



## Charles D. Kolstad

Senior Fellow at the Stanford Institute for Economic Policy Research and at the Precourt Institute for Energy and, by courtesy, of Economics

 Curriculum Vitae available Online

### Bio

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#### BIO

[OFFICE HOURS: Email for appointment--Room 235, SIEPR/Gunn Building, 366 Galvez St.]

Prof. Charles D. Kolstad of Stanford University is an internationally known environmental economist with a focus on industrial organization and public economics. His research interests are in information, uncertainty and regulation, with much of his applied work in the area of climate change and energy markets. He has been a Convening Lead Author for the Intergovernmental Panel on Climate Change (co-recipient of the 2007 Nobel Peace Prize), is a founding Co-Editor of the OUP journal *Review of Environmental Economics & Policy* and serves as an advisor to the State of California on their greenhouse gas cap and trade program. He is a former president of the Association of Environmental and Resource Economists (AERE).

Prior to joining Stanford in 2012, Prof. Kolstad was on the faculty of the University of California, Santa Barbara, where he was Chair of the Department of Economics and a Bren Distinguished Professor of Environmental Management. He is a University Fellow at Resources for the Future (Washington, DC), a Fellow of CESifo (Munich) and a Research Associate at the National Bureau of Economic Research (Cambridge, MA).

PhD students who wish to study with me (or another Stanford professor in the field of environmental, resource or energy economics) should first apply to a degree-granting department or program at Stanford (such as Economics, Management Science & Engineering, the Graduate School of Business or the Emmet Interdisciplinary Program in Environment and Resources), mentioning my name (no need to contact me in advance). See further information in the link at the side of this page ("Info for Prospective PhD Students").

At Stanford, Prof. Kolstad is affiliated with:

Department of Economics

Emmet Interdisciplinary Program in Energy and Resources (E-IPER)

Stanford Environmental and Energy Policy Analysis Center (SEEPAC)

Precourt Institute for Energy (PIE)

Stanford Institute for Economic Policy Research (SIEPR)

Woods Institute for the Environment

#### ACADEMIC APPOINTMENTS

- Senior Fellow, Stanford Institute for Economic Policy Research
- Senior Fellow, Precourt Institute for Energy

- Professor (By courtesy), Economics

## HONORS AND AWARDS

- Fellow, Association of Environmental and Resource Economists (AERE) (2009)

## LINKS

- Kolstad Hi Res Photo @ Berkeley: <http://www.stanford.edu/~ckolstad/HmPg/Kolstad.Berkeley.jpg>
- Textbook Info: <http://www.stanford.edu/~ckolstad/HmPg/Textbooks.pdf>
- Info for Prospective PhD Students: <http://www.stanford.edu/~ckolstad/HmPg/InfoPhD.htm>
- IPCC Chapter 3: [http://www2.bren.ucsb.edu/~kolstad/publications/pdf/WGIII\\_AR5\\_Ch03.pdf](http://www2.bren.ucsb.edu/~kolstad/publications/pdf/WGIII_AR5_Ch03.pdf)
- Kolstad Hi Res Photo @ SEEPAC event: <http://www.stanford.edu/~ckolstad/HmPg/Kolstad.SEEPACReception.2015.jpg>
- Kolstad Hi Res Photo @ UCLA: <http://www.stanford.edu/~ckolstad/HmPg/Kolstad.UCLA.jpg>
- Info for Prospective Postdocs: <http://www.stanford.edu/~ckolstad/HmPg/Postdocs.pdf>

## Research & Scholarship

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### CURRENT RESEARCH AND SCHOLARLY INTERESTS

My research interests are broadly in environmental economics and related areas of industrial organization and public economics. My policy-related focus within these fields is climate change and energy markets.

I currently have several projects related to uncertainty and learning in strategic contexts regarding the provision of public goods. For the most part, the application is international environmental agreements. This work is primarily theoretical, though with some empirical and experimental work to validate and illuminate theory. I also have research interests in energy economics (particularly regulation) and other dimensions of the economics of climate change.

