Benjamin P Goldstein, Ph.D.

Assistant Professor of Environment and Sustainability, School for Environment and Sustainability
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Education

Technical University of Denmark	2017	Ph.D.	Management Engineering
Technical University of Denmark	2012	M.Sc.	Environmental Engineering
University of Toronto	2007	B.A.Sc.	Chemical Engineering

Academic Appointments

2023-Current	Assistant Professor of Environment and Sustainability, School for Environment and Sustainability, University of Michigan
2023-Current	Adjunct Professor of Bioresource Engineering, Faculty of Agricultural and Environmental Sciences, McGill University
2021-2023	Assistant Professor of Bioresource Engineering, Faculty of Agricultural and Environmental Sciences, McGill University *Faculty Associate* Trottier Institute for Sustainability in Engineering and Design
2017-2020	Postdoctoral Researcher, Erb Institute for Global Sustainable Enterprise, School for Environment and Sustainability, University of Michigan

External Research Appointments

2014-2015	Visiting Scholar, School of Architecture and Planning, Massachusetts Institute of Technology

Industry Experience

2009-2013	Project Scientist, AEL Environment, Mississauga, ON

Departmental Service

2021-2023	Program Advisor – Bioresource Engineering Master's (Non-Thesis) Program, Environmental Engineering Option (McGill)
2021-2023	Co-Chair – Departmental Committee on Equity, Diversity, and Inclusion (McGill)
2021-2023	Member – Departmental Social Committee (McGill)

Awards

2017	Recipient of the *Young Researcher Award*. Technical University of Denmark. Presented to one graduating Ph.D. student from each department based on demonstrated research excellence.
2012	Recipient of the *International Student Award*. Technical University of Denmark. Awarded to the top 4 international students at the university based on GPA.

Publications

Refereed Journal Articles

2023 VanderWilde C., Goldstein B., & Newell J.P., Do certification schemes foster supply chain embeddedness? **Organization and Environment** (In Prep)

2023 Desaulniers V, Goldstein B., Lachapelle M., & Lefsrud M., Greener green: The environmental impacts of the Canadian Cannabis Industry. **Journal of Cleaner Production** (Submitted)

2023 Dade M., Bonn A., Eigenbrod F., Felipe-Lucia M., Fisher B. Goldstein B., Holland R., Hopping K., Lavorel S., de Waroux J., Macdonald G., Mandle L., Metzger J., Pascual U., Rieb J., Vallet Am., Wells G., Ziter C., Bennet E., & Robinson B., Landscapes – A lends for assessing sustainability. **Ecosystems and People** (Under Review)

2023 Elliot T., Goldstein B.* & Charlebois S., Nearly 10 billion liters of Canadian milk wasted since 2012. [*Corresponding Author] **Nature Sustainability** (Under Review)

2023 Chamanara S., Goldstein B. & Newell J.P., Mapping the environmental justice impacts of dust pollution from cattle feedlots across the United States. **Nature Food** (Under Review)

2023 Meyer F., Elliot T., Craig S. & Goldstein B., A multi-scale model of the carbon footprint of low-carbon construction in Montreal. **Environmental Research: Infrastructure and Sustainability** (Accepted with Revisions)

2023 VanderWilde C., Goldstein B. & Newell J.P., Out of sight, out of mind: The first-mile problem in supply chains. **Global Environmental Change** (Accepted with Revisions)

2023 Hawes J.* & Goldstein B.*, Newell J.P., Dorr E., Caputo S., Fox-Käemper R., Grard B., Ilieva R., Fargue-Lelièvre A., Poniży L., Schoen V., Specht K., & Nevin C., Comparing the carbon footprint of urban and conventional agriculture. [*Contributed Equally] **Nature Cities** (Accepted with Revisions)

2023 Gagnon W. & Goldstein B., Fighting Fire with Fire: Carbon-Negative Heat Production in Canada's North Using Pyrolysis of Fire-Killed Trees. **Resources, Conservation, and Recycling** (In Press)

2023 Dorr E., Goldstein B., Aubry C., Gabrielle B. & Horvath A., How to perform life cycle assessments of urban agriculture. **Journal of Cleaner Production**, DOI: 10.1016/j.jclepro.2023.138010

2023 VanderWilde C., Newell J.P., Gounaridis D. & Goldstein B., Deforestation, certification, and transnational palm oil supply chains: Linking Guatemala to global consumer markets. **Journal of Environmental Management**, 344 (Oct) DOI: 10.1016/j.jenvman.2023.118505

