CIPRIAN NECULA

CONTACTS

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- Google Scholar page: https://scholar.google.ro/citations?user=4sY4ehAAAAAJ&hl=en

PROFESSIONAL EXPERIENCE

- Oct. 2001 – present, Bucharest University of Economic Studies, Department of Money and Banking, various teaching and research positions, since 2013 Professor
- Apr. 2015 – Mar. 2017, Marie Curie Fellow, University of Zurich, Department of Banking and Finance
- Oct. 2012 – Sept. 2013, SCIEX Post-Doctoral Fellow, University of Zurich, Department of Banking and Finance, Chair in Quantitative Finance

EDUCATION

- 2015 - MSc in Computational Biology and Bioinformatics, ETH Zurich
- 2012 - Habilitation in Economics, Bucharest University of Economic Studies
- 2009 - PhD in Finance, DOFIN, Bucharest University of Economic Studies, supervisor: Prof. Moisa ALTAR
- 2003 - MSc in Stochastic Processes, University of Bucharest, Faculty of Mathematics
- 2002 - MSc in Financial Markets, DOFIN, Bucharest University of Economic Studies
- 2001 - BA in Economics, Bucharest University of Economic Studies, Faculty of Finance and Banking
- 2001 - BA in Mathematics, University of Bucharest, Faculty of Mathematics

INTERESTS AND ACTIVITIES

- financial mathematics and risk management
- macroeconomic modelling and monetary policy

SELECTED RESEARCH GRANTS

- **international grants**

- 2015-2017 - **Marie Curie IEF Grant**: "Heterogeneity and the Volatility of Financial Assets" - *post-doctoral fellow;*
- 2012-2013 - **SCIEX Post-Doctoral Grant** : "The Interaction of Agents and Asset Price Dynamics" - *post-doctoral fellow*
- 2010-2011 - **CERGE/GDN RRC-X Grant**: "Macroeconomic Implications of Population Ageing and Pension Reform in Romania" – *principal investigator*;
- 2009-2010 - **CERGE/GDN IRC Grant**, „City Size Distribution Dynamics in Transition Economies: A Cross-Country Investigation" – *principal investigator*;
- 2002-2004 - **British Academy Research Project "Joint Projects with South East Europe"**: "Volatility in Financial Markets in Eastern-European Countries", coordinator: Dr. Simon BURKE (University of Reading) – *researcher*;

- **national grants**

- 2010-2012 – **CNCS-UEFSCDI PNII_RU_PD Project**: "Modeling the Interconnections between the Financial System and the Real Sector using Mechanical Statistics Principles" – *principal investigator*;
- 2011-2012 - **CNCS-UEFSCDI PNII_PCE Project**, „Uncertainty, Complexity, and Financial Stability" – *researcher*;
- 2009-2011 - **CNCS-UEFSCDI PNII_PCE Project** "Modeling the Influence of Uncertainty, Volatility and Risk on the Dynamics of Complex Socio-economic Systems" – *researcher*;
- 2007-2010 – **CNCS-UEFSCDI PNII Project**: "Innovation and economic growth" – *researcher*;

- 2005-2008 - **CNCS-UEFSCDI CEEX Project**: "Economic growth, employment and competitiveness in a knowledge-based economy" – *researcher.*

SELECTED POLICY ORIENTED PROJECTS

- 2011-2012 – **SPOS Project** – "European Semester: ensuring sustainable economic growth through sound public finances. Lessons for Romania" - *senior researcher*;
- 2009-2010 – **SPOS Project** – "Developing a Medium Term Fiscal Framework for Romania" - *senior researcher;*
- 2005-2006 – **PAIS III Project**: - "Capital Account Liberalization and the Competitiveness of the Romanian Economy" – *researcher*
- 2004-2006 - **PHARE Project** – "Strengthening the capacity of analysis, macroeconomic forecast and elaboration of economic policies within the National Commission of Prognosis, the Ministry of Economy and Trade and the Prime Minister Cabinet" – *researcher.*

DISTINCTIONS

- national: Georgescu Roegen Diploma (2005, 2006), Diploma for Excellence in Research (2013), CFA Romania Award for Best Research Paper, Section "Finance" – "*A General Closed Form Option Pricing Formula*" (2014)
- international: Best Reviewer Award of *European Journal of Operational Research* (2010)

OTHER PROFESSIONAL ACTIVITIES

- Director (2009-present) and Assistant Director (2003-2009) of the MSc Program in Finance and Banking – DOFIN
- Director (2009-present) of Center for Advanced Research in Finance and Banking (CARFIB) at the Bucharest University of Economic Studies
- Member of the editorial board of *The Review of Finance and Banking*
- Reviewer for *European Journal of Operational Research, Economic Modelling, Quantitative Finance, Applied Economics, Computational Economics, Economic Research*
- Representative of the Bucharest University of Economic Studies in the Academic Board of the European Banking Institute

