Advanced Workshop
For Central Bankers
September 3-10, 2013

Lawrence Christiano
Martin Eichenbaum
Mark Gertler
Robert Hall
Anil Kashyap
Dale Mortensen
Sergio Rebelo
Carmen Reinhart
Thomas Sargent
Robert Shimer
Mark Watson
This annual week-long workshop for central bank economists has two objectives. First, to expose participants to frontier models and techniques in monetary economics. Second, to foster discussion and exchange of ideas about applied monetary policy problems faced by different central banks.

The week is organized around lectures and computer-based assignments.

The workshop has been held annually since 2004. It has been attended, so far, by roughly 350 participants from 40 central bank institutions.

Participating Institutions

Central banks of: Armenia, Australia, Austria, Bangladesh, Brazil, Belgium, Canada, Colombia, Costa Rica, Denmark, Finland, France, Greece, Hong Kong, Iceland, India, Italy, Israel, Japan, Korea, Malaysia, Mexico, the Netherlands, Norway, the Philippines, Poland, Slovakia, Spain, South Africa, Sweden, Switzerland, and Uruguay.

The European Central Bank, the Federal Reserve Banks of Atlanta, Boston, Cleveland, and Dallas, the Bank of International Settlements, the Inter-American Development Bank, and the International Monetary Fund.
Course lectures

The workshop includes six three-hour course lectures on the following topics.

**Empirical methods in monetary economics, Martin Eichenbaum**
Alternative techniques to estimate and empirically evaluate models of the monetary transmission mechanism: (i) structural VARs identified with short run restrictions, long run restrictions, and sign restrictions; (ii) fitting dynamic models to impulse response functions; (iii) maximum likelihood methods.

**Specification, estimation, and analysis of monetary models, Lawrence Christiano**
Structural monetary models: the role of different frictions, such as sticky wages, sticky prices, working capital, and credit market imperfections. The use of Bayesian and other methods to estimate models and a review of recent developments in the use of models in the monetary policy process.

**Monetary policy and credit markets, Anil Kashyap**
Modeling capital market imperfections, particularly the role of banks in the transmission of monetary policy. Review of micro and macro empirical evidence, with emphasis on cross-country comparisons and institutional constraints.

**Open economy models, Sergio Rebelo**
Parity conditions in dynamic open economy models. Empirical evidence on sources of real exchange rate (RER) fluctuations. Modeling RER fluctuations. An empirical analysis of the failure of uncovered interest parity (UIP). Modeling deviations from UIP.
Special-topic lectures

Lecture 1: Financial factors in macroeconomic modeling and policy analysis, Mark Gertler (New York University)
Lecture 2: Lessons from the financial crises, Robert Hall (Stanford University)
Lecture 3: Understanding labor market frictions, Dale Mortensen (Northwestern University)
Lecture 4: Debt crises, Carmen Reinhart (Harvard University)
Lecture 5: Modeling inflation, Thomas Sargent (New York University)
Lecture 6: Modeling the labor market, Robert Shimer (University of Chicago)
Lecture 7: Macroeconomic forecasting, Mark Watson (Princeton University)

Practicum
The course lectures are complemented with afternoon sessions designed to provide participants with hands-on experience with the techniques presented.

Logistics
The workshop takes place at the James L. Allen Center, the home of Kellogg’s Executive Education Programs. The Center is located on the shores of Lake Michigan at Northwestern University’s Evanston campus.
Dates
The workshop will take place between Tuesday, September 3 and Tuesday, September 10, 2013. Participants are expected to arrive on Tuesday, September 3 and leave in the afternoon of Tuesday, September 10, 2013. Participants who are interested in attending the Optional Review Session on Tuesday, September 3, 2013 are expected to arrive on Monday, September 2, 2013. This optional session is devoted to a comprehensive tutorial on what you need to know about Matlab to be able to use the software employed in the course.

Schedule
A preliminary workshop schedule is attached.

Software and lecture materials
At the end of the workshop participants receive a CD with lecture materials and with all the programs used during the practicum sessions.

Price
For information on the cost of the program for the current year please email eich@northwestern.edu.

Cancellations made before June 1st, 2013 are subject to a 25% fee. Cancellations made after June 1st, 2013 are subject to the total charge.
## Schedule

<table>
<thead>
<tr>
<th>03/Sep Tuesday</th>
<th>04/Sep Wednesday</th>
<th>05/Sep Thursday</th>
<th>06/Sep Friday</th>
<th>07/Sep Saturday</th>
<th>08/Sep Sunday</th>
<th>09/Sep Monday</th>
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<td>9:00 AM to 10:30 AM</td>
<td>Martin Eichenbaum Session 1</td>
<td>Lawrence Christiano Session 1</td>
<td>Lawrence Christiano Session 3</td>
<td>Lawrence Christiano Session 5</td>
<td>Ani Kashyap Session 1</td>
<td>Sergio Rebelo Session 1</td>
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<td>10:45 AM to 12:15 PM</td>
<td>Martin Eichenbaum Session 2</td>
<td>Lawrence Christiano Session 2</td>
<td>Lawrence Christiano Session 4</td>
<td>Lawrence Christiano Session 6</td>
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<td>Optional Matlab Review Session</td>
<td>Practicum Session</td>
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<td>Dinner</td>
<td>Dinner Speaker: Dale Mortensen</td>
<td>Dinner</td>
<td>Optional Dinner</td>
<td>Dinner at Stained glass (at 7:15 pm)</td>
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