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## Publications

### Articles in Journals

- \*Phillips, J., Gillis, D., & Hanner, R. (2019). Incomplete estimates of genetic diversity within species: implications for DNA barcoding. *Ecology & Evolution*, 9 (5), 2996-3010, doi: 10.1002/ece3.4757.
- \*Phillips, J., Hanner, B., & Gillis, D. (in press, 2019). HACSim: Iterative extrapolation of haplotype accumulation curves for assessment of intraspecific COI DNA barcode diversity estimates. *PeerJ Computer Science*.
- Gillis, D., & \*Edwards, B. (in press, 2019). The Utility of Join-Point Regression Models to Identify Population Level Parameters in a Standard Surplus Production Model. .
- Kipp, A., Cunsolo, A., Gillis, D., \*Sawatzky, A., & Harper, S. (2018). The Need for Community-led, Integrated, and Innovative Monitoring Programs when Responding to the Health Impacts of Climate Change. *International Journal of Circumpolar Health*., doi: 10.1080/22423982.2018.1517581.
- \*Stojsin, A., Costa, N., De Moraes, R., De Bem, T., Costa, M., \*Carter, T., Gillis, D., Neal, M., Ohashi, O., Miranda, M., Meirelles, F., Favetta, L., King, W.A. (2017). Fetal sex alters maternal anti-Mullerian hormone during pregnancy in cattle. *Animal Reproduction Science*, 186, 85-92.
- Gillis, D., \*Nelson, J., \*Driscoll, B., Hodgins, K., Fraser, E., Jacobs, S. (2017). Interdisciplinary and Transdisciplinary Research and Education in Canada: A Review and Suggested Framework. *Collected Essays on Learning and Teaching*, 1Q 203-222.
- \*Sawatzky, A., Cunsolo, A., Gillis, D., Shiwak, I., Flowers, C., \*Cook O., Wood M., Rigolet Inuit Community Government, Harper S. (2017). Profiling the eNuk program: An Inuit-led strategy for monitoring and responding to the impacts of environmental change on health and wellbeing in Rigolet, Nunatsiavut. *Northern Public Affairs*.
- Jacobs, S., & Gillis, D. (2016). Innovation through Transdisciplinary Training. *Zygote Quarterly*, 78.
- \*Stojsin-Carter, A., Mahboubi, K., Costa, N., Gillis, D., \*Carter, T., Neal, M., Miranda, M., Ohashi, O., Favetta, L., King, W.A. (2016). Systematic and Local Anti-Mullerian hormone reflects differences in the reproduction potential of Zebu and European type cattle *Animal Reproduction Science*, 167, 51-58.
- \*Russell, S., Patel, M., Gilchrist, G., Stalker, L., Foong, J., Gillis, D., Brudno, M., LaMarre, J. (2016). Bovine piRNA-like RNAs are associated with both mobile elements and mRNAs. *Reproduction*.
- \*Death, L. E., Deardon, R., & Gillis, D. (2015). Model Choice Using the Deviance Information Criterion for Latent Conditional Individual-Level Models of Infectious Disease Spread. *Epidemiological Methods*, 4 (1), 47-68, doi: 10.1515/em-2014-0001.
- Schnarr, K., \*Carter, T., Gillis, D., Weber, C., Lemon, J., Dayes, I., Dolling, J., Gulenchyn, K., Boreham, D. (2015). Biological response of positron emission tomography (PET) scan exposure and adaptive response in humans. *Dose-Response*, 13 (4).
- \*Korzun, M., \*Alexander, C., \*Cluskey-Belanger, L., \*Fudger, D., Needham, L., Vsetula, K., Williamson, D., Gillis, D. (2014). Farm To Fork: Community-engaged scholarship from community partners' perspective. *Gateways (Sydney): international journal of community research & engagement*, 7 (1).
- \*Tscherner, A., \*Smith, N., Blondin, P., Gillis, D., & LaMarre, J. (2014). Variation in microRNA-34 Family Expression in

Bovine Gametes and Preimplantation Embryos. *Reproductive Biology and Endocrinology*, 12.

\*Marty, A. C., Choleris, E., Gillis, D., Armstrong, J., Amor, T., McCluggage, A.R., Turner, P.V., Liang, G., Cai, K., Lu, R. (2012). Luman/CREB3 Recruitment Factor Regulates Glucocorticoid Receptor Activity and Is Essential for Prolactin-Mediated Maternal Instinct. *Molecular and Cellular Biology*, 32 (4), 5140-5150.

Uzaraga, I., Gerbis, B., Holwerda, E., Gillis, D., & Wai, E. (2012). Topical Amitriptyline, Ketamine and Lidocaine in Neuropathic Pain Caused by Radiation Skin Reaction: A Pilot Study. *Supportive Care in Cancer*, 20 (7), 1515-1524.

Lukey, J., Crawford, S., & Gillis, D. (2010). Effect of Information Availability on Species At Risk Decision-Making. *Conservation Biology*, 24 (5), 1398-1406.

Lukey, J., Crawford, S., Gillis, D., & Gillespie, M. (2010). Effect of ecological uncertainty on species at risk decision-making: COSEWIC expert opinion as a case study. *Animal Conservation*, 14, 151-157.

Adamic, P., Dixon, S., & Gillis, D. (2009). Multiple Decrement Modelling in the Presence of Interval Censoring and Masking. *Scandinavian Actuarial Journal*, 2010 (4), 312-327.

Fischer, P., & Gillis, D. (2006). Plane Maps, Singularities and Quasi-fixed Points. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, 16, 179-183.

### Articles in Proceedings

\*Asch, M., \*Seymour, F., Ernst, J., & Gillis, D. (in press, 2019). Incorporation of Node Mobility in Data Replication Schemes in Mobile Ad Hoc Networks. *The 10th IEEE Annual Information Technology, Electronics, and Mobile Communications Conference*

\*Fraser, J., McCuaig, J., & Gillis, D. (2019). IFS: An educational platform for analyzing course outcomes and student experience. *Fifth SPLICE Workshop (ICER) 2019 - Computing Science Education Infrastructure: From Tools to Data*.

\*Pafla, M., Scott, S., Wong, C., Gillis, D., & Pfeil, U. (2019). Jumping on the Bandwagon: Overcoming Social Barriers to Public Display Use. *Graphics Interface 2019*.

\*Al Hadwer, A., Gillis, D., & Rezania, D. (2019). Big Data Analytics for Higher Education in the Cloud Era. *2019 IEEE 4th International Conference on Big Data Analysis, IEEE*.

Gillis, D., & \*Durish, N. (2018). Bridging the Digital Divide to Support Community-Based Monitoring in the Circumpolar North. *ArcticNet 2018*.

\*Rose, D., \*Edwards, B., \*Kett, R., \*Yodzis, M., \*Angevaere, J., Gillis, D. (2017). Exploring Anthropogenic Activities and Management Decisions Using a Novel Environmental Agent Based Model. *IEEE Canada International Humanitarian Technology Conference (IHTC)*.

Jacobs, S., \*Nelson, J., \*Driscoll, B., & Gillis, D. (2015). Hijacking all the courses: a trans-disciplinary learning experience for undergraduate students. *The Western Conference on Science Education*, 1 (1).

Nikitenko, D., & Gillis, D. (2014). Touching the data: exploring data sonification on mobile touchscreen devices. *Procedia Computer Science: The 11th International Conference on Mobile Systems and Pervasive Computing (MobiSPC'14)*.

