

Richard Ross Gruetzemacher III

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Work & Research Experience

- Assistant Professor of Business Analytics at Wichita State University August 2021 to present
- Visiting Assistant Professor of Business Information & Technology at the University of Memphis August 2020 – August 2021
- Visiting Researcher 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

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

Honors and Awards

- 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

Journal Papers

- R. Gruetzemacher, D. Paradice. *Deep Transfer Learning & Beyond: Future Directions for Transformer Language Models in Information Systems Research*. ACM Computing Surveys (impact factor of 10.2). Forthcoming
- R. Gruetzemacher, J. Whittlestone. *The Transformative Potential of AI*. Futures (impact factor of 3.1). 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 8.6). September 2021
- R. Gruetzemacher, D. Paradice, K.B. Lee. *Forecasting Extreme Labor Displacement: A Survey of AI Practitioners*. Technological Forecasting and Social Change (impact factor of 8.6). December 2020
- R. Gruetzemacher. *A Holistic Framework for Forecasting Transformative AI*. Big Data and Cognitive Computing. June 26th, 2019
- R. Gruetzemacher, A. Gupta, D. Paradice. *3D Deep Learning for Detecting Pulmonary Nodules in CT Scans*. Journal of the American Medical Informatics Association (impact factor of 4.5). October 1st, 2018

Other Periodicals

- R. Gruetzemacher. *The Power of Natural Language Processing*. Harvard Business Review. April 19th, 2022

Grants and Funding

- \$45,279.00 from the Alfred P. Sloan Foundation for *Enhancing Scientific Research Productivity with Foundation Models*. April 2022-August 2022

Working Manuscripts

- 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. *A Primer on Risks from Transformative AI*. Target: Nature Machine Intelligence.
- R. Gruetzemacher, H. Liang, X. Niu. *A Survey of Task Complexity in Advanced System Development: Implications for Next Generation AI Tools*. Target: MIS Quarterly.
- R. Gruetzemacher, Z. Munyikwa, H. Liang. *Developing an AI Research Assistant*. Target: Sloan Management Review.
- D. Manheim, R. Gruetzemacher, A. Englander, J. Marble. *AI-risk Elicitations: Toward Understanding Differences in Definitions*. Target: AI and Society.

Works in Progress

- R. Gruetzemacher, D. Manheim. *A Comparative Analysis of Conditional Trees and Bayesian Networks for Applications in Technological Forecasting*. Target: Futures and Forecasting Science.
- R. Gruetzemacher. *Scenario Mapping for Anticipating Transformative AI*. Target: Futures and Forecasting Science.
- R. Gruetzemacher, D. Manheim, P. Tetlock. *A Full-inference Forecasting Cycle via Delphi and a Forecasting Tournament*. Target: Management Science.
- R. Gruetzemacher, D. Manheim, J. Marble. *Disentangling and Defining Elements of Preparadigmatic Research Domains*. Target: Organization Science.
- R. Gruetzemacher, L. Mani, S. Avin, J. Fox. *Using Wargames for Strategic Planning in Technology Management*. Target: Organization Science.

Refereed Conference Papers

- S. Avin, R. Gruetzemacher, J. Fox. *Exploring AI Futures through Role Play*. February 7th-8th, 2020
Conference paper presented at the 3rd AAAI/ACM Conference on AI for Ethics and Society (oral presentation).
- R. Gruetzemacher, D. Paradise. *Mapping the Paths to AGI*. August 6th-9th 2019
Conference paper presented at the 12th Conference on Artificial General Intelligence. Shenzhen, China.
- R. Gruetzemacher. *Rethinking AI Strategy and Policy as Entangled Super Wicked Problems*. February 1st-3rd, 2018
Conference paper presented at the 1st AAAI/ACM Conference on AI for Ethics, and Society. New Orleans, LA (oral presentation).

- 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

Invited Presentations

- 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