

EDUCATION

- Ph.D. Engineering & Public Policy**, Carnegie Mellon University, Pittsburgh, PA Aug 2011 – Aug 2016
Thesis: Using Vigilance to Quantify Human Behavior for Phishing Risk
Advisor: Baruch Fischhoff
- B.S. Engineering: Systems**, Franklin W. Olin College of Engineering, Needham, MA Aug 2006 – May 2010

ACADEMIC EXPERIENCE

- Assistant Professor**, Engineering Management & Systems Engineering Aug 2018 – Present
Missouri University of Science & Technology, Rolla, MO

WORK EXPERIENCE

- Science & Technology Policy Fellow**, Solar Energy Technologies Office Nov 2016 – Jun 2018
U.S. Department of Energy, Washington, D.C.
- Research Engineer/Scientist I**, Shipboard Science Support Group May 2010 – Jul 2011
Department of Oceanography, University of Washington, Seattle, WA

AREA OF SPECIALIZATION

socio-technical systems, human machine interfaces, technology adoption, risk management, decision support, participatory research

SUMMARY OF ACTIVITIES

Research Funding

I lead multi-sector, cross-disciplinary, stakeholder-centered teams for problem-oriented research.

- 10 Awarded External Grants (5 as PI)
- Total Funding: \$4M; Shared Credit: \$1.5M

Publications

As expected in interdisciplinary work, I publish in multiple disciplines to reach a wide range of audiences.

- Peer Reviewed Journal Articles (at S&T): 14 accepted/published
- Peer Reviewed Conference Proceedings (at S&T): 12 accepted/published
- h-index: 8 (SCOPUS), 10 (Google Scholar) as of April 2023

Teaching

- Redeveloped 2 out of 4 courses taught at S&T
- Average CET Score: 3.39 (out of 4)

My research quantifies the human part of complex socio-technical systems to improve decision-making for:

1. **Human-Machine Teams:** For high-risk decisions, human decision-makers need to understand how and when to trust AI recommendations. Participatory research methods support efforts to design effective decision support, which are experimentally tested in the lab before moving toward field tests.
 - AI in Transplant Healthcare, see funding (EF10, EF8, EF7, EF5) and publications (J18, J11, C16, C14, C13, C9, C8)
 - Biased AI in Hiring, see funding (IF4)
 - Bot Detection, see publication (J12)
2. **Infrastructure Transitions:** Individuals and organizations struggle to decide which technologies or projects to implement, particularly in the context of rapid technological change (and high uncertainty). Quantitative and qualitative impact evaluations provide inputs to models and simulations.
 - Rural Broadband, see funding (EF6, EF1) and publications (J21, J20, J19, J17, C10, C7, C6, C5)
 - Renewable Energy, see funding (EF4, EF3) and publications (J15, J14, J13, J10, J9, C15)
 - Fully-Mobile Radiation Oncology, see funding (IF3, IF2) and publications (J16, C12)

My teaching philosophy emphasizes project-based learning that has real-world relevance and builds a portfolio. I strive to (1) center student-directed learning, (2) have public-facing outputs, and (3) encourage students to engage with the world beyond the classroom.

- Received industry funding (IF5) for ergonomics assessment project, *Human Factors*, 2022
- Partnered with local non-profit organizations to write public-facing papers and create videos on recent energy system issues, *Energy and Sustainability Management Engineering*, 2020 – Present

SCHOLARLY CONTRIBUTIONS

Authors include ¹student author (*if advised by me, ^if undergraduate) and ²corresponding author.

Working Papers

- (J22) Hanson, E.^{1*}, Canfield, C.², Fikru, M., & Heeter, J. (revise and resubmit). State-Level Trends in Renewable Energy Procurement via Distributed versus Utility-Scale Procurement. *Renewable Energy*.
<https://ssrn.com/abstract=4148363>
- (J23) Fikru M. G.² & Canfield, C. (under review). Choosing Both/And: Encouraging Green Energy Purchases in Community Choice Aggregation. *Energy Policy*. <https://ssrn.com/abstract=4048222>
- (J24) Heatherly, M.^{1*}, Baker, D. A. & Canfield, C.² (under review). Don't touch that dial: Psychological reactance, transparency, and user acceptance of smart thermostat setting changes. *PLOS ONE*.
- (J25) Kenny, R.^{1,2}, Fischhoff, B., Davis, A., & Canfield, C. (revise & resubmit). Improving Social Bot Detection Through Aid and Training. *Human Factors*.
- (J26) Miller, Z. J.¹, O'Brien, C.², Canfield, C., & Sullivan, L. (revise & resubmit). Show-Me resilience: Assessing and reconciling expert perceptions of climate resilience in rural Missouri. *Environmental Management*.
- (J27) Reynolds-Kueny, C.², Price, A.^{1*}, & Canfield, C. (revise & resubmit). Measure Twice, Change Once: Using Simulation to Support Change Management in Rural Healthcare Delivery. *Advances in Health Care Management*.
- (J28) Subramanian, H. V.^{1*}, Canfield, C.², Shank, D. B., & Kinnison, M.^{1*^} (under review). Combining Uncertainty Information with AI Recommendations Supports Calibration with Domain Knowledge. *Journal of Risk Research*.
- (J29) Agarwal, A.^{1*}, Canfield, C., & Fikru, M. (under review). Role of Greener Default Options on Consumer Preferences for Renewable Energy Procurement. *Applied Energy*.