I welcome new PhD students who wish to study with me. Typically, my students train to be environmental or resource economists, which means they receive strong training in economics. At Stanford this means successfully taking the first year PhD sequences in microeconomics (Econ 202-204) and econometrics (Econ 270-272) offered by the Department of Economics. In addition, students should take the PhD classes Economics 250 (Environmental Economics) and 251 (Resource and Energy Economics). This is a minimum and other coursework would depend on student interest and needs. Strong preparation in math is essential.

There are a number of PhD programs at Stanford that are appropriate for someone seeking training as an environmental economist. In addition to the Department of Economics, there are several other departments in which students may apply and matriculate, including the Emmet Interdisciplinary Program in Environment and Resources (E-IPER).

Working Papers

## Teaching

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### COURSES

#### 2017-18

- Introduction to Resource, Energy and Environmental Economics: ENVRES 300 (Aut)
- Natural Resource and Energy Economics: ECON 251 (Win)

#### 2016-17

- Introduction to Resource, Energy and Environmental Economics: ENVRES 300 (Aut)

#### 2015-16

- Introduction to Resource, Energy and Environmental Economics: ENVRES 300 (Aut)
- Natural Resource and Energy Economics: ECON 251 (Win)

#### 2014-15

- Introduction to Resource, Energy and Environmental Economics: ENVRES 300 (Aut)
- Natural Resource and Energy Economics: ECON 251 (Win)

### STANFORD ADVISEES

#### Doctoral (Program)

Marissa Childs, Chikara Onda

#### Doctoral Dissertation Co-Advisor (AC)

Casey Maue

### Publications

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#### PUBLICATIONS

- **CLIMATE ECONOMICS. Opportunities for advances in climate change economics.** *Science*  
Burke, M., Craxton, M., Kolstad, C. D., ONDA, C., Allcott, H., Baker, E., Barrage, L., Carson, R., Gillingham, K., Graff-Zivin, J., Greenstone, M., Hallegatte, S., Hanemann, et al  
2016; 352 (6283): 292-293
- **CLIMATE CHANGE. The IPCC at a crossroads: Opportunities for reform.** *Science*  
Carraro, C., Edenhofer, O., Flachsland, C., Kolstad, C., Stavins, R., Stowe, R.  
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- **Environmental economics. An economic perspective on the EPA's Clean Power Plan.** *Science*  
Fowlie, M., Goulder, L., Kotchen, M., Borenstein, S., Bushnell, J., Davis, L., Greenstone, M., Kolstad, C., Knittel, C., Stavins, R., Wara, M., Wolak, F., Wolfram, et al  
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- **Social Economic and Ethical Concepts and Methods** *Climate Change 2014: Mitigation of Climate Change*  
Kolstad, C. D., et al  
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- **Bridging Reality and the Theory of International Environmental Agreements** *Climate Change and Common Sense: Essays in Honour of Tom Schelling*  
Kolstad, C. D.,  
Oxford University Press.2012: 61–74
- **Regulatory Choice with Pollution and Innovation** *The Design and Implementation of US Climate Policy*  
Kolstad, C.  
University of Chicago Press.2012: 65–74
- **Economic impacts of climate change on California agriculture** *CLIMATIC CHANGE*  
Deschenes, O., Kolstad, C.  
2011; 109: 365-386
- **Uncertainty, Learning and Heterogeneity in International Environmental Agreements** *ENVIRONMENTAL & RESOURCE ECONOMICS*  
Kolstad, C. D., Ulph, A.  
2011; 50 (3): 389-403
- **Intermediate Environmental Economics**  
Kolstad, C. D.  
Oxford University Press.2011

