Jennifer D. Russell

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ACADEMIC EXPERIENCE

Associate Professor of Sustainability and Circular Economy
Dept. of Sustainable Biomaterials, Virginia Tech, Blacksburg, VA, USA — August 2025 - Present

Assistant Professor of Sustainability and Circular Economy
Dept. of Sustainable Biomaterials, Virginia Tech, Blacksburg, VA, USA — August 2019 – July 2025

Lecturer in Sustainable Operations
MBA in Sustainability, Bard College, Annandale-on-Hudson, NY, USA — July 2018 - Present

EDUCATION

Rochester Institute of Technology, Rochester, NY, USA — August 2018
Doctor of Philosophy (Ph.D.), Sustainability

- Dissertation title: "*Market Transformation for Value-Retention Processes as a Strategy for Circular Economy*" Advisor: Nabil Z. Nasr
- Developed and co-authored UNEP International Resource Panel 2018 report "Redefining value – the manufacturing revolution: remanufacturing, refurbishment, repair, and direct reuse in the circular economy."

University of Toronto, Toronto, ON, Canada — May 2010
Master of Business Administration (M.B.A.), Concentration in Strategy

University of Waterloo, Waterloo, ON, Canada — May 2006
Honour's Bachelor of Environmental Studies (B.ES), Concentration in Environment and Business, Diploma in Environmental Assessment, Co-operative placement program

RESEARCH INTERESTS

- Environmental impact analysis and interpretation for design
- Dynamic production-consumption systems for sustainable products and technologies
- Market transformation strategies in support of circular economy and sustainability
- Value-chain, supply chain, and business model innovations for sustainability outcomes
- Social psychology, perceptions and attitudes towards sustainable products and technologies
- Socio-economic and techno-economic systems assessment
- Applied systems-perspectives to better inform market barriers assessments

SPONSORED RESEARCH / GRANTS

Sponsored Research: (Total: USD $3,032,221 | Direct Control: USD $729,286)

- **PI:** Total $94,350 | Direct Control: **$94,350** from *Retirement Unlimited Inc.* (RUI) (2021-2028).
  - Industry-funded project; integrated undergraduate research project and experiential learning via a rolling five-year collaboration with a VA-based organization. Undergraduate students are paid and earn academic credit to learn sustainability consulting and analytics in an applied, real-world context, engaging directly with organizational client; 15 undergraduate students involved between 2021 – 2023.

- **Co-PI:** Total $1,881,371 | Direct Control: **$299,997** from *U.S. National Science Foundation* (NSF) (2021 – 2025).
  - Conduct participant and stakeholder backcasting workshops focused on co-creation across upstream and downstream systems for the scaling of advanced polyurethane foam recycling technology and material markets.
  - Conduct material flow, technoeconomic, and additional quantitative analyses regarding the current-state stocks, flows, and transformations of polyurethane foam products.
- **PI:** Total $250,000 | Direct Control: **$250,000** from *U.S. National Science Foundation* (NSF) (2022-2024).
  - Develop an international network-of-networks connecting U.S. researchers and professionals working on sustainable production and consumption innovation with colleagues and collaborators around the world.
- **Co-PI:** Total $500,000 | Direct Control: **$29,997** from *U.S. National Institute of Standards & Technology* (NIST) (2022-2024).
  - The program, entitled "Exciting Students for Sustainability with Curriculum, Open-Access Resources, and Training" (ESSCORT), develops a transportable educational framework that integrates systems and futures thinking at the intersection of innovation and society coupled with plastics redesign across discipline-focused schools and professional societies of science and engineering.
- **Co-PI:** Total $74,500 | Direct Control: **$8,367** from *U.S. National Science Foundation* (NSF) (2022)
  - Supplementary funding for Research Experiences for Undergraduates (REU) as part of the pre-existing NSF project focused on polyurethane foam products. Engaged local underrepresented undergraduate students in empirical research and interactions with graduate research assistants.
- **PI:** Total $232,000 | Direct Control: **$46,575** from *Swedish Research Council* (FORMAS) (2019 – 2021).
  - Research into best practices in enabling repair of electronics and appliances, as well as remaining challenges/barriers to repair within context of circular economy and climate targets.

Other Funding: (Total: $53,116 | Direct Control: $27,072)

- **PI:** Total $4,892 | Direct Control: $4,892, Virginia Tech Pathways Grant Program (2021) (2021)
- **Co-PI:** Total $34,844 | Direct Control: $8,800, Howard Hughes Medical Institute (HHMI) Inclusive Excellence program (Summer 2021) – PI: A. Zink-Sharp
- **PI:** Total $6,690 | Direct Control: $6,690, Virginia Tech Institute for Society, Culture & Environment (ISCE) (2021)
- **PI:** Total $2,000 | Direct Control: $2,000, Virginia Tech College of Natural Resources & Environment Instructional Support Grant (Fall 2021).
- **PI:** Total $3,000 | Direct Control: $3,000, Virginia Tech Institute for Creativity, Arts and Technology (ICAT) Mini-SEAD Grant (2021)
- **PI:** Total $2,000 | Direct Control: $2,000, Virginia Tech College of Natural Resources & Environment Instructional Support Grant (Spring 2020).

AWARDS

- *Excellence in Teaching Award*, Virginia Tech, 2022
- Finalist, *Industry Studies Association Dissertation Award*, 2018
- *Outstanding Service Award for International Students*, Rochester Institute of Technology, 2017
- *Fram Award for Excellence in Applied Critical Thinking*, Rochester Institute of Technology, 2016
- *Service Award*, Golisano Institute for Sustainability, Rochester Institute of Technology, 2016

PUBLICATIONS

Current Google Scholar Profile includes (07/012025):

Metric	Count/Score
Citations	1075
h-Index	16

The following is a list of the refereed publications I have published, and my specific contribution (please note that "*" indicates a supervised student author):

Peer-reviewed journal publications

1) Ali, A.*, **Russell, J.D.** [in-press]. Accelerating the transition to wood-based circular bioeconomy: A literature review of current state, trends, opportunities, and priorities for future research. *Current Forestry Reports.*
2) Galappaththi, E.K., **Russell, J.D.**, Dolby, M.*, Newsome, T.* and Jayasekara, S.M.*, 2025. Status of global accumulation of marine debris. *Global Environmental Change*, *95*, p.103058. https://doi.org/10.1016/j.gloenvcha.2025.103058 [Conceptualization, analysis, co-author]
3) Moore, E. A., Bhuwalka, K., Zhu, A., Chen, Y., Tang, P., **Russell, J. D.**, Kirchain, R., Roth, R. (2025). Addressing decarbonization strategies through a game theory perspective. *Resources, Conservation and Recycling*, *215*, https://doi.org/10.1016/j.resconrec.2025.108137 [Co-author, reviewer]
4) Xu, Z., Sun, D., Xu, J., Yang, R., **Russell, J. D**., & Liu, G. (2024). Progress and challenges in polystyrene recycling and upcycling. *ChemSusChem*, *17*(17), e202400474. https://doi.org/10.1002/cssc.202400474 [Co-author, reviewer]
5) Abadian, M.*, **Russell, J.D**. (2024). Exploring Backcasting as a Tool to Co-create a Vision for a Circular Economy: A Case Study of the Polyurethane Foam Industry . *Journal of Circular Economy*, *2(2).* https://doi.org/10.55845/UZXQ5070 [Reviewer, editor, co-author]
6) Kim, S.*, Horvath, L., **Russell, J.D.**, Park, J. (2023). Sustainable and Secure Transport: Achieving Environmental Impact Reductions by Optimizing Pallet-Package Strength Interactions during Transport. *Sustainability*.15(17):12687. doi: 10.3390/su151712687. [Reviewer, editor, corresponding author].
7) **Russell, J.**, Huff, K.*, & Haviarova, E. (2023). Evaluating the Cascading-Use of Wood Furniture: How Value-Retention Processes Can Contribute to Material Efficiency and Circularity. *Journal of Industrial Ecology*. 27(3), 856-867. doi:10.1111/jiec.13284. [Conceptualization, modeling, author, editor]
8) **Russell, J. D.,** Svensson-Hoglund, S.*, Richter, J. L., Dalhammar, C., & Milios, L. (2023). A matter of timing: system requirements for repair and their temporal dimensions. *Journal of Industrial Ecology*, *27*(3), 845-855. doi: 10.1111/jiec.13284. [Conceptualization, modeling, author, editor]
9) Richter, J. L., Svensson-Hoglund, S.*, Dalhammar, C., **Russell, J. D.,** & Thidell, Å. (2023). Taking stock for repair and refurbishing: A review of harvesting of spare parts from electrical and electronic products. *Journal of Industrial Ecology*, *27*(3), 868-881. doi:10.1111/jiec.13315. [Co-author, reviewer and editor].
10) **Russell, J. D.**, & Nasr, N. Z. (2023). Value-retained vs. impacts avoided: the differentiated contributions of remanufacturing, refurbishment, repair, and reuse within a circular economy. *Journal of Remanufacturing*, *13*(1), 25-51. doi:10.1007/s13243-022-00119-4. [Conceptualization, modeling, analysis, author, editor].

11) Okorie, O., **Russell, J.,** Cherrington, R., Fisher, O., & Charnley, F. (2023). Digital transformation and the circular economy: Creating a competitive advantage from the transition towards Net Zero Manufacturing. *Resources, Conservation and Recycling*, *189*. doi:10.1016/j.resconrec.2022.106756. [Conceptualization, modeling, author, editor].

12) Okorie, O., **Russell, J**., Jin, Y., Turner, C., Wang, Y., & Charnley, F. (2022). Removing barriers to Blockchain use in circular food supply chains: Practitioner views on achieving operational effectiveness. *Cleaner Logistics and Supply Chain*, *5*. doi:10.1016/j.clscn.2022.100087. [Author, analysis, editor, revisions].

13) Svensson-Hoglund, S*., **Russell, J. D.,** & Richter, J. L. (n.d.). A Process Approach to Product Repair from the Perspective of the Individual. *Circular Economy and Sustainability*. doi:10.1007/s43615-022-00226-1. [Co-author, conceptualization, reviewer, editor].

14) Hull, C. E., **Russell, J. D.,** & Kukar-Kinney, M. (2022). Making Sustainability a Core Competency: Consumer Response to Sustainable Innovative Products. *Sustainability (Switzerland)*, *14*(18). doi:10.3390/su141811688. [Conceptualization, author, modeling, analysis, reviewer, editor, revisions].

15) Kim, S.*, Horvath, L., **Russell, J. D.**, & Park, J. (2021). Investigation of the Effect of Pallet Top-Deck Stiffness on Corrugated Box Compression Strength as a Function of Multiple Unit Load Design Variables. *Materials*, *14*(21), 15 pages. doi:10.3390/ma14216613. [Reviewer and editor].

16) Svensson-Hoglund, S.*, Richter, J. L., Maitre-Ekern, E., **Russell, J. D.**, Pihlajarinne, T., & Dalhammar, C. (2021). Barriers, enablers and market governance: A review of the policy landscape for repair of consumer electronics in the EU and the U.S. *journal of cleaner production*, *288*, 18 pages. doi:10.1016/j.jclepro.2020.125488. [Co-author and editor].

17) Okorie, O., Obi, M., **Russell, J.**, Charnley, F., & Salonitis, K. (2021). A triple bottom line examination of product cannibalisation and remanufacturing: A review and research agenda. *SUSTAINABLE PRODUCTION AND CONSUMPTION*, *27*, 958-974. doi:10.1016/j.spc.2021.02.013. [Data collection, analysis, co-author, and editor].

18) Okorie, O., Charnley, F., **Russell, J.**, Tiwari, A., & Moreno, M. (2021). Circular business models in high value manufacturing: Five industry cases to bridge theory and practice. *BUSINESS STRATEGY AND THE ENVIRONMENT*, *30*(4), 1780-1802. doi:10.1002/bse.2715. [Co-author, analyst, and editor].