2023 Dorr E., Goldstein B., Aubry C., Gabrielle B. & Horvath A., Life cycle assessment of eight urban farms and community gardens in France and California. **Resources, Conservation, and Recycling**, 192 (May) DOI: 10.1016/j.resconrec.2023.106921

2023 Dorr E., Hawes J., Goldstein B., Fargue-Lelièvre A., Fox Kämper R., Specht K., Fedeńczak K., Caputo S., Cohen N., Poniży L., Schoen V., Górecki T., Newell J.P., Jean-Soro L. & Grard B., Food production and resource use of urban farms and gardens: a five-country study. **Agronomy for Sustainable Development,** 43(18) DOI: 10.1007/s13593-022-00859-4

2023 Chamanara S., Goldstein B. & Newell J.P., Power asymmetries in supply chains and implications for environmental governance: a study of the beef industry**. Supply Chain Management, An International Journal,** DOI: 10.1108/SCM-02-2022-0068

2022 Elliot T., Goldstein B., Gómez-Baggethun E., Maes J., Proenca V., Rugani B., Ecosystem services deficits of European cities. **Science of the Total Environment**, 837 (Sept) DOI: 10.1016/j.scitotenv.2022.155875

2022 Illieva R., Cohen N., Israel M., Specht K., Fox-Kämper R., Fargue-Lelievre A., Ponizy L., Schoen V., Caputo S., Kirby C., Goldstein B., Newell J. & Blythe C., The socio-cultural benefits of urban agriculture: A review of the literature. **Land**, 11(5) DOI: 10.3390/land11050622

2022 Elliot T., Torres-Matallana J., Goldstein B., Almenar J., Gómez-Baggethun E., Maes J., Proenca V. & Rugani B., An expanded framing of ecosystem services is needed for a sustainable urban future. **Renewable and Sustainable Energy Reviews**, 162 DOI: 10.1016/j.rser.2022.112418

2022 Cho K., Goldstein B., Gounaridis D. & Newell J.P., Hidden risks of deforestation in global supply chains of natural rubber: A study of Sri Lanka. **Journal of Cleaner Production**, 349 DOI: 10.1016/j.jclepro.2022.131275

2022 Goldstein B., Reames T. & Newell J.P., Racial inequities in household energy use and carbon emissions in the United States: An Emissions Paradox. **Energy Research and Social Science**, 84 (Feb) DOI: 10.1016/j.erss.2021.102365

2021 Dorr E., Goldstein B., Horvath A., Aubry C., Gabrielle B., Environmental impacts and resource use of urban agriculture: system review and meta-analysis. **Environmental Research Letters**, 16(9) DOI: 10.1088/1748-9326/ac1a39

2021 Cho K., Goldstein B., Gounaridis D. & Newell J.P., Where does your guacamole come from? Detecting deforestation associated with the export of avocados from Mexico to the United States. **Journal of Environmental Management**, 278 (Part 1) DOI: 10.1016/j.jenvman.2020.111482

2021 Chamanara S., Goldstein B. & Newell J.P., Where is the Beef? Costco's Beef Supply Chain and Environmental Justice in California. **Journal of Cleaner Production**, 278 DOI: 10.1016/j.jclepro.2020.123744

2020 Goldstein B., Gounaridis D. & Newell J.P., The carbon footprint of household energy use in the United States. **Proceedings of the National Academy of Sciences of U.S.A.**, 117(32) DOI: 10.1073/pnas.1922205117

2020 Goldstein B. & Newell J.P., How to track corporations across space and time. **Ecological Economics**, 169 DOI: 10.1016/j.ecolecon.2019.106492

2020 Sohn J., Kalbar P., Goldstein B. & Birkved, M., Defining Temporally Dynamic Life Cycle Assessment: A Literature Review. **Integrated Environmental Assessment and Management**, 16(3) DOI: 10.1002/ieam.4235

2020 Sohn J., Bisquert P., Hecham A., Kalbar P., Goldstein B., Birkved M. & Irving-Olsen S. Argumentation corrected context weighting-life cycle assessment: A practical method of including stakeholder perspectives in multi-criteria decision support for LCA. **Sustainability**, 12(6) DOI: 10.3390/su12062170

2019 Goldstein B. & Newell J.P., Why academics should study the supply chains of individual corporations. **Journal of Industrial Ecology,** 23(6) DOI: 10.1111/jiec.12932

2019 Newell J.P., Goldstein B. & Foster A., A 40-year review of food–energy–water nexus literature and its application to the urban scale. **Environmental Research Letters,** 14(7) DOI: 10.1088/17489326/ab0767