- **Who Pays a Price on Carbon?** *ENVIRONMENTAL & RESOURCE ECONOMICS*  
Grainger, C. A., Kolstad, C. D.  
2010; 46 (3): 359-376
- **Environmental Economics**  
Kolstad, C. D.  
Oxford University Press.2010
- **Distribution and Climate Change Policies** *Climate Change Policies: Global Challenges and Future Prospects*  
Kolstad, C. D., Grainger, C.  
2010
- **Equity, Heterogeneity and International Environmental Agreements** *B E JOURNAL OF ECONOMIC ANALYSIS & POLICY*  
Kolstad, C. D.  
2010; 10 (2)
- **Is a Cap-and-Trade System a Disguised Tax?** *Harvard College Economics Review*  
Kolstad, C. D.  
2009; 3 (2): 22-23
- **Restructuring Federal Climate Research to Meet the Challenges of Climate Change**  
Kolstad, C. D., Ramanathan, V., et al  
The National Academies Press.2009
- **Less Traffic, A Better Life** *Sacramento Bee*  
Kolstad, C. D.  
2009
- **A Statement on the Appropriate Role for Research and Development in Climate Policy** *The Economists' Voice*  
Arrow, K., Cohen, L. R., David, P. A., Hahn, R. W., Kolstad, C. D., Lane, L. L., Montgomery, W. D., Nelson, R. R., Noll, R. G., Smith, A. E.  
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- **When Carbon is Priced, Who Ultimately Pays?** *VOX*  
Kolstad, C. D.  
2009
- **Learning and international environmental agreements** *CLIMATIC CHANGE*  
Kolstad, C., Ulph, A.  
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- **Beyond the Market Advisory Committee: Proceedings from a Workshop held at Stanford University**  
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- **Researching preferences, valuation and hypothetical bias** *ENVIRONMENTAL & RESOURCE ECONOMICS*  
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- **Systematic uncertainty in self-enforcing international environmental agreements** *JOURNAL OF ENVIRONMENTAL ECONOMICS AND MANAGEMENT*  
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- **Prescriptive Environmental Regulations versus Market - Based Incentives** *Moving to Markets in Environmental Regulation*  
Kolstad, C. D., Freeman, J.  
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- **Evaluating Progress of the U.S. Climate Change Science Program: Methods and Preliminary Results**  
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- **Learning and climate change** *CLIMATE POLICY*  
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- **Interpreting Estimated Environmental Kuznets Curves for Greenhouse Gases** *The Journal of Environment & Development*  
Kolstad, C. D.  
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- **Adjustment costs from environmental change** *JOURNAL OF ENVIRONMENTAL ECONOMICS AND MANAGEMENT*  
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- **Environmental Protection in a Knowledge - Based Economy** *Proceedings , Delhi Sustainable Development Summit*,  
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- **Comment on 'Environmental Policy and Firm Behavior: Abatement Investment and Location Decisions under Uncertainty and Irreversibility' by Anastasios Xepapadeas** *Behavioral and Distributional Effects of Environmental Policy*  
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- **COP6: Observations of an Interested Bystander** *Energy Policies and Markets: New Trends or Old Cycles?*  
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- **Comment on 'Energy Demand and Supply in the Developing World 1990 - 2020,' by Churchill** *Proceedings 1993 World Bank Annual Conference on Development Economics*  
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- **The Timing of CO2 Control in the Face of Uncertainty and Learning** *International Environmental Economics*  
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- **Looking vs. Leaping: The Timing of CO2 Control in the Face of Uncertainty and Learning** *IASA*  
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- **Price Formation in International Coal Trade** *Proceedings Coaltrans 91* Kolstad, C. D. 1991
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- **A Framework for Exploring Cost Effective CO2 Control Paths: Discussant Comments** *Proceedings of the Workshop on Economic/Energy/Environmental Modeling for Climate Policy Analysis* Kolstad, C. D. 1991
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  - **Measuring Relative Market Power in the Western US Coal Market Using Shapley Values** *Resources and Energy*  
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- **Short-Run and Long-Run Industrial Demand for Energy: Recent Evidence from Seven Major OECD Countries** *Proceedings, Eighth Annual International Conference of International Association of Energy Economists*  
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- The Papal Encyclical as it Relates to IPCC Findings - Pontifica Catolica Universidad Chile