

# ANA TRIŠOVIĆ

Computer Science & Artificial Intelligence Laboratory (CSAIL), MIT Sloan School of Management &  
The Institute for Quantitative Social Science (IQSS) at Harvard  
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## RESEARCH INTERESTS

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- *Broad Interests:* Computational Social Science, Data Science, Artificial Intelligence (AI)
- *Application Areas:* AI & Society, AI for Science, Metascience, Climate and Environmental Research
- *Methodologies:* Foundation Models, Big Data Analytics, Scientometrics, Deep Learning, Text Mining

## EDUCATION

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- 2014 - 2018 **University of Cambridge, Newnham College**  
PhD in COMPUTER SCIENCE
- 2010 - 2014 **Union University, School of Computing** in Serbia  
BSc in COMPUTER SCIENCE
- 2010 - 2013 **University of Belgrade** in Serbia  
BSc in MECHANICAL ENGINEERING

## WORK EXPERIENCE

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- SEPT 2023 – **Massachusetts Institute of Technology**  
PRESENT • *Research Scientist* at FutureTech - Lead research on the societal and scientific impact of AI across disciplines, industries, and geopolitical contexts. PI of the first Sloan Foundation grant at CSAIL.
- SEPT 2019 – **Harvard University**  
PRESENT • *Research Associate* at The Institute for Quantitative Social Science (Feb 2022 – Present)  
Advance data infrastructure and user research to optimize the Dataverse platform's capabilities.  
• *Research Associate* at Harvard T.H. Chan School of Public Health (Feb 2022 – Sept 2023)  
Built climate-health data pipelines. Co-authored NIH grants securing over \$6M.  
• *Postdoctoral Fellow* at The Institute for Quantitative Social Science (Sept 2019 – Feb 2022)  
Advanced Dataverse repository, built partnerships, and secured Sloan Foundation grant.
- SEPT 2018 – **University of Chicago**  
SEPT 2019 • *Postdoctoral Fellow* at The Energy Policy Institute - Supported modeling of climate policy impacts, including estimating the social cost of carbon using large-scale environmental data.
- JULY 2013 – AUG 2018 **CERN**  
• *Project Associate* (Sept 2017 – Aug 2018) – Contributed to CERN Open Data and Analysis Preservation platforms, advancing infrastructure for reproducible and accessible research.  
• *Doctoral Student* (Aug 2014 – Sept 2017) – Designed systems to capture dependencies between software, detectors, and datasets for LHCb, supporting seamless data analysis across upgrades.  
• *Technical Student* (July 2013 – July 2014) – Developed a particle collision display tool for LHCb, now used by students worldwide through the International Masterclass program.
- MAR 2013 – JULY 2013 **Microsoft**  
• *Data Science Associate* - Analyzed Azure cloud metrics to assess load balancing and blacklisting systems, proposing optimizations for performance and efficiency.