Peer-Reviewed Journal Articles

- (J21) Valentín-Sívico, J.^{1*}, Canfield, C.², Low, S. A., & Gollnick, C. (2023). Evaluating the Impact of Broadband Access and Internet Use in a Small Underserved Rural Community. *Telecommunications Policy*, 47(4), 102499. <https://doi.org/10.1016/j.telpol.2023.102499>
- (J20) Valentín-Sívico, J.^{1*}, Canfield, C.² & Egbue, O. (2022). Push them forward: Challenges in intergovernmental organizations' influence on rural broadband infrastructure expansion. *Government Information Quarterly*, 39(4), 101752. <https://doi.org/10.1016/j.giq.2022.101752>
- (J19) Canfield, C.², Low, S. A., Gollnick, C., & Davis, D. (2022). Integrating Research and Extension to Improve Community Participation in Broadband Projects. *Choices: A publication of the Agricultural & Applied Economics Association*, 37(3), 1-7. <https://www.choicesmagazine.org/choices-magazine/theme-articles/making-it-count-applying-science-to-support-universal-broadband/integrating-research-and-extension-to-improve-community-participation-in-broadband-projects>
- (J18) Elder, H.^{1*}, Canfield, C.², Shank, D. B., Rieger, T., & Hines, C.^{1*^}. (2022). Knowing When to Pass: The Effect of AI Reliability in Risky Decision Contexts. *Human Factors*.
<https://doi.org/10.1177/00187208221100691>
- (J17) Kryszkiewicz, P.², Canfield, C., Bhada, S. V., & Wyglinski, A. M. (2022). A Systems Approach for Solving Inter-Policy Gaps in Dynamic Spectrum Access-Based Wireless Rural Broadband Networks. *IEEE Access*, 10, 21165-25174. [10.1109/ACCESS.2022.3156106](https://doi.org/10.1109/ACCESS.2022.3156106)
- (J16) Price, A.^{1,2*}, Canfield, C., Hugo, G., Kavanaugh, J., Henke, L., Laugeman, E., Samson, P., Reynolds-Kueny, C., & Cudney, E. (2022). Techno-Economic Feasibility Analysis of a Fully-Mobile Radiation Oncology System using Monte Carlo Simulation. *Journal of Clinical Oncology – Global Oncology*, 8, e2100284.

- (J15) Gao, X.², Canfield, C.², Tang, T.², Hill, H.^{1a}, Higman, M.¹, & Cornwell, J.¹ (2022). Encouraging Voluntary Government Action via a Solar-Friendly Designation Program to Promote Solar Energy in the U.S. *Proceedings of the National Academy of Sciences*, 119(11), 1-9.
- (J14) Fikru, M.², Atherton, J.^{1a}, & Canfield, C. (2022). Cost-Reflective Dynamic Electricity Pricing for Prosumers. *The Electricity Journal*, 35(1), 107075.
- (J13) Fikru, M. G.² & Canfield, C. (2022) Demand for Renewable Energy via Green Electricity versus Solar Installation in Community Choice Aggregation. *Renewable Energy*, 186, 769-779.
- (J12) Kenny, R.^{1,2}, Fischhoff, B., Davis, A., Carley, K., & Canfield, C. (2022). Duped by Bots: Why Some are Better Than Others at Detecting Fake Social Media Personas. *Human Factors*.
- (J11) Threlkeld, R.¹, Ashiku, L.¹, Canfield, C.², Shank, D., Schnitzler, M., Lentine, K., Axelrod, D., Battineni, A. C. R.¹, Randall, H., Dagli, C. (2021). Reducing Kidney Discard with Artificial Intelligence Decision Support: The Need for a Transdisciplinary Systems Approach. *Current Transplantation Reports*, 8, 263-271.
- (J10) Morgan, J.^{1*} & Canfield, C.² (2021). Comparing Behavioral Theories to Predict Consumer Interest to Participate in Energy Sharing. *Sustainability*, 13(14), 7693.
- (J9) Fikru, M.² & Canfield, C. (2020). A Generic Economic Framework for Electric Rate Design with Prosumers. *Solar Energy*, 211, 1325-1334.
- (J8) Canfield, C.², Fischhoff, B., & Davis, A. (2019). Better Beware: Comparing Metacognition for Phishing and Legitimate Emails. *Metacognition and Learning*, 14(3), 343-362.
- (J7) Canfield, C.² & Fischhoff, B. (2018). Setting Priorities in Behavioral Interventions: An Application to Reducing Phishing Risk. *Risk Analysis*, 38(4), 826-838.
- (J6) Canfield, C.², Fischhoff, B., & Davis, A. (2017). Quantifying Phishing Susceptibility for Detection and Behavior Decisions. *Human Factors*, 58(8), 1158-1172.
- (J5) Canfield, C., Bruine de Bruin, W.², & Wong-Parodi, G. (2017). Perceptions of Electricity Use Communications: Effects of Information, Format, and Individual Differences. *Journal of Risk Research*, 20(9), 1132-1153.
- (J4) Canfield, C.², Klima, K., & Dawson, T. (2015). Using Deliberative Democracy to Identify Energy Policy Priorities. *Energy Research & Social Science*, 8, 184-189.
- (J3) Wong-Parodi, G.², Bruine de Bruin, W., & Canfield, C. (2013). Effects of Simplifying Outreach Materials for Energy Conservation Programs that Target Low-Income Households. *Energy Policy*, 62(1), 1157-1164.
- (J2) Krishnamurti, T.², Davis, A. L., Wong-Parodi, G., Wang, J., & Canfield, C. (2013). Creating an in-home display: Experimental evidence and guidelines for design. *Applied Energy*, 108(1), 448-458.
- (J1) Canfield, C. & Zastavker, Y. V.² (2009). Faculty on Integrated Project-Based Learning. *Academic Exchange Quarterly*, 13(1), 100-107.