\*Korzun, M., \*Alexander, C., \*Cluskey-Belanger, L., \*Fudger, D., Needham, L., Vsetula, K., Williamson, D., Gillis, D. (2014). Farm To Fork: How a Third Year Computer Science Class Took On the Issue of Food Insecurity. *Teaching and Learning Innovations Conference Proceedings*.

### Books, Monographs, Compilations, Manuals

Shrestha, A., Adamic, P., Gillis, D., & Caron, S. (2010). *Instructor's Solutions Manual to accompany Introduction to Probability and Statistics (2nd Canadian ed.)* Nelson.

### Conference Presentations

\*Durish, N. & Gillis, D. (2019). *The Rigolet Internet Assessment Initiative: A community-based approach to quantifying the current state of telecommunications networks in Rigolet, Nunatsiavut*. ArcticNet 2019, Halifax, Canada-Nova Scotia.

\*Edwards, B., Jacobs, S., & Gillis, D. (2019). *Risk Assessment of Great Lakes piping plovers using eABM: An R package to run Environment Agent-based Models*. American Ornithology Society 2019 Conference, Anchorage, Alaska.

\*Phillips, J., Hanner, B., & Gillis, D. (2019). *HACSim: Iterative extrapolation of haplotype accumulation curves for assessment of intraspecific COI DNA barcode sampling completeness*. iBOL8, Trondheim, Norway.

\*Sawatzky, A., Cunsolo, A., Jones-Bitton, A., Gillis, D., Wood, M., Flowers C., Shiwak I., The Rigolet Inuit Community Government, Harper S.L. (2019). *The Best Scientists are the People That's out There: Inuit-Led Integrated Surveillance for Place-Based Health Adaptation to Climate Change*. Labrador Research Forum, Happy Valley-Goose Bay, Canada-Newfoundland.

Middleton, J., Cunsolo, A., Jones-Bitton, A., Shiwak, I., Flowers, C., Sawatzky A., Wood M., Gillis D., Harper S. (2019). *Accessing and assessing environmental information: community-identified metrics and modifiers that matter in a changing climate*. Labrador Research Forum, Happy Valley-Goose Bay, Canada-Newfoundland.

\*Durish, N., Gillis, D., \*Seymour, F., \*Rourke, K., \*Asch, M., S. Raturi, B. Hughes, C. Flowers, I. Shiwak, M. Wood, J. Ernst (2019). *Bridging the Digital Divide in the Circumpolar North*. Labrador Research Forum, Happy Valley-Goose Bay, Canada-Newfoundland.

Gillis, D. (2019). *Integrated Panel Discussion*. Invited presentation at Nexus for Innovation: Extended Practices of University Art Collections, Guelph, Canada-Ontario.

Gillis, D., \*Durish, N., \*Rourke, K., \*Asch, M., \*Knarr, J., A. Kipp, A. \*Sawatzky, J. \*Middleton, D. \*Borish, I. \*Bell, A. Cunsolo, I. Shiwak, C. Flowers, M. Wood, S.L. Harper (2019). *Supporting Community-Based Monitoring With Technology In The Circumpolar North*. Labrador Research Forum, Happy Valley-Goose Bay, Canada-Newfoundland.

\*St. Jean, D., Kunze, H., & Gillis, D. (2019). *Computer Science Techniques for Species Classification*. AMMCS, Waterloo, Canada-Ontario.

Jacobs, S. & Gillis, D. (2019). *Toward A Curriculum In Experiential Learning*. Teaching and Learning Innovations Conference, Guelph, Canada-Ontario.

\*Asch, M., \*Rourke, K., \*Seymour, F., \*Durish, N., Flowers, C., M. Wood, D. Gillis, J. Ernst (2019). *Bridging the Digital Divide with Mobile Ad Hoc Networks in the Circumpolar North*. 2019 Western Student Research Conference, London, Canada-Ontario.

\*August, C., \*Dawkins, H., Gillis, D., & Doherty, E. (2019). *Immediate Feedback Solutions for a Software Design Course*. CUPS 2019, Guelph, Canada-Ontario.

\*Bebis, M. & Gillis, D. (2019). *User Interface Design in Crowdsourced Applications*. CUPS 2019, Guelph, Canada-Ontario.

\*Mustafa, A., \*Durish, N., \*Asch, M., \*Rourke, K., \*Samuels, J., D. Gillis (2019). *Developing Tools To Learn Mobile Development*. CUPS 2019, Guelph, Canada-Ontario.

\*Varshney, A., \*Durish, N., \*Asch, M., \*Rourke, K., \*Samuels, J., D. Gillis (2019). *eNuk: The Health And Environment Monitoring System*. CUPS 2019, Guelph, Canada-Ontario.

Gillis, D. & \*Durish, N. (2019). *Building Foundational Skills: Community-Engaged Software Design*. Invited presentation at SpringIT Day, Guelph, Canada-Ontario.

Gillis, D. (2019). *Diversity Panel*. Invited presentation at Inclusivity Workshop, Guelph, Canada-Ontario.

Jacobs, S., Gillis, D., & Fraser, E. (2019). *Academic and Municipal partnerships*. Invited presentation at Municipal Waste Association 2019, Lindsay, Canada-Ontario.

\*Edwards, B., Jacobs, S., & Gillis, D. (2018). *Assessing the effects of beach raking on piping plover reproductive success using an environmental agent-based model*. Annual Meeting of the Waterbird Society, Vancouver, Canada-British Columbia.

\*Edwards, B., Jacobs, S., & Gillis, D. (2018). *Assessing the effects of beach raking on piping plover reproductive success using an environmental agent-based model*. 42nd Annual Waterbirds Society Meeting, Vancouver, Canada-British Columbia.

Columbia.

\*Middleton, J., Cunsolo, A., Jones-Bitton, A., Shiwak, I., Flowers, C., A. \*Sawatzky, M. Wood, D. Gillis, S. Harper (2018). *Accessing and assessing environmental information: community-identified metrics and modifiers that matter in a changing climate*. ArcticNet 2018, Ottawa, Canada-Ontario.

\*Middleton, J., Cunsolo, A., Jones-Bitton, A., Shiwak, I., Flowers, C., A. \*Sawatzky, M. Wood, D. Gillis, S. Harper (2018). *Accessing and assessing environmental information: community-identified metrics and modifiers that matter in a changing climate*. ArcticNet 2018, Ottawa, Canada-Ontario.

\*Sawatzky, A., Cunsolo, A., Shiwak, I., Flowers, C., \*Middleton, J., M. Wood, D. Gillis, A. Jones-Bitton, S.L. Harper (2018). *It depends...: Considering Inuit-identified metrics in context for monitoring and responding to climate change in the Circumpolar North*. ArcticNet 2018, Ottawa, Canada-Ontario.

\*Sawatzky, A., Cunsolo, A., Shiwak, I., Flowers, C., \*Middleton, J., M. Wood, D. Gillis, A. Jones-Bitton, S.L. Harper (2018). *It depends...: Considering Inuit-identified metrics in context for monitoring and responding to climate change in the Circumpolar North*. ArcticNet 2018, Ottawa, Canada-Ontario.

Cunsolo, A., Harper, S., Gillis, D., Shiwak, I., Flowers, C., \*Sawatzky A., Kipp A., Wood M., The Rigolet Inuit Community, \*Durish N., \*Cook O., \*Rourke K. (2018). *The eNuk Program: Participatory, community-led environment and health surveillance with Inuit in Rigolet, Nunatsiavut, Canada*. 17th International Congress on Circumpolar Health, Copenhagen, Denmark.

Cunsolo, A., Harper, S., & Gillis, D. (2018). *Community-Based Monitoring and Surveillance in the Circumpolar North*. ArcticNet 2018, Ottawa, Canada-Ontario.

