Middle East Technical University
Financial Mathematics Group
Ankara/Turkey

bilgiyilmaz07@gmail.com
Mobile: +905058449407
Website:
http://iam.metu.edu.tr/people?id=104

Bilgi Yilmaz, Ph.D. Candidate

Education

May 2011 – Jun 2014	**Institute of Applied Mathematics, Ankara, Turkey** MSc, Financial Mathematics Çankaya, Ankara, Turkey
Feb 2008 – Jun 2010	**Ankara University** MSc, Real Estate Development Ankara, Turkey
Sep 2003 – Jun 2007	**Ankara University** Undergraduate, Mathematics Ankara, Turkey

MSc Thesis

Bilgi Yilmaz. *Computation of The Greeks in Black-Scholes-Merton and Stochastic Volatility Models Using Malliavin Calculus*. 06/2014, Degree: MSc, Supervisor: Assist. Prof. Dr. Yeliz Yolcu Okur.

Work Experience

Mar 2011 – present	**Research Assistant** Middle East Technical University, Institute of Applied Mathematics "IAM",Financial Mathematics Group,
June 2010 – March 2011	**Research Assistant** Kahramanmaraş Sütçü İmam University, Faculty of Science, Mathematics,
Jan 2009 – Jun 2010	**Project Manager** ORSER Control and Certification Body,
Jan 2008 – Jan2009	**Project Manager** IPM International Project Management,

Languages English (working proficiency), Turkish (Native)

Scientific Membership SIAM: Society for Industrial and Applied Mathematics

Research Interests Financial Markets, Mathematical Finance, Stochastic Modelling, Financial Modeling, Mortgage, Real Estate, Interest Rate Modeling, Option Pricing, Derivatives

Projects

A.Sevap Selcuk Kestel, **Bilgi Yilmaz**, Estimating the Effect of Economic and Social Indicators on Real Estate Markets by Using Parametric and Nonparametric Methods, Research Project, Researcher, 01/01/2017-31/12/2017.

Journal Publications

Bilgi Yilmaz, Sevtap Selcuk-Kestel. Computation of Hedging Coefficients for Mortgage Default and Prepayment Options: Malliavin Calculus Approach. *The Journal of Real Estate Finance and Economics*, 2018 (In review).

Bilgi Yilmaz, Sevtap Selcuk-Kestel. A Stochastic Approach to Model Housing Markets: The US Housing Market Case. *Numerical Algebra, Control and Optimization*, 2018 (In press).

Yeliz Yolcu-Okur, Tilman Sayer, **Bilgi Yilmaz**, B. Alper Inkaya. Computation of the Delta of European options under stochastic volatility models. *Computational Management Science,* 05/2018, DOI:10.1007/s10287-018-0316-y.

Bilgi Yilmaz. Computation of option greeks under hybrid stochastic volatility models via Malliavin calculus. *Modern Stochastics: Theory and Applications*, 04/2018, DOI:10.15559/18-VMSTA100.

Yener Coşkun, A. Sevtap Selcuk-Kestel, **Bilgi Yılmaz**. Diversification Benefit and Return Performance of REITs Using CAPM and Fama-French: Evidence from Turkey. Borsa Istanbul Review, 08/2017; 17(4)., DOI:10.1016/j.bir.2017.08.003.

Yeliz Yolcu Okur, Tilman Sayer, **Bilgi Yilmaz**, B.Alper İnkaya. *Computation of the Delta of European Options Under Stochastic Volatility Models*. SSRN Electronic Journal, 10/2016, DOI:10.2139/ssrn.2877709.

Conference Proceedings

Bilgi Yilmaz, Sevtap Selcuk-Kestel. Determination of Sensitivities for Mortgage Default and Prepayment Options. 8th General AMaMeF Conference, Amsterdam, Holland, 2017.

Bilgi Yilmaz, Sevtap Selcuk-Kestel. The Effect of Macro-Economic Factors on Housing Markets: US Case. IRSYSC 2017 – 3rd International Researchers, Statisticians and Young Statisticians Congress, Konya, Turkey, 2017.