# SELECTED PUBLICATIONS

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## JOURNAL ARTICLES

1. Jie Kate Hu, **Ana Trišović**, Ankita Bakshi, Danielle Braun, Francesca Dominici, and Joan Casey. “Co-exposure to Extreme Heat, Wildfire Burn Zones, and Wildfire Smoke in the Western US from 2006 to 2020”. *Science Advances* (2025)
2. James A. Rising, Azhar Hussain, Kevin Schwarzwald, and **Ana Trišović**. “A Practical Guide to Climate Econometrics: Navigating Key Decision Point in Weather and Climate Data Analysis”. *Journal of Open Source Education (JOSE)* (2025)
3. Whanhee Lee, Xiao Wu, Seulkee Heo, Joyce Mary Kim, Kelvin C Fong, Ji-Young Son, Matthew Benjamin Sabath, **Ana Trišović**, Danielle Braun, Jae Yoon Park, Yong Chul Kim, Jung Pyo Lee, Joel Schwartz, Ho Kim, Francesca Dominici, Ziyad Al-Aly, and Michelle L. Bell. “Air Pollution and Acute Kidney Injury in the US Medicare Population: A Longitudinal Cohort Study”. *Environmental Health Perspectives* (2023)
4. **Ana Trišović**. “Cluster Analysis of Open Research Data: A Case for Replication Metadata”. *International Journal of Digital Curation* (2023)
5. **Ana Trišović**, Matthew K. Lau, Thomas Pasquier, and Mercè Crosas. “A Large-scale Study on Research Code Quality and Execution”. *Nature Scientific Data* (2022)
6. Daniel Garijo, Hervé Ménager, Lorraine Hwang, **Ana Trišović**, Michael Hucka, Thomas Morrell, Alice Allen, Task Force on Best Practices for Software Registries, and SciCodes Consortium. “Nine Best Practices for Research Software Registries and Repositories”. *PeerJ Computer Science* (2022)
7. Stian Soiland-Reyes, Peter Sefton, Mercè Crosas, Leyla Jael Castro, Frederik Coppens, José M Fernández, Daniel Garijo, Björn Grüning, Marco La Rosa, Simone Leo, Eoghan Carragáin, Marc Portier, **Ana Trišović**, RO-Crate Community, Paul Groth, and Carole Goble. “Packaging research artefacts with RO-Crate”. *Data Science* (2021)
8. **Ana Trišović**, Katherine Mika, Ceilyn Boyd, Sebastian Feger, and Mercè Crosas. “Repository Approaches to Improving the Quality of Shared Data and Code”. *Data* (2021)
9. Kelly Blumenthal, Aleksandra Goeva, Sara Stoudt, **Ana Trišović**, and Pavle Trišović. “Why Do We Plot Data?” *Harvard Data Science Review* (2021)
10. Aleksandra Goeva, Peyton Jones, Sara Stoudt, and **Ana Trišović**. “Recipes for Connector Courses From the Early-Career Board Kitchen”. *Harvard Data Science Review* (2021)
11. Shuang Frost, Aleksandra Goeva, Javin Pombra, Will Seaton, Sara Stoudt, **Ana Trišović**, Chris Wang, and Catherine Zucker. “Kaleidoscopic Perspectives on Practicum-Based Data Science Education”. *Harvard Data Science Review* (2021)
12. Aleksandra Goeva, Sara Stoudt, and **Ana Trišović**. “Toward Reproducible and Extensible Research: from Values to Action”. *Harvard Data Science Review* (2020)
13. Shuang Frost, Aleksandra Goeva, William Seaton, Sara Stoudt, and **Ana Trišović**. “Early-Career View on Data Science Challenges: Responsibility, Rigor, and Accessibility”. *Harvard Data Science Review* (2020)
14. **Ana Trišović**, Chris R. Jones, Ben Couturier, and Marco Clemencic. “Provenance Tracking in the LHCb Software”. *Computing in Science & Engineering (CISE)* (2020)
15. Xiaoli Chen, Sünje Dallmeier-Tiessen, Robin Dasler, Sebastian Feger, Pamfilos Fokianos, Jose Benito Gonzalez, Harri Hirvonsalo, Dinos Kousidis, Artemis Lavasa, Salvatore Mele,

Diego R. Rodriguez, Tibor Simko, Tim Smith, **Ana Trišović**, Anna Trzeinska, Ioannis Tsanaktsidis, Markus Zimmermann, Kyle Cranmer, Lukas Heinrich, Gordon Watts, Michael Hildreth, Lara Lloret Iglesias, Kati Lassila-Perini, and Sebastian Neubert. “Open Is Not Enough”. *Nature Physics* (2019)

16. Thomas Pasquier, Matthew K. Lau, **Ana Trišović**, Emery R. Boose, Ben Couturier, Mercè Crosas, Aaron M Ellison, Valerie Gibson, Chris R. Jones, and Margo Seltzer. “If These Data Could Talk”. *Nature Scientific Data* (2017)