19) Dalhammar, C., Wihlborg, E., Milios, L., Richter, J. L., Svensson-Höglund, S.*, **Russell, J.**, & Thidell, Å. (2021). Enabling Reuse in Extended Producer Responsibility Schemes for White Goods: Legal and Organisational Conditions for Connecting Resource Flows and Actors. *Circular economy and sustainability*, *1*(2), 671-695. doi:10.1007/s43615-021-00053-w. [Co-author, analyst, and editor].

20) Moore, E. A., **Russell, J. D.**, Babbitt, C. W., Tomaszewski, B., & Clark, S. S. (2020). Spatial modeling of a second-use strategy for electric vehicle batteries to improve disaster resilience and circular economy. *RESOURCES CONSERVATION AND RECYCLING*, *160*, 11 pages. doi:10.1016/j.resconrec.2020.104889. [Data collection, modeling, analysis, co-author, and editor].

Book chapters

1) **Russell, J.D.**, Okorie, O. (2023). Accelerating the adoption of circular economy: An extended diffusion model for understanding consumer perceptions of circular economy products. In *The Routledge Handbook of Catalysts for a Sustainable Circular Economy*. Routledge. (pp. 420-443). DOI: 10.4324/9781003267492.

2) **Russell, J.**, Svensson, S.*, Moore, E., Novich, L., & Donaghey, F. (2023). Circular Economy Through a Fixing City Mindset. In *Place-Based Sustainability Research and Design Extending Pathways for Ecological Stewardship* (pp. 218-248). Newcastle-upon-Tyne: Cambridge Scholars Publishing. ISBN: 1-5275-9081-X

3) Okorie, O., **Russell, J. D.**, & Salonitis, K. (2023). Embodied Energy Assessment of the Remanufacturing Cleaning Process: A Proposed MRIO-Methodology Framework. In *Smart Innovation, Systems and Technologies* Vol. 338 SIST (pp. 398-402). DOI:10.1007/978-981-19-9205-6_39

4) **Russell, J.D.,** Nasr, N. (2021). "Value-Retention Processes within the Circular Economy". In *Remanufacturing: Fundamentals, Operations and Engineering.* John Wiley & Sons, New York.

Papers in refereed conference proceedings

1) *Svensson-Hoglund, S., Nordbeck, P., Richter, J. L., & **Russell, J. D.** (2023). The Role of Repair as a Resource for Resilience: Case Studies on the Effects of Repair Outcomes of Essential Products. In K. Niinimäki, & K. Cura (Eds.), *Proceedings of the 5th PLATE Conference* (pp. 1051-1057). Aalto University https://aaltodoc.aalto.fi/handle/123456789/122687?show=full [Conceptualization, editor]

2) Okorie, O., **Russell, J.D**., Salonitis, K. (2023). Embodied Energy Assessment of the Remanufacturing Cleaning Process: A Proposed MRIO-Methodology Framework. In: Scholz, S.G., Howlett, R.J., Setchi, R. (eds) Sustainable Design and Manufacturing. SDM 2022. Springer Nature, Singapore. DOI: 10.1007/978-981-19-9205-6_39. [Co-author, analyst, editor].

3) **Russell, J.**, Moore, E., Hindman, D., Hauptman, J., & McGinnis, S. (2022). Sustainable From the Start: Activating Sustainability Priorities Within Early-Stage Product Design Education. In International Symposium for Sustainable Systems and Technology. Pittsburgh, PA. [Conceptualization, analysis, author, presenter].

4) Okorie, O., **Russell, J.D.** (2021). "Exploring the Risks of Blockchain and Circular Economy Initiatives in Food Supply Chains: A Hybrid Model Practice Framework". 8th International Conference on Sustainable Design and Manufacturing. Split, Croatia, 15-17 Sep. DOI: 10.1007/978-981-16-6128-0_28. [Co-author, analyst, and editor].

5) Huff, K.*, Haviarova, E., **Russell, J.D.** (2021) "Evaluating the Inclusion of Circular Economy Practices in the Wood Furniture Industry." 64th International Convention of the Society of Wood Science and Technology. Flagstaff, AZ, 04-06 August. (pp. TBD). [Co-author, analyst, and editor].

6) Kim, S.*, **Russell, J.D.,** Horvath, L. (2021) "Characterizing the environmental impacts of common e-commerce packaging options for sustainability-minded stakeholders." International Association of Packaging Research Institutes. Virtual, 17 Jun. (pp. TBD). [Co-author, analyst, and editor].

7) **Russell, J.D.,** Svensson-Hoglund, S.*, Richter, J., Milios, L., Dalhammar, C. (2021). "The temporal dimensions of product repair and a policy mix for upscaling circular economy repair activities." Proceedings of the 4th PLATE Conference. University of Limerick, Limerick, 26-27 May. (pp. TBD). [Lead author, data collection, modeling, analyst, and editor]

8) **Russell, J.D.,** Huff, K.*, Haviarova, E. (2021). "The value of cycling regenerative materials: A case of cascading-use of wood furniture within the circular economy." Proceedings of the 4th PLATE Conference. University of Limerick, Limerick, 26-27 May. (pp. TBD). [Lead author, data collection, modeling, analyst, and editor]

9) Richter, J. Frolov, T., Dalhammar, C., **Russell, J.D**., Svensson-Hoglund, S.*, Thidell, A. (2021). "Reaping what WEEE sow: the potential for harvesting spare parts for repair and refurbishment." Proceedings

of the 4th PLATE Conference. University of Limerick, Limerick, 26-27 May. (pp. TBD). [Co-author and editor]