Peer-Reviewed Conference Proceedings

- (C16) Threlkeld, R.^{1,2}, Ashiku, L.¹, Dagli, C., Dzieran, R.¹, Canfield, C., Lentine, K., Schnitzler, M., Marklin, G., Rothweiler, R., Speir, L., & Randall, H. (2023). AI-Enabled Digital Support to Increase Placement of Hard-to-Place Deceased Donor Kidneys. *American Journal of Transplantation*. (extended abstract published from *American Transplant Congress*)
- (C15) Davis, A.¹, Long, S.², & Canfield, C. (2022). Key Factors for Energy Portfolio Transitions in Island Nations. *Proceedings of the American Society for Engineering Management*. **Merritt Williamson Best Conference Paper Award**
- (C14) Ashiku, L.^{1,2}, Threlkeld, R.¹, Dagli, C., Schnitzler, M., Canfield, C., Lentine, K., & Randall, H. (2022). Donor Disposition AI Model to Predict Transplant for Recovered Deceased Donor Kidneys. *American Journal of Transplantation*, 22(suppl 3), 652-653. (extended abstract published from *American Transplant Congress*)
- (C13) Ashiku, L.^{1,2}, Threlkeld, R.¹, Canfield, C., & Dagli, C. (2022). Identifying AI Opportunities in Donor Kidney Acceptance: Incremental Hierarchical Systems Engineering Approach. *IEEE Systems Conference (SysCon)*, pp. 1-8, doi: 10.1109/SysCon53536.2022.9773875.
- (C12) Price, A.^{1,2*}, Canfield, C., Hugo, G., Kavanaugh, J., Henke, L., Laugeman, E., Samson, P., Kueny, C., & Cudney, E. (2021) Techno-economic Feasibility Analysis of a Fully-Mobile Radiation Oncology System using Monte Carlo Simulation. *International Journal of Radiation Oncology, Biology, Physics* (abstract

published from *American Society for Radiation Oncology*, 9% acceptance rate) **Highlighted in session for top-rated abstracts**

- (C11) Laughton, S.², Gingerich, D., Narra, S. P., & Canfield, C. (2021). From Student Organization Leadership to Excelling at Tenure-service Requirement. *Proceedings of the American Society for Engineering Education*.
- (C10) Bhada, S. V.², Canfield, C., & Wyglinski, A. (2021). A Transdisciplinary Socio-Technical Systems Approach: Wireless Solutions for the Digital Divide. *Proceedings of the IEEE Systems Conference 2021*.
- (C9) Schnitzler, M. A.², Dagli, C., Canfield, C., Dzebisashvili, N., Varma, C., Axelrod, D., Lentine, K., Ouseph, R., & Randall, H. (2020). Using Artificial Intelligence Tools for Identification of High Risk Transplant Recipients for Focused Management. *American Journal of Transplantation*, 20(suppl 3), 283–284. (extended abstract published from *American Transplant Congress*)
- (C8) Subramanian, H. V.^{1*}, Canfield, C.², Shank, D. B., Andrews, L.^{1**}, & Dagli, C. (2020) Communicating Uncertain Information from Deep Learning Models in Human Machine Teams. *Proceedings of the American Society for Engineering Management*.
- (C7) Valentín-Sívico, J.^{1,2*}, Canfield, C. & Egbue, O. (2020). Rural Access to Industry 4.0: Public Sector Management of Broadband. *Proceedings of the Institute of Industrial & Systems Engineers*.
- (C6) Legaspi, J.¹, Canfield, C., Gill, K.¹, Bhada, S., & Wyglinski, A.² (2020). Integrated Agent-Based Model for Broadband Resource Allocation Analysis. *Proceedings of the IEEE Vehicular Technology Conference*.
- (C5) Canfield, C.², Egbue, O., Hale, J.¹, & Long, S. (2019). Opportunities and Challenges for Rural Broadband Infrastructure Investment. *Proceedings of the American Society for Engineering Management*.
- (C4) Canfield, C.², Davis, A., Fischhoff, B., Forget, A., Pearman, S., & Thomas, J. (2017). Replication: Challenges in Using Data Logs to Validate Phishing Detection Ability Metrics. *Proceedings of the Symposium on Usable Privacy and Security (SOUPS)*. (open data and code in <https://osf.io/6dknx/>)
- (C3) Canfield, C., Strachota, B. & Zastavker, Y. V.² (2011). Self-Directed Learning Contention: Faculty and Student Views. *Proceedings of the American Society for Engineering Education (ASEE) Annual Meeting, USA*.
- (C2) Canfield, C. & Zastavker, Y. V.² (2010). Achievement Goal Theory: A Framework for Implementing Group Work and Open-Ended Problem Solving. *Proceedings of the ASEE/IEEE Frontiers in Education Conference, USA*.
- (C1) Canfield, C. & Zastavker, Y. V.² (2009). Mathematics and Physics Faculty Conceptions of Teaching in a First-Year Integrated Project-Based Engineering Curriculum. *Proceedings of the American Society for Engineering Education (ASEE) Annual Meeting, USA*. **3rd Best Paper in First Year Programs Division**

Reports

- (R5) Canfield, C. (2022). OVERCOME: A Systems Approach to Scaling Rural Co-op Efforts to Expand the Fiber Edge Executive Summary. Available at: <https://www.maximizewmo.org/broadband-project-overcome>
- (R4) National Academies of Sciences, Engineering, and Medicine. (2021). *Space radiation and astronaut health: Managing and communicating cancer risks*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/26155>.
- (R3) Canfield, C., Gao, X., Rai, V., Tang, T., Hill, H.¹, Higman, M.¹, Cornwell, J.¹, & Oostendorp, M.¹ (2021). SolSmart Evaluation Research Insights. Available at: <https://solsmart.org/resources/solsmart-evaluation-research-insights/>
- (R2) Denkler, S., Luppino, T., Gupta, L., Shannon, K., Boots, B., McCarty, M., Canfield, C., & Prewitt, W. (2020) Report of June 1, 2020 Workshop: Bringing Broadband to a Missouri Community. Available at: <https://mobroadband.org/wp-content/uploads/sites/44/2020/07/WORKSHOP-REPORT-FINAL.pdf>
- (R1) Wiser, R., Dargouth, N., Hoen, B., Barbose, G., Seel, J., Rai, V., Beck, A., Sekar, A., Reeves, D. C., Funkhouser, E., O’Shaughnessy, E., Sigrin, B., & Canfield, C. (2018). Diffusion of Innovations: Interplay of Social, Economic, Technological, and Policy Drivers in the Solar Industry. Technical Brief, Lawrence Berkeley National Laboratory. Available at: <https://www.osti.gov/biblio/1477405>

PRESENTATIONS

Invited Talks

- (IT8) 2022. Joint with M. Fikru. Choosing Both/And: Encouraging Green Energy Purchases in Community Choice Aggregation. Silicon Valley Clean Energy, Online.
- (IT7) 2022. Joint with X. Gao. Evaluating the SolSmart Program: Does Encouraging Voluntary Government Action Impact the Solar Market? Evaluation Community of Practice, DOE Office of Energy Efficiency and Renewable Energy, Online.
- (IT6) 2021. Joint with D. Baker. Human Factors in Manufacturing. Partnership to Enhance Innovation, Resilience and Agility in Missouri's Manufacturers, University of Missouri Extension, Online.
- (IT5) 2021. Transitioning the Energy Sector to Low Carbon Sources. International Visitor Leadership Program by the U.S. Department of State, World Affairs Council of St. Louis, Energy and Cybersecurity: A Project for Panama, Online.
- (IT4) 2021. Decision Science for Infrastructure Systems. The University of Tennessee Knoxville, Industrial & Systems Engineering Graduate Seminar, Online.
- (IT3) 2020. Energy Research at Missouri S&T. Midwest Energy Policy Series: Economic Development & Infrastructure, Missouri Energy Initiative, Online.
- (IT2) 2020. Decision Science for Infrastructure Systems. University of Missouri - St. Louis, Online.
- (IT1) 2018. The Future of the Grid: Policy, Technology, and Market Changes. Papers We Love Conference, St. Louis, MO. <https://youtu.be/qzfv1JrhQGo>

Conference Presentations Without Proceedings

- (CP29) 2023. (accepted) Ferreira, S.², Corns, S., Canfield, C., Tyler, S.¹, Kraemer, V.¹, & Long, S. Improving the Mission Assurance Assessment and Engineered Resilience Systems Decision Quality. *American Society for Engineering Management*, Denver, CO.
- (CP28) 2023. (accepted) Agarwal, A.^{1,2}, Canfield, C., & Fikru, M. Influence of Choice Framing on Residential Renewable Energy Procurement. *American Society for Engineering Management*, Denver, CO.
- (CP27) 2023. (accepted) Subramanian, H. V.^{1,2}, Canfield, C., & Shank, D. B. Integrating Stakeholder Input into the Design of Explainable AI Interfaces: An Application in Kidney Transplant Healthcare. *Institute of Industrial and Systems Engineers*, New Orleans, LA.
- (CP26) 2023. (accepted) Agarwal, A.^{1,2}, Canfield, C., & Fikru, M. Influence of Choice Framing on Consumers' Electricity Purchase Decisions. *Institute of Industrial and Systems Engineers*, New Orleans, LA.
- (CP25) 2022. Canfield, C.², Agarwal, A.¹, & Fikru, M. How Do Utility-Scale Renewable Procurement Options Influence Distributed Solar Installation Decisions? *Association for Public Policy and Management*, Washington, D.C.
- (CP24) 2022. Subramanian, H. V.¹, Canfield, C.², Shank, D. B., & Dagli, C. The Role of Explainable AI in a Decision Support System for Kidney Transplant Placement. *American Society for Engineering Management*, Tampa, FL.
- (CP23) 2022. Agarwal, A.^{1,2}, Canfield, C., & Fikru, M. G. How Do Utility-Scale Renewable Procurement Options Influence Distributed Solar Installation Decisions? *Association for Environmental Studies & Sciences*, Baltimore, MD.
- (CP22) 2022. Valentín-Sívico, J.^{1,2}, Canfield, C., Bhada, S., & Wyglinski, A. Evaluating Social Impact and System Design of a Wireless Rural Broadband Network. *Institute of Industrial & Systems Engineers*, Seattle, WA.
- (CP21) 2022. Price, A.¹, Canfield, C.², Hugo, G., Reynolds-Kueny, C., & Cudney, E. Techno-economic Feasibility Analysis of a Fully-Mobile Radiation Oncology System using Monte Carlo Simulation. *Institute of Industrial & Systems Engineers*, Seattle, WA.
- (CP20) 2021. Subramanian, H. V.^{1,2}, Canfield, C., & Shank, D. B. Role of Uncertainty Information and Domain Knowledge in Use of Artificial Intelligence Recommendations. *Society for Risk Analysis*, Online.
- (CP19) 2021. Hanson, E.^{1,2}, Canfield, C., Fikru, M. G., & Heeter, J. State-Level Trends in Renewable Energy Procurement via Solar Installation versus Green Electricity. *United States Association for Energy Economics (USAEE)*, Online.
- (CP18) 2021. Agarwal, A.^{1,2} & Canfield, C. Agent-Based Modeling of Broadband Adoption in Unserved and Underserved Areas. *American Society for Engineering Management*, Online.

- (CP17) 2021. Valentín-Sívico, J.^{1,2}, [Canfield, C.](#) & Egbue, O. Stakeholder Influence on Rural Broadband Expansion in Missouri. *American Society for Engineering Management*, Online.
- (CP16) 2021. Heatherly, M.¹, [Canfield, C.](#)² & Baker, D. Designing for Automation: Potential Reactance from Smart Home Energy Management Systems. *American Society for Engineering Management*, Online.
- (CP15) 2021. Subramanian, H. V.^{1,2}, [Canfield, C.](#), Elder, H.¹, Ashiku, L.¹, Threlkeld, R.¹, Hines, C.¹, Dagli, C., Shank, D., Lentine, K., Schnitzler, M., & Randall, H. Engaging Stakeholders in the Transplant Community to Design Artificial Intelligence Decision Support. *American Society for Engineering Management*, Online.
- (CP14) 2021. [Canfield, C.](#)², Low, S., & Gollnick, C. Tailoring Broadband Impact Evaluations Using a Participatory Approach: An Application in Clinton County, Missouri. *Making it Count: Applying Science to Support Universal Broadband Adoption* (hosted by APLU), Online.
- (CP13) 2021. Fikru, M.² & [Canfield, C.](#) Substitutes versus Complements: Effect of renewable energy procurement on solar installation decisions. *Western Economic Association International Conference*, Online.
- (CP12) 2021. Fikru, M.², [Canfield, C.](#), & Atherton, J.¹. An Economic Framework for Dynamic Electric Rates with Prosumers. *Midwest Economic Association Annual Meeting*, Online.
- (CP11) 2020. Subramanian, H. V.^{1,2}, [Canfield, C.](#), Shank, D., Andrews, L.¹, & Dagli, C. Designing Communications for AI Recommendations with Uncertain Truth. *Society for Risk Analysis (SRA) Annual Meeting*, Online.
- (CP10) 2020. [Canfield, C.](#)², Obuseh, M.¹, Fikru, M. Monte Carlo Simulation of Solar Adoption Under Varying Electricity Rates. *Association for Public Policy and Management Annual Fall Research Conference*, Online.
- (CP9) 2020. Obuseh, M.^{1,2}, [Canfield, C.](#)², Fikru, M., Godse, P.¹, & Rawls, Z.¹. Monte Carlo Simulation of Solar Adoption Under Varying Electric Rates. *Institute of Industrial & Systems Engineers Annual Conference*, Online.
- (CP8) 2020. [Canfield, C.](#)². Framing Transparency as an Ethical Responsibility in PhD Data Science [Lightning Talk]. *useR! R User Conference*, Online. https://www.youtube.com/watch?v=YMqslWu_7ZA
- (CP7) 2020. Fikru, M.², [Canfield, C.](#) An Economic Framework for Modelling the Impact of Electric Rates on Prosumers Decisions. *Western Economic Association International Conference*, Online.
- (CP6) 2017. [Canfield, C.](#)², Cheese, E., Boyd, M., Shah, M., Mucha, O. & Ulrich, E. Solar in Your Community Challenge: Measure Twice, Cut Once. *American Evaluation Association Annual Conference*, Washington, DC.
- (CP5) 2015. [Canfield, C.](#)², Fischhoff, B. & Davis, A. Using Signal Detection Theory to Measure Phishing Detection Ability and Behavior. *Society for Risk Analysis (SRA) Annual Meeting*, Arlington, VA.
- (CP4) 2014. [Canfield, C.](#)² & Fischhoff, B. Using the Mental Models Approach to Assess Strategies for Improving Cybersecurity. *Trustworthy Cyber Infrastructure for the Power Grid (TCIPG) Summer School*, St. Charles, IL.
- (CP3) 2013. [Canfield, C.](#)², Bruine de Bruin, W., & Wong-Parodi, G. Redesigning Bills: The Effect of Format on Responses to Electricity Use Information. *Society for Risk Analysis (SRA) Annual Meeting*, Baltimore, MD.
- (CP2) 2013. [Canfield, C.](#)², Bruine de Bruin, W., & Wong-Parodi, G. Redesigning Bills: The Effect of Format on Responses to Electricity Use Information. *Subjective Probability, Utility, and Decision Making (SPUDM)*, Barcelona, Spain.
- (CP1) 2009. [Canfield, C.](#)² & Zastavker, Y. V. Mathematics and Physics Faculty Conceptions of Teaching in a First-Year Integrated Project-Based Engineering Curriculum. *American Society for Engineering Education (ASEE) Annual Meeting*, Austin, TX.

Poster Presentations

- (PP13) 2023. [Canfield, C.](#), Price, A.¹, Kueny, C., Hugo, G., Biedermann, G., & Lu, B. Increasing Rural Access to Care with Mobile Radiation Oncology. *University of Missouri Ellis Fischel Cancer Center, Cancer Research Day*, Columbia, MO.
- (PP12) 2020. Elder, H.¹, [Canfield, C.](#), Shank, D. B., & Hines, C. Can AI recommendations encourage riskier decision-making with higher reliability? *Society for Risk Analysis (SRA) Annual Meeting*, Online.
- (PP11) 2020. Galbraith, M.¹ & [Canfield, C.](#) Opportunities to Improve Work Zone Zipper Merge Compliance with Behavioral Science. *Society for Risk Analysis (SRA) Annual Meeting*, Online.

- (PP10) 2020. Heatherly, M.¹, Canfield, C., & Baker, D. The Role of Psychological Reactance in Smart Home Energy Management Systems. *Society for Risk Analysis (SRA) Annual Meeting*, Online.
- (PP9) 2020. Valentín-Sívico, J.¹, Canfield, C., & Egbue, O. Risks Associated with Rural Broadband: As Seen Through the Lenses of the Planning Community. *Society for Risk Analysis (SRA) Annual Meeting*, Online.
- (PP8) 2019. Canfield, C., Shank, D. B., Andrews, L.¹, & Dagli, C. Communicating Uncertainty in Deep Learning Models for High Stakes Decisions [Poster Platform]. *Society for Risk Analysis (SRA) Annual Meeting*, Arlington, VA.
- (PP7) 2019. Canfield, C., Egbue, O., Valentín-Sívico, J.¹. Community Decision-Making for Rural Broadband Infrastructure. *Association for Public Policy and Management Annual Fall Research Conference*, Denver, CO.
- (PP6) 2019. Canfield, C., Fikru, M., & Godse, P.¹ [presenter]. Trade-offs between Private and Social Benefits for Electricity Rate Design. *Association for Public Policy and Management Annual Fall Research Conference*, Denver, CO.
- (PP5) 2019. Kwasa, B., Canfield, C., Mulligan, P. & Sherizadeh, T. Research Gaps in Mining & Automation. *Institute of Industrial and Systems Engineers Annual Conference*, Orlando, FL.
- (PP4) 2018. Canfield, C., Fischhoff, B., & Davis, A. Metacognition and Phishing Emails: Do People Know When They Are Taking Risks? *Society for Risk Analysis (SRA) Annual Meeting*, New Orleans, LA.
- (PP3) 2015. Canfield, C., Fischhoff, B., & Davis, A. Using Signal Detection Theory to Measure Phishing Detection Ability and Behavior. *Symposium On Usable Privacy and Security (SOUPS)*, Ottawa, Canada.
- (PP2) 2015. Canfield, C., Klima, K., & Dawson, T. Using Deliberative Democracy to Identify Energy Policy Priorities in the United States. *Engineering Sustainability Conference*, Pittsburgh, PA.
- (PP1) 2008. Canfield, C. & Zastavker, Y. V. Faculty Talk: Implementing an Integrated First-Year Project-Based Engineering Curriculum. *American Society for Engineering Education (ASEE) Zone 1 Conference*, West Point, NY.

SPONSORED RESEARCH

External Funding

- (EF10) 2022-2026. National Science Foundation, *Collaborative Research: FW-HTF-R: Embedding Preferences in Adaptable Artificial Intelligence Decision Support for Transplant Healthcare to Reduce Kidney Discard*, S&T: Canfield (PI), Dagli, Shank & SLU: Lentine, Schnitzler, Total Award: \$1,800,000, 40% contribution (\$720,000)
- (EF9) 2022-2024. U.S. Army, *Improving Mission Assurance Assessment and Engineered Resilience Systems*, S&T: Long (PI), Corns, Canfield (Co-PI) & UT Arlington: Ferreira, Total Award: \$496,760, 40% contribution (\$198,704)
- (EF8) 2022-2023. Mid-America Transplant, *Deep Learning Model to Improve Tissue Authorization for Mid-America Transplant Services*, S&T: Dagli (PI), Canfield (Co-PI), Total Award: \$46,763, 30% contribution (\$14,029)
- (EF7) 2022-2024. Mid-America Transplant Foundation, *AI-Enabled Digital Support to Increase Placement of Hard-to-Place Deceased Donor Kidneys*, S&T: Dagli (PI), Canfield (Co-PI) & SLU: Lentine, Schnitzler, Randall, Total Award: \$211,453, 40% contribution (\$84,581)
- (EF6) 2021-2022. US Ignite, *OVERCOME21: A Systems Approach to Scaling Rural Co-op Efforts to Expand the Fiber Edge*, S&T: Canfield (PI) & WPI: Wyglinski, Bhada & United Co-op: Farnan & Maximize NWMO: Gollnick, Total Award: \$325,000, 32% contribution (\$102,687)
- (EF5) 2020-2021. National Science Foundation, *FW-HTF-P: Teaming Transplant Professionals and Artificial Intelligence Tools to Reduce Kidney Discard*, S&T: Canfield (PI), Dagli, Shank & SLU: Lentine, Schnitzler, Total Award: \$150,000, 50% contribution (\$75,000)
- (EF4) 2020-2023. Alfred P. Sloan Foundation, *Substitutes vs. Complements: Effect of Renewable Procurement Options on Installation Decisions*, S&T: Canfield (PI), Fikru & NREL: Heeter, Total Award: \$150,000, 50% contribution (\$75,000)
- (EF3) 2020. The Solar Foundation, *SolSmart Program Evaluation*, S&T: Canfield (PI) & UT Austin: Rai & U Miami: Gao & FSU: Tang, Total Award: \$145,000, 82% contribution (\$119,036)

- (EF2) 2019-2021. Missouri Department of Transportation (MoDOT), *Optimizing Work Zone Zipper Merge Operations Using Driving Simulations*, MU: Sun (PI), Edara, Anowar & S&T: Canfield (Co-PI), Total Award: \$90,000, 15% contribution (\$13,500)
- (EF1) 2019-2021. U.S. Department of Education, *GAANN: Interdisciplinary Fellowship Program in Engineering Management and Systems Engineering for Rebuilding Infrastructure*, S&T: Qin (PI), Canfield (Co-PI), Long, Dagli, El-adaway, Sun, Total Award: \$600,804, Years 1-2: 15% contribution, Year 3: 20% contribution (\$100,195)

Internal Seed Funding

- (IF6) 2023. Center for Science, Technology and Society (CSTS) Seed Funds, *Reducing Discrimination in Hiring using Algorithmic Recommendations*, Canfield (PI), Shank, Cundiff, Total Award: \$10,000
- (IF5) 2022. Economic Development Administration and Briggs & Stratton (50% cost share) as part of University of Missouri's Partnership to Enhance Innovation, Resilience and Agility in Missouri's Manufacturers, *Ergonomics Assessment for Briggs and Stratton*, Canfield (PI), Total Award: \$10,000, 100% contribution *funded data collection fieldtrip and project for Human Factors course
- (IF4) 2022. Intelligent Systems Center (ISC) GRA Support Award, *Reducing Discrimination in Hiring using Algorithmic Recommendations: An Investigation into How People Make Hiring Decisions when Receiving Biased AI Recommendations*, Shank (PI), Canfield (Co-PI), Total Award: \$9,644
- (IF3) 2022. Center for Science, Technology and Society (CSTS) Seed Funds, *Increasing Rural Access to Care with Mobile Radiation Oncology*, Canfield (PI), Kueny, Total Award: \$8,400, PI
- (IF2) 2022. Kummer Ignition Grant Initiative, *Increasing Rural Access to Care with Mobile Radiation Oncology*, Canfield (PI), Kueny & Wash U: Hugo, Total Award: \$25,000
- (IF1) 2019-2020. Smart Living Seed Funds, *Improving Situational Awareness with Vigilance Training*, Canfield (PI), Murray, Total Award: \$24,000