#### CONFERENCE AND WORKSHOP ARTICLES

17. Janakan Sivaloganathan, **Ana Trišović**, and Neil Thompson. “Mapping the Impact of Foundation Models on the UN Sustainable Development Goals”. *21st IEEE International Conference on e-Science* (2025)
18. **Ana Trišović**, Jan Range, Philip Durbin, Amber Leahey, Wei Li, and Danielle Braun. “Improving FAIR Compliance for High-Dimensional Data via Automated Metadata Extraction”. *2025 IEEE International Conference on eScience (eScience)* (2025)
19. Alex Fogelson, **Ana Trišović**, and Neil Thompson. “LLMs in Citation Intent Classification: Progress, Precision, and Reproducibility Challenges”. *Proceedings of the ACM Conference on Reproducibility and Replicability (ACM REP)* (2025)
20. **Ana Trišović**, Gabe Miller, Dimitris Bertsimas, and Jie K. Hu. “Predicting Concurrence of Heatwaves, Droughts, and Wildfires with Spatiotemporal Deep Learning”. *Tackling Climate Change with Machine Learning at ICLR* (2025)
21. Mauricio Tec, **Ana Trišović**, Michelle Audirac, Sophie Woodward, Jie Kate Hu, Naeem Khoshnevis, and Francesca Dominici. “SpaCE: The Spatial Confounding Environment”. *12th International Conference on Learning Representations (ICLR)* (2024)
22. Mauricio Tec, **Ana Trišović**, Michelle Audirac, and Francesca Dominici. “SpaCE: The Spatial Confounding (Benchmarking) Environment”. *CLeaR (Causal Learning and Reasoning)* (2023)
23. Daina Bouquin, Oliver Bertuch, Elena Colon-Marrero, and **Ana Trišović**. “Advancing Software Citation Implementation”. *Computing Research Repository (CoRR)* (2023)
24. Layan Bahaidarah, Ethan Hung, Andreas Francisco De Melo Oliveira, Jyotsna Penumaka, Lukas Rosario, and **Ana Trišović**. “Toward reusable science with readable code and reproducibility”. *18th International Conference on e-Science (e-Science)* (2022)
25. Nadica Miljkovic, **Ana Trišović**, and Limor Peer. “Towards FAIR Principles for Open Hardware”. *Conference on Application of Free Software and Open Hardware (PSSOH)* (2021)
26. **Ana Trišović**, Philip Durbin, Tania Schlatter, Gustavo Durand, Sonia Barbosa, Danny Brooke, and Mercè Crosas. “Advancing Computational Reproducibility in the Dataverse Data Repository Platform”. *3rd International Workshop on Practical Reproducible Evaluation of Computer Systems (P-RECS)* (2020)
27. Anna E. Woodard, **Ana Trišović**, Zhuzhao Li, Yadu Babuji, Ryan Chard, Tyler Skluzacek, Ben Blaiszik, Daniel S. Katz, Ian Foster, and Kyle Chard. “Real-Time HEP Analysis With FuncX – a High-Performance Platform for Function as a Service”. *24th International Conference on Computing in High Energy & Nuclear Physics (CHEP)* (2020)
28. **Ana Trišović**. “Graph Mining at the High-Energy Physics Experiment LHCb”. *7th International Symposium on Industrial Engineering* (2018)
29. **Ana Trišović**, Ben Couturier, Val Gibson, and Chris R. Jones. “Recording the LHCb Data and

Software Dependencies". *22th International Conference on Computing in High Energy & Nuclear Physics (CHEP)* (2017)

30. **Ana Trišović**. "Measuring the  $D^0$  Lifetime at the LHCb Masterclass". *37th International Conference on High Energy Physics (ICHEP)* (2016)

