

An aerial photograph of the Northwestern University campus in Evanston, Illinois. The image shows green lawns, trees, and buildings. A red location pin is placed on the map, indicating the location of Northwestern University. The text 'Northwestern University Evanston, IL' is overlaid on the map near the pin.

# Advanced Workshop For Central Bankers

September 4-11, 2018

Northwestern University  
Evanston, IL

Lawrence Christiano  
Martin Eichenbaum  
Charles Evans  
Jordi Gali  
Simon Gilchrist  
Thomas Philippon  
Giorgio Primiceri  
Valerie Ramey  
Sergio Rebelo  
Ricardo Reis



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# Advanced Workshop For Central Bankers

This 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 530 participants from 42 central bank institutions.

## Participating Institutions

### Central Banks:

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

### Federal Reserve Banks:

Atlanta, Boston, Cleveland, and Dallas, European Central Bank, the Bank of International Settlements, the Inter-American Development Bank, and the International Monetary Fund.



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## Course lectures

The workshop includes seven 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.

Open-economy models,  
Sergio Rebelo

Understanding movements in the real exchange rate and the failure of uncovered interest parity. Designing open-economy models consistent with the key facts about nominal and real exchange rates.

Macroeconomic forecasting  
Giorgio Primiceri

A comprehensive review of forecasting methods. Topics include VARs, dynamic factor models, robust Bayes inference, nowcasting, and long-run forecast uncertainty.

Macro-prudential regulation,  
Thomas Philippon

An introduction to the principles underlying macroprudential regulation and an analysis of how macroprudential considerations alter the use of regulatory tools and the design of financial regulation.



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## Special-topic lectures

Ricardo Reis (London School of Economics): Quantitative Easing

Valerie Ramey (University of California at San Diego): Government Spending Multipliers

Jordi Gali (Universitat Pompeu Fabra): Bubbles and Monetary Policy

Simon Gilchrist (Boston University): Inflation Dynamics during the Financial Crisis.

Charles Evans (Federal Reserve Bank of Chicago): U.S. Economy and Monetary Policy

## 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 Kellogg Global Hub located on the shores of Lake Michigan at Northwestern University's Evanston campus.



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## Dates

The workshop will take place between Tuesday, September 4 and Tuesday, September 11, 2018. Participants are expected to arrive on Tuesday, September 4 and leave in the afternoon of Tuesday, September 11, 2018. Participants who are interested in attending the Optional Review Session on Tuesday, September 4, 2018 are expected to arrive on Monday, September 3, 2018. 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 all the lecture materials and programs used during the practicum sessions.

## Price

The fee (payable in U.S. dollars) includes tuition, course materials, accommodations, social program, meals, coffee breaks, and receptions. Enrollment is confirmed only upon receipt of full payment.

Cancellations made before June 1st, 2018 are subject to a 25% fee.

Cancellations made after June 1st, 2018 are subject to the total charge.



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## Advanced Workshop for Central Bankers Schedule, 2018

	04/Sep Tuesday	05/Sept Wednesday	06/Sept Thursday	07/Sept Friday	08/Sept Saturday	09/Sept Sunday	10/Sept Monday	11/Sept Tuesday
7:30 AM to 9:00 AM		Breakfast, Allen Center	Breakfast, Allen Center	Breakfast, Allen Center	Breakfast, Allen Center	Breakfast, Allen Center	Breakfast, Allen Center	Breakfast, Allen Center
9:00 AM to 10:30 AM		Using VARs Martin Eichenbaum	DSGE models Lawrence Christiano	Model estimation Lawrence Christiano	Financial frictions Lawrence Christiano	Open-economy models Sergio Rebelo	Forecasting Giorgio Primiceri	Macro-prudential regulation Thomas Philippon
10:30 AM to 10:45 AM		Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
10:45 AM to 12:15 PM		Using VARs Martin Eichenbaum	DSGE models Lawrence Christiano	Model estimation Lawrence Christiano	Financial frictions Lawrence Christiano	Open-economy models Sergio Rebelo	Forecasting Giorgio Primiceri	Macro-prudential regulation Thomas Philippon
12:15 PM to 1:30 PM		Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch
1:30PM to 4:00 PM	Optional Matlab Review Session	Practicum Session	Practicum Session	Chicago Architectural River Cruise (starts at 3:30 pm)	Practicum Session	Simon Gilchrist Inflation Dynamics During the Financial Crisis	Practicum Session	
4:00 PM to 4:15 PM		Coffee Break	Coffee Break		Coffee Break		Coffee Break	
4:15 PM to 5:30 PM	Charles Evans U.S. Economy and Monetary Policy	Valerie Ramey Government Spending Multipliers	Jordi Gali Asset Bubbles and Monetary Policy				Ricardo Reis, Quantitative Easing	
5:30PM to 6:30 PM	Dinner	Cocktails	Cocktails		Dinner		Cocktails	
6:30PM to 8:00 PM		Dinner	Dinner			Optional Dinner	Celebration dinner at Stained Glass (7:15 pm)	
					Show at Chicago Theater			



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