Akhil Rao

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Education

2019	Ph.D., Economics, University of Colorado Boulder
2016	M.A., Economics, University of Colorado Boulder
2012	B.S., Business Administration, University of California Riverside

Appointments

2019–now	Assistant Professor, Middlebury College
2017–2019	Graduate Part-Time Instructor, University of Colorado Boulder
2014–2016	Teaching Assistant, University of Colorado Boulder

Research

Primary fields

Space economics; Environmental economics; Computational economics

Works in progress

[1] "Disease-economy trade-offs under alternative pandemic control strategies" with Thomas Ash, Antonio M. Bento, Daniel Kaffine, and Ana I. Bento
draft, github.
Under review at Nature Communications

[2] "Open access to orbit and runaway space debris growth" with Giacomo Rondina
draft
Under review at the Journal of the Association of Environmental and Resource Economists

[3] "Economic principles of space traffic control"
draft (job market paper)

[4] "International cooperation and competition in orbit-use management" with Aditya Jain
draft

[5] "The economics of orbital transportation"
draft

[6] "Elicitation and Corrective Taxation" with Brennan McConnell
Mimeo

[7] "The economics of long-run orbit-use management" with Sébastien Rouillon and Julien Guyot
Mimeo

[8] "Satellite constellations and orbital competition" with Sébastien Rouillon and Julien Guyot

[9] "Location choice, incomplete property rights, and efficiency: Evidence from the Geostationary belt" with Nikodem Szumilo

[10] "Space stations as a backstop technology" with Doyoung Park

[11] "Disaster business cycles: 20 years of evidence from US counties" with Raphaelle G. Coulombe

Journal publications

[1] **Rao, A**., Burgess, M., & Kaffine, D. (2020). Orbital-use fees could more than quadruple the value of the space industry. Proceedings of the National Academy of Sciences, 117(23), pp.12756-12762.

[2] **Rao, A**. (2020). The Economics of Orbit Use: Theory, Policy, and Measurement. Journal of the Association of Environmental and Resource Economists, 7(1), iii-iii. Dissertation abstract.

Conference proceedings

[1] **Rao, A**., Letizia, F. (2021). An Integrated Debris Environment Assessment Model. In 8th European Conference on Space Debris Proceedings.

[2] Bennett, T., Cain, C., Campbell, N.S., Gemer, A.A., Marino, J., Niederwieser, T., & **Rao, A**. (2018). The CENKI Space Economic Simulator: Analytical Verification of an Agent-Based Modeling Engine. In 2018 IEEE Aerospace Conference. IEEE.

[3] Bennett, T., Cain, C., Campbell, N.S., Gemer, A.A., Marino, J., Niederwieser, T., & **Rao, A**. (2018). The CENKI Space Economic Simulator: Demonstrating Agent-Based Modeling on Satellite Market Data. In 2018 IEEE Aerospace Conference. IEEE.

Book chapters

[1] Greenblatt, J., & **Rao, A**. (2019). K-Town: A Thousand-Person Colony. In F. Crossman (Ed.), Mars Colonies: Plans for Settling the Red Planet (pp. 149–176). The Mars Society.

Non-academic writing

[1] **Rao, A**., Adilov, N., Cunningham, B., Guyot, J., Rouillon, S., & Wagner, J. (2021). Economists' Response to 86 FR 61335. Our submission.

[2] Castle-Miller, M., Anzaldúa, A., Davidson, H., Aganaba-Jeanty, T., Greenblatt, J., Hanlon, M. L. D., Matula, T. L., **Rao, A.**, Shubin, L. G. (2020). The Lunar Development Cooperative: A new idea for enabling lunar settlement. In The Space Review.

[3] **Rao, A**. (2019). Humans or Robots First? In Politico: The Agenda.

Teaching

Independent Study	W 2020, W/S 2021	Middlebury College
Space Economics	F 2021	Middlebury College
Environmental Economics	F 2019, S 2020, S/F 2021	Middlebury College
Economic Statistics	F 2019, S 2020, F 2021, S 2022	Middlebury College
Math Tools for Economists	S/F 2017, S/F 2018	University of Colorado Boulder
Principles of Macroeconomics	S 2015, S 2016	University of Colorado Boulder
Principles of Microeconomics	F 2014, F 2015, F 2016, S 2019	University of Colorado Boulder

Selected Honors and Awards

2021-2022	AERE Scholars Fellow
2020	ProQuest CGS Distinguished Dissertation Award in Social Sciences
2019	Wallace E. Oates Outstanding Doctoral Dissertation Award
2018	Sieglinde Talbott Haller Fellowship in Economics
2018	Center to Advance Research and Teaching in the Social Sciences Spring Graduate Student Award
2018	Summer Graduate School Dissertation Fellowship
2017	Reuben A. Zubrow Fellowship in Economics
2013	Coro Southern California Fellows Program in Public Affairs

Presentations

2022

[1] Secure World Foundation Orbital Carrying Capacity Workshop

[2] Auburn University Department of Aerospace Engineering Jack and Ann Waddey Invited Seminar

[3] George Washington University Space Policy Institute

[4] NASA Office of Science and Technology Policy

2021

[1] 8th European Conference on Space Debris

[2] IASC Commons in Space

[3] From Measurements to Understanding: ESA MASTER Modelling Workshop

2020

[1] CODER 2020 workshop

[2] Astronomics Society Workshop on the Economics and Law of Space (postponed; COVID-19)

[3] Secure World Foundation Workshop on Relevance of Economic Models to Space Debris Policy

[4] AERE Virtual Conference

[5] GOSEE Conference

[6] National Space Council Lunar Polar Resources Roundtable

2019

[1] Middlebury College

[2] Institute for Defense Analyses

[3] Colorado School of Mines Economics Department Seminar

2018

[1] Western Economic Association International AERE Session

[2] IEEE Aerospace Conference

[3] Pacific Council PolicyWest

2017

[1] Heartland Environmental and Resource Economics Workshop at Illinois

[2] CU Environmental and Resource Economics Workshop

Professional Activities

Conferences

- Co-organizer, IASC Commons in Space 2022 conference
- Co-organizer, IASC Commons in Space 2021 conference

Reviewing

- Acta Astronautica

- Space Policy
- EcoHealth
- Journal of Space Safety Engineering

Boards

- Advisory Board member, EU study on Space Traffic Management 2020-2022

College Service

- Academic advisor – 18 students ongoing as of 2022
- Thesis advisor – 1 student 2021-2022, 2 students 2019-2020