2017 Mohareb E., Heller M., Novak P., Goldstein B., Fonoll X. & Raskin L., Considerations for reducing food system energy demand while scaling up urban agriculture. **Environmental Research Letters,** 12(12) DOI: 10.1088/1748-9326/aa889b

2017 Goldstein B., Moses R., Sammons N. & Birkved M., Potential to curb the environmental burdens of American beef consumption using a novel plant-based beef substitute. **PLoS One,** 12(12) DOI: 10.1371/journal.pone.0189029

2017 Goldstein B., Birkved M., Fernández J. & Hauschild, M., Contributions of Local Farming to Urban Sustainability in the Northeast United States. **Environmental Science & Technology,** 51(13) DOI: 10.1021/acs.est.7b01011

2017 Goldstein B., Birkved M., Fernández J. & Hauschild, M. Surveying the environmental footprint of urban food consumption. **Journal of Industrial Ecology,** 21(1) DOI: 10.1111/jiec.12384

2016 Goldstein B., Birkved M., Fernández J. & Hauschild, M. Testing the environmental performance of urban agriculture as a food supply in northern climates. **Journal of Cleaner Production,** 135 DOI: 10.1016/j.jclepro.2016.07.004

2016 Goldstein B., Hauschild M., Fernández J. & Birkved M. Urban versus conventional agriculture, taxonomy of resource profiles: a review. **Agronomy for Sustainable Development,** 36(9) DOI: 10.1007/s13593-015-0348-4

2016 Goldstein B., Hansen S.F., Gjerris M., Laurent A. & Birkved M. Ethical aspects of life cycle assessments of diets**. Food Policy**, 59 DOI: 10.1016/j.foodpol.2016.01.006

2013 Goldstein B., Birkved M., Quitzau M-J, & Hauschild M., Quantification of urban metabolism by coupling with the life cycle assessment framework: concept development and case study. **Environmental Research Letters,** 8 DOI: 10.1088/1748-9326/8/3/035024

2013 Goldstein B., Herbøl M., Figeuroa M., Gaps in tools assessing the energy implications of renovations versus rebuilding decisions. **Current Opinions in Environmental Sustainability,** 5 DOI: 10.1016/j.cosust.2013.03.005

Book Chapters

2023 Gummidi B., Goldstein B., Sohn J., Lanau M., Birkved M. & Liu G., Quantifying the Sunk Carbon Cost of Cities: 50 Years of Construction in Odense, Denmark. In **Embodied Carbon and Impacts of Buildings and Cities** (eds) Azari R. & Moncaster A. **Routledge** (Forthcoming).

2018 Goldstein B. & Rasmussen F., Life Cycle Assessment of Buildings and the Built Environment. In **Life Cycle Assessment** (eds) Hauschild M., Rosenbaum R., & Olsen S. **Springer**.

Editorials and Commentaries

2017 Ernstoff A., Stylianou K. & Goldstein B., Response to: Dietary strategies to reduce environmental impact must be nutritionally complete. **Journal of Cleaner Production,** 162 DOI: 10.1016/j.jclepro.2017.05.205

Editor Activities

2023 **Guest-Editor,** Special Issue on Urban Management: Developing Sustainable, Resilient, and Equitable Cities, Frontiers of Engineering Management, *with* Wei-Qiang Chen, Hua Cai, Oliver Heidrich, and Yu Liu

Refereed Conference Proceedings

2022 Gagnon W., Adetona A., Gillespie E. & Goldstein, B., Decarbonizing the North: Carbon & Economic Analysis of Space Heating Combined Carbon Capture & Storage. 5th Annual Conference on Building Energy and Design, Montreal, Canada

2014 Goldstein B., Birkved M., Hauschild, M. & Fernández J. Urban agricultural typologies and the need to quantify their potential to reduce a city's environmental 'foodprint'. World Sustainable Buildings Conference 2014, Barcelona, Spain

2013. Birkved, M. & Goldstein, B., Environmental sustainability assessment of urban systems applying coupled urban metabolism and life cycle assessment. Sustainable Buildings Conference 2013, Graz, Austria

Other Publications

2022 Elliot T., Wambersie L., Goldstein B. & Levasseur L. The Turkey in the Room – What is the environmental impact of your Christmas menu? SUBSTANCE. Official Publication of the Ecole Technologique Superiore at the University of Montreal

2019 Goldstein B. & Newell J.P. New Ways to Study the Supply Chains of Individual Corporations. ICYMI! (Fall Issue). Official Publication of the Erb Institute for Sustainable Enterprise at the University of Michigan