#### UNDER REVIEW AND WORK IN PROGRESS

31. **Ana Trišović**, Alex Fogelson, Janakan Sivaloganathan, and Neil Thompson. "The Rapid Growth of AI Foundation Model Usage in Science". *Submitted to Science*
32. **Ana Trišović**, Alex Fogelson, and Neil Thompson. "Strategic Control of AI: Corporate R&D, Public Sector Lag, and the Emerging De-Democratization of Innovation". *Work in Progress*
33. **Ana Trišović**, Alex Fogelson, and Neil Thompson. "Is USA Failing to Capitalize on its AI Investment Advantage over China?" *Work in Progress*
34. Hans Gundlach, Alex Fogelson, Jayson Lynch, **Ana Trišović**, Jonathan S. Rosenfeld, Anmol Sandhu, and Neil Thompson. "Experimental Measurement of Algorithmic Progress in AI". *Work in Progress*
35. Jie K. Hu, **Ana Trišović**, and Joan A. Casey. "Gaps in Air Quality Monitoring in Wildfire Smoke-Impacted Western United States". *Submitted to Nature Communications*
36. **Ana Trišović**, Jan Range, Philip Durbin, Katherine Mika, Amber Leahey, and Danielle Braun. "Open-Source Geospatial Data Management: Methods and Applications". *Major revision at Environmental Modelling and Software*
37. Romain Puech, Joseph Ye, Danique de Moor, **Ana Trišović**, and Dimitris Bertsimas. "WFDroneBench: A Benchmark for Sensor Placement and Drone Routing for Wildfire Detection". *Submitted to the International Conference on Representation Learning (ICLR)*

I am a coauthor of many publications in Physics as a member of the LHCb collaboration at CERN. My h-index is 98 (Google Scholar).

## RESEARCH GRANTS

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- 2025–2027 **Alfred P. Sloan Foundation** (\$300,000)  
PI with Dr. Neil Thompson as Co-PI, for quantifying the use of AI in science and exploring automation in science.
- 2025–2026 **MIT Generative AI Impact Consortium** (\$150,000)  
Key Personnel, led by Prof. Dimitris Bertsimas as PI, "Personalized Learning with GenAI for MIT Open Learning Courseware".
- 2023–2025 **Microsoft - Innovation + Society** (\$300,000)  
Key Personnel, led by Dr. Neil Thompson as PI, "Measuring the accessibility and democratization of the AI ecosystem in science".
- 2025–2026 **OpenAI Credits for Research** (\$1,000)  
for large-scale bibliometric analysis of AI in science.
- 2024–2025 **OpenAI Credits for Research** (\$10,000)  
for large-scale bibliometric analysis of AI in science.
- 2023–2026 **National Institute of Environmental Health Sciences** (\$6.7 milion)  
Key Personnel, led by Prof. Francesca Dominici as PI and others for creating a Research Coordinating Center (RCC) on climate change and health
- 2022–2024 **Institute of Museum and Library Services** (\$99,372)  
PI with Dr. Daina Bouquin, for Software Citation Implementation: Action Plan Development.

- 2022–2023 **National Institutes of Health** (\$238,197)  
Key Personnel, for supporting dissemination of geospatial data in the Dataverse repository.
- 2022–2023 **National Institutes of Health** (\$336,874)  
Key Personnel, for developing approaches for AI/ML readiness for wildfire exposures.
- 2020–2023 **Alfred P. Sloan Foundation** (\$196,990)  
Key Personnel, led by Prof. Gary King and Dr. Merce Crosas as PI, “Preservation of advanced computing artifacts and automatic code revision for research reproducibility and reuse”.
- 2019–2021 **CLIR Micro-Grant for Research** (\$3,000)  
for exploring gamification in research dissemination.
- 2019–2020 **Amazon AWS Cloud Credits for Research** (\$10,000)  
for large-scale research software analysis in Dataverse.

## AWARDS, PRIZES, & FELLOWSHIPS

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- 2025 **Excelencia Severo Ochoa Mobility Fellow**  
Visit to the Barcelona Supercomputing Center (BSC) in Spain.
- 2025 **Breakthrough Prize in Fundamental Physics**  
Laureate as part of the LHCb Collaboration at CERN.
- 2025 **NSF SeekCommons Fellow**  
Work on STS, Open Science, and Socio-Environmental research.
- 2024 **USCIS EB-2 National Interest Waiver**  
Recognized as a Person of National Interest in the USA.
- 2020 **SciPy 2020 Top Reviewer**  
for reviewing submissions at the SciPy conference.
- 2019 **Research Data Alliance (RDA) Early-Career Fellowship**
- 2016 **Computing in High Energy Physics (CHEP) Student Scholarships**
- 2014 **Google Anita Borg Memorial Scholarship (Women Techmakers)**  
For outstanding achievement, leadership, and community involvement.
- 2015–2017 **Muir Wood Scholarship, Newnham College, University of Cambridge**  
For Mathematics, Engineering and Science.
- 2013–2015 **Dositeja Award** - for extraordinary students in Serbia.
- 2012 **Deutscher Akademischer Austauschdienst (DAAD) Scholarship**
- 2011–2012 **Praise for Outstanding Academic Achievements** at University of Belgrade.
- 2011 **Belgrade City Scholarship for Extraordinary Students**
- 2010 **First Step to Nobel Prize in Physics** - Honorable Mention.
- 2006–2010 **The International Physics Olympiad (IPhO)**  
Awards at regional and republic-level Physics competitions in Serbia.
- 2006 **Valedictorian**  
Primary and Secondary School Despot S. Lazarevic.