LANGUAGES

- English: advanced level
- French: intermediate level

SELECTED PUBLICATIONS

1. Papers in peer-reviewed journals

- "Modeling tail dependence using a stochastic volatility model", *Computational Economics*, 2022, doi: 10.1007/s10614-022-10271-5 (with S-W. Kim and Y-K. Ma)
- "Quantifying the Probability of a Recession in Selected Central and Eastern European Countries", *Economic Research,* 2022, doi: 10.1080/1331677X.2022.2073460 (with B. Murarasu, A-N. Radu, C. Anghelescu and A. Zaharia)
- "A General Closed Form Option Pricing Formula", *Review of Derivatives Research*, 22*,* 2019, doi: 10.1007/s11147-018-9144-z (with W. Farkas and G. Drimus);
- "A Two-Factor Cointegrated Commodity Price Model with an Application to Spread Option Pricing", *Journal of Banking and Finance,* 77, 2017, doi: 10.1016/j.jbankfin.2017.01.007 (with W. Farkas, E. Gourier, and R. Huitema);
- "Quantifying the recapitalization fund premium using option pricing techniques", *Economics Letters*, 114, 3, 2012, doi: 10.1016/j.econlet.2011.11.002 (with A-N Radu);
- "Long Memory in Eastern European Financial Markets Returns," *Economic Research*, 25, 2, 2012, doi: 10.1080/1331677X.2012.11517512 (with A-N Radu);
- „A Two–Country Discontinuous General Equilibrium Model", *Economic Computation and Economic Cybernetics Studies and Research*, 44, 2, 2010;
- „Modeling the Dependency Structure of Stock Index Returns using a Copula Function Approach", *Romanian Journal of Economic Forecasting*, 13, 3, 2010;
- "A Copula-GARCH Model", *Economic Research*, 23, 2, 2010, doi: 10.1080/1331677X.2010.11517408 ;
- „Estimating Potential GDP for the Romanian Economy. An Eclectic Approach", *Romanian Journal of Economic Forecasting*, 13, 3, 2010 (with M. Altar and G. Bobeică);
- „Estimating the Cyclically Adjusted Budget Balance for the Romanian Economy. A Robust Approach.", *Romanian Journal of Economic Forecasting*, 13, 2, 2010 (with M. Altar and G. Bobeică);

- "Modeling Heavy-Tailed Stock Index Returns Using the Generalized Hyperbolic Distribution", *Romanian Journal of Economic Forecasting*, 10, 2, 2009;
- "Modeling the Economic Growth in Romania. The Influence of Fiscal Regimes", *Romanian Journal of Economic Forecasting*, 9, 4, 2008 (with M. Altar and G. Bobeică);
- "Modeling the Economic Growth in Romania. The Role of Human Capital", *Romanian Journal of Economic Forecasting*, 9, 3, 2008 (with M. Altar and G. Bobeică);
- "Option Pricing in a Fractional Brownian Motion Environment", *Mathematical Reports*, vol.6(56), no. 3, 2004.

2. Papers in conference proceedings and edited volumes

- "The Impact of Cointegration on Commodity Spread Options", in Glau, K., Z. Grbac, M. Scherer and R. Zagst (Eds.), *Innovations in Derivatives Markets*, Springer, pp. 421-435, 450 pag., 2016, (with W. Farkas, E. Gourier, and R. Huitema);
- „Modeling Stock Returns Dynamics in Central and Eastern European Emerging Markets," in Papanikos T. (Ed), *Economic Essays*, ATINER, 2012, (with G.- V. Anghelache and A.-N. Radu)
- "Fiscal policy and economic growth in Central and Eastern European countries", in Socol C. (Ed), *Emerging macroeconomics. Case studies - Central and Eastern Europe*, Nova Science, 2012 (with Altar M. and G. Bobeică);
- „The Dynamics of Bank Assets Volatility in Central and Eastern European Countries", in Mastorakis N. et al (Eds), *Models and Methods in Applied Sciences*, 2011. (with A-N Radu and A. Trifan)
- "Estimation of The Equilibrium Real Exchange Rate and of Deviations for Romania", in Iancu A. (ed.); *Economic convergence*; C.H. Beck; 2008 (with Altar, M., L. Albu, I. Dumitru)

3. Books

- *Implementing a Medium Term Fiscal Framework for Romania*, IER Publishing House, 2010 (coauthor);
- *Assessing Public Finance Sustainability in Romania* (in Romanian), ASE Publishing House, 2008 (coauthor);
- *An Assessment of the Volatility of the Romanian Macroeconomic Environment* (in Romanian), ASE Publishing House, 2008 (coauthor);
- *The Impact of Capital Account Liberalization on the Exchange Rate and the Competitiveness of the Romanian Economy*, IER Publishing House, 2006 (coauthor).

4. Selected presentations at conferences

- "Herding and Stochastic Volatility", poster presentation, ASSA Annual Meeting 2019, Atlanta;
- "An Approximation of an Equivalent European Payoff for the American Put Option", 10th World Congress of the Bachelier Finance Society, Dublin, July 2018;
- "Herding and Stochastic Volatility", Innovations in Insurance, Risk- and Asset Management, Munich, April 2017;
- "A Generalized Bachelier Formula for Pricing Basket and Spread Options", Vienna Congress on Mathematical Finance, Vienna, September 2016;
- "Herding and Stochastic Volatility", 9th World Congress of the Bachelier Finance Society, New York, July 2016;
- "A General Closed Form Option Pricing Formula", 9th World Congress of the Bachelier Finance Society, New York, July 2016;
- "Herding and Stochastic Volatility", European Financial Management Association 2016 Annual Meeting, Basel, June 2016;
- "A General Closed Form Option Pricing Formula", Quantitative Methods in Finance Conference 2015, Sydney, December 2015;
- "A General Closed Form Option Pricing Formula", invited speaker, International Conference on Operations Research 2015, Vienna, September 2015;
- "The Dynamics of Heterogeneity and Asset Prices", 38th Conference on Stochastic Processes and their Applications, Oxford, July 2015;
- "A General Closed Form Option Pricing Formula", Stochastics & Computational Finance Conference 2015, Lisbon, July 2015;
- "A General Closed Form Option Pricing Formula", Challenges in Derivatives Markets 2015, Munich, April 2015;
- "The Dynamics of Heterogeneity and Asset Prices", 9th Bachelier Colloquium on Mathematical Finance and Stochastic Calculus, Metabief, January 2015;
- "Expansion-based Approximation for Pricing Basket and Spread Options", poster presentation, 8th World Congress of the Bachelier Finance Society, Brussels, June 2014.