2019 Goldstein B. The Five Ws of Supply Chains: Who, What, When, Where and Why You Should Care. ICYMI! (Spring Issue) Official Publication of the Erb Institute for Sustainable Enterprise at the University of Michigan

Select Media Coverage

2022 *Housing Matters* (Urban Institute), "How Do Neighborhood Energy Efficiency and Carbon Emissions Vary Based on Residents' Race and Ethnicity?" Mar. 23

2022 *WSLS-TV* (NBC-affiliate), "How to calculate your carbon footprint – and why you should care," Feb. 17

2021 Futurity, "White neighborhoods have higher carbon emissions," Nov. 29

2021 *Grist*, "Black and Latino neighborhoods pay more for energy despite far lower emissions," Dec. 2

2020 *Scientific American*, "Neighborhood wealth dramatically impacts home greenhouse gas emissions," Nov. Issue

2020 *The San Francisco Chronicle,* "MicroClimates: An S.F. neighborhood has on the nation's lowest carbon footprints. It has almost nothing to do with the residents' choices," Nov. 17

2020 *Smart Cities Dive,* "High-income homes responsible for 25% more GHG: study," Nov. 21

2020 *Planetizen,* "One U.S. state boasts 33% fewer carbon emissions per capita than any other." Aug. 3

2020 *Associated Press,* "Rich Americans spew more carbon pollution at home than poor," Jul. 20. Story was syndicated by numerous high-impact news outlets including The Washington Post, The Guardian, The Los Angeles Times, and The Christian Science Monitor.

2020 *Gizmodo*, "McMansions will doom us all." Jul. 20

2020 *CNN*, "Wealthy American homes have carbon footprint 25% higher than low-income residences." Jul. 20

2020 *Thomson-Reuters*, "High household energy use could thwart U.S. emissions cuts, a study warns." Jul. 20

2020 *United Press International*, "Wealthier in the U.S. have larger carbon footprints, energy use survey shows." Jul. 20

2017 *Bloomberg,* "Urban agriculture won't save us from climate change." Jun. 21

2017 *Seeker,* "Urban farming isn't a game changer when it comes to carbon emissions." Jun. 22

Podcasts, Radio, and Video

2022 *AccuWeather*, "Ways to reduce your carbon footprint," Jan. 20 [Video Interview]

2021 Knowledge Archives, "Connecting the dots with supply chains," Feb. 25 [Podcast]

2020 Science Friday, "Three Missions to Mars," Jul. 24 [Podcast]

Conference Contributions

Presentations (* indicates presenting author is Benjamin Goldstein)

2022 Hawes J., Gounaridis D., Newell J., Goldstein B. & Limerick S. *Spatial metabolism modeling of sustainability, resilience, and justice tradeoffs: The case of urban agriculture*, American Geophysical Union (Fall Meeting). Chicago, Illinois. December 12

2022 Hawes J., Gounaridis D., Goldstein B., Newell J.P. *Understanding the multi-dimensional effects of urban agriculture at the city-scale: A study of the US and Europe*, American Association of Geographers 2022 Annual Meeting. New York City, New York. February 25 – March 1

2022 Chamanara S., Gounaridis D, Goldstein B. & Newell J.P. *Environmental justice of livestock supply chains in California,* American Association of Geographers 2022 Annual Meeting. New York City, New York. February 25 – March 1

2022 VanderWilde C., Goldstein B. & Newell J.P. *Do certification schemes foster supply chain embeddedness?,* American Association of Geographers 2022 Annual Meeting. New York City, February 25 – March 1

2021 Hawes J., Gounaridis D., Goldstein B. & Newell J. *A framework for multidimensional assessment of urban agriculture at the City-Scale,* 60th European Regional Science Association Congress. Virtual, August 24-27

2021 Caputa S., Hawes J., Dorr E, Goldstein B., Specht K., Blythe C., Cohen N., Fox-Kaemper R., Jean-Soro L., Lelièvе A., Manente V., Schoen V. & Poniży L. *How to measure the multiple benefits of urban agriculture: a review of the multi-criteria tools for the development of an UA index*, Third World Conference of the Society for Urban Ecology. Poznań, Poland, July 7-9

2021 *Goldstein B., Cho K., Gounaridis D. & Newell J.P. *Rubber and risk: Deforestation related to the export of natural rubber from Sri Lanka,* American Association of Geographers 2021 Annual Meeting. Seattle, Washington. April 7-11

2021 Chamanara S., Goldstein B. & Newell J.P. *Costco's Supply Chain and Environmental Justice in California,* American Association of Geographers 2021 Annual Meeting. Seattle, Washington. April 7-11