Gillis, D. (2018). *Civic Engagement & Social Entrepreneurship: Creating & Managing a Community-Engaged Computer Science Classroom*. Invited presentation at Dalian Nationalities University Seminar Series, Dalian, China.

Gillis, D. & \*Durish, N. (2018). *Bridging the Digital Divide to Support Community-Based Monitoring in the Circumpolar North*. ArcticNet 2018, Ottawa, Canada-Ontario.

Gillis, D. (2018). *Interdisciplinary & Transdisciplinary Programs - More than the sum of their parts [Invited]*. Invited presentation at Interdisciplinary Approaches to Biomedical Science Seminar Series, Hanover, New Hampshire.

Gillis, D. & \*Durish, N. (2018). *Bridging the Digital Divide to Support Community-Based Monitoring in the Circumpolar North*. ArcticNet 2018, Ottawa, Canada-Ontario.

Gillis, D. & \*Durish, N. (2018). *Using participatory design methods and innovative mesh technology to develop the eNuk app*. Arctic Circle, Reykjavík, Iceland.

Gillis, D. & \*Durish, N. (2018). *Community-Engaged Computer Science: Lessons Learned in the Pursuit of Social Justice*. gov Summit 2018, Taipei, Taiwan.

Gillis, D., \*Durish, N., \*Seymour, F., \*Rourke, K., \*Cook, O., Shiwak I., Flowers C., \*Sawatzky A., Kipp A., Wood M., The Rigolet Inuit Community Government, Harper S., Cunsolo A., Ernst J. (2018). *Bridging the Digital Divide in the Circumpolar North with Wireless Mobile Mesh Networks: a community-led participatory project in Rigolet, Nunatsiavut*. 17th International Congress on Circumpolar Health, Copenhagen, Denmark.

Gillis, D. (2018). *Understanding Human Impacts On The Environment And Human Health*. Invited presentation at Dalian Nationalities University, Dalian, China.

Kipp, A., Cunsolo, A., Gillis, D., \*Sawatzky, A., & Harper, S. (2018). *The need for community-led, integrated & innovative monitoring programs when responding to the health impacts of climate change*. ArcticNet 2018, Ottawa, Canada-Ontario.

Shiwak, I., Cunsolo, A., Harper, S., & Gillis, D. (2018). *The eNuk Program: Indigenous-Led Environment-Health Surveillance for Adaptation*. Arctic Circle, Reykjavík, Iceland.

\*Durish, N., \*Seymour, P., \*Cook, O., \*Sawatzky, A., Shiwak, I., Flowers C., The Rigolet Inuit Community Government, Ernst J., Cunsolo A., Harper S., Gillis D. (2018). *A Community-led Approach to Contextualize Gamification*. CPHAZ Symposium 2018, Guelph, Canada-Ontario.

- \*Durish, N., \*Seymour, F., \*Rourke, K., Raturi, S., Hughes, B., Harper S., Cunsolo A., Flowers F., Shiwak I., Wood M., Rigolet Inuit Community Government, Gillis D., Ernst J. (2018). *Bridging the Digital Divide and Improving Community-Based Monitoring Programs in the Circumpolar North*. People, Places, and Public Engagement, St. John's, Canada-Newfoundland.
- \*Edwards, B., Jacobs, S., & Gillis, D. (2018). *Citizen scientists and Plover Lovers: how nearly a decade's worth of data has played a role in saving the endangered piping plover at Sauble Beach*. People, Places, and Public Engagement, St. John's, Canada-Newfoundland.
- \*Edwards, B., Jacobs, S., & Gillis, D. (2018). *Digital Plovers: Informing Management Decisions of Endangered Piping Plovers Using an Environmental Agent-Based Model*. National Integrative Research Conference 2018, Montreal, Canada-Quebec.
- \*Gascho, J., \*Fontanna, J., \*Ahmed, S., Toro, L., Williamson, D., Gillis, D. (2018). *Building Independence Using Community-Engaged Software Design*. People, Places, and Public Engagement, St. John's, Canada-Newfoundland.
- \*Houlding, P., Hodgins, K., Fraser, E., Gillis, D., & Jacobs, S. (2018). *Community-Engaged Learning – From Curriculum Design to Classroom Participation*. People, Places, and Public Engagement, St. John's, Canada-Newfoundland.
- Cunsolo, A., Harper, S., & Gillis, D. (2018). *The eNuk Program: Indigenous-Led Environment-Health Surveillance for Adaptation*. People, Places, and Public Engagement, St. John's, Canada-Newfoundland.
- Gillis, D., \*Rourke, K., & Shiwak, I. (2018). *eNuk: Using Mesh Technology to Support Climate Change Monitoring [Invited keynote]*. Invited presentation at Indigenous Mapping Workshop, Montreal, Canada-Quebec.
- Gillis, D., \*Rourke, K., & \*Durish, N. (2018). *Ideation Process, Identifying Problems RightMesh Can Solve I & II*. Invited presentation at Indigenous Mapping Workshop, Montreal, Canada-Quebec.
- Gillis, D. (2018). *Digital Inclusion Using Wireless Mobile Networks [Invited]*. Invited presentation at Ontario Digital Inclusion Summit, Toronto, Canada-Ontario.
- Gillis, D., \*Durish, N., \*Cook, O., \*Seymour, F., \*Gascho, J., Fontanna J., Houlding P., Williamson D. (2018). *How Community Engaged Computer Science Can Change the World*. People, Places, and Public Engagement, St. John's, Canada-Newfoundland.
- Shiwak, I., Cunsolo, A., Gillis, D., & Harper, S. (2018). *The eNuk Program: Adaptation through a Community-University Partnership for Environment and Health Monitoring*. People, Places, and Public Engagement, St. John's, Canada-Newfoundland.
- \*Durish, N. & Gillis, D. (2018). *Developing an Inuit-led Community Health and Environmental Monitoring System using Mobile Mesh Networks in Rigolet, Nunatsiavut*. Invited presentation at Community-Based Environmental Monitoring Workshop, Iqaluit, Canada-Nunavut.
- \*Seymour, F., Raturi, S., \*Durish, N., \*Cook, O., \*Sawatzky, A., Shiwak I., Flowers C., Rigolet Inuit Community Government, Harper S., Cunsolo A., Gillis D., Ernst J. (2018). *Connecting Remote Northern Communities with Offline Mobile Applications*. CPHAZ Symposium 2018, Guelph, Canada-Ontario.
- Gillis, D. (2018). *More Chairs At The Table: Designing For Food Security [Invited]*. Invited presentation at South Western Ontario Retreat: Engineers Without Borders, Guelph, Canada-Ontario.
- Gillis, D. & \*Durish, N. (2018). *Potential Health Impacts of the Digital Divide [Invited]*. Invited presentation at CPHAZ Symposium 2018, Guelph, Canada-Ontario.
- Jacobs, S. & Gillis, D. (2018). *Ideas Congress: a transdisciplinary learning environment for experiential education [Invited]*. Invited presentation at McMaster University Education and Cognition Symposium, Hamilton, Canada-Ontario.
- \*French, S., \*Phillips, J., Hanner, R., & Gillis, D. (2018). *Estimating sampling size using haplotype accumulation curves and semiparametric models*. CUPS 2018, Guelph, Canada-Ontario.
- \*Gascho, J., \*Fontanna, J., Toro, L., Williamson, D., & Gillis, D. (2018). *The Process of Utilizing Community-Engaged Software Development in the Creation of an Engaging Medication Reminder App*. CUPS 2018, Guelph, Canada-Ontario.