## TEACHING EXPERIENCE

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- 2025 **Universal AI (UAI) at MIT Open Learning**  
Course creator and instructor in Data Analytics and Machine Learning.

- 2024 **NASA's Transform to Open Science Summer School, UIUC**  
Lecturer on Open Science and AI methods.
- 2023 **Research Education in Genome Science, School of Medicine at Mount Sinai**  
Lecturer on Reproducibility in Scientific Computing.
- 2023 **International Summer School on Deep Learning & Big Data (IRDRA)**  
Lecturer on Principles of Computational Research.
- 2021 **Summer School at the Xidian University in China**  
Lecturer in Introduction to Machine Learning.
- 2017 **LHCb Experiment at CERN, Switzerland**  
Instructor in Fundamentals of Data Analysis in Particle Physics.
- 2015 **Newnham College, University of Cambridge**  
TA in Algorithms (Undergraduate).
- 2015 **Cavendish Laboratory, University of Cambridge**  
TA in Physics Practicals (Undergraduate) and Computational Physics (Graduate).

## RESEARCH ADVISING & MENTORING

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- 2025 **Romain Puech** PhD '27. MIT. Project mentor.
- 2025 **Caio de Prospero Iglesias** MBA '25. MIT. Project mentor.
- 2025 **Gabe Miller** MBA '25. MIT. Project mentor.
- 2024 **Anna Tsvetkov** PhD '25. Brown University. Project mentor.
- 2020 **Layan Bahaidarah** B.Sc. '20. Boston University. Capstone project mentor.
- 2020 **Ethan Hung** B.Sc. '20. Boston University. Capstone project mentor.
- 2020 **Andreas F. De Melo Oliveira** B.Sc. '20. Boston University. Capstone project mentor.
- 2020 **Jyotsna Penumaka** B.Sc. '20. Boston University. Capstone project mentor.
- 2020 **Lukas Rosario** B.Sc. '20. Boston University. Capstone project mentor.

## INVITED TALKS, KEYNOTES AND PANELS

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- 2025 **650th EUROMECH Colloquium: Addressing Challenges in Applied Mechanics through AI Applications**  
Invited Talk on “Foundation Models in Engineering and the Hard Sciences”.
- 2025 **21st IEEE International Conference on eScience**  
Invited talk at the featured session “Frontiers and Horizons in eScience”
- 2025 **Academy of Management (AOM)**  
Member of the organizing committee for the professional development workshop “Space Economy – Opportunities for Management Research”
- 2025 **National Academies of Sciences, Engineering, and Medicine’s (NASEM)**  
Panel Moderator for the Special Closed Session: “Defining the Parameters of Success for a National Next-Gen AI Initiative” at Government-University-Industry-Philanthropy Research (GUIPRR).
- 2025 **10th International Conference on Information and Communication Technology for Intelligent Systems**  
*Keynote Speaker.*
- 2025 **MIT Operations Research Center (ORC)**  
Invited talk on “Analysis of Co-Exposure to Extreme Heat, Wildfire Burn Zones, and Wildfire Smoke in the Western US” at the IAP Seminar.
- 2024 **OpenForum Academy Symposium**