2021 Cho K., Gounaridis D., Goldstein B. & Newell J.P. *Deforestation associated with supply chains exporting avocados from Mexico to the United States,* American Association of Geographers 2021 Annual Meeting. Seattle, Washington. April 7-11

2021 VanderWilde C., Goldstein B. & Newell J.P. *Tackling Guatemalan Palm Oil from Producer to US Consumer,* American Association of Geographers 2021 Annual Meeting. Seattle, Washington. April 7-11

2021 J.P. Newell & Goldstein B.. *Why academics need to study the architecture of corporations,* American Association of Geographers 2021 Annual Meeting. Seattle, Washington. April 7-11

2020 Poniży L., Béchet B., Blythe C., Caputo S., Cohen N., Dorr E., Fox-Kämper R., Grard B., Goldstein B., Ilieva R., Jean-Soro L., Lelievre A., Newell J., Schoen V., Specht K., Spiżewski T., *An integrative approach to urban agriculture. The methodological framework of the FEW-meter project.* Dresden Nexus Conference. Dresden, Germany. Jun. 4

2019 *Goldstein B. & Newell J.P. *Linking Urban and Rural by Tracking Corporate Actors Across Space and Time,* American Association of Geographers 2019 Annual Meeting. Washington, DC. April 7

2018 Specht K., Grard B., Poniży L., Fox-Kämper R., Caputo S., Cohen N., Newell J., Jean-Soro L. & Goldstein B. *The FEW-meter: An integrative model to measure and improve urban agriculture, shifting it towards circular urban metabolism.* ESP Europe Regional Conference. San Sebastian, Spain. October 16

2017 *Goldstein B. *Assessing the Edible City*, 9th Conference for Industrial Ecology. University of Illinois at

Chicago, Chicago, Illinois. June 28

2014 *Goldstein B. *Urban 'Food-prints' and Urban Agriculture - Supplying Food in an Urbanizing World*, World Sustainable Building Conference 2014. Barcelona, Spain. October 29

2014 *Goldstein B. *Urban Agricultural Typologies and the Need to Quantify their Potential to Reduce a City's Environmental 'Foodprint'*, 5th NorLCA Biennial Case Symposium. Reykjavik, Iceland. October 2

Posters

2023 Goldstein B., Gounaridis D., & Newell J.P. *Carbon footprint of household energy use in the United States*, 11th Conference for Industrial Ecology. Leiden, Netherland. July 3

2023 Meyer F., Elliot T., Craig S., & Goldstein B. *A multi-scale model of the environmental impacts of low-carbon construction in Montreal*, 11th Conference for Industrial Ecology. Leiden, Netherland. July 2

2022 Goldstein B. *What is urban symbiosis?*, Gordon Research Conference on Industrial Ecology. Newry, Maine. June 12

2019 Specht K., Fox-Kämper R., Cohen N., Ilieva R., Grard B., Bechet B., Poniży, L., Caputo S., Schoen V., Newell J., Goldstein B. & Jean-Soro, L. *Urban Agriculture and the Food-Energy-Water-NEXUS: Comparison of Policy Documents of five Metropolitan Regions in Europe and the U.S.* AESOP-Sustainable Food Planning International Conference. Madrid, Spain. Nov. 8

2017 Goldstein B. & J.P. Newell *Firm-Centered Approaches to Industrial Ecology*, Gordon Research Conference on Industrial Ecology. Les-Diatribes, Switzerland. May 22

2016 Goldstein B., Fernandez J., Birkved M. & Hauschild M. *Testing the environmental performance of urban agriculture as a food supply in northern climates*, Gordon Research Conference on Industrial Ecology. Stowe, Vermont. June 24

2015 Goldstein B., Fernandez J., Birkved M. & Hauschild M. *Quantifying Urban Foodprints and Mitigation Opportunities*, 8th Conference for Industrial Ecology. Guildford, United Kingdom. July 8

2012 Goldstein B. *Application of LCA to Urban Metabolism as a Method for Gauging Urban Sustainability*, Society of Environmental Toxicology and Chemistry 18th LCA Case Study Symposium. Copenhagen, DK. November 26

Sessions Organized or Chaired (* indicates session chair was Benjamin Goldstein)

2022 **Environmental Justice of Production Networks, Value Chains, and Commodities [I,II,III]* American Association of Geographers 2022 Annual Meeting. Paper session organizer: Goldstein B. & Chamanara S. New York City, New York. April 7-11 February 25 – March 1. Three Sessions

2021 **The Corporation [I,II,III].* American Association of Geographers 2021 Annual Meeting. Paper session organizer: Goldstein B. & Chamanara S. Seattle, Washington. April 7-11. Three Sessions