Yener Coşkun, **Bilgi Yilmaz**, Sevtap Selcuk-Kestel. Diversification benefit and return performance of reits using CAPM and Fama French evidences from Turkey. 2nd international conference on Applied Economics and Finance, Eskişehir, Turkey, 2016.

Sevtap Selcuk Kestel, Yener Coşkun, **Bilgi Yilmaz**. Diversification Benefit and Return Performance of REITs Using CAPM and Fama-French Methods in Emerging Markets: The Turkish Case. European Real Estate Society 22nd Annual Conference/ERES-İTÜ, İTÜ/Istanbul, Turkey, 2015.

Bilgi Yilmaz, Computation of Greeks via Malliavin Calculus. 2nd Ankara-İstanbul Workshop on Stochastic Processes, İstanbul, Turkey, 2015.

Sevtap Selcuk Kestel, Yener Coskun, **Bilgi Yilmaz**. Comparative Study on REIT Returns in Borsa Istanbul by Using Single Index and Fama-French Methods. Anadolu International Conference in Economics, Eskişehir, Turkey, 2015.

Bilgi Yilmaz, Yeliz Yolcu Okur. Computation of Malliavin Greeks in Hybrid Stochastic Volatility Models. EURO Working Group for Commodities and Financial Modelling (55th Meeting of the EWGCFM), Middle East Technical University, Ankara, Turkey, 2015.

Bilgi Yilmaz, Yeliz Yolcu Okur, Alper Inkaya, Tilman Sayer: Computation of the Delta of European Options under Stochastic Volatility Models. 2014 SIAM Conference on Financial Mathematics and Engineering, US, 2014.

Bilgi Yilmaz. Comparison of Different Methods to Compute the Greeks. 8th International Statistic Congress 27 − 30 October, 2013 Antalya, Turkey, 2013.

Bilgi Yilmaz, B. Alper Inkaya, Yeliz Yolcu Okur: Application of the Malliavin Calculus for Computation of Greeks in Black-Sholes and Stochastic Volatility Models. 26th European Conference on Operational Research Rome, Italy, 2013.

National Conference Proceedings

Bilgi Yilmaz. Computation of Greeks via Malliavin Calculus. 2nd Ankara-İstanbul Workshop on Stochastic Processes, Istanbul, Turkey, 2015.

Workshops

Advanced Modelling in Mathematical Finance Workshop in Honor of Azize Hayfavi's 75th Birthday, Financial Modeling, Monte Carlo Simulations, Institute of Applied Mathematics, Middle East Technical University, Ankara, Turkey, 23.10.2017 -23.10.2017 (Organizer-National).

VCMF Educational Workshop, Limit Order Book / High Frequency Trading, Credit Risk / Systemic Risk, Computational Methods and Calibration, New Financial Markets, Stochastic Volatility Models, Risk Measures and Optimization, WU Wien - Vienna University of Economics and Business, Vienna, Australia, 15.09.2016 -16.09.2016 (International).

3rd Ankara-Istanbul Workshop on Stochastic Processes, Bayesian and hidden Markov models, Diffusion and jump-diffusion models in finance, Levy and renewal processes, Malliavin calculus and its applications to finance, Probabilistic approach to operator theory, Processes in random media Random walks on graphs, Stochastic flows, Middle East Technical University, Ankara, Turkey, 16.06.2016 -17.06.2016 (National).

2nd Ankara-Istanbul Workshop on Stochastic Process, Bayesian and hidden Markov models, Diffusion and jump-diffusion models in finance, Levy and renewal processes, Malliavin calculus and its applications to finance, Probabilistic approach to operator theory, Processes in random media, Random walks on graphs, Stochastic flows, Koç University, Istanbul, Turkey, 18.06.2015 -19.06.2015 (National).

1st Ankara-Istanbul stochastic days, Bayesian and hidden Markov models, Diffusion and jump-diffusion models in finance, Levy and renewal processes, Malliavin calculus and its applications to finance, Probabilistic approach to operator theory, Processes in random media, Random walks on graphs, Stochastic flows, Boğaziçi University, Istanbul, Turkey, 12.06.2014 -13.06.2014 (National).