Professional Development

National Science Foundation, Making the Leap to Large, 2021

AWARDS

2022. Missouri S&T Faculty Research Award
2022. Merritt Williamson Best Conference Paper Award, American Society for Engineering Management
2021. Missouri S&T Outstanding Teaching Commendation
2019. Energy Innovation Policy and Management Scholar, Information Technology & Innovation Foundation, <https://itif.org/itif-energy-innovation-boot-camp-early-career-scholars>
- 2013-2016. National Science Foundation Graduate Research Fellowship (\$44,000/year)
2015. Society for Risk Analysis Security and Defense Student Merit Award (\$500)
2014. John and Claire Bertucci Fellowship (\$20,000)
2009. 3rd Best Paper, First Year Programs Division, American Society for Engineering Education

TEACHING

Courses Fully Developed/Re-Developed

- Energy and Sustainability Management Engineering (EMGT 5513), Missouri S&T (F20, F21, SP23)
- Partnered with Missouri Energy Initiative and MOST Policy Initiative for course project
- Advanced Engineering Management Science (EMGT 6413), Missouri S&T (SP19, SP20, SP21, SP22)
- Awarded ASEM Merritt Williamson Award for conference paper derived from student project

Additional Courses

- Human Factors (EMGT 4330/PSYCH 4710), Missouri S&T (F22, SP23)
- Received funding (IF5) for ergonomics assessment project in F22
- Managing Engineering & Technology (EMGT 2110), Missouri S&T (F18, F19)

Professional Development

UM System Online Teaching Certification, July 2021

MENTORING

PhD (2 graduated, 4 in progress)

Victoria Kraemer, PhD Engineering Management, Jan 2023 – expected Dec 2025

Harishankar V. Subramanian, PhD Engineering Management, Aug 2021 – expected Dec 2024

Alex Price, PhD Systems Engineering, Jan 2020 – expected Dec 2023

Ankit Agarwal, PhD Engineering Management, May 2021 – expected Dec 2023

Javier Valentín-Sívico, PhD Engineering Management, “Evaluating Barriers to and Impacts of Rural Broadband Access,” Aug 2019 – Jul 2022

Julia Morgan, PhD Systems Engineering, “System of Systems Approach to Integrating Energy Sharing into Existing Electricity Distribution Infrastructure,” Aug 2020 – May 2021

MS (4 graduated, 1 in progress)

Eyuel Assebe Getahun, MS Engineering Management, Aug 2022 – expected May 2024

Eric Hanson, MS Systems Engineering, “State-Level Trends in Renewable Energy Procurement via Solar Installation versus Green Electricity,” Sept 2020 – May 2022

Harishankar V. Subramanian, MS Engineering Management, “Communicating Uncertain Information from Deep Learning Models in Human Machine Teams,” Jan 2020 – July 2021

Matthew Heatherly, MS Engineering Management, “The Role of Psychological Reactance in Smart Home Energy,” Mar 2020 – July 2021

Ankit Agarwal, MS Engineering Management, “Agent-Based Model of Broadband Adoption in Unserved and Underserved Areas,” Jun 2020 – May 2021

Visiting (1)

Hannah (Felske) Elder, MS Human Factors, Technische Universität Berlin, Aug 2020 – May 2021

Graduate Committee (7 completed, 6 in progress)

Amaneh (Elham) Babae, MS Industrial-Organizational Psychology, Missouri S&T, Jan 2023 – Present

Yasaman Jamalipour Soofi, PhD Systems Engineering, Missouri S&T, Mar 2022 – Present

Michael Parrish, PhD Engineering Management, Missouri S&T, Oct 2020 – Present

Richard Threlkeld, PhD Systems Engineering, Missouri S&T, Dec 2019 – Present

Steven Demski, PhD Engineering Management, Missouri S&T, Oct 2018 – Present

Alex Sellers, PhD Engineering Management, Missouri S&T, Aug 2018 – Present

Lirim Ashiku, PhD Systems Engineering, Missouri S&T, Dec 2019 – Present

Tiffanie Toles, PhD Engineering Management, Missouri S&T, Mar 2021 – May 2023

Prachita Humane, PhD Engineering Management, Missouri S&T, Nov 2022 – May 2023

Ryan Kenny, PhD Engineering & Public Policy, Carnegie Mellon University, Nov 2019 – May 2022

Dakshak Keerthi Chandra, PhD Computer Science, Missouri S&T, Sept 2019 – Jan 2022

Jacob Hale, PhD Engineering Management, Missouri S&T, Jan 2019 – Jul 2021

Rodney Ewing, PhD Engineering Management, Missouri S&T, Nov 2019 – Oct 2020

John Richards, PhD Engineering Management, Missouri S&T, Oct 2019 – Aug 2020

Awards Given to Mentored Students

Chase Johnson, BS Engineering Management, 3rd Place Research Proposal Poster, Missouri S&T Undergraduate Research Conference, 2023

Alex Price, PhD Systems Engineering, IISE Future Faculty Fellow, 2022

Maria Galbraith, BS Engineering Management, 3rd Place Engineering Paper, Missouri S&T Undergraduate Research Conference, 2021

Casey Hines, BS Engineering Management, 3rd Place Engineering Poster, Missouri S&T Undergraduate Research Conference, 2021

Maria Galbraith, BS Engineering Management, ASEM Undergraduate Scholarship, 2020

BROADER IMPACTS AND ENGAGEMENT

Participatory Research (Stakeholder Engagement) Co-Design Events

2021, Sept. Broadband Internet Project OVERCOME Internet Kick-off, launched residential sign-up process.

Invited local residents, Turney, MO.