2019 **Urban-rural linkages: theory, case studies and future [I,II].* American Association of Geographers 2019 Annual Meeting. Paper session organizer: Goldstein B. & Chamanara S. Washington, DC. April 7. Two Sessions

Invited Talks

Conferences

2022 *Environmental benefits of urban agriculture take time to accrue,* Ecological Society of America & Canadian Society for Ecology and Evolution 2022 Annual Meeting. Montreal, Quebec. August 16

2021 *Assessing the Edible City,* American Institute of Chemical Engineering 2nd Food-Energy-Water Conference. Berkeley, California. February 12

2020 *Data for Urban Sustainability: The Good, The Bad, and The Ugly,* Gordon Research Conference on Industrial Ecology (Cancelled due to Covid-19)

McGill University

2023 How to track corporations across space and time. Trottier Institute for Sustainability in Engineering and Design (TISED) Talk. February 22

2022 Bioresources and the city: What's the connection? Faculty of Agricultural and Environmental Sciences Homecoming. October 22

2022 *Greenwashing in "Sustainable" Production and Consumption.* Desautels Sustainability Network. February 10 [Virtual Panel]

2021 *Tracking Corporations Across Space and Time.* "GeoSpectives" lunch lecture at the Department of Geography. November 12

University of Michigan

2020 *The Carbon Energy Footprint of Household Energy Use in the United States.* Center for Sustainable Systems Board of Directors Meeting. October 8

2019 *Revealing Supply Chains to Increase Sustainability and Reduce Risk*, with Newell J.P. Center for Sustainable Systems Board of Directors Meeting. March 15

2019 *Revealing Supply Chains to Increase Sustainability and Reduce Risk*, with Newell J.P. MUSE Conference 2019. February 22

Technical University of Denmark

2015 *Testing the Assertion that Urban Agriculture is Sustainable*, DTU Sustain Conference 2019, December 17

2015 *Assessing the Edible City*, Guest Lecture for Sustainability and Life Cycle Assessment Undergraduate Course, Department of Civil Engineering, October 19

2014 *The Sustainability of Urban Agriculture from a Life Cycle Perspective*, Guest Lecture for Sustainability and Life Cycle Assessment Undergraduate Course, Department of Civil Engineering, October 19

Other Institutions

2022 *Sunk Carbon Costs of Cities,* Penn State Embodied Carbon Symposium 2022. University Park, Pennsylvania. November 28. (With Bhuvan Gummidi)

2022 *Agri-Food Supply Chains: Making Them Transparent and Sustainable*. Guest lecture at the Copenhagen Business School, September 12

2021 *Agri-Food Supply Chains: Making Them Transparent and Sustainable*. Guest lecture at the Copenhagen Business School, September 15

2021 *Spatially Resolved Urban Environmental Footprints: Novel Data in the US Context.* Guest seminar at the Indian Institute of Technology Bombay, Centre for Urban Science and Engineering, April 21

2020 *How to Track Corporations Across Space and Time*. Guest lecture at the Copenhagen Business School, November 3

Research Funding (Canadian Dollars Unless Noted)

Externally Funded

$76,200 *Advanced urban agriculture at the city-scale: Productive capacity and environmental performance.* Fond de recherche du Quebec – Nature et technologies (FRQNT) Établissement de la reléve professorale (English: Research Support for New Academics), 2023-2024
PI: Goldstein B.

$126,700 *Quantifying the impact of municipal organic waste management strategies on carbon footprint.* Environment and Climate Change Canada: Climate Action and Awareness Fund, 2022. Total Award Value: $2,221,200
PI: Clark G. Co-PI: Goldstein B.

$7,000 *Promise and Challenges of Indoor fruit production in cold climates.* Weston Family Foundation Spark Award, 2022. Total Award Value: $50,000
PI: Charles T. Co-PI: Goldstein B.

$180,000 *Sustainable Cities on an Interconnected Planet.* Natural Sciences & Engineering Research Council (NSERC) Discovery Grant, 2021-2026
PI: Goldstein B.

$12,000 *Sustainable Cities on an Interconnected Planet.* NSERC Discovery Grant-Launch Supplement, 2021-2026
PI: Goldstein B.

$313,049 US *The Sustainability Hoofprint of Cities - A Spatial Model to Assess Transboundary Urban Consumption.* National Science Foundation (NSF) Environmental Sustainability Program, 2018-2021.
PI: Newell J.P. Co-PI: Schmitt J.
Senior Personnel: Goldstein B. and Pelton R.

$234,590 US *The FEW-Meter – An Integrative Model to Measure and Improve Urban Agriculture, Shifting It Towards Circular Urban Metabolism*. Belmont Forum/NSF, 2018-2021.
PI: Newell J.P.
Senior Personnel: Goldstein B.

20,000 DKK *Assessing the Edible City.* Augustinus Fond (Denmark) Graduate Research Fellowship, 2014
PI: Benjamin Goldstein

20,000 DKK *Assessing the Edible City.* Reinhold Fund (Denmark) Jorck and Hustrus Fund in Support of Graduate Research, 2014
PI: Benjamin Goldstein

Internally Funded

$8,000 *Sustainability Education Fellow.*
Fellowship awarded to support designing a course with principles of sustainability at the center of the learning outcomes.
PI: Benjamin Goldstein

Teaching

Courses at McGill

Engineering Mechanics: Statics (Fall 2021-Present)
Department: Bioresource Engineering (Undergraduate)
Role: Instructor of Record

Foundational course on the concepts of solid body mechanics, equilibrium, and the application of vector forces and displacements to the solution of physical systems in static equilibrium. Completely overhauled the course to by streamlining the lectures and assignments to focus on core concepts in order to reduce student burnout and teaching assistant workload. Assessment methods: Quizzes, assignments, and written exams.

Bio-Environmental Engineering (Fall 2021-Present)
Department: Bioresource Engineering (Undergraduate)
Role: Instructor of Record
Examines the role of bioresources and engineering solutions to grand global environmental challenges including climate change and energy scarcity. Emphasized the trade-offs of different potential technologies (e.g. biofuels, solar energy) across environmental and social dimensions, and their political and economic implications. Assessment methods: Quizzes, written midterm exam, and group case study. Co-taught in 2021.

Bio-resource Engineering Seminar (Winter 2021-Present)
Department: Bioresource Engineering (Undergraduate and Graduate)
Role: Instructor of Record
Seminar where students present their research to their peers. They gain practice in presenting scientific concepts and in giving and receiving constructive feedback. Co-taught.

Courses at University of Michigan

Urban Sustainability (Fall 2018)
Department: Bioresource Engineering (Graduate)
Role: Instructor of Record
Multidisciplinary introduction to urban sustainability through the lenses of industrial ecology, urban political ecology, and urban ecology. The course provides students with the theoretical and methodological tools to analyze complex urban sustainability challenges. Students learn about a range of solutions to foster a sustainable urban future, ranging from localization of agriculture, to industrial symbiosis, to ecological restoration. Assessment methods: Written midterm, essays, and group case study.

Courses at the Technical University of Denmark

Introduction to Life Cycle Assessment (Fall 2014, Fall 2015, Fall 2016)
Department: Management Engineering (Graduate)
Role: Teaching Assistant

Supervision, Committee Participation, and Advising

Formal Supervision (indicates primary supervisor)*

Ph.D. Students

2026[Est.] Alireza Taghdisian*, Department of Bioresource Engineering, McGill University, *Advanced urban agriculture at the city scale: Productive potential and environmental performance*.

2023[Est.] Vincent Brousseau, Department of Bioresource Engineering, McGill University, *Towards Nutrient Efficient Cannabis Cultivation.* (Co-Supervisor).

Master's Students

2023 William Gagnon*, Department of Bioresource Engineering, McGill University, *Fighting Fire with Fire:* Decarbonizing Energy *in the Canadian North Using Pyrogenic Carbon Capture and Storage from Fire-Killed Trees*.

2023 Felicity Meyer*, Department of Bioresource Engineering, McGill University, *Carbon Implications of Mass-Timber Development in Future Montreal*.

2023[Est.] Estefany Cabanillas*, Department of Bioresource Engineering, McGill University, *Environmental Impacts of Advanced Controlled-Agriculture in Montreal.*

Graduate Researchers Supervised (non-thesis)

McGill University: Yash Mehta (Summer 2021), Malolan Rajagopal (Winter 2023)

Undergraduate Researchers Supervised

McGill University: Sadie MacDonald (Summer/Fall 2022, Recipient of NSERC Undergraduate Research Student Award), Maya Dwivedi-Leng (Winter 2022), Shimon Takagi (Fall 2022), Marianne Pominville (Fall 2022), Anouk Rhode (Fall 2021), Laurianne Roy (Summer/Fall 2021, Recipient of NSERC Undergraduate Research Student Award)

Bachelor's Honours Students

McGill University; Sadia MacDonald (Bioresource Engineering, '23)

