

# Rowan Shi

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Graduate Administrator: Laura Hedden

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## Fields

International trade, Spatial and Urban Economics

Primary

Industrial Organization, International Macroeconomics

Secondary

## Education

*PhD candidate in Economics*, Princeton University

2014 -

Thesis title: International trade with heterogeneous firms and reallocation

Expected completion: June 2020

Steve Redding

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*BA in Mathematics and Economics*, University of California, Berkeley

2009 - 2014

Highest Honors in Economics, Distinction in General Scholarship

## Job market paper

[\*Solving combinatorial discrete choices in heterogeneous agent models: theory and an application to corporate tax harmonization in the European Union\*](#)

with Kathleen Hu

This paper develops a solution method for computing optimal decisions to combinatorial discrete choice problems (CDCPs) in heterogeneous agent settings. With an arbitrary type distribution over any number of differentiated characteristics, it quickly computes the policy \textit{function} mapping the entire type space to corresponding optimal actions. The binary decisions can display either supermodular or submodular interactions. Problems of this structure arise naturally in economic settings, especially in international trade and industrial organization. The proposed algorithm is particularly well suited for estimating or computing general equilibrium models incorporating heterogeneous agents solving CDCPs, including choices on plant locations, input sourcing partners, or export market entry. As an illustration of the algorithm in practice, the paper then turns to evaluating the effects of a counterfactual policy equalizing corporate tax rates across the European Union using a quantitative general equilibrium model where heterogeneous firms optimally select a set of countries in which to operate affiliates.

## Works in progress

*Brazil's import liberalization and reallocation in its non-traded sector*

### **Awards and fellowships**

<i>Summer Fellowship</i> , International Economics Section, Princeton University	2016 - 2019
<i>Doctoral Fellowship</i> , Princeton University	2014 - 2020

### **Teaching**

<i>Course organizer</i> , Introduction to microeconomics, Prof. Kelly Noonan	2018 - 2020
<i>Course organizer</i> , Introduction to microeconomics, Prof. Henry Farber	2019
<i>Teaching assistant</i> , Introduction to microeconomics, Prof. Kelly Noonan	2018
<i>Teaching assistant</i> , Ethics and economics, Prof. Thomas Leonard	2017
<i>Teaching assistant</i> , Introduction to macroeconomics, Prof. Elizabeth Bogan	2016 - 2017

### **Research experience**

<i>Research assistant</i> , Prof. Oleg Itskhoki	2015
<i>Research assistant</i> , Prof. Mark Aguiar	2014
<i>Research assistant</i> , Prof. Yuriy Gorodnichenko	2013