- \*Houlding, P., \*Durish, N., & Gillis, D. (2018). *Evaluating the Digital Divide in Canada*. CUPS 2018, Guelph, Canada-Ontario.
- \*Seymour, F., Raturi, S., \*Durish, N., Shiwak, I., Flowers, C., Ernst J., Gillis D. (2018). *Developing an Instant Messaging Platform Beyond the Digital Divide*. CUPS 2018, Guelph, Canada-Ontario.
- Gillis, D. (2018). *Reflections on the Big Land [Invited]*. Invited presentation at In The Gallery With Seminar Series, Guelph, Canada-Ontario.
- Gillis, D. & \*Durish, N. (2018). *Bridging the Digital Divide in the Circumpolar North [Invited keynote]*. Invited presentation at SpringIT Day, Guelph, Canada-Ontario.
- \*Andrachuk, M., Cunsolo, A., Sawatzky, A., Snook, J., Gillis, D., \*Durish N, Shiwak I, Flowers C, Wood M, Harper, SL (2017). *Supporting wildlife stewardship and conservation through a digital platform for knowledge co-production*. ArcticNet 2017, Quebec, Canada-Quebec.
- \*Durish, N., Gillis, D., \*Cook, O., Cunsolo, A., \*Sawatzky, A., Shiwak, I, Flowers, C, the Rigolet Inuit Community Government, and Harper, SL (2017). *The eNuk health and environmental monitoring system; improving user engagement through social gaming elements*. ArcticNet 2017, Quebec, Canada-Quebec.
- \*Edwards, B. & Gillis, D. (2017). *Modelling habitat loss in Piping Plovers using an environmental agent-based model*. American Ornithology 2017:, East Lansing, Michigan.
- \*Griffiths, M., Gillis, D., & Hodgins, D. (2017). *Investigation of Mannheimia haemolytica and Bovine Respiratory Disease towards generalized Immune Response through Mathematical Modelling*. The IV International AMMCS Interdisciplinary Conference, Waterloo, Canada-Ontario.
- \*Phillips, J., Gillis, D., & Hanner, B. (2017). *Intraspecific sample size estimation for DNA barcoding: Are current sampling levels enough?* 2017 International Barcode of Life Conference, Johannesburg, South Africa.
- \*Seymour, P., \*Durish, N., \*Cook, O., Cunsolo, A., Harper, S., Sawatzky, A, Shiwak, I, Flowers, C, Rigolet Inuit Community Government, and Ernst, J, Gillis, D (2017). *Leveraging Mesh Networks to Design Systems that Connect Remote Northern Communities*. ArcticNet 2017, Quebec, Canada-Quebec.
- Ernst, J., \*Seymour, P., \*Durish, N., \*Cook, O., Cunsolo, A., Sawatzky, A, Flowers, C, Shiwak, I, Rigolet Inuit Community Government, Harper, SL, and Gillis, D (2017). *Improving the Connectivity of Rigolet Using the Inuit-led eNuk Application and Wireless Mesh Technologies*. ArcticNet 2017, Quebec, Canada-Quebec.
- Gillis, D. (2017). *Data Analytics and a Sustainable Secure Food Supply: A Bright Future Together [Invited]*. Invited presentation at Big Data Congress 2017, Halifax, Canada-Nova Scotia.
- Gillis, D., Sawatzky, A., Shiwak, I., & Cunsolo, A. (2017). *Climate change and health: Inuit-led adaptation in Nunatsiavut*. Northern Rural and Remote Health, Happy Valley-Goose Bay, Canada-Newfoundland.
- Gillis, D., Cunsolo, A., & Shiwak, I. (2017). *The eNuk Program: Inuit-led environment & health monitoring in Rigolet, Nunatsiavut*. Invited presentation at ArcticNet 2017, Quebec City, Canada-Quebec.
- Gillis, D., Hodgins, K., Fraser, E., & Jacobs, S. (2017). *The Role of Transdisciplinary Classrooms to Address Broad Social Challenges*. Society for Teaching and Learning in Higher Education (STLHE) Conference, Halifax, Canada-Nova Scotia.
- Gillis, D., Ernst, J., \*Cook, O., \*Sawatzky, A., Cunsolo, A., Sherilee Harper, Inez Shiwak, Charlie Flowers, the Rigolet Inuit Community Government (2017). *Developing an Inuit-led Community Health and Environment Monitoring System using Mobile Mesh Networks in Rigolet, Nunatsiavut*. Northern Rural and Remote Health, Happy Valley-Goose Bay, Canada-Newfoundland.
- Gillis, D. (2017). *Developing Mobile Mesh Technology for Improved Connectivity in a Remote Inuit Community in Canada's Circumpolar North (Invited)*. Invited presentation at Dalian Nationalities University Seminar Series, Dalian, China.
- Hodgins, K., Gillis, D., Jacobs, S., & Fraser, E. (2017). *Creating Community-Engaged Changemakers inside a Curricular Context*. C2UExpo2017, Vancouver, Canada-British Columbia.
- Sawatzky, A., Cunsolo, A., Jones-Bitton, A., Gillis, D., Shiwak, I., Flowers, C., \*Cook, O., Wood, M., Rigolet Inuit

Community Government, Harper, S.L. (2017). *Why environment and health monitoring matters to Inuit in Rigolet, Nunatsiavut, Labrador*. Northern Rural and Remote Health, Happy Valley-Goose Bay, Canada-Newfoundland.

Stojisin-Carter, A., Costa, N., de Morais, R., de Bem, T., M, C., Gillis, D and Carter, T and Miranda, M and Ohashi, O and Favetta, L and King, A (2017). *Fetal sex affects the maternal level of plasma anti-Mullerian hormone during pregnancy in cattle*. European Society of Human Reproduction and Embryology, Geneva, Switzerland.

\*Cook, O., Gillis, D., Sawatzky, A., Cunsolo, A., Shiwak, I., C. Flowers, and Rigolet Inuit Community, and S. Harper (2017). *Designing Inuit-led Health & Environment Monitoring Using Participatory Software Design Methods*. CPHAZ Symposium 2017, Guelph, Canada-Ontario.

\*Griffiths, M., Gillis, D., & Hodgins, D. (2017). *Developing a Mathematical Model to Investigate Mannheimia haemolytica and Bovine Respiratory Disease*. CPHAZ Symposium 2017, Guelph, Canada-Ontario.

Gillis, D. (2017). *Breaking Down Barriers: Transdisciplinarity & Social Innovation to Address Public Health Issues (Invited)*. Invited presentation at CPHAZ Symposium 2017, Guelph, Canada-Ontario.

Gillis, D., \*Jouillard, M., & \*Miller, D. (2017). *Innovating The Food System: The Meal Exchange Trick Or Eat Web and Mobile Application (Invited)*. Invited presentation at The National Food Summit, Guelph, Canada-Ontario.

Gillis, D., \*Cook, O., \*Sawatzky, A., Cunsolo, A., Shiwak, I., Flowers, C and the Rigolet Inuit Community Government, and Harper, S (2017). *The Development of an Inuit-led Environment & Health Monitoring System Using Participatory Software Design Methods in Rigolet, Nunatsiavut*. Labrador Research Forum, Happy Valley-Goose Bay, Canada-Newfoundland.

Gillis, D. (2017). *Transdisciplinary Classrooms: Building Next Generation Leaders & Change Makers*. Creative Connections Conference, Fredericton, Canada-New Brunswick.

Sawatzky, A., Cunsolo, A., Gillis, D., Jones-Bitton, A., \*Cook, O., I. Shiwak, C. Flowers, M. Wood, S. Harper (2017). *Inuit values-based approaches for reforming and reclaiming environment and health monitoring research in the North*. National Gathering of Graduate Students, Vancouver, Canada-British Columbia.