10) Okorie, O., **Russell, J.D.,** Charnley, F. (2020) "The reuse economy for digital technologies: A rapid review." Proceedings of the Conference of the International Society for the Circular Economy 2020, University of Exeter, Exeter, 6-7 July (pp. TBD). [Data collection, modeling, analyst, and editor]
11) Dalhammar, C., Wihlborg, E., **Russell, J.D**., Luth Richter, J., Milios, L, Thidell, A., and Svensson-Hoglund, S.* (2020) "Legal and organizational issues when connecting resource flows and actors: reuse and producer responsibility schemes for white goods." Proceedings of the Conference of the International Society for the Circular Economy 2020, University of Exeter, Exeter, 6-7 July (pp. TBD). [Co-author, analyst, and editor]
12) Svensson-Hoglund, S.*, **Russell, J.D**., Luth Richter, J., Dalhammar, C. (2020) "A Future of Fixing: Upscaled Repair Activities envisioned using a Circular Economy Repair Society System Framework." Proceedings of the Electronics Goes Green 2020+ Conference, Technische Universität Berlin, Berlin, Sep 01 (pp. 434-441). [Data collection, modeling, analyst, corresponding author, and editor]
13) **Russell, J.D.,** Nasr, N. (2019). "Quantifying the Contribution of Value-Retention Processes (VRPs) to Resource Efficiency within the Circular Economy." Conference Proceedings of Engineering Sustainability 2019, University of Pittsburgh, Pittsburgh, 9 – 11 April (pp. TBD). [Lead author, data collection modeling, analyst, and editor]
14) **Russell, J.D.** (2019). "Market Transformation for Circular Economy: Integrating Eco-Innovation and Consumer Decision-Making in the Presence of Perceived Risk." Conference Proceedings of Engineering Sustainability 2019, University of Pittsburgh, Pittsburgh, 9 – 11 April (pp. TBD). Mascaro Center for Sustainable Innovation. [Lead author, data collection modeling, analyst, and editor]

Papers and posters presented at industry/agency/professional meetings

1) Abadian, M.*, **Russell, J.D.** "Pathways to Circular Economy – A co-created vision by and for the polyurethane foam industry". Presentation at the *2023 Polyurethanes Technical Conference*, San Antonio, USA. September 25-27, 2023. [Reviewer]
   - The Center for polyurethanes Industry (CPI) is part of the American Chemistry Council. The CPI Technical Conference is one of the largest professional annual gatherings for members of the polyurethanes industry, in the world. [Lead author and presenter]
2) Abadian, M.*, **Russell, J.D.** "Co-creating a vision for the circular economy:
   A case study of the polyurethane foam industry via backcasting". Presentation at the *Product Lifetimes and the Environment 2023 Conference*, Helsinki, Finland. May 26-June 1, 2023. [Presenter and Reviewer]
3) Abadian, M.*, **Russell, J.D.** "Pathways to Circular Economy – A co-created vision by and for the polyurethane foam industry. Presentation at the *2023 Polyurethanes Technical Conference*, San Antonio, USA. September 25-27, 2023. [Reviewer]
   - The Center for polyurethanes Industry (CPI) is part of the American Chemistry Council. The CPI Technical Conference is one of the largest professional annual gatherings for members of the polyurethanes industry, in the world. [Lead author and presenter]
4) **Russell, J.D.**, Jin, K. "Roadmap for a Sustainable Future: Applying Systems-Science to the Visioning of a Circular Polyurethane Foam Economy". Presentation at the *2022 Polyurethanes Technical Conference*, National Harbor, USA. October 3-5, 2022.
   - The Center for polyurethanes Industry (CPI) is part of the American Chemistry Council. The CPI Technical Conference is one of the largest professional annual gatherings for members of the polyurethanes industry, in the world. [Lead author and presenter]
5) **Russell, J.D.** "Circular Economy Principles for the Value Chain." *Seminar Presentation at The Ellen*

MacArthur Foundation's Procurement Design Sprint, London, UK. October 21, 2019. [Lead author and presenter].

- The Ellen MacArthur Foundation (EMF) is the founding entity behind the mobilization and adoption of the Circular Economy by policy-makers and industry decision-makers. The EMF published the seminal report defining and presenting analysis of circular economy and its potential in 2013.
- I worked with the EMF to establish Virginia Tech as a Network University Partner, and a Profiled University in 2020, showcasing industrial ecology, sustainability, and circular economy initiatives and programming at Virginia Tech. This affiliation remains online, published at https://ellenmacarthurfoundation.org/virginia-polytechnic-institute-and-state-university.

Other papers and reports

1) Svensson-Höglund, S.*, Thorslund, M.L., Richter, J.L., Olsson, A.R., Jensen, C.L., Quist, J., **Russell, J.** and Dalhammar, C., 2022. *Futures of fixing: exploring the life of product users in circular economy repair society scenarios*. International Institute for Industrial Environmental Economics, Lund University.
2) Nasr, N., **Russell, J.D.** 2018 "Re-defining Value: The Manufacturing Revolution: Remanufacturing, Reuse, Repair, and Refurbishment in the Circular Economy." International Resource Panel, United Nations Environment Programme. [Data collection, modeling, analysis, corresponding author, and editor]
3) Nasr, N., **Russell, J.D.** 2018. "Re-defining Value: The Manufacturing Revolution: Remanufacturing, Reuse, Repair, and Refurbishment in the Circular Economy. A Summary for Policy Makers." International Resource Panel, United Nations Environment Programme. [Data collection, modeling, analysis, corresponding author, and editor]
4) Nasr, N., **Russell, J.D.** 2018. "Re-defining Value: The Manufacturing Revolution: Remanufacturing, Reuse, Repair, and Refurbishment in the Circular Economy. A Summary for Business Leaders." International Resource Panel, United Nations Environment Programme. [Data collection, modeling, analysis, corresponding author, and editor]

TEACHING AND ADVISING

Graduate Student Academic Advising and Mentoring Responsibilities

Role	Name	Degree	Status/Degree Date
Chair	Umashankar, Viverjita	M.S. Forest Products (SBIO)	• Degree awarded (May 2022)
	Cricco, Isabella	M.S. Forest Products (SBIO)	• Degree awarded (Dec. 2023) • *Outstanding GTA Award, SBIO 2022
	Svensson-Hoglund, Sahra	Interdisciplinary Ph.D. (SBIO)	• Preliminary Exam passed • Proposal Defense approved • *Two (2) first-author peer-reviewed journal publications • *Three (3) non-first-author peer-reviewed journal publications • *Seven (7) international conference presentations • Funded through ICTAS Fellowship

	Abadian, Mona	Ph.D., Forest Products (SBIO)	• Plan of Study approved • Research Plan approved • Committee formed • Preliminary Exam planned • *Accepted into Interfaces of Global Change IGEP (Spring 2023) • *Three (3) international conference presentations • *One (1) first-author peer-reviewed journal publication • Funded through NSF Project
	Ali, Atif	Ph.D., Forest Products (SBIO)	• Plan of Study approved • Research Plan approved • Preliminary Exam planned • *Accepted into Interfaces of Global Change IGEP (Spring 2024) • *Two (2) international conference presentations • Funded through GTA and external scholarships.
	Upchurch, Audra	Interdisciplinary Ph.D. (SBIO)	• Part-time student • Plan of Study approved • IPhD Research Proposal approved by Graduate School • Committee Formed • Self-funding
Committee Member	Seemungal, Richard	M.S.., Architecture	• 1st year student • Accepted into Biobuild IGEP (Fall 2023) • Self-funding
	Asad, Tahla Bin	Interdisciplinary Ph.D.	• 1st year student • IPhD Research Proposal approved by Graduate School • Committee Formed
	Hassan, Abid	M.S. Forest Products (SBIO)	• 1st year student • Committee formed • Awarded 1st Place at SBIO Research Symposium in Spring 2024 • Passed Preliminary Exam
	Alamri, Uthman	Ph.D., Architecture	• Passed Prelim. Exam
	Alviri, Hajar	Ph.D., Social & Ecological Sustainability **University of Waterloo*	• Passed proposal defense
	Huff, Kendria	M.S. Forest Products **Purdue University*	• Degree awarded (May 2021)

	Kim, Saewhan	M.S. Forest Products (SBIO)	• Degree awarded (Aug. 2022)
	Grizzard, Daniel	M.S. Forest Products (SBIO)	• Degree awarded (May 2023)
	Marggraf, Gregory	M.S. Architecture	• Degree awarded (Aug. 2023)

Other Student Academic Advising and Mentoring Responsibilities

Role	Name(s)	Project / Initiative	Status / Duration
Undergraduate project Advisor	Mikita, Kevin	Global Change Center (GCC)-Multicultural Academic Opportunities Program (MAOP) Scholarship	• Funded undergraduate research project on plastic packaging sustainability • Draft manuscript for peer-review journal publication written • 2021 – 2022
Graduate Fellowship Advisor	Bharadwaj, Esha	Global Sustainability Scholars (GSS) Program Fellow	• Completed Fall 2023
	Lew, Kayla	Global Sustainability Scholars (GSS) Program Fellow	• Completed Fall 2024
Undergraduate Research Team(s) Advisor	Zimmerman, Cole Chukwuege, Ugochi Gruspier, Hannah	Junior Sustainability Consulting UG Research Project (2022-2023)	• Completed Spring 2023
Undergraduate Research Team(s) Advisor	Calabretta, Nico Flannagan, Ray Van Marcke de Lummen, Alex Chakravartula, Sree Chen, Ryan Simmons, Matt Taylor, Nolan Zhang, Amy Bolen, Kayla Barrese, Joe	Junior Sustainability Consulting UG Research Project (2023-2024)	• Completed Spring 2024

Undergraduate Research Team(s) Advisor	Van Marcke de Lummen, Alex Gaudet, Addie Poyner, Amy Yerneni, Avekra Kipper, Callie Nunez-Candelario, Bryan Zebrowski, Hayden Meadows, Cameron Quinones, Lily Hester, Simone	Junior Sustainability Consulting UG Research Project (2024-2025)	• Completed Spring 2025 • Recipients of CNRE Dennis Dean Undergraduate Research Symposium Award 2025

Summary of Course and Program Development and Status

	Courses		
	Undergraduate	**Graduate**	**Approved?**
SBIO 1114 – Sustainable Future through Circular Economy	X		Spring 2020 (As Special Study) Spring 2021
SBIO 2504 – Circular Economy Analytics (Pathways 5A)	X		Fall 2020
SBIO 5344 – Industrial Ecology		X	Spring 2022
UNR 2004 – Introduction to Urban Natural Resources	X		Spring 2023
	Major or Degree Programs		
	Undergraduate	**Graduate**	**Approved?**
B.S. (UNR) in Urban Natural Resources Management (CNRE)	X		*In Review* – University
B.S. (SBIO) in Sustainability Systems Science (Major)	X		*Approved* – University Spring 2025

Summary of courses taught and student evaluations

Year / Term	**Course #**	**Course Title**	**Enrolled**	**Response**	**Overall Effectiveness**	**Dept. Average**	**College Average**
2020 / S	SBIO 1984	Introduction to Circular Economy	14	10	**6 / 6**	5.44 / 6	5.18 / 6
2020 / F	SBIO 2504	Circular Economy Analytics	17	12	**5.75 / 6**	5.36 / 6	5.2 / 6
2021 / S	SBIO 1984	Sustainable Future through Circular Economy	6	5	**5.8 / 6**	5.42 / 6	5.44 / 6

2021 / F	SBIO 2504	Circular Economy Analytics	17	14	**5.57 / 6**	5.47 / 6	5.57 / 6
2022 / S	SBIO 1114	Sustainable Future through Circular Economy	19	16	**5.75 / 6**	5.42 / 6	5.44 / 6
2022 / S	SBIO 5984	SS: Industrial Ecology	5	3	**5.33 / 6**	5.42 / 6	5.44 / 6
2022 / F	SBIO 2504	Circular Economy Analytics	27	24	**5.58 / 6**	5.39 / 6	5.35 / 6
2023 / S	SBIO 1114	Sustainable Future through Circular Economy	22	17	**5.88 / 6**	5.42 / 6	5.38 / 6
2023 / S	SBIO 5984	SS: Industrial Ecology	7	4	**5.75 / 6**	5.42 / 6	5.38 / 6
2023 / S	GRAD 5134	Interfaces of Global Change: 1st Seminar	22	12	**5.75 / 6**	5.58 / 6	5.46 / 6
2023 / F	SBIO 2504	Circular Economy Analytics	34	31	**5.77 / 6**	5.45 / 6	5.50 / 6
2023 / F	GRAD 5134	Interfaces of Global Change: 2nd Seminar	20	14	**5.71 / 6**	5.31 / 6	5.23 / 6
2024 / S	GRAD 5134	Interfaces of Global Change: 3rd Seminar	20	13	**5.54 / 6**	5.38 / 6	5.20 / 6
2024 / S	SBIO 1114	Sustainable Future through Circular Economy	39	13	**5.85 / 6**	5.46 / 6	5.39 / 6
2024 / S	SBIO 5344	Industrial Ecology	7	5	**6 / 6**	5.46 / 6	5.39 / 6
2024 / F	SBIO 2504	Circular Economy Analytics	30	22	**5.5 / 6**	5.39 / 6	5.43 / 6
2025 / S	SBIO 1114	Sustainable Future through Circular Economy	48	n/a	**n/a**	n/a	n/a

PROFESSIONAL DEVELOPMENT AND TRAINING

Time	PDN /Training Course Name
Summer 2024	AAC&U Teaching to Increase Diversity and Equity in STEM (TIDES) Institute – VT Team Delegate
Summer 2022	Summer Institute ’22 (Virginia Tech)
Summer 2021	Summer Institute ’21 (Virginia Tech)
Fall 2020	VirTual Safe Zone 101 (2pm Section) (Virginia Tech)
Fall 2020	Fall Lab Planning Workshop (Virginia Tech)
Summer 2020	Course Design Clinic (Virginia Tech)
Summer 2020	Summer Diversity Summit (Virginia Tech)
Summer 2020	Summer Course Design Clinic (Virginia Tech)
Spring 2020	Course Design Clinic (Virginia Tech)
Fall 2019	Models and Methods for Implementing Group Work into Courses (Virginia Tech)
Fall 2019	Pathways Data Discussion: Digging into the Core Concept Data to Inform Improvement (Virginia Tech)
Fall 2019	Pathways Assessment: How to Prepare and Make the Most of the Process (Virginia Tech)

INTERNATIONAL RESEARCH COLLABORATIONS

FORMAS / CREACE collaboration with IIIEE (Sweden). Project “*Creating the CE repair society - policies, networks and people*” (CREACE) was funded by the Swedish Research Council (FORMAS) in Fall 2019 and initiated in Spring 2020. The project is scheduled to end Nov. 30, 2021. VT received a sub-award for this work, formalizing a research relationship with Lund University, and Russell serving as PI. From this work, the following outputs have resulted: two (2) papers published in peer-reviewed journals, four (4) conference papers, one (1) paper under-review for a peer-reviewed journal, and one (1) on-going research initiative with the IIIEE team on a project extension proposal (Phase 2) to FORMAS for 2022.

Exeter Center for Circular Economy. Circular Economy & Digital Technologies. This collaboration started out informally through a conference paper and has since formalized into a series of papers and on-going collaborative research with colleagues at the Exeter Center for Circular Economy (ECCE) at the University of Exeter. The ECCE was designated as the UK Research & Innovation National Interdisciplinary Circular Economy Research Hub (CE Hub), connecting and coordinating Centers for Circular Economy across five UK universities. From this collaboration the following outputs have resulted: two (2) papers published in peer-reviewed journals, one (1) conference paper, one (1) paper under-review for a peer-reviewed journal, and one (1) on-going research initiative with the ECCE team, with planned manuscript submission in December 2021.

Project TRACK-STAR.EU (EU-USA) Circular Economy & Biodiversity Working Group. TRACK-STAR is co-funded by the Delegation of the European Union to the United States of America. It will facilitate Transatlantic Civil Society Dialogues between civil society organizations, trade associations, think tanks,

and academics from Europe and the United States. This 18-month transatlantic endeavor was initiated to develop policy ideas to stimulate transatlantic cooperation by building relationships and seeking improved understanding, as a policy incubator. This collaboration was initiated in Spring 2021, and no outputs have resulted yet; however, key connections with colleagues at James Madison University, and the University of Virginia have been established and discussions regarding proposal collaboration have been started.

Systems of Sustainable Consumption and Production (SSCP) Knowledge Action Network (KAN). The SSCP KAN is a global network of researchers and practitioners interested in ways that sustainable consumption and production systems can be created, nurtured, and contribute to a more sustainable world. The SSCP KAN aims to contribute to enhancing global equity, reducing unequal access to resources, and enabling all people on the planet to lead flourishing lives within biophysical constraints. The SSCP KAN works to advance a more systemic SCP approach, encouraging and enabling an urgent transformation in theory and practice to SCP systems. This collaboration was initiated in Spring 2021, and has led to two proposal submissions to the National Science Foundation's program Accelerating Research through International Network-to-Network Collaborations (AccelNet).

PRESENTATIONS

Invited keynote presentations and lectures

1) **Russell, J.D.** "End of Waste? Circular Economic Substitutions / New Raw Materials". Panelist at the *Building a Planetary Solution: Regenerative Biomaterial Strategies for a Planet in Crisis Symposium*, Yale University, New Haven, USA. 20-22 February, 2025.
2) **Russell, J.D.** "Repair Centre: Exploring Right to Repair and Value-Retention Processes to Drive Circularity". *Canadian Circular Economy Summit*, Montreal, Canada. 8-10 April, 2025.
3) **Russell, J.D.** "Risks, Compliance & Opportunities: The Changing Landscape for Plastics". Presentation at the *Virginia Recycling Association Annual Conference*, Blacksburg, USA. May 23, 2023.
4) **Russell, J.D.** "Science storytelling for the SDGs with Springer Nature and the UN Sustainable Developments Solutions Network." Invited Storyteller at *Science Summit at the 78th United Nations General Assembly*. In-person. September 13, 2023. New York City, U.S.A.
5) **Russell, J.D.** "Circular Economy 101: Wood Products & the Build Environment." *Invited Lecture at Yale School of Architecture*. Online. February 24, 2021.
6) **Russell, J.D.** "Circular Economy 101: Wood Products & the Build Environment." *Invited Lecture at Yale School of Architecture*. Online. February 12, 2020.
7) **Russell, J.D**. "Circular Economy for the Wood Products Industry." *Seminar Presentation at the Consortium for Research on Renewable Industrial Materials (CORRIM) Circular Economy Workshop*, Seattle WA. January 21, 2020.
8) **Russell, J.D.** "Circular Economy Principles for the Value Chain." *Seminar Presentation at The Ellen MacArthur Foundation's Procurement Design Sprint*, London, UK. October 21, 2019.

Professional meetings, panels, workshops, etc., led or organized

1) **Program Chair**, International Symposium of Sustainable Systems & Technology (ISSST) 2025 Conference. June 15-19, 2025. Minneapolis, USA.
   - The ISSST is one of the longest-running research conferences on sustainability and the intersection of technology, policy, and behavior. It is an international community of engineers, scientists, professionals, and educators, sharing cutting-edge research and forming interdisciplinary teams for future collaboration.

2) **Program Chair**, International Symposium of Sustainable Systems & Technology (ISSST) 2024 Conference. June 17-20, 2024. Baltimore, USA.
3) **Workshop Lead & Facilitator**, Pathways to Action - Shaping a Collaborative Research Agenda at the Interface of Sustainable Consumption and Sustainable Production. Hosted at *Brazilian Academy of Management Annual 2023 Conference*. September 25 - 29, 2023. Sao Paolo, Brazil.
   - Workshop supporting research activities for NSF AccelNet Design project, VR(Ex)Change.
   - Attendees: 30 (anticipated)
4) **Workshop Lead & Facilitator**, Pathways to Action - Shaping a Collaborative Research Agenda at the Interface of Sustainable Consumption and Sustainable Production. Hosted at *SCORIA-ERSCP-WUR Conference*. July 5 - 8, 2023. Wageningen, Netherlands.
   - Workshop supporting research activities for NSF AccelNet Design project, VR(Ex)Change.
   - Attendees: 8
5) **Workshop Lead & Facilitator**, Pathways to Action - Shaping a Collaborative Research Agenda at the Interface of Sustainable Consumption and Sustainable Production. Hosted at *Sustainability Research & Innovation Conference*. June 26-July 1, 2023. Panama City, Panama.
   - Workshop supporting research activities for NSF AccelNet Design project, VR(Ex)Change.
   - Attendees: 18
6) **Workshop Lead & Facilitator**, Pathways to Action - Shaping a Collaborative Research Agenda at the Interface of Sustainable Consumption and Sustainable Production. Hosted at *International Symposium of Sustainable Systems & Technology (ISSST) 2023 Conference*. June 12-15, 2023. Fort Collins, USA.
   - Workshop supporting research activities for NSF AccelNet Design project, VR(Ex)Change.
   - Attendees: 25
7) **Conference Coordinator**, International Symposium of Sustainable Systems & Technology (ISSST) 2023 Conference. June 12-15, 2023. Fort Collins, USA.
   - Research presentations: 123
   - Attendance: 136 people
8) **Workshop Lead & Facilitator**, Industry Backcasting Workshop: NSF-Emerging Frontiers in Research and Innovation – Circular Economy for Polyurethane Foams. Nov. 3-4, 2022. Tempe, USA.
   - Hybrid format, with 43 participants (14 virtual, 29 in-person)
   - Designed and facilitated backcasting process that generated qualitative and quantitative data sets
   - Analysis of workshop data has resulted in three conference presentations and one manuscript submitted to a peer-reviewed journal.

OUTREACH AND EXTENSION CONTRIBUTIONS

- **Virginia Tech's Curious Conversation's Podcast (Recorded)** – Williams, T. (Host). (15 Apr 2024). [Russell, J., podcast interview]. In *Jennifer Russell talks about circular economies*. Curious Conversations Podcast. https://news.vt.edu/articles/2024/04/research-curiousconversation-russell.html . Interview to talk about the concept of a circular economy as a shift away from the linear economy, which follows a take-make-dispose model, and instead focuses on reducing waste and reusing materials**.**
- **Untangling Circularity Podcast (Recorded)** – Novich, L, and Power, C. (Hosts) (29 Feb 2024). [Russell, J., podcast interview]. In *Repair Across Industries.* Untangling Circularity Podcast. https://www.listennotes.com/podcasts/the-untangling/repair-across-industries-3R7yq5KOe_8/ . Interview on the role of repair in sustainability and circular strategies, and how this can be taught and incorporated into classroom sustainability education.

- **WDBJ7 Television Interview (Live)** – *Eco-friendly reminders offered for Christmas*. 12/22/2023. Interview with Here @ Home program on sustainability considerations, environmental impacts, and options for an eco-friendly holiday footprint. https://www.wdbj7.com/2023/12/22/eco-friendly-reminders-christmas/
- **Fox 5 DC Interview (Live) –** *Sustainable Tailgating*. 09/22/2023. Short television interview regarding the environmental impacts of tailgating and what participants can do to reduce their impact.
- **KCBS Radio Interview (Recorded)** – *Eco-Friendly Tailgating*. 08/31/2023. Short radio interview regarding environmental impacts of tailgating and what participants can do to reduce their impact.
- **WDBJ7 Television Interview (Recorded)** – *Sustainable Tailgating*. 08/28/2023. Short television interview regarding the environmental impacts of tailgating and what participants can do to reduce their impact.
- **WHRO Documentary Interview (Recorded)** – *Spotlight Earth: Environmental Science*. 08/15/2023. Interview with Spotlight Earth series host about career paths, research, and emerging science in the areas of sustainable biomaterials, industrial ecology, and sustainability.
- **ABC (WJLA) DC Interview (Live)** – *Every day can be Earth Day*. 04/01/2023. Short television interview regarding environmental impacts in the news, and everyday actions that people can take to reduce their carbon footprint.
- **National Geographic –** *A Better Path for Plastics: A Virtual Ideas Exchange.* 03/03/2021. Served as one of four panelists in a moderated session as part of a larger National Geographic Panel series, which will result in a National Geographic publication. The panel focus was on primary and secondary plastics markets, within circular economy and recycling systems. Link to the event: https://www.nationalgeographic.com/better-path-for-plastic?cmpid=org=ngp::mc=social::src=linkedin::cmp=sp_milliken::add=li20210524sponsored-sponsoredmilliken::rid=
- **American Association for the Advancement of Science (AAAS) Annual Meeting 2021 –** *Sustaining a Passion for Sustainable Materials: From Molecules to Manufacturing*. 02/08/2021. Served as panel moderator for expert live panel session at AAAS Annual Meeting and produced three (3) Research Spotlight videos that were also presented at AAAS 2021 Annual Meeting. Collaborators: Long, T., Beers, K., Korley, L., Hillmyer, M., Laymen, J., and Konig, C.
- **WVTF Radio IQ Interview (Recorded) –** *After pandemic, re-purpose instead of recycling?* 06/08/2020. Interview with Robbie Harris on circular economy options and interests arising mid-COVID-19 pandemic. Link to broadcast: https://www.wvtf.org/post/after-pandemic-re-purpose-instead-recycling#stream/0
- **Sierra Club Magazine –** *Will Circular Economy Save the Planet?* 12/23/2020. Interviewed and quoted contributor to SIERRA Magazine cover story (January 2021 publication) exploring Circular Economy history, current state, and cautions. Quoted alongside major thought leaders in sustainable production and consumption (e.g., W. Stahel, R. Geyer, and W. McDonough). Link to online article: https://www.sierraclub.org/sierra/2021-1-january-february/feature/will-circular-economy-save-planet.

UNIVERSITY / COLLEGE / DEPARTMENT / STUDENT SERVICE

- **Chair**, (*College*), *Faculty Association – Student Policies and Affairs Committee* (SPAC) in College of Natural Resources and Environment. 2025 – Present.
- **Member,** *(University), University Mission Initiative (UMI) Committee on Funding Doctoral Research.* 2025 – Present.

- **College Faculty Representative**, (*University*), College of Natural Resources and Environment Faculty, *Commission on Undergraduate Studies and Policies* (CUSP). 2024 – 2027.
- **Senior Fellow**, (*University*) *Curriculum Committee***,** Interdisciplinary Graduate Education Program (IGEP) in Interfaces of Global Change (IGC). 2024-2025 academic year.
- **Chair,** *(University) Curriculum Committee***,** Interdisciplinary Graduate Education Program (IGEP) in Interfaces of Global Change (IGC). 2023-2024 academic year.
- **Co-Chair,** *(University) Curriculum Committee,* Interdisciplinary Graduate Education Program (IGEP) in Interfaces of Global Change (IGC) – 2022-2023 academic year.
- **Member,** *(University) Curriculum Committee,* Interdisciplinary Graduate Education Program (IGEP) in Interfaces of Global Change (IGC). 2021 – Present.
- **Member**, (*College*), *Faculty Association – Student Policies and Affairs Committee* (SPAC) in College of Natural Resources and Environment. 2024 – 2027
- **Member**, (*College*), *Faculty Association – Academic Resources Committee* (ARC) in College of Natural Resources and Environment. 2025 - 2027
- **Member,** *(Department) Search Committee* – Collegiate Faculty Member in Industrial Ecology – Fall 2022 – Summer 2023.
- **Member,** *(College), Faculty Association Diversity, Equity & Inclusion (DEI) Committee*, Fall 2021 – Summer 2024.
- **Member,** (*College) Degree Development Committee,* B.S. in Urban Natural Resources, Fall 2020 – Present.
- **Member,** *(Department) Curriculum Committee*, Fall 2022 - Present
- **Member,** *(Department) Strategic Planning Committee* – Spring 2020 – Present
- **Lead,** *(Department) Undergraduate Recruitment* – Fall 2020 – Fall 2023
- **Member,** *(Department) New SBIO Major Development Committee***,** B.S., Major in Sustainable Systems Science, 2021 – Present
- **Member,** *Sustainable Biomaterials Department Team,* SBIO Howard Hughes Medical Institute (HHMI) Inclusive Excellence, Spring 2021 – Summer 2024.
- **Member-at-Large,** *CNRE Faculty Association Diversity, Equity & Inclusion Committee* – Fall 2021 – Summer 2024.
- **Advisor,** *SBIO Graduate Student Organization,* Spring 2023 - Present
- **Advisor**, *SBIO Undergraduate Student Club*, Spring 2021 – Fall 2023
- **Lead,** *SBIO Student Belonging Assessment & Improvement,* Spring 2021
- **Guest Speaker**, *Student Environmental Coalition,* Spring 2020; Fall 2020

SERVICE TO PROFESSION AND FIELD

- **Member,** *Technical Advisory Board*, BOTTLE Consortium, National Renewable Energy Laboratory (NREL), 2025 – Present.
- **Co-Chair**, *Consortium for Research into Renewable Industrial Materials* (CORRIM), 2025 – Present.
- **Member,** *Standards Steering Committee, Cradle-to-Cradle Product Innovation Institute* (C2CPII), 2021 – Present.

- **Member,** *Circular Economy Working Group*, Systems of Sustainable Consumption and Production Knowledge Action Network (SSCP KAN), FutureEarth, 2021 – Present.
- **Co-chair,** *Technical Interest Group (TIG) – Circular Economy*, Forest Products Society (FPS), 2023 – 2025.
- **Appointed Member**, *Plastic Waste Prevention Advisory Council*, Commonwealth of Virginia, 2021 – 2023.