

## David Zarruk Valencia

135 S. 20th st  
Philadelphia, PA, 19103  
+1(267)474-6472  
[davidza@sas.upenn.edu](mailto:davidza@sas.upenn.edu)

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### EDUCATION

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| <i>MA in economics</i> , (GPA: 4.68/5),<br>Universidad de los Andes, Bogotá, Colombia  | 2013 |
| <i>BA in mathematics</i> , (GPA: 4.52/5),<br>Thesis: Solving the Support Vector Machines' optimization problem<br>through <i>k-nearest</i> neighbors search (Grade: 5.0/5.0)<br>Universidad de los Andes, Bogotá, Colombia | 2013 |
| <i>BA in economics, cum laude</i> , (GPA: 4.60/5),<br>Universidad de los Andes, Bogotá, Colombia   | 2011 |
| <i>Academic exchange</i> , (GPA: 27.5/30),<br>Università Commerciale Luigi Bocconi, Milan, Italy   | 2009 |

### PERSONAL INTERESTS

Macroeconomic theory, development and conflict economics.

### WORKING EXPERIENCE

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|---|------------------------|
| <i>Research assistant</i><br>Centro de Estudios sobre Desarrollo Económico - CEDE<br>Universidad de los Andes | March 2011 - June 2013 |
|---|------------------------|
- Co-author of a working paper that studies the impact of crime participation on lower school assistance in Colombia.
  - Database construction and consolidation for different projects at CEDE.
  - Regression analysis and estimation for research related to conflict, violence, education and poverty.
  - Design, simulation and model calibration to estimate the fiscal burden of programs for the displaced population, prepared for the Ministry of Finance.
  - Go through national and international economic literature on conflict economics and rural development.

*Research assistant*  
EConcept AEI

October 2009 - July 2010

- Analyze and prepare weekly conference presentations on Colombian and international economic conjuncture.
- Participate in the elaboration of monthly and quarterly economic reports on the Colombian economy.
- Elaborate quarterly GDP projections.
- Collect information of the Colombian economy for database construction.

## ACADEMIC EXPERIENCE

### Teaching assistant (for professor Harold Cole):

Macroeconomic Theory II, 2014  
PhD in Economics, University of Pennsylvania

### Teaching assistant (for professor Harold Cole):

Monetary and Fiscal Policy, 2014  
BA in Economics, University of Pennsylvania

### Professor:

MATLAB Introductory Course, 2013  
BA in Economics, Universidad de los Andes

### Graduate instructor:

Advanced Microeconomics: Game Theory (3.75/4.00), 2012  
Advanced Macroeconomics: Long Run (3.78/4.00), 2011  
MA in Economics, Universidad de los Andes

Linear Algebra I (3.64/4.00), 2011  
Mathematical Methods for Economists (3.61/4.00), 2011  
BA in Mathematics, Universidad de los Andes

Microeconomics II (3.45/4.00), 2011, 2012  
BA in Economics, Universidad de los Andes

Introduction to Asymmetric Information and Auction Theory, 2010  
Diploma on Economics of Risk and Information, Universidad de los Andes

*Undergraduate teaching assistant:* Linear Algebra II, Integral Calculus, Statistics and Probability,  
Poverty and Wealth.

## AWARDS

Best preliminary econometrics exam (8/10) 2011  
PhD in Economics, University of Pennsylvania

Cum Laude degree in economics (GPA: 4.60/5) 2011  
BA in Economics, Universidad de los Andes

Scholarship awarded to the best ECAES of Universidad de los Andes 2011  
MA in Economics, Universidad de los Andes

Academic excellence scholarship (GPA: 5/5), 2011  
BA in Economics, Universidad de los Andes

Second highest national score in ECAES (Colombian National Exam of Undergraduate Academic Quality), Score: 152 2010

## RESEARCH

‘*Equidad y Eficiencia Rural en Colombia: Una Discusión de Políticas Para el Acceso a la Tierra*’, 2012. *Working paper*, Documento CEDE (2012-38). With Ana María Ibáñez and Margarita Gáfaró.

‘*On the Determinants of Armed Groups’ Demobilization: Analysis of the Colombian Case*’. Masters’ thesis, 2012. Advisors: Ana María Ibáñez and Daniel Mejía.

‘*Solving the Support Vector Machines’ optimization problem through k-nearest neighbors search*’, 2012. *Working paper*. To be published. With María de los Angeles González and Adolfo Quiroz.

‘*The Costs of Crime and Violence in Colombia: Juvenile Crime and Education*.’ Working paper, 2012. With Ana María Ibáñez and Catherine Rodríguez.

‘*Tópicos en Teoría Geométrica de Grupos*’. Non-published manuscript, 2011. With Daniele D’Angeli and others. Available from the author upon request.

## GRANTS

IDB grant for research on the costs of violence and conflict in Latin America and the Caribbean. 2012

## LANGUAGES

English (fluent), italian (proficient), portuguese (proficient), spanish (native).