2021, Sept. AI in Kidney Acceptance Design-a-thon Workshop #3, reviewed AI decision support system interfaces. Invited professionals from transplant centers, organ procurement organizations, and transplant recipients, Online.

2021, Jun. Broadband Internet Project OVERCOME Ice Cream Social, introduced project and answered questions from community members. Invited local residents, Turney, MO.

2021, Jun. AI in Kidney Acceptance Design-a-thon Workshop #2, reviewed proposed system architecture.

Invited professionals from transplant centers, organ procurement organizations, and transplant recipients, Online.

2021, Jan. AI in Kidney Acceptance Design-a-thon Workshop #1, determined project scope and workflow.

Invited professionals from transplant centers, organ procurement organizations, and transplant recipients, Online.

Panels & Webinars

2023. Facilitator. Commercial Energy Efficiency, Inflation Reduction Act Funding Collaboration. *Missouri Energy Initiative*, Online.

2022. Member. NWMO Broadband Discovery Group Update. *Maximize NWMO*, Online.

2022. Member. Expanding Broadband Access in Missouri. *MOST Policy Initiative Roundtable*, Online.

2022. Member. Climate Resilience in Rural Missouri. *MOST Policy Initiative Roundtable*, Online.

2022. Member. Piloting Novel Broadband Solutions in Seven Underserved Communities. *Smart Cities Connect*, Columbus, OH.

2021. Organizer & Member. Wireless Solutions for the Digital Divide: Need for a Systems Approach. *New England Workshop on Software Defined Radio (NEWSDR)*, Online.

2021. Chair & Discussant. The Economic Impact of Community Choice Aggregation and Alternative Green Energy Procurement Strategies. *Western Economic Association International Conference*, Online.

2020. Organizer. Evaluating a National Certification Program: Implications for Voluntary Local Government Action on Clean Energy. Natural Resource, Energy, and Environmental Policy Section, *Association for Public Policy and Management*, Online.

2019. Discussant. Consumer Behavior and Sustainability Policy: Understanding Decision-Making and Response to Policy Changes. Natural Resource, Energy, and Environmental Policy Section, *Association for Public Policy and Management*, Denver, CO.

Nonprofit Board Membership

Missouri S&T Proxy Board Member, Missouri Energy Initiative (MEI), 2019 – Present

Advisory Board Member, Missouri Science & Technology (MOST) Policy Fellowship, 2019 – Present

External Research Groups

Associate Member, Siteman Cancer Center, Washington University in St. Louis, 2022 – Present

Member, Ellis Fischel Cancer Center, University of Missouri, 2022 – Present

Consulting

Study Design Consultant, Solstice Initiative, 2020

Professional Societies

Society for Risk Analysis (SRA), 2014 – Present

Association for Public Policy and Management (APPAM), 2018 – Present

American Society for Engineering Management (ASEM), 2018 – Present

Institute of Industrial and Systems Engineers (IISE), 2020 – Present

SERVICE

International

Board Member, Modeling & Simulation, Institute of Industrial and Systems Engineers, 2023-2025
Track Co-Chair, Modeling & Simulation, Institute of Industrial and Systems Engineers, 2023
Secretary, Decision Analysis and Risk Specialty Group, Society for Risk Analysis, 2022
Vice-President for Membership, Epsilon Mu Eta, Engineering Management Honor Society, American Society for Engineering Management, 2020-2023
Judge, Doctoral Colloquium Poster Pitch, Institute of Industrial and Systems Engineers, 2020
Student Representative/Webmaster, Risk Communication Specialty Group, Society for Risk Analysis, 2014

National

Committee Member, National Academies of Sciences, Engineering, and Medicine's (the Academies) Committee on the Assessment of Strategies for Managing Cancer Risks Associated with Radiation Exposure During Crewed Space Missions, 2020 – 2021
Proposal Reviewer, National Science Foundation (NSF)
Social, Behavioral and Economic Sciences, 2017 – 2022
Electrical, Communications, and Cyber Systems, 2019 – 2020
Computer and Information Science and Engineering, 2020
Peer Reviewer for *Engineering Management Journal*, *Energy Research & Social Science*, *Journal of Experimental Psychology: Applied*, *Telecommunications Policy* (see <https://www.webofscience.com/wos/author/rid/J-2707-2019>), 2016 – Present

University of Missouri System

UM System Broadband Initiative: Creating Digitally Connected Communities, 2019 – Present
Supported development of Broadband Guide, 2021
Organized/facilitated virtual interactive session on community adoption in “Bringing Broadband to a Missouri Community” Workshop, hosted by UM System Office of Extension and Engagement, 2020

Missouri S&T Research Centers

Center for Science, Technology, and Society (CSTS), Researcher, 2019 – Present
Chair, Director Internal Search Committee, 2023
Executive Board, 2021 – Present
Panel Organizer, “Missouri Science Policy Workshop” co-hosted by MOST and CSTS, 2019
Intelligent Systems Center (ISC), Investigator, 2019 – Present
Judge, ISC Graduate Research Symposium, 2019 – 2023
Center for Research in Energy and Environment (CREE), Research Investigator, 2019 – Present
Center for Biomedical Research (CBR), Investigator, 2023 – Present

Missouri S&T Campus

Institutional Contact, Public Interest Technology University Network (PIT-UN), 2023 – Present
Affiliated member, S&T ADVANCE, 2022 – Present (see <https://advance.mst.edu/>)
Judge, Undergraduate Research Conference, 2019 – 2021
Chancellor's Faculty Advisory Panel on the Kummer School of Innovation, Entrepreneurship, and Economic Development, 2020 – 2021
College of Engineering & Computing (CEC) Research Committee, 2020 – 2021

Missouri S&T Department

Advisor, Epsilon Mu Eta, Engineering Management Honors Society, 2018 – Present
Member, Sarchet/Kummer Professorship Search Committee, 2022 – 2023
Research Co-Lead, Strategic Planning Initiative, 2020 – 2021