Ömür Uğur, Ph.D.

Personal Data

Middle East Technical University (METU)
Institute of Applied Mathematics (IAM)
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Birth: March 8, 1971, İstanbul, Turkey

Education

1998–2003 Ph.D. in Mathematics
Middle East Technical University (METU), Ankara, Turkey
Theme: *Boundary Value Problems for Higher Order Linear Impulsive Differential Equations*

1995–1998 M.Sc. in Mathematics
Middle East Technical University (METU), Ankara, Turkey
Theme: *Hypervirial Analysis of Enclosed Quantum Mechanical Systems*

1991–1995 B.S. in Mathematics
Middle East Technical University (METU), Ankara, Turkey

Employment History

11/2017–present Director
Institute of Applied Mathematics (IAM), Middle East Technical University (METU), Ankara, Turkey

06/2017–present Member of Faculty (Prof. Dr.)
Institute of Applied Mathematics (IAM), Middle East Technical University (METU), Ankara, Turkey

02/2015–12/2017 Chair of Scientific Computing (SC) Program
Institute of Applied Mathematics (IAM), Middle East Technical University (METU), Ankara, Turkey

07/2011–06/2017 Member of Faculty (Assoc. Prof. Dr.)
Institute of Applied Mathematics (IAM), Middle East Technical University (METU), Ankara, Turkey

03/2011–11/2012 Chair of Financial Mathematics (FM) Program
Institute of Applied Mathematics (IAM), Middle East Technical University (METU), Ankara, Turkey

2008–2011 Member of Faculty (Assist. Prof. Dr.)
Institute of Applied Mathematics (IAM), Middle East Technical University (METU), Ankara, Turkey

10/2008–03/2009 Visiting Professor
Department of Mathematics, University of Kaiserslautern, Kaiserslautern, Germany

2004–2008 Member of Faculty (Instructor)
Institute of Applied Mathematics, Middle East Technical University, Ankara, Turkey

02/2007–09/2007 Visiting Professor
Department of Mathematics, University of Kaiserslautern, Kaiserslautern, Germany

2002–2003 Part-Time Instructor
Department of Mathematics, Middle East Technical University (METU), Ankara, Turkey

1995–2002 Research Assistant
Department of Mathematics, Middle East Technical University (METU), Ankara, Turkey

VISITED INSTITUTIONS (ABROAD)

10/2008–03/2009 Department of Mathematics, Technical University of Kaiserslautern, Germany (upon invