

Richard Ross Gruetzemacher III

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Assistant Professor of Business Analytics at Wichita State University August 2021 to present

- Department of Finance, Real Estate and Decision Sciences; Barton School of Business

Education

- PhD in Business (Management Information Systems), August 2020, Auburn University
 - Dissertation: *Forecasting Transformative AI*
- Master of Science in Computational Engineering, December 2014. The University of Tennessee, Chattanooga
 - Thesis: *Numerical Simulation of Human Breathing and Particle Transport through a CT-based Pulmonary Airway Geometry*
- Bachelor of Science in Mechanical Engineering, August 2011. The University of Tennessee, Chattanooga

Other Affiliations

- Executive Director of the Transformative Futures Foresight Institute June 2022 to present
- Research Affiliate at the Centre for the Study of Existential Risk (CSER) at the University of Cambridge June 2022 to present
- Senior Gamemaster for Intelligence Rising (Technology Strategy Roleplay) April 2019 to present
- 2023 Foresight Institute Fellow January 2023 to present

Previous Work & Research Experience

- Visiting Assistant Professor of Business Information & Technology at the University of Memphis August 2020 – August 2021
- Visiting Researcher at CSER at the University of Cambridge July 2019 – September 2019
- Data Scientist at the University of Tennessee, Chattanooga July 2015 to July 2016
- Research Associate at the National Center for Computational Engineering January 2015 to July 2015

Honors and Awards

- 2023 Researcher of the Year, Barton School of Business May 3rd, 2023
- 2023 Graduate Instructor of the Year, Barton School of Business May 3rd, 2023
- 2020 Americas Conference on Information Systems (AMCIS) Advanced Doctoral Consortium selection. August 12th-13th, 2020
- Best Poster Award for High Impact. Winter Conference for Business Intelligence. Snowbird, Utah. March 3rd-5th, 2016

Journals & Periodicals

- R. Gruetzemacher. *The Power of Natural Language Processing*. Harvard Business Review. Digital article April 2022
- R. Gruetzemacher, D. Paradise. *Deep Transfer Learning & Beyond: Future Directions for Transformer Language Models in Information Systems Research*. ACM Computing Surveys (impact factor of 14.3). January 2022
- R. Gruetzemacher, J. Whittlestone. *The Transformative Potential of AI*. Futures (impact factor of 3.8). January 2022

- R. Gruetzemacher, F. Dorner, N. Bernaola, C. Giattino, D. Manheim. *A Research Agenda for Forecasting AI Progress*. Technological Forecasting and Social Change (impact factor of 10.9). September 2021
- R. Gruetzemacher, D. Paradise, K.B. Lee. *Forecasting Extreme Labor Displacement: A Survey of AI Practitioners*. Technological Forecasting and Social Change (impact factor of 10.9). December 2020
- R. Gruetzemacher. *A Holistic Framework for Forecasting Transformative AI*. Big Data and Cognitive Computing. June 26th, 2019
- R. Gruetzemacher, A. Gupta, D. Paradise. *3D Deep Learning for Detecting Pulmonary Nodules in CT Scans*. Journal of the American Medical Informatics Association (impact factor of 7.9). October 1st, 2018

Grants and Funding

- \$158,928.00 from the Survival and Flourishing Fund for research on the use of Bayesian networks in judgmental forecasting. January 2023 to August 2023
- \$45,279.00 from the Alfred P. Sloan Foundation for *Enhancing Scientific Research Productivity with Foundation Models*. April 2022–August 2022
- \$6,000.00 subaward from the Centre for Effective Altruism for AI expert elicitation related to the MTAIR project. June 2020–June 2021

Work Under Review

- R. Gruetzemacher, K.B. Lee, D. Paradise. *An Interactive Calibration Training App for Improving Probabilistic Judgments*. Revised once for Futures & Foresight Science.

Working Manuscripts

- R. Gruetzemacher, T. Pilditch, H. Liang, C. Manning, V. Gates, K. Kilian. *Perceptions of Societal-scale Risks from Advanced AI: A Comparison of Experts and Voters*. Target: Science.
- L. Mani, S. Avin, R. Gruetzemacher, J. Fox. *Intelligence Rising: Evidence to Support the use of Role-Playing Games for Forecasting Possible AI Futures*. Target: Simulation and Gaming.
- R. Gruetzemacher, J. Fox, S. Avin, L. Mani, A. Saeri. *Insights from Immersive Scenario Role-play to Explore Strategic Futures in Artificial Intelligence*. Target: Futures.
- R. Gruetzemacher, S. Avin, J. Fox, M. Salmela. *Lessons from an AI TTX Simulating AI Races*. Target: War on the Rocks.
- R. Gruetzemacher, M. Nasir, S. Abdinnour. *A Practical Comparison of Transformer Language Models: State-of-the-art Classification for Social Media Customer Service*. Target: Decision Support Systems.

Works in Progress

- R. Gruetzemacher, V. Gates, et al. *Experts' Opinions on the Societal-scale Risks from Broadly Capable AI Systems*.
- R. Gruetzemacher, T. Pilditch, A. Marcoci. *Improving Accuracy and Logic in Forecasting Tournaments Using a Bayesian Network Elicitation Tool*.
- R. Gruetzemacher, T. Pilditch, D. Paradise. *Improving Longer-term Forecasts with Conditional Forecasts*.
- R. Gruetzemacher, K. Kilian, et al. *A Consortium for AI Auditing & Evaluations*.
- A. Marcoci, R. Gruetzemacher, et al. *Predicting the Geopolitical Impacts of AI*.

Refereed Conference Proceedings

- C. Manning, S. Zhuma, S. Nagrecha, M. Koutogui, M. Yessoufou, M. Jabbor, R. Gruetzemacher. *Streamlining Science: Recreating Systematic Literature Reviews with AI-Powered Decision Tools*. Americas Conference on Information Systems 2023. August 10th-12th, 2023
- R. Gruetzemacher, S. Abdinnour. *Using Deep Learning for Identifying Social Media Customer Service Opportunities*. Americas Conference on Information Systems 2022. August 10th-14th, 2022
- S. Avin, R. Gruetzemacher, J. Fox. *Exploring AI Futures through Role Play*. Conference paper presented at the 3rd AAAI/ACM Conference on AI for Ethics and Society (oral presentation). February 7th-8th, 2020
- R. Gruetzemacher. D. Paradice. *Mapping the Paths to AGI*. Conference paper presented at the 12th Conference on Artificial General Intelligence. Shenzhen, China. August 6th-9th 2019
- R. Gruetzemacher. *Rethinking AI Strategy and Policy as Entangled Super Wicked Problems*. Conference paper presented at the 1st AAAI/ACM Conference on AI for Ethics, and Society. New Orleans, LA (oral presentation). February 1st-3rd, 2018
- R. Gruetzemacher, A. Gupta. *Using Deep Learning for Pulmonary Nodules Detection and Diagnosis*. Conference paper presented at the 22nd Americas Conference on Information Systems. San Diego, CA. (oral presentation). August 11th-13th, 2016
- R. Gruetzemacher, A. Gupta, G. Wilkerson. *Sports Injury Prevention Screen (SIPS): Design and Architecture of an Internet of Things (IoT) Based Analytics Health App*. Conference paper at the 2016 International Conference on Information Resources Management. Cape Town, South Africa (oral presentation and invited for paper development workshop). May 18th-20th, 2016
- R. Gruetzemacher, A. Arabshahi, R. Pankajakshan. *Effects of Inhalation Transience on Particle Transport Through a CT-Based Human Airway Geometry*. Conference paper presented at the 2015 International Mechanical Engineering Congress & Exposition. Houston, TX (oral presentation). November 13th-19th, 2015

