

Luke William Johnston

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Diabetes epidemiologist, R user and developer, teacher of modern data science and analysis skills, and open science and reproducibility advocate. *Only showing most items **since 2019**. For full CV, see cv.lukewjohnston.com.*

Education

2013 – 2017	PhD in Nutritional Sciences, University of Toronto in Toronto, CA
2011 – 2013	MSc in Nutritional Sciences, University of Toronto in Toronto, CA
2005 – 2010	BSc in Kinesiology, University of Waterloo in Waterloo, CA

Positions held

2019 – present	DDA postdoctoral researcher, Steno Diabetes Center Aarhus in Aarhus, Denmark
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Teaching and curriculum planning and development

Teaching experience.

2020 – present	Lead instructor for Reproducible Research in R: An intermediate workshop on modern approaches and workflows to processing data (PhD and Postdocs), Danish Diabetes Academy in Denmark
2020 – present	Lead instructor for Reproducible Research in R: An introductory workshop on modern data analyses and workflows (PhD and Postdocs), Danish Diabetes Academy in Denmark
2019	Lead instructor for Software Carpentry Workshop (Anyone), Aarhus University in Aarhus, Denmark
2019	Lead instructor for Reproducible Quantitative Analyses and Workflows using R (PhD and Postdocs), German Institute of Human Nutrition Potsdam-Rehbrueke in Potsdam, Germany
2019	Lead instructor for Reproducible Quantitative Methods: Data analysis workflow using R (PhD and Postdocs), Danish Diabetes Academy in Denmark

Course planning.

2020 – 2021	Scientific program organizing committee for the Danish Diabetes Academy Postdoctoral Winter School, Danish Diabetes Academy in Denmark
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Curriculum development

1. **Luke W. Johnston**, Helene Bæk Juel, Bettina Lengger, Daniel R. Witte. 'roostools/r-cubed: Reproducible Research in R - An introductory workshop on modern data analyses and workflows'. (2020). URL: <https://r-cubed.roostools.org/>. DOI: [10.5281/zenodo.3921894](https://doi.org/10.5281/zenodo.3921894).
2. **Luke Johnston**, Omar Silverman-Retana, Andreas Eiset, Signe Storgaard. 'r-cubed: Reproducible Research in R - An Intermediate Workshop on Modern Approaches and Workflows to Processing Data'. (2020). URL: <https://r-cubed-intermediate.roostools.org/>. DOI: [10.5281/zenodo.4061900](https://doi.org/10.5281/zenodo.4061900).
3. **Luke W Johnston**, Daniel R Witte, João Santiago, Anna Schritz. 'Reproducible Quantitative Methods: Data analysis workflow using R'. (2019). URL: <https://dda-course.lwjohnst.com/>. DOI: [10.5281/zenodo.2603311](https://doi.org/10.5281/zenodo.2603311).
4. **Luke W Johnston**. 'acdcourse: Analyzing Cohort Datasets with R'. (2019). URL: <https://github.com/lwjohnst86/acdcourse>. DOI: [10.5281/zenodo.3247819](https://doi.org/10.5281/zenodo.3247819).
5. **Luke W Johnston**, Madeleine Bonsma-Fisher, Joel Ostblom, Ahmed Hasan, James Santangelo, Lindsay Coome, Lina Tran, Elliott Sales De Andrade, Sara Mahallati. 'UofTCoders/rcourse: Quantitative Methods in R for Biology'. (2019). URL: <https://uoftcoders.github.io/rcourse/>. DOI: [10.5281/zenodo.1117432](https://doi.org/10.5281/zenodo.1117432).

Awards and external funding

Showing all awards, excluding travel grants, during PhD and postdoc.

2019	Danish Diabetes Academy Postdoctoral Fellowship from Danish Diabetes Academy (DKK 1.8 million), Denmark
2017	Michael C. Archer Research Excellence Award from University of Toronto , Toronto, Canada
2017	Gordon Cressy Student Leadership Award from University of Toronto , Toronto, Canada
2014	New Investigator Award from International Society for the Study of Fatty Acids and Lipids , Stockholm, Sweden
2014	Doctoral Student Research Award from Canadian Diabetes Association (CAD 21000), Toronto, Canada
2014	Margaret and Nicholas Fodor Fellowship from University of Toronto (CAD 3000), Toronto, Canada

Dissemination activities

Publications since 2019 (H-index from Google Scholar: 5)

1. Shahan Yashpal, Angela D. Liese, Beatrice A. Boucher, Lynne E. Wagenknecht, Steven M. Haffner, **Luke W. Johnston**, Richard P. Bazinet, Marian Rewers, Jerome I. Rotter, Steve M. Watkins, Anthony J. Hanley. 'Metabolomic profiling of the Dietary Approaches to Stop Hypertension diet provides novel insights for the nutritional epidemiology of type 2 diabetes mellitus'. *British Journal of Nutrition* (2021). DOI: [10.1017/s0007114521003561](https://doi.org/10.1017/s0007114521003561).
2. **Luke Johnston**, Helene Juel, Bettina Lengger, Daniel Witte, Hannah Chatwin, Malene Christiansen, Anders Isaksen. 'r-cubed: Guiding the overwhelmed scientist from random wrangling to Reproducible Research in R'. *Journal of Open Source Education* (2021). DOI: [10.21105/jose.00122](https://doi.org/10.21105/jose.00122).
3. M. M. Broadley, A. Gonzalez-Franquesa, A. Jonsson, C. B. Christiansen, G. D. Carrasquilla, A. Mamidi, S. M. Ghiasi, H. B. Juel, S. Falk, M. S. Isidor, P. Aldiss, L. Gillberg, K. Carolo dos Santos, R. Sabaratnam, L. O. Huang, J. S. Quist, J. R. Knudsen, S. Poulsen, R. Quaranta, M. Tozzi, R. B. Mikkelsen, M. K. Andersen, M. Dall, A. B. Møller, M. H. Drag, S. Panahi, C. L. Lyons, L. Small, A. Altıntaş, P. Poursharifi, B. Osborne, A. K. Sarvari, **L. W. Johnston**, M. H. Solheim, I. M. Modvig, A. S. Husted, N. Z. Jespersen, E. L. Brown, E. Bak, A. Peluso, F. Finger, K. V. Grunddal, K. Rupa, H. T. Vistisen, J. B. Henningsen, T. Ma, M. Hauge Pedersen, K. Plucinska, S. L. Jepsen, G. Repasky. 'Next generation diabetes scientists shape global research culture'. *Acta Physiologica* (2020). DOI: [10.1111/apha.13455](https://doi.org/10.1111/apha.13455).
4. Omar Silverman-Retana, Adam Hulman, Jannie Nielsen, Claus T. Ekstrøm, Bendix Carstensen, Rebecca K. Simmons, Lasse Bjerg, **Luke W. Johnston**, Daniel R. Witte. 'Effect of familial diabetes status and age at diagnosis on type 2 diabetes risk: a nation-wide register-based study from Denmark'. *Diabetologia* (2020). DOI: [10.1007/s00125-020-05113-8](https://doi.org/10.1007/s00125-020-05113-8).
5. **Luke Johnston**, Madeleine Bonsma-Fisher, Joel Ostblom, Ahmed Hasan, James Santangelo, Lindsay Coome, Lina Tran, Elliott De Andrade, Sara Mahallati. 'A graduate student-led participatory live-coding quantitative methods course in R: Experiences on initiating, developing, and teaching'. *Journal of Open Source Education* (2019). DOI: [10.21105/jose.00049](https://doi.org/10.21105/jose.00049).
6. Ingrid D. Santaren, Richard P. Bazinet, Zhen Liu, **Luke W. Johnston**, John L. Sievenpiper, Adria Giacca, Ravi Retnakaran, Stewart B. Harris, Bernard Zinman, Anthony J. Hanley. 'The Distribution of Fatty Acid Biomarkers of Dairy Intake across Serum Lipid Fractions: The Prospective Metabolism and Islet Cell Evaluation (PROMISE) Cohort'. *Lipids* (2019). DOI: [10.1002/lipid.12185](https://doi.org/10.1002/lipid.12185).
7. Zhila Semnani-Azad, Philip W Connelly, **Luke W Johnston**, Ravi Retnakaran, Stewart B Harris, Bernard Zinman, Anthony J Hanley. 'The macrophage activation marker soluble CD163 is longitudinally associated with insulin sensitivity and β -cell function'. *The Journal of Clinical Endocrinology & Metabolism* (2019). DOI: [10.1210/clinem/dgz166](https://doi.org/10.1210/clinem/dgz166).
8. Sara Mahdavi, Antonio Bellasi, Karan Nagra, **Luke Johnston**, Paul Tam, Biagio Di Iorio, Tabo Sikaneta. 'Associations of Calcium from Food Sources versus Phosphate Binders with Serum Calcium and FGF23 in Hemodialysis Patients'. *Journal of Clinical Medicine* (2019). DOI: [10.3390/jcm8101680](https://doi.org/10.3390/jcm8101680).
9. Zhila Semnani-azad, **Luke W Johnston**, Christine Lee, Ravi Retnakaran, Philip W Connelly, Stewart B Harris, Bernard Zinman, Anthony J Hanley. 'Determinants of longitudinal change in insulin clearance: the Prospective Metabolism and Islet Cell Evaluation cohort'. *BMJ Open Diabetes Research & Care* (2019). DOI: [10.1136/bmjdr-2019-000825](https://doi.org/10.1136/bmjdr-2019-000825).

Books

1. Damien Irving, Kate Hertweck, **Luke Johnston**, Joel Ostblom, Charlotte Wickham. 'Research Software Engineering with Python'. *Taylor & Francis Ltd* (2021). URL: <https://merely-useful.tech/py-rse/>. ISBN: [0367698323](https://www.taylorfrancis.com/9780367698323).

R packages

2019	posterdown: Generate PDF Conference Posters Using R Markdown (contributor), CRAN
2016	prodigenr: Research Project Directory Generator (creator), CRAN
2014	broom: Convert Statistical Analysis Objects into Tidy Tibbles (contributor), CRAN
2016	carpenter: Build Common Tables of Summary Statistics for Reports (creator), CRAN
2016	mason: Build Data Structures for Common Statistical Analysis (creator), CRAN

Presentations (since 2020)

1. (Oral) **Luke W. Johnston**, Clemens Wittenbecher, Fabian Eichelmann. 'NetCoupler: Inferring causal pathways between high-dimensional metabolic data and external factors'. *Annual useR Conference in Virtual* (2021).
2. (Contributed) Hannah Chatwin, **Luke W Johnston**, Helene Bæk Juel, Bettina Lengger, Daniel R. Witte, Malene Revsbech Christiansen, Anders Aasted Isaksen. 'r-cubed: Guiding the overwhelmed scientist from random wrangling to Reproducible Research in R'. *Annual useR Conference in Virtual* (2021).
3. (Oral) **Luke W. Johnston**, Clemens Wittenbecher. 'NetCoupler: Inferring causal pathways between high-dimensional metabolic data and external factors'. *Annual Meeting of the Danish Epidemiological Society in Virtual* (2021).
4. (Oral poster) **LW Johnston**, C Wittenbecher, HT Vistisen, CC Dahm, DR Witte. 'The metabolic pathways between components of stature and HbA (1c): a causal structure learning approach in the UK Biobank'. *European Association for the Study of Diabetes Annual Meeting in virtual setting* (2020).
5. (Oral) **L. W. Johnston**, C. Wittenbecher. 'NetCoupler: Inferring causal pathways between high-dimensional metabolic data and external factors'. *IARC Nutritional Methodology and Biostatistics Group in Virtual* (2020).