Snow, B., Gillis, D., & Snow, N. (2017). *A Graphic Designer, An Evaluator, and a Computer Scientist Walk into a Bar*. Canadian Evaluation Society 2017, Vancouver, Canada-British Columbia.

Gillis, D. (2017). *Experiential Learning in STEM & Professional Programs (Invited)*. Invited presentation at Council of Ontario Universities Experiential Learning Best Practices Exchange, Toronto, Canada-Ontario.

\*Edwards, B. & Gillis, D. (2017). *Using environmental agent-based modelling to simulate the breeding success of piping plovers*. CPES Undergraduate Poster Session, Guelph, Canada-Ontario.

\*Houlding, P. & Gillis, D. (2017). *Emotional Intelligence - Exploring AI to Understand Emotional Context*. CPES Undergraduate Poster Session, Guelph, Canada-Ontario.

\*Katsaras, C., McMurtry, L., Levac, L., & Gillis, D. (2017). *Visualizing the Community Vitality Index*. CPES Undergraduate Poster Session, Guelph, Canada-Ontario.

\*Rourke, K., \*Fraser, J., Gillis, D., & McCuaig, J. (2017). *Investigating the impact of automated feedback in e-learning environments*. CPES Undergraduate Poster Session, Guelph, Canada-Ontario.

\*Zhu, L. & Gillis, D. (2017). *Using Cellular Automata to Evaluate the Effects of Self-Driving Cars on Traffic*. CPES Undergraduate Poster Session, Guelph, Canada-Ontario.

Jacobs, S., \*Nelson, J., Hodgins, K., \*Bramberger, L., Fraser, E., D. Gillis (2017). *Out with the Old Lecture, In with the Ideas-Congress (ICON) Transdisciplinary Interactive Classroom*. Teaching and Learning Innovations Conference, Guelph, Canada-Ontario.

\*Lafferty, R. & Gillis, D. (2017). *A Visualization Platform for Big Data Analysis*. CPES Undergraduate Poster Session, Guelph, Canada-Ontario.

\*Cook, O., Gillis, D., Harper, S., Cunsolo, A., \*Sawatzky, A., Shiwak, I and Flowers, C and the Rigolet Inuit Community Government (2016). *The eNuk App: Participatory software design of an environmental monitoring tool in Rigolet*,

*Nunatsiavut*. ArcticNet 2016, Winnipeg, Canada-Manitoba.

\*Sawatzky, A., Cunsolo-Willox, A., Bunce, A., Gillis, D., Shiwak, I., Shiwak, J. and Wood, M. and Ford, J. and Furgal, C. and Edge, V. and Harper, S. (2016). *Inuit perspectives on community-based, participatory approaches for addressing health impacts of environmental change in Rigolet, Nunatsiavut, Labrador*. Transforming Health Care in Rural and Remote Communities Conference, Edmonton, Alberta, Edmonton, Canada-Alberta.

\*Sawatzky, A., Cunsolo-Willox, A., Bunce, A., Gillis, D., Shiwak, I., Shiwak, J. and Wood, M. and Ford, J. and Furgal, C. and Edge, V. and Harper, S. (2016). *InukSUK (Strength. Understanding. Knowledge): A community-driven environment and health surveillance program in the Canadian Arctic*. Transforming Health Care in Rural and Remote Communities Conference, Edmonton, Alberta, Edmonton, Canada-Alberta.

\*Sawatzky, A., Cunsolo, A., Bunce, A., Gillis, D., \*Cook, O., M. Wood, I. Shiwak, J. Shiwak, J. Ford, C. Furgal, V. Edge, the Rigolet Inuit Community Government, S. Harper (2016). *Placing strength, understanding, and knowledge at the heart of community-based environment and health surveillance with Inuit in Canada*. One Health EcoHealth 2016, Melbourne, Australia- VIC.

\*Sawatzky, A., Cunsolo, A., Gillis, D., Bitton-Jones, A., \*Cook, O., Shiwak I., Flowers C., Rigolet Inuit Community Government, Harper S. (2016). *Developing values-based environment and health metrics for surveillance with Inuit in Rigolet, Nunatsiavut, Labrador*. ArcticNet 2016, Winnipeg, Canada-Manitoba.

\*Sawatzky, A., Cunsolo Willox, A., Bunce, A., Gillis, D., Shiwak, I., Shiwak, J. and Wood, M. and Ford, J. and Furgal, C. and Edge, V. and Harper, S. (2016). *Building Local & Indigenous Knowledge Systems (Building LINKS): A community-driven environment and health surveillance program in the Canadian Arctic*. Transforming Health Care in Rural and Remote Communities Conference, Edmonton, Canada-Alberta.

\*Sawatzky, A., Cunsolo, A., Gillis, D., Bunce, A., \*Cook, O., Shiwak I., Shiwak J., Flowers C., Wood M., Ford J., Furgal C., Edge V., Rigolet Inuit Community Government, Harper S. (2016). *The eNuk Program: Participatory, community-led environment and health surveillance with Inuit in Rigolet, Nunatsiavut, Canada*. ArcticNet 2016, Winnipeg, Canada-Manitoba.

Cunsolo, A., \*Sawatzky, A., Gillis, D., Bunce, A., \*Cook, O., Wood, M, Shiwak, I, Shiwak, J, Ford, J, Furgal, C, Edge, V, the Rigolet Inuit Community Government, Harper, SL (2016). *The eNuk Program: Community-driven environment and health surveillance in the Canadian Arctic*. ArcticNet 2016, Winnipeg, Canada-Manitoba.

Cunsolo, A., Harper, S., \*Sawatzky, A., Gillis, D., \*Cook, O., I. Shiwak, C. Flowers (2016). *Inuit-Led Participatory Environment and Health Monitoring for Adaptation and Sovereignty*. 20th Biennial Inuit Studies Conference, St. John's, Canada-Newfoundland.

Gillis, D., \*Katsaras, C., & \*Alexander, C. (2016). *The Utility of Computer Science to Address Food Insecurity*. Advancing Food Insecurity Research In Canada, Toronto, Canada-Ontario.

Jacobs, S. & Gillis, D. (2016). *Meeting needs after graduation: a trans-disciplinary learning experience for undergraduate students*. Society for Teaching and Learning in Higher Education (STLHE) Conference, London, Canada-Ontario.

Sawatzky, A., Cunsolo, A., Gillis, D., Bunce, A., \*Cook, O., Wood, M., Shiwak, I., Shiwak, J., Ford, J., Furgal, C., Edge, V., the Rigolet Inuit Community Government, and Harper, S.L (2016). *The eNuk Program: Community-driven environment and health surveillance in the Canadian Arctic*. 20th Biennial Inuit Studies Conference, St. John's, Canada-Newfoundland.

\*Sawatzky, A., Cunsolo Willox, A., Bunce, A., Gillis, D., Shiwak, I., Shiwak, J., Wood, M., Ford, J., Furgal, C., Edge, V., Harper, S. (2016). *Participatory development of environment-health surveillance in the Canadian Arctic*. Sparking Population Health Solutions Summit, Ottawa, Canada-Ontario.

\*Sawatzky, A., Cunsolo-Willox, A., Bunce, A., Gillis, D., Shiwak, I., Shiwak, J. and Wood, M. and Ford, J. and Furgal, C. and Edge, V. and Harper, S. (2016). *Placing strength, understanding, and knowledge at the heart of community-based environment and health surveillance with Inuit in Canada*. CPHA Public Health 2016 conference, Toronto, Canada-Ontario.

