Excellence hires. This was a substantive change from the previous process. This new process enabled (and required) engagement with campus-wide strategic priorities as well as unit-specific needs and aspirations. Developing and launching this process required extensive consultation across the 16 units at UTSC as well as stakeholders on the executive team at UTSC.

#### **Other New Initiatives:**

- **Mentorship Initiatives Fund Grant.**
- **Augmented funding programs for Teaching stream faculty:** Professional/Pedagogical Development Support Fund (PPF) and Pedagogical/Professional Development Grant (PPG)
- **MEAD (Mentoring Excellence & Diversity @ UTSC) Steering group**
- **Chair's Mentorship groups.**

**Equity Matters Seminar Series** (Fall 2017 Launch, the series is an [ongoing](#) campus-wide offering of the Dean's office).

**Indigenous Cultural Acumen and Academic Life Education sessions (2017, 2018)**

**Expanded, comprehensive New Faculty Orientation (Aug 2017-2020).** This multi-day program includes over 40 speakers, online resources, and cohort-building, ensuring new faculty understand context, strategic directions, and supports for their work at UTSC.

**Chairs & Academic Directors Retreat (2017, 2018, 2019).** General onboarding as well as a focus on change management, accessibility, equity and inclusion, proactive recruitment and other themes.

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**OTHER SIGNIFICANT UNIVERSITY SERVICE ROLES: 2010-PRESENT (EARLIER ROLES AVAILABLE ON REQUEST)**

**2020 to present. Member, the Committee on Equity, Diversity and Inclusion in Research and Innovation,** University of Toronto.

**2022/2023. Decanal assessor,** faculty search committees in Management and Sociology.

**2019- 2020. Chair, Campus Farm Steering committee, University of Toronto at Scarborough**

As Chair, I designed a governance structure for the farm, ensuring balance between operational & academic leadership and expertise, drafted terms of reference for each body, and ensured alignment of decision-making processes with the academic mission.

**2014-2016. Vice Chair, Committee on Academic Policies & Programs University of Toronto**

**2010 – 2016. Committee Member, Academic Board, University of Toronto, and subcommittees: Academic Policies & Programs (2010-2016), University Tribunal (2011-2012).**

**2010 – 2016. Committee Member, Editorial Advisory Board & Creation Committee, UTSC Commons Magazine,**

**Service on senior leadership searches has included**

2017. Director, Equity & Diversity, UTSC

2015/2016. Search for the Vice Principal Academic & Dean, UTSC

2013. Search for the President of the University of Toronto

2012. Renewal committee: Vice President & Principal of UTSC

2007. Search for the Vice President & Principal of UTSC

**Service for the Department of Biological Sciences, University of Toronto at Scarborough**

2022 – 2023. Chair, Equity, Diversity & Inclusion Committee, Department of Biological Sciences.

Present: member, Equity, Diversity & Inclusion Committee, Department of Biological Sciences

From 2017 through 2022, I was unable to provide service within the Department due to conflict of interest with my decanal roles, and due to a research and study leave (July 2021- June 2022)

2014-2017, 2023. Member, Departmental Executive committee

2014-2016, 2021-2023. Member, Promotions Committee

2016, 2017, 2018, Member, PTR committee

Other service roles internal to the Department of Biological Sciences since 2010 are not listed in detail here, but include: Faculty search committees (10), Career review committees: interim review, tenure review or continuing status review committees, reading or teaching committees (14); 2011- 2017. Assigned mentor to new faculty (4)

**Service for the Graduate Department of Ecology & Evolutionary Biology**

- 2010 – 2012, Graduate Coordinator; ex officio membership on Graduate Admissions Committee & Graduate Affairs Committee

**OTHER SERVICE: UNDERGRADUATE ADMINISTRATION:**

- **Program Supervisor:** Conservation & biodiversity and Integrative Biology Undergraduate programs. 2015 – 2016.
- **Chair of Task Force** on design of a new program in Ecology & Evolution. Oversaw drafting proposal, approval through governance and was inaugural Program Supervisor (Biodiversity, Ecology & Evolution Major program. 2009 – 2012)
- **Program Supervisor,** Conservation Biology Undergraduate Program. 2009 – 2011.
- **Organization committee and judge,** Department of Zoology Research Colloquium. University of Toronto, 2003
- **Coordination and drafting of growth plan document,** Ecology/Evolution/Organismal Biology group, UTSC, 2002.
- **Web-Master,** Integrative Behaviour & Neuroscience Group, UTSC. 2001 – 2006.
- **Co-founder, Integrative Behaviour & Neuroscience Group,** UTSC. 2001.
- **New Science Building Committee member,** Life Sciences representative, UTSC, 2001-2002.

**13. B. OUTSIDE THE UNIVERSITY OF TORONTO****EXTERNAL REVIEWER (2016 – 2022)****Tenure or Promotion:**

American Museum of Natural History, UC Santa Barbara, University of Auckland, University of Nebraska, Smithsonian Tropical Research Institute, University of California, Berkeley, Macquarie University, University of California, Davis, University of Michigan, Dearborn; Villanova University

**Departmental reviews:**

Chair, External review of the Department of Biological Sciences, Simon Fraser University. April 2022

**F. OTHER RELEVANT INFORMATION****OTHER EVIDENCE OF IMPACT (2010 TO PRESENT)****SCIENCE COMMUNICATION**

As a publicly-funded fundamental researcher, I centre the importance of outreach and communication with the public. My trainees and I engage in regular outreach activities and ensure we regularly connect with science journalists regarding our work, as well as providing commentary or knowledge translation to increase appreciation of science in general. See also content under [‘Creative Professional Activities’](#)

1. Textbook features: ‘Meet the Scientist’, interview/research feature in Herron et al. Introductory Biology, Canadian Edition. Pearson. Various other features on work from my research group in textbooks on Evolution and Animal Behaviour at the senior high school and undergraduate level.

2. Research and career path features in online educational resources such as 'Understanding Evolution' from UC Berkeley (<https://evolution.berkeley.edu/>); and Science superheroes ([https://www.themarkablz.com/maydianne\\_andrade/](https://www.themarkablz.com/maydianne_andrade/)); [Quirks & Quarks](#) and other outlets.
3. PBS NOVA (PBS) ScienceNow, program aimed at engaging young people in science (see <http://www.pbs.org/wgbh/nova/sciencenow/>) featured a profile of my work, and was aired repeatedly between July 2009 and March 2010.
4. The range of ongoing outreach events throughout my career includes talks, tours, education sessions in schools, career panels, Q&A sessions with high school students, a travelling 'bug show', Museum and library talks. ***On average, I commit to 4-6 engagements of this type each year, together with my lab members.***
5. Radio/podcast interviews (science):
  - <https://www.thenakedscientists.com/articles/interviews/black-widow-spiders-dating-and-mating>
  - <https://www.cbc.ca/radio/quirks/dec-12-spotting-steve-superbolts-and-megaflashes-hyperventilating-sober-and-more-1.5835976/maydianne-andrade-on-black-widow-spiders-and-fighting-for-racial-equity-in-science-1.5835987>
  - <https://www.abc.net.au/radionational/programs/what-the-duck/>

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#### RESEARCH DELAYS

1. Maternity leaves: October 2002 through September 2003 & November 2007 through June 2008
2. A serious health issue decreased my productivity in 2011 and 2012, culminating in a leave from 29 January – 8 March 2013 during which I was incapacitated and unable to work.
3. Bereavement leave, 2018.
4. Health leave. 15 October through 30 November 2020
5. A pandemic-related shut-down of my lab from February 2020 through November 2020 led to a major setback in lab populations that are central to research in my group.