Houtan BASTANI

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EDUCATION

MSc Economics *(with Merit)* 2008-09
London School of Economics
Modules in: Microeconomics, Macroeconomics, Econometrics, International Economics

B.S. Economics, Computer Science *(Summa Cum Laude)* 2000-03
College of William & Mary
College education financed through scholarships, grants, loans and work.
Modules in: Econometrics, Time-Series Econometrics, Topics in Math Econ, Micro and Macro Theory, Databases, Systems Programming, among many others.

Candidate for B.S.E. Computer Science Engineering *(transferred)* 1998-00
University of Pennsylvania

FELLOWSHIPS, HONORS AND AWARDS

US **Fulbright** Research Fellow, Italy	2003-04
Elected member of **Phi Beta Kappa** honor society	2002
Frances L. and Edwin K. Cummings Scholar	2002
NSF REU Program	2001, 2002
Dean's List	1999-03

WORK EXPERIENCE

Researcher Software Engineer, Dynare, CEPREMAP, École Normale Supérieure since 2009

- Focused on development of Dynare, primarily in C++, Matlab, and Julia
- Programmed
  - OLS, FGLS, Gibbs Sampling for SUR models, VAR forecasts, …
  - Interpreter for Dynare's macro processing language
  - Dynare's Reporting functionality
  - Dynare's test suite, run nightly upon commit
  - Integrated Sims, Waggoner and Zha MS-SBVAR code
  - JSON and Julia output of preprocessor
  - among others...
- Responsible for distribution on macOS: create installation packages and snapshots; created and maintain installation scripts on Homebrew
- Debian server administration (manage users, email addresses, bacula backups, etc.)
- Webmaster http://www.dynare.org and http://www.cepremap.fr

Consultant, Organisation for Economic Co-operation and Development (OECD) 2018

- Added Gandhi, Navarro and Rivers (2017) module to MultiProd codebase
- Fixed bug in Stata Gtools
- Gave class on Git

Consultant, Copywrighte Design 2018

- Created interactive in-store display using Python and Raspberry Pi

Consultant, CQER, **Federal Reserve Bank of Atlanta** 2011

- Worked for Dan Waggoner and Tao Zha, creating an interface for use with their Regime-Switching DSGE models.

Research Assistant, Federal Reserve Board 2006-08

- Worked in the modeling group of the Trade and Financial Studies section of the Division of International Finance (IF).
- Primarily focused on research improving the numerical methods for estimating parameters of Dynamic General Equilibrium models (see publications below). This involved extensive programming in C, Matlab and Fortran.
- Developed simple forecast average models in EViews, producing forecasts of foreign real GDP growth and foreign inflation, to be used within IF.
- Responsible for generating FRB/Global alternative simulations to be included in the Greenbook every FOMC cycle.
- Worked closely with two economists in preparation for special presentations to the Board members.
- Conducted literature reviews

Computer Applications Programmer, Federal Reserve Board 2005-06

- Programmed various projects including the Check 21 survey for banks and Web Census. Both projects involved programming in VB .Net and database design.

Research Assistant to Dr. Nikos Chrisochoides, College of William & Mary 2001-03

- Ported parallel communication software from Linux to Windows so that multiple platforms could be used in parallel within a computing cluster. Found inconsistencies between the Microsoft implementation of the Message Passing Interface for parallel communication and the industry standard.

Teaching Assistant for Introductory Italian 2001

- Taught Italian to eleven undergraduate students two times a week, fostering conversation and assessing participation.

COMPUTER SKILLS

Programming Languages:	C, C++, Fortran, Matlab, Julia, EViews, Stata, Java, Python, VB .NET
Operating Systems:	macOS, GNU/Linux, Windows
Other:	Flex, Bison, PLY, Emacs, SQL, Git, Autotools, Travis CI, web development, sys admin
Open Source:	Have contributed to Homebrew and Homebrew Science

PUBLICATIONS

"Dynare: Reference Manual, Version 4", with Stéphane Adjemian, Michel Juillard, Ferhat Mihoubi, George Perendia, Marco Ratto and Sébastien Villemot, Dynare Working Papers, no. 1, CEPREMAP, April 2011.

"On the Application of Automatic Differentiation to the Likelihood Function for Dynamic General Equilibrium Models", with Luca Guerrieri. Advances in Automatic Differentiation. Eds. Bischof, C.H., et. al. Berlin: Springer-Verlag, 2008. 303-314.

LANGUAGE SKILLS

English (native); Farsi, Italian, French (advanced); Portuguese, Spanish (novice)

INTERESTS

Hobbies: jewelry making (Instagram: @hbcreated)
Sports: badminton, yoga, squash, soccer
Have travelled extensively

REFERENCES AVAILABLE UPON REQUEST