Gillis, D. (2016). *Farm To Fork (Invited)*. Invited presentation at Guelph Food Talks, Guelph, Canada-Ontario.



- \*Edwards, B., \*Rose, D., \*Requejo, F., \*Rollins, E., \*Kett, R., D. Gillis (2016). *Improving efficiency of traditional agent-based models to investigate anthropogenic activities on a wild fish population*. CPES Undergraduate Poster Session, Guelph, Canada-Ontario.
- \*Katsaras, C., \*Alexander, C., \*Carvalho, J., & Gillis, D. (2016). *Extending the Farm To Fork System for World Wide Use*. CPES Undergraduate Poster Session, Guelph, Canada-Ontario.
- \*Katsaras, C., \*Alexander, C., \*Carvalho, J., \*Cook, O., \*Dagg, D., \*Mitkov, D and \*Goethke, B and \*Jourard, M and Gillis, D (2016). *Computer Science & One Health: Community Engaged Scholarship & Food Security*. One Health Poster Day, Guelph, Canada-Ontario.
- \*Sawatzky, A., Cunsolo, A., Gillis, D., Bunce, A., \*Cook, O., Wood, M, Shiwak, I, Shiwak, J, Ford, J, Furgal, C, Edge, V, the Rigolet Inuit Community Government, Harper, SL (2016). *The eNuk Program: Community-driven environment and health surveillance in the Canadian Arctic*. One Health EcoHealth 2016, Guelph, Canada-Ontario.
- \*Sawatzky, A., Cunsolo, A., Gillis, D., Jones-Bitton, A., \*Cook, O., Bunce A., Shiwak I., Flowers C., Wood M., Rigolet Inuit Community Government, Harper S. (2016). *Exploring Inuit perspectives on developing values-based environment and health metrics for surveillance in Rigolet, Nunatsiavut, Labrador*. Ontario Veterinary College Graduate Student Research Symposium, Guelph, Canada-Ontario.
- Gillis, D. (2016). *Using Community Involvement to Extend, Promote, and Leverage Research (Invited)*. Invited presentation at Beyond the H-Index Panel: Enhancing Research Impact, Cambridge, Canada-Ontario.
- Gillis, D. & \*Cook, O. (2016). *The 1s and 0s of One Health (Invited)*. Invited presentation at CPHAZ Seminar Series, Guelph, Canada-Ontario.
- Cunsolo, A., Harper, S., Bunce, A., Shiwak, I., Flowers, C., Gillis D, \*Sawatzky A, \*Cook O, Ford J, Furgal C, Wood M, and the Rigolet Inuit Community Government (2016, April). *The InukSUK Program: Inuit-Led Environment & Health Monitoring for Adaptation*. Adaptations Canada 2016, Ottawa, Canada-Ontario.
- Gillis, D. & \*Alexander, C. (2015). *Addressing food insecurity through social innovation: improving the educational experience of physical and engineering science students through multi-disciplinary team work*. 35th Annual Conference of the Society for Teaching and Learning in Higher Education, Vancouver, Canada-British Columbia.
- Gillis, D. (2015). *The Role of Academics in Advocating For Hunger and Poverty Issues*. Invited presentation at 10th Annual Conference on Universities Fighting World Hunger, Guelph, Canada-Ontario.
- Jacobs, S., Nelson, J., Driscoll, B., & Gillis, D. (2015). *Hijacking All The Courses: A Trans-disciplinary Learning Experience for Undergraduate Students*. The Western Conference on Science Education, London, Canada-Ontario.
- Gillis, D. & Nikitenko, D. (2015). *Touching The Curve*. The Accessibility Conference: Choosing Bridges over Barriers, Guelph, Canada-Ontario.
- \*Gagne, D., \*Hu, Y., \*Luiz Andrade, J., \*Torres de Lima, J., \*Alexander, C., Gillis, D. (2015). *Gamification of Online Public Health Surveys*. CPES Undergraduate Poster Session, Guelph, Canada-Ontario.
- \*Gruber, J., \*Kaminobo Takaezu, W., \*Tanaka, V., \*Lucena Palmieri, E., \*Mazzawi, A., \*Seymour, F., Nikitenko, D., Gillis, D. (2015). *Investigating Recognizer Algorithms for Use in the Sonification and Gesture Control (SonG-C) Program*. CPES Undergraduate Poster Session, Guelph, Canada-Ontario.
- \*Nelson, J., \*Sparks, A., Ritchie, K., Gillis, D., & Jacobs, S. (2015). *The ICON Pilot Project Successfully Fosters Transdisciplinary Communication and Thinking for Undergraduate Participants*. CPES Undergraduate Poster Session, Guelph, Canada-Ontario.
- \*Rose, D., \*Kett, R., \*Yodzis, M., \*Angevaare, J., & Gillis, D. (2015). *A Combined Agent Based and Stage Structured Model to Study Anthropogenic Effects on Fish Populations*. CPES Undergraduate Poster Session, Guelph, Canada-Ontario.
- \*Saba, M., \*D'Angelo, A., \*Molloy, N., & Gillis, D. (2015). *Development of a Web Portal and Mobile App for Fisheries Management in the Traditional Waters of the Saugeen Ojibway First Nations*. CPES Undergraduate Poster Session, Guelph, Canada-Ontario.

- Gillis, D. (2014). *Computer Science and Community Engaged Scholarship (Invited)*. Invited presentation at Dalian Nationalities University Seminar Series, Dalian, China.
- Nikitenko, D. & Gillis, D. (2014). *Touching the data: exploring data sonification on mobile touchscreen devices*. The 11th International Conference on Mobile Systems and Pervasive Computing, Niagara Falls, Canada-Ontario.
- Yo, S. & Gillis, D. (2014). *Considering A Lean Classroom: Towards Lean Pedagogy*. Fusion Annual Desire2Learn Global Users Conference 2014, Nashville, Tennessee.
- \*Angevaare, J., Gillis, D., & Darlington, G. (2014). *Efficient Bayesian Inference for Conditionally Autoregressive Models*. Annual Meeting of the Statistical Society of Canada, Toronto, Canada-Ontario.
- Gillis, D. (2014). *Geospatial Methods for Fisheries Management*. Invited presentation at Interdisciplinary Workshop on Geospatial Computing, Kitchener, Canada-Ontario.
- \*Cook, O., \*Knoop, R., \*Possani, H., \*Seymour, F., Gillis, D., Denis Nikitenko (2014). *Enhancing Education for the Visually Impaired Using Sonification and Gesture Control Devices*. CPES Undergraduate Poster Session, Guelph, Canada-Ontario.
- \*Driscoll, B., \*Nelson, J., Jacobs, S., & Gillis, D. (2014). *ICON: A trans-disciplinary learning experience for undergraduate students*. CPES Undergraduate Poster Session, Guelph, Canada-Ontario.
- \*Driscoll, B., \*Nelson, J., Jacobs, S., & Gillis, D. (2014). *ICON: A trans-disciplinary learning experience for undergraduate students*. CBS Undergraduate Poster Session, Guelph, Canada-Ontario.
- Gillis, D. (2014). *Fostering Innovation for Food Security via computer science and community engaged scholarship*. 4th Annual Knowledge Exchange Share Fair, Guelph, Canada-Ontario.
- Gillis, D. (2014, March). *Food Insecurity: How Computer Science Can Help*. NRC and OPHA's 2014 Annual Conference, Ottawa, Canada-Ontario.
- \*Cluskey-Belanger, L., \*Katznelson, B., \*Alexander, C., Vsetula, K., Williamson, D., D. Gillis (2013). *From Farm To Fork: Community Engaged Scholarship in the Classroom*. CUExpo 13, Corner Brook, Canada-Newfoundland.
- \*Stojsin, A., Sovernigo, T., Filho, M., Gillis, D., Adona, P., M. Miranda, O. Shashi, P. Madan, W. King (2013). *Plasma Anti-Mullearian hormone as a predictor of bovine ovarian size, number of antral follicles, and overall animal fertility in three breeds of cattle*. Ovarian Club Meeting, 2013, Paris, France.
- \*Stojsin, A., Neil, M., Shipla, A., Hughes, E., Faghih, M., M. Karnis, D. Gillis, W. King (2013). *Ratio of the serum and follicular fluid anti-Mullerian hormone as a predictor of the patient embryo utilization and pregnancy rates*. CFAS 59th Annual Meeting, Victoria, Canada-British Columbia.
- \*Cluskey-Belanger, L., \*Katznelson, B., Williamson, D., & Gillis, D. (2013). *Community Engaged Scholarship: The Farm To Fork Project, or How a Third Year Computer Science Class Took on Food Security*. Teaching and Learning Innovations Conference Proceedings, Guelph, Canada-Ontario.
- Gillis, D. (2013). *KTT: How Community Engagement in a 3rd Year Computer Science Class Addressed Food Insecurity (Invited)*. Invited presentation at The Knowledge Transfer & Translation Community of Practice, Guelph, Canada-Ontario.
- Gillis, D., Williamson, D., \*Cluskey-Belanger, L., & \*Katznelson, B. (2013). *Farm To Fork: How a Third Year Computer Science Class Took On the Issue of Food Insecurity*. Teaching and Learning Innovations Conference, Guelph, Canada-Ontario.
- Gillis, D. (2013). *Alternative Pedagogies: Learning through Community Engaged Research Partnerships*. Invited presentation at Teaching and Learning Innovations Conference Proceedings, Guelph, Canada-Ontario.
- Gillis, D. (2013). *Mapping the Future to Improve Health and Health Policy in the Here and Now (Invited)*. Invited presentation at Epidemiology and Biostatistics Seminar Series, London, Canada-Ontario.
- \*Alexander, C., \*Cluskey-Belanger, L., \*Cook, O., \*Tempelman, J., \*Winer, J., D. Gillis (2013). *Developing an Online System To Facilitate Community University Engagement*. CPES Undergraduate Poster Session, Guelph,

