Contact Department of Economics (802) 443 2192

Information: Middlebury College akhilr@middlebury.edu Warner Hall 502A https://akhilrao.github.io

Middlebury, VT 05753 Citizenship: USA

Research Interests: Environmental and Resource Economics, Computational Economics

Appointments: Assistant Professor, Middlebury College (2019-current)

Graduate Part-Time Instructor, University of Colorado Boulder (2017-2019)

Teaching Assistant, University of Colorado Boulder (2014-2016)

Education: PhD Economics, University of Colorado Boulder, 2019

MA Economics, University of Colorado Boulder, 2016

BS Business Administration, University of California Riverside, 2012

Working Papers:

"Economic Principles of Space Traffic Control", (job market paper, latest draft)

"Cost in Space: Debris and Collision Risk in the Orbital Commons", with

Giacomo Rondina (latest draft)

"Elicitation and Corrective Taxation", with Brennan McConnell (mimeo)

Publications:

"Orbital-use fees could more than quadruple the value of the space industry", with Matthew Burgess and Daniel Kaffine, in *Proceedings of the National Academy of Sciences Jun 2020, 117 (23)*

"The Economics of Orbit Use: Theory, Policy, and Measurement" (dissertation abstract), in *Journal of the Association of Environmental and Resource Economists* 2020 7:1, iii-iii

"The CENKI Space Economic Simulator: Analytical Verification of an Agent-Based Modeling Engine", with Trevor Bennett, Charles Cain, Nicholas Campbell, Andrew Gemer, John Marino, and Tobias Niederwieser, in 2018 IEEE Aerospace Conference Proceedings

"The CENKI Space Economic Simulator: Demonstrating Agent-Based Modeling on Satellite Market Data", with Trevor Bennett, Charles Cain, Nicholas Campbell, Andrew Gemer, John Marino, and Tobias Niederwieser, in 2018 IEEE Aerospace Conference Proceedings

Works in progress:

"Modeling individual behavior in coupled economic-epidemiological models", with Thomas Ash, Ana I. Bento, Antonio M. Bento, and Daniel Kaffine

"Framing the Colliders Debate", with James Wells

"The great orbit war: a dynamic Cournot-Nash analysis of orbit use", with Sébastien Rouillon

"Understanding the differential economic effects of peacekeeping in postconflict states", with Timothy Passmore

"Malthusian Limits to Capital Growth: Alaskan Reindeer from 1900 to 1940", with Ann Carlos and Catherine Massey

"Welfare Consequences of Interplanetary Trade", with Doyoung Park

Teaching Experience:

Assistant Professor, Middlebury College:

- Environmental Economics (F 2019, S 2020)
- Economic Statistics (F 2019, S 2020)
- Independent Study (W 2020 with Aditya Jain)

Graduate Part-Time Instructor, University of Colorado Boulder:

• Math Tools for Economists 1 (F/S 2018, F/S 2017)

Teaching Assistant, University of Colorado Boulder:

- Principles of Microeconomics (S 2019, F 2016, F 2015, F 2014)
- Principles of Macroeconomics (S 2016, S 2015)

Professional Experience:

Red9 Corporation, Data Analyst (2013-2015)

Seminars and Conference Presentations:

2020

- Astronomics Society Workshop on the Economics and Law of Space (postponed due to COVID-19)
- Secure World Foundation DC Workshop on Relevance of Economic Models to Space Debris Policy (postponed due to COVID-19)
- AERE Virtual Conference
- GOSEE Conference
- National Space Council Lunar Polar Resources Roundtable

2018

- Western Economic Association International AERE Session
- IEEE Aerospace Conference
- CU Algorithmic Economics Seminar
- CU Macroeconomics Seminar
- CU Environmental Economics Seminar
- Pacific Council PolicyWest

2017

- Heartland Environmental and Resource Economics Workshop at Illinois
- CU Environmental and Resource Economics Workshop
- CU Environmental Economics Seminar
- CU Macroeconomics Seminar

2016

CU Environmental Economics Seminar

2015

• CU Environmental Economics Seminar

Non-academic writing:

"Humans or Robots First?", in Politico: The Agenda, 6/13/19 (link)

"K-Town: Portrait of a Thousand-Person Mars Colony", with Jeff Greenblatt

Grants, Awards, and Fellowships:

2019 Wallace E. Oates Outstanding Doctoral Dissertation Award

2018 Sieglinde Talbott Haller Fellowship in Economics

2018 Graduate School Domestic Travel Grant

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

Membership in

American Economic Association

Professional Associations:

Association of Environmental and Resource Economists

College Service:

AAUP Budget Working Group - ongoing

Academic Advisor - 7 students, ongoing

Thesis Advisor - 2 students (2019-2020)