

# IE Decision Systems Engineering Spring '21 Seminar Series

Friday, February 26, 12-1 p.m.

Zoom <https://asu.zoom.us/j/81413425044>

This talk will be recorded and will have a Q&A at the end.

## “Characterizing Pareto Optima: Sequential Utilitarian Welfare Maximization”

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### Bio

**Chris T. Ryan** teaches at the University of British Columbia in the Sauder School of Business. His research interests include optimization (broadly defined), theoretical economics, operations management, organizational learning, and business history.

### Abstract

We characterize Pareto optimality via sequential utilitarian welfare maximization: a utility vector  $u$  is Pareto optimal if and only if there exists a finite sequence of non-negative (and eventually positive) welfare weights such that  $u$  maximizes utilitarian welfare with each successive welfare weights among the previous set of maximizers. The method of proof uses building blocks from convex analysis and amounts to a characterizations of "maximal" elements in a closed convex set.

This is joint work with: Yeon-Koo Che, Columbia (Economics), Jinwoo Kim, Seoul National University (Economics), Fuhito Kojima, University of Tokyo. (Economics)