Canada-Ontario.

\*Alexander, C., \*Cluskey-Belanger, L., \*Cook, O., \*Tempelman, J., \*Winer, J., D. Gillis (2013). *Farm To Fork: A Community Engaged Project*. CPES Undergraduate Poster Session, Guelph, Canada-Ontario.

Overdyk, L., Binns, A., Gillis, D., Hanner, R., & Crawford, S. (2012). *An interdisciplinary approach to evaluate entrainment at water usage industries*. Latonnell Conservation Symposium, Guelph, Canada-Ontario.

\*Carter, T., Gillis, D., Betts, D., Madan, P., Hyttel, P., A. King (2012). *Individual Telomere Measurement and the Identification of Patterns in Telomere Length*. The 1st Canadian Symposium on Telomeres and Genome Integrity, London, Canada-Ontario.

\*Deeth, L., Deardon, R., & Gillis, D. (2012). *Variations of the Deviance Information Criterion for Infectious Disease Models*. Annual Meeting of the Statistical Society of Canada, Guelph, Canada-Ontario.

\*Ryan, K., Crawford, S., & Gillis, D. (2012). *Depth Distribution of Larval Lake Whitefish Coregonus clupeaformis in a Great Lakes Embayment*. Annual Meeting of the Statistical Society of Canada, Guelph, Canada-Ontario.

Angevaare, J. & Gillis, D. (2012). *The Utility of Catch Per Unit Effort Variance*. Annual Meeting of the Statistical Society of Canada, Guelph, Canada-Ontario.

Carter, T., Gillis, D., Betts, D., Madan, P., Hyttel, P., A. King (2012). *Telomere length patterns in cellular populations: a preliminary study in PHA stimulated lymphocytes*. Gairdner Foundation Genome Canada Meeting, Ottawa, Canada-Ontario.

Gillis, D., \*Krsic, N., \*Overdyk, L., & Hanner, B. (2012). *Signal Processing for Species Identification*. Annual Meeting of the Statistical Society of Canada, Guelph, Canada-Ontario.

Rueffer, M., Horrocks, J., & Gillis, D. (2012). *Spatial and Temporal Modelling of Change in Marine Harvests*. Annual Meeting of the Statistical Society of Canada, Guelph, Canada-Ontario.

Marshall, R. & Gillis, D. (2012). *Row Zone Knows*. Innovative Farmers Association of Ontario Conference 2012, London, Canada-Ontario.

Gillis, D. & \*Angevaare, J. (2012). *Something's Fishy (Invited)*. Invited presentation at Colloquium Joint BIOM&S Seminar Sereis, Guelph, Canada-Ontario.

Gillis, D. (2011). *Distribution of Gastrointestinal Illness Using Multivariate Spatial Poisson Mixtures (Invited)*. Invited presentation at 7th Annual International GeoMED Conference, Victoria, Canada-British Columbia.

Gillis, D., Desmond, T., & Holt, J. (2011). *Multivariate Spatial Poisson Mixtures*. Annual Meeting of the Statistical Society of Canada, Wolfville, Canada-Nova Scotia.

Carter, T., Gillis, D., Betts, D., Madan, P., Hyttel, P., A. King (2011). *Measuring all the ends: the challenges, solutions, and applications of comprehensive telomere measurement*. Graduate Student Symposium, Guelph, Canada-Ontario.

Martyn, A., Armstrong, J., Gillis, D., Williams, T., Choleris, E., R. Lu (2010). *Luman Recruitment Factor (LRF) deficiency affects prolactin levels and causes a defect in maternal behavior*. 2010 Canadian Neuroscience Meeting, Ottawa, Canada-Ontario.

Martyn, A., Armstrong, J., Gillis, D., Williams, T., Choleris, E., R. Lu (2010). *Luman Recruitment Factor (LRF) deficiency affects prolactin levels and causes a defect in maternal behaviour*. 4th Annual Neuroscience Day, Guelph, Canada-Ontario.

Martyn, A., Armstrong, J., Choleris, E., Gillis, D., & Lu, R. (2009). *Phenotypic Analysis of a Knockout Mouse Model Reveals the Involvement of LRF in Maternal Behaviour*. Neuroscience 2009, Society for Neuroscience, Chicago, United States of America.

Gillis, D., Desmond, T., & Holt, J. (2009). *Identification of Disease Source via Multivariate Spatial Mixture Models*. Annual Meeting of the Statistical Society of Canada, Vancouver, Canada-British Columbia.

Tey, J., Gillis, D., Caskenette, A., Rooney, N., Klotz, G., B. Harford, S. Crawford (2009). *A review of the Bence Statistical*

*Catch-at-Age Population Model for Lake Whitefish Stock Management*. Annual Meeting of the Statistical Society of Canada, Vancouver, Canada-British Columbia.

Dixon, S. & Gillis, D. (2007). *Climate change and gastrointestinal illness in Alberta - a spatial temporal analysis using conditionally autoregressive models*. Annual Meeting of the Statistical Society of Canada, St. John's, Canada-Newfoundland.

Gillis, D. (2007). *Waterborne Disease in Alberta*. Statistics Colloquium, Guelph, Canada-Ontario.

## Software

2016: The Immediate Feedback System.