Examination and Steering Committee Participation

Doctoral Examination Committee

2023 [Est.] Michael Babcock, Doctoral Candidate, Faculty of Agricultural and Environmental Sciences, McGill University. *MacCam: A spatially downscaled model to assess energy flows through Canadian Agriculture.*

2023 Calli VanderWilde, Doctoral Candidate, School for Environment and Sustainability, University of Michigan. *A Political-Industrial Ecology of Palm Oil from Guatemala.*

2022 Mohammad Reza Alizadeh, Doctoral Candidate, Faculty of Agricultural and Environmental Sciences, McGill University. *Development of a Multi-Scenario Multi-Objective Analysis Framework to Explore Optimal, Resilient and Robust Solutions in Coupled Human-Water Systems.*

2022 Kerstin Schreiber, Doctoral Candidate, Department of Geography, McGIll University. *Limits to local foodsheds: The roles of social and biophysical resources for mobilizing local food production capacity.*

2022 Sanaz Chamanara, Doctoral Candidate, School for Environment and Sustainability, University of Michigan. *Environmental Justice and Governance of Beef Supply Chains.*

2020 Joshua Sohn, Department of Management Engineering, Technical University of Denmark. Environmental Sustainability Assessment of Advanced Agricultural Waste Technologies and Agricultural Territories. [External Examiner]

Doctoral Advisory Board/Steering Committee

2022 Erica Dorr, AgroTech Paris. *Creation of a Simplified LCA Tool for Urban Agriculture*. [External Steering Committee Member]

2020 Thomas Eliot, Luxembourg Institute of Science and Technology. *Ecosystem Service Toolbox developed from multi-scale Integrated Modelling of Urban Metabolism.* [External Advisor]

Master's Thesis Co-Chair/Committee

2020 Kimin Cho, University of Michigan. *The influence of U.S. avocado demand on the environment and peoples of Michoacán, Mexico.*

2016 Leire Diez Larrea, Technical University of Denmark. *Management of urban nutrient cycles and sinks in the City of Copenhagen*.

2016 Saimonas Skurichinas, Technical University of Denmark. *Urban nutrient cycles and sinks in the City of Copenhagen.*

2014 Andreas Secher, Technical University of Denmark. *DGNB New Urban District Method in Sustainable Planning.*

Graduate Researchers Advised

Christian Noyce, University of Michigan. Spring 2019
Linnea Carver, University of Michigan. Fall 2018
Katherine Cunningham, University of Michigan. Fall 2018

Undergraduate Researchers Advised

University of Michigan: Emily Wolfe (Summer 2019), Lydia Whitbeck (Spring 2019), Jianella Macalino (Spring 2019)

Technical University of Denmark: Davide Casella (Bachelor's Thesis. 2016), Michael Reymann (Bachelor's Thesis. 2016), Cindy Jesperson (Bachelor's Thesis. 2014), Ida Christensen (Bachelor's Thesis. 2014)

Other Service and Membership

Invited Referee

Journal Manuscripts: Agronomy for Sustainable Development; Challenges for Sustainability; Current Opinions in Environmental Sustainability; Earth's Future; Ecological Economics; Economic Systems Research; Ecosystem Services; Environmental Research: Infrastructure and Sustainability; Environmental Research Letters; Environmental Science & Technology; Environmental Science & Policy; Global Environmental Change; Journal of Industrial Ecology; Journal of Cleaner Production; Nature Climate Change; One Earth; Organization & Environment; Resources, Conservation & Recycling; Science Advances; Science of the Total Environment; Sustainability; Sustainable Cities and Society.

Conference Proceedings: Procedia CIRP.

Industry Journals**:** The Bridge (United States National Academy of Engineering's Flagship Quarterly).
Grants: Alfred P. Sloan Foundation; Canada Foundation for Innovation.
Academic Review Panels: National Index on Agri-Food Performance (Canada)

Departmental Service as a Graduate Student

2014-2016 Head of Social Media and Public Outreach, Division for Quantitative Sustainability Assessment
2015-2016 Head of Graduate Student Society, Division for Quantitative Sustainability Assessment

Memberships

International Society for Industrial Ecology [2015-present]
American Association of Geographers [2019-present]
American Society of Agricultural and Biological Engineers [2022-present]
Ontario Society of Professional Engineers [2022-present] (seeking license)
Professional Engineers of Ontario (license application submitted) [2021-present]
Danish Society of Engineers [2012-2018]

Undergraduate Research Positions

2005 EyeTap Laboratory, Department of Electrical and Computer Engineering, University of Toronto. Supervisor: Prof. Steve Mann