Conference Presentations & Invited Presentations

- R. Gruetzemacher, J. Fox. *Intelligence Rising: A Strategic Simulation Game for Exploring AI Futures*. EAGxNordics 2023. April 21st-23rd, 2023
- R. Gruetzemacher. *Generalist Agentive AI and the Power of Multimodal Foundation Models*. INFORMS Annual Meeting. October 16th-19th, 2022
- R. Gruetzemacher. *Bayesian Networks vs. Conditional Trees for Creating Questions for Forecasting Tournaments*. The 2022 Bayesian Modeling and Applications Workshop at the Conference on Uncertainty in AI. August 5th, 2022
- R. Gruetzemacher, D. Paradice, K.B. Lee. *An Interactive Calibration Training App for Improving Probabilistic Judgments*. The 2022 International Symposium on Forecasting. July 10th-13th, 2022

- R. Gruetzemacher. *Exploring AI Futures Through Role-Play*. The 2022 Effective Altruism Global Conference, London. London, UK. April 16th-18th, 2022
- R. Gruetzemacher, S. Abdinnour. *Deep Transfer Learning for Classification of Social Media Customer Service Opportunities*. 2021 Conference on AI, Machine Learning and Business Analytics. December 2nd-3rd, 2021
- R. Gruetzemacher. *Deep Transfer Learning & Beyond: Applications of Transformer Language Models in Business Analytics*. 2021 INFORMS Virtual Business Analytics Conference. April 12th-14th, 2021
- B. Devlin, N. Sears, M. Maas, E. Bartels, R. Gruetzemacher. *Gaming as a Research Method for Foreign Policy and International Politics*. A roundtable discussion, 2021 International Studies Association Conference. April 7th-10th, 2021
- R. Gruetzemacher, D. Paradise. *Deep Transfer Learning & Beyond: Future Directions for Transformer Language Models in Information Systems Research*. 2020 Conference on AI, Machine Learning and Business Analytics. December 10th, 2020
- R. Gruetzemacher. *Applications of Deep Transfer Learning & Pre-trained Language Models in Business*. AIAA Pre-ICIS workshop. Munich, Germany. December 15th, 2019
- R. Gruetzemacher. *Forecasting & Foresight for Transformative AI*. Invited seminar at the European Union Commission Joint Research Center. Seville, Spain. November 22nd, 2019
- R. Gruetzemacher. *Defining and Unpacking Transformative AI*. The 2019 Effective Altruism Global Conference, London. London, UK. October 20th, 2019
- R. Gruetzemacher. *Forecasting Transformative AI*. Invited presentation at Hughes Hall College Cambridge University. Cambridge, UK. September 24th, 2019
- R. Gruetzemacher. *A Holistic Framework for Forecasting Transformative AI*. Invited seminar at the Center for the Governance of AI at Oxford University. Oxford, UK. April 19th, 2019
- R. Gruetzemacher. *Tracking and Forecasting AI Progress*. Invited presentation at the Georgia Tech Enterprise Innovation Institute. Atlanta, Georgia. November 16th, 2017
- R. Gruetzemacher, A. Gupta. *Using Deep Learning for Detection of Pulmonary Nodules*. Winter Conference for Business Analytics. Snowbird, Utah. March 3rd-5th, 2016
- R. Gruetzemacher, A. Gupta, G. Wilkerson, J. Haynes. *Sports Injury Prevention & Screening (SIPS): A Demo of a Real Time Analytics System*. Pre-ICIS Business Analytics Congress 2015. Fort Worth, Texas (prototype demonstration runner up). December 13th, 2015
- R. Gruetzemacher. *Deep Learning for Detecting Lung Cancer*. The Center for Biomedical Informatics at the University of Tennessee Health Science Center. Memphis, Tennessee. October 14th, 2015
- R. Gruetzemacher, *et al.* *Numerical Simulation of Airflow in a CT-based Human Airway Model with Physiologically Appropriate Boundary Conditions*. 2014 Biomedical Engineering Society Conference. San Antonio, Texas. October 22nd-25th, 2014