ECON899 - Computational Methods
Instructor: Dean Corbae
Email: dcorbae@gmail.com,
Web: http://sites.google.com/site/deancorbae/
Teaching Assistant: Jake Zhao, email: j8zhao@gmail.com

Syllabus

This class teaches techniques to compute and estimate dynamic structural models with heterogeneous agents to answer questions in macroeconomics on incomplete credit markets and firm dynamics. The class is organized around the following matrix of topics:

<table>
<thead>
<tr>
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<th>Households</th>
<th>Firms</th>
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<tbody>
<tr>
<td>continuum</td>
<td>Huggett</td>
<td>Hopenhayn</td>
</tr>
<tr>
<td>finite</td>
<td>Krusell/Quadrini/Rios-Rull</td>
<td>Ericson/Pakes</td>
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</table>

The equilibrium concept for “continuum” economies is competitive while for “finite” economies it is Markov perfection.

There will be Matlab or Fortran computer assignments every week that can be done in groups and a final project which must be done individually. Final project suggestions are listed at the bottom of this syllabus.

Some books that might prove useful are:

Some great websites to complement this course are Victor Rios-Rull, Jesus Fernandez Villaverde, Makoto Nakajima, and Pablo D’Erasmo.
Part 1a. Understanding the U.S. Distribution of Wealth (‘*’ denotes papers covered in class or problem sets)


Part 1b. Political Economy


Part 2a. Understanding Entry, Exit, and Firm Dynamics


Part 2b. Strategic Interactions among Firms


**Final Project:** Reproduce the results in a paper which uses heterogeneous agent computation techniques of your choice. Some suggestions are:


