

## João Plínio Juchem Neto

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### ADDRESS:

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### EDUCATION

- Ph.D. in Applied Mathematics Candidate. University of Delaware (UD). Newark, DE, USA.  
*July 2009-August 2013. Teaching Assistanship.*
- Master in Applied Mathematics. Federal University of Rio Grande do Sul (UFRGS). Porto Alegre, RS, Brazil. *March 2005 – May 2008. CNPq Scholarship.*  
*Dissertation: "Hull-White Model and Some Extensions with Stochastic Volatility: Perturbative Approximations", under the supervision of Professor Julio Cezar Ruiz Claeysen, Ph.D.*
- Bachelor in Economics. Federal University of Rio Grande do Sul (UFRGS). Porto Alegre, RS, Brazil. *March 1999 - April 2004.*  
*Monograph: "Black-Scholes Model for Pricing European Options: Analytical and Numerical Solution", under the supervision of Professor Jorge Paulo de Araújo, Ph.D.*
- Electronic Technician. Fundação Escola Técnica Liberato Salzano Vieira da Cunha. Novo Hamburgo, RS, Brazil. *March 1993 - December 1997.*

### RESEARCH INTERESTS

- Derivative pricing, real options, fixed-income instruments pricing, stochastic portfolio theory, time series analysis, stochastic differential equations.
- Economic growth modeling, applications of information theory in game and microeconomic theory, international finance, use of special functions in solving dynamic economical problems.

### SKILLS

- Languages: Portuguese (native), English (fluent), Spanish (reading), French (reading), Italian (reading).

- Computer: Linux, Unix, Windows, Maple, Matlab, Mathematica, SPSS, R, *C Programming Language*, Microsoft Office (advanced Excel - VBA), MySQL, Latex.

## **PROFESSIONAL EXPERIENCE**

- Federal University of Rio Grande do Sul – UFRGS (*Porto Alegre, RS, Brazil*)  
Institute of Mathematics - Department of Pure and Applied Mathematics  
Position: Professor Substituto.  
*August 2008 – July 2009. (40h/week)*
- Companhia Estadual de Geração e Transmissão de Energia Elétrica - CEEE-GT  
(*Porto Alegre, RS, Brazil*)  
Debt Management Department, Financial Division  
Position: Economist.  
Activities: Management of debt contracts, amortization table calculations, confection of projected debt reports, estimation of the company's cost of capital, programming of macros in Excel.  
*January 2006 – June 2007. (44h/week)*
- Televisão Gaúcha S.A. (*Porto Alegre, RS, Brazil*)  
Distribution Engineering, Integrated Network Department  
Position: Electronics Technician.  
Activities: PDH/SDH Digital Radios Network Management. Confection of network reliability reports, data analysis, programming of macros in Excel and programming in PHP/Apache/MySQL.  
*February 1998 – October 2003. (36h/week)*

## **TEACHING EXPERIENCE**

- Federal University of Rio Grande do Sul – UFRGS (*Porto Alegre, RS, Brazil*)  
Institute of Mathematics - Department of Pure and Applied Mathematics  
Teacher for “Calculus and Analytical Geometry II” and “Differential Equations II”  
(undergraduate level).  
*August 2008 – July 2009.*
- Colégio Pensar (*Guaíba, RS, Brazil*)  
Technical Course in Business Management.  
Teacher for “Economy and Markets”.  
*August 2005 – November 2005. (4h/week)*

## PARTICIPATION IN EVENTS

- Workshop on mathematical and finance: research in options 2008. **Hull-White Model with Stochastic Volatility: Perturbative Approximations (poster, talk)**. November 23-27, 2008. Angra dos Reis, RJ. Organized by IMPA – Instituto Nacional de Matemática Pura e Aplicada.
- Mini-Workshop in Econophysics. **Black-Scholes Model for Option Pricing: Gaussian and Non-Gaussian Log-returns (talk)**. Physics Institute. University of Brasilia (UnB). Brasília, DF. 2005.
- Mini-Workshop in Econophysics. **Simulating Markets with an Unidimensional Cellular Automaton (talk)**. Physics Institute. University of Brasilia (UnB). Brasília, DF. 2005.

## WORKING PAPERS

- Juchem Neto, J. P. **The Solow Growth Model with a Perfect Substitution CES Production Function: Constant and Oscillatory Migration Rates**. May 2009 (in development).
- Juchem Neto, J. P.; Claeysen, J. C. R. **Temporary Migration in a Solow Growth Model**. April 2009 (to be submitted).
- Juchem Neto, J. P.; Claeysen, J. C. R.; Ritelli, D.; Mingari Scarpello, G. **Closed-form solutions to an economic growth logistic model with migration**. Submitted to *Jornal of Mathematical Economics*, March 2009.
- Juchem Neto, J. P.; Claeysen, J. C. R.; Ritelli, D.; Mingari Scarpello, G. **Migration in a Solow Model**. Submitted to *Applied Sciences*, July 2009.
- Juchem Neto, J. P. **Fisher's Equation – Stability Analysis, Perturbative and Numerical Solutions**. September, 2005.

## MEMBERSHIP IN SOCIETIES

- Society for Industrial and Applied Mathematics (SIAM).