- The Immediate Feed Back System (IFS) is a web application for student programming and essay writing assessment. Files are uploaded to the server for analysis, then feedback is generated based on the file contents and structure. Feedback is configurable via a set of tools which can be enabled or disabled on a whim.

2016: eNuk web portal and mobile application.

- The eNuk web portal and mobile applications were launched as part of a pilot program in the community of Rigolet, Labrador in August, 2016, to monitor changes to the environment and health, and climate change adaptations. The web and mobile apps will continue to be developed over the coming years, expanding beyond the pilot for use by all members of the community, and then further to all communities in the Nunatsiavut territory.

2016: The Farm To Fork/Meal Exchange Trick Or Eat Web and Mobile Application. Students are developing a web and mobile application for a pilot launch in Guelph to support Meal Exchange's Trick Or Eat campaign. The products are expected to be available nationally by October 2017.

2016: Farm To Fork Website V2.0. To accommodate communities around the world that have requested access to the Farm To Fork project, the system will be relaunched by October 2016 for use by any community anywhere in the world. To accomplish this, we have had to rebuild the system to allow for growth and an improved user experience.

2015: Garden Fresh Box. The Garden Fresh Box should be available for use by the Guelph Community Health Centre by January 2017.

2014: Farm To Fork Mobile Application. The mobile application will be ready for launch by January 2017. The launch of the mobile app has been delayed to allow for updates and revisions to the Farm To Fork website - required to account for demand from around the world. The new system will allow for better user experience, and use by any community around the world.

2014: The Saugeen Ojibway Commercial Fisheries Mobile Application. The mobile application is expected to be available early 2017.

2013: iPantry. Developed with Evan Fraser (Geography). The project is currently on hold.

2013: The Saugeen Ojibway Commercial Fisheries Web Portal. The web portal is being redeveloped for use in 2017.

2013: The Community University Portal. The Community University Portal is being reviewed by the Institute for Community Engaged Scholarship before beta-testing can begin.

2012: Farm To Fork Website. The Farm To Fork website was designed by the 2012 CIS3750 class, and completed by a subset of students (Alexander, Cluskey-Belanger, Cook, Winer, Fudger, Katznelson, Templeman) for launch in October 2013. The website was designed to facilitate conversations between emergency food providers and the people in the community who could afford to donate, to improve the quality and quantity of food donated to the emergency food system. Team members have been awarded the 40 Under 40 award (Gillis, Williamson, Alexander, Cluskey-Belanger, Cook), the University of Guelph Student Life's Be The Change award (Alexander, Cluskey-Belanger, Cook), and the Emily Hayes Community Partner Award (Vsetula, Needham)

## Other Research

2018: Johnson, N., Danielsen, F., Fidel, M., Pulsifier, P., Iversen, L., Eicken H., Lee O., Hauser D., Poulsen M.K., Strawhacker C., Bell T., Loseto L., Druckenmiller M., Cunsolo A., Gillis D., Shiwak I., Nickels S., Divine L., Chapin III S. *Community-based monitoring infrastructures for pan-Arctic observing: Policy-regulatory, technological, social, and economic dimensions.*

- Published online as part of the Arctic Observing Summit statements (2018)

2018: \*Kipp, A., Cunsolo, A., Gillis, D., \*Sawatzky, A., \*Cook, O., \*Durish N., Shiwak I., Flowers C., Rigolet Inuit Community Government, Wood M., Harper S. *The eNuk Environmental and Health Monitoring Program.*

- Published in Polar Knowledge: Aqahliat, Inaugural Edition, 2018

2017: \*Sawatzky, A., Cunsolo, A., Gillis, D., Shiwak, I., Flowers, C., O. \*Cook, The Rigolet Inuit Community Government, S. Harper *Profiling the eNuk program: An Inuit-led strategy for monitoring and responding to the impacts of environmental change on health and wellbeing in Rigolet, Nunatsiavut.*

- Published in Northern Public Affairs Magazine, Volume 5, Issue 2: Innovations in Northern Community Health and Wellness

## Articles-in-Progress

\*Dawkins, H., Gillis, D., & McCuaig, J. (2019). "Validation of an expert problem-solving behaviour scale," Initial submission to *SIGCSE Annual Conference on Innovation and Technology in Computer Science.*

\*Fraser, J., Gillis, D., & McCuaig, J. (2019). "What are the demographics and behavioral patterns of computer science undergraduate students using automated feedback systems?," targeted for *Computers in Human Behaviour.*

\*Parker, R., Perkel, K., Gillis, D., Mandal, R., Neal, M., Madan P., (2019). "Cell membrane metabolites as markers of human preimplantation embryonic viability," Initial submission to *Reproductive Biomedicine Online.*

\*Seymour, F., Heidema, C., Falkner, M., Gillis, D., & Ernst, J. (2019). "Measuring Network Connectivity Between Commercial-off-the-Shelf Android Devices," Initial submission to *Applied Networking Research Workshop 2019.*

\*Sawatzky, A., Cunsolo, A., Jones-Bitton, A., Gillis, D., Wood, M., C. Flowers, I. Shiwak, The Rigolet Inuit Community Government, S. Harper, (2019). "The best scientists are the people that's out there: The importance of Inuit-led integrated environment and health monitoring to respond to climate change," Initial submission to *Climatic Change.*

\*Fraser, J., Gillis, D., & McCuaig, J. (2018). "Automatic Feedback, Self-Efficacy, and Engagement: A Literature Review," targeted for *IEEE Transactions on Education.*

\*Cook, O., \*Sawatzky, A., Cunsolo, A., Harper, S., Wood, M., Shiwak I., Flowers C., Rigolet Inuit Community Government, Gillis D., (2018). "Participatory mobile application development," targeted for *Computer Communications.*

\*Cook, O., King, N., \*Sawatzky, A., Cunsolo, A., Harper, S., Wood M., Shiwak I., Flowers C., Rigolet Inuit Community Government, Gillis D., (2018). "Co-developing the eNuk software: a community-based participatory design case study with Inuit in Rigolet, Canada," targeted for *EcoHealth.*

\*Edwards, B., Jacobs, S., & Gillis, D. (2018). "Exploring the Use of Environmental Agent-Based Models on Great Lakes Piping Plovers," Revision under 2nd review to *Ibis.*

\*Carter, T., Gillis, D., Bressan, F., De Bem, T., Sampaio, R., Sangalli J., Sovernigo T., Adona P., Meirelles F., Miranda M., Ohashi O., King W., (2016). "Recapitulation of donor telomere length patterns in bovine clone offspring and presumptive induced pluripotent stem cell populations," targeted for *Scientific Reports.*

\*Carter, T., Gillis, D., & King, W. (2016). "Component Distribution Comparison: Objective and quantitative comparison of telomere patterning," targeted for *Scientific Reports.*

\*Carter, T., Gillis, D., Joudrey, E., Rho, G., Jeon, B., DH Betts, AP Powell, WA King, (2016). "Telomere patterning and X-inactivation in bovine clones following somatic cell nuclear transfer and the potential implications for cellular reprogramming therapies," targeted for *Scientific Reports.*

Gillis, D., \*Spark, A., \*Nelson, J., Ritchie, K., & Jacobs, S. (2015). "ICON: A transdisciplinary learning experience for all undergraduate students," targeted for International Journal of Educational Research.

\*Bertin, D. A., Gillis, D., & Lu, R. (2015). "Survival Analysis of a Budding Flatworm (*Schmidtea mediterranea*)," targeted for Aging Cell.

\*Angevaere, J., Gillis, D., & Darlington, G. (2014). "Efficient Estimation of Spatial Random Effects in Hierarchical Bayesian Models," targeted for Computational Statistics & Data Analysis.