- Invited talk on “The AI Revolution in Science: Scaling Up, De-democratization, and the Vital Role of Open Source”.
- 2022 International Conference on Supercomputing (SC22)**  
 Panelist at the session on “Reproducibility and Trustworthiness of Computational Research”.
- 2022 Statistical Software Conference**  
 Invited talk on “Evidence-based practices for better research software”.
- 2022 Journal Editors Discussion Interface (JEDI) workshop**  
 Invited talk.
- 2022 Serbian Academy of Sciences and Arts**  
 Invited talk.
- 2022 Pew Research Center**  
 Invited talk “The Landscape of Data Sharing and Computational Reproducibility for Social Research”.
- 2021 Gathering for Open-Source Hardware (GOSH) Meeting**  
 Invited talk on “FAIR Principles for Open Hardware”.
- 2021 Helmholtz Rich Metadata Software Publication (HERMES) Workshop**  
 Invited talk on Research Software Preservation at the Dataverse Project.
- 2021 Metascience Conference**  
 Invited talk on “Evidence-based steps toward a culture for replicability and reproducibility”.
- 2021 Expert Meeting on Data Sharing Guidance for NIA Longitudinal Studies**  
 Convened by the Committee on National Statistics (CNSTAT), National Academies of Sciences, Engineering, and Medicine, for the Division of Behavioral and Social Research (BSR), National Institute on Aging (NIA). Invited talk “The Dataverse Project: Data sharing, Reproducibility, Research, Development and the Community”.
- 2019 European Centre for Medium-Range Weather Forecasts (ECMWF)**  
*Keynote Speaker* at “Building Reproducible Workflows for Earth Sciences” Workshop
- 2016 Cambridge Centre for Data-Driven Discovery (C2D3) (Big Data)**  
 Invited talk on the physics data provenance at the LHCb experiment at the “Multidisciplinary Perspectives on Data Preservation and Access” Workshop

## CONSORTIUMS, SOCIETIES & SERVICE WORK

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- 2024 – PRESENT **National Academies of Sciences, Engineering, and Medicine (NASEM)**  
 Member of the U.S. National Committee for CODATA.
- 2023 – PRESENT **Journal of Open-Source Software (JOSS)**  
 Topic Editor.
- 2021 – PRESENT **Journal of Systems Research (JSys)**  
 Review Board Member in Data Science and Reproducibility.
- 2022 – 2024 **Oxford and Cambridge Society of New England**  
 Member Alumni.
- 2020 – 2023 **Harvard Data Science Review (HDSR)**  
 Member of the Early-Career Board.
- 2021 – 2023 **Consortium of Scientific Software Registries and Repositories (SciCodes)**  
 Committee Member.
- 2021 – 2023 **GDCC Software and Container Metadata Working Group**  
 Working Group Chair.

## CONFERENCE ACTIVITIES

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- 2025 **ACM Conference on Reproducibility and Replicability** - Poster Session Chair
- 2024 **Supercomputing Conference** - Reproducibility Initiative Committee member
- 2023 **IEEE International Conference on eScience** - Poster Session Chair
- 2021 **CLIR Webinar: Toward Open, Reproducible and Reusable Research** - Organiser
- 2020 – 2021 **Annual Dataverse Community Meeting** - Planning Committee and Chair
- 2020 **SciPy Scientific Computing Conference** - Program Committee
- 2020 **The Theory and Practice of Provenance (TaPP)** - Program Committee

## PRESS

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- 2025 **MIT News**
- 2024 **Politika**, Serbia's oldest daily newspapers
- 2024 **Dive In Podcast**
- 2023 **ReproducibiliTea Podcast**
- 2022 **The Scientist**
- 2022 **The Research Software Engineering (RSE) Stories Podcast**

## REFERENCES

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### **Dr. Neil Thompson**

Director of the MIT FutureTech Research Project  
Principal Research Scientist  
MIT Computer Science & Artificial Intelligence Laboratory and MIT Sloan School of Management

### **Prof. Gary King**

Director of the Institute for Quantitative Social Science  
Albert J. Weatherhead III University Professor  
Harvard University

### **Prof. Dimitris Bertsimas**

Vice Provost for MIT Open Learning  
Boeing Leaders for Global Operations Professor of Management, Professor of Operations Research  
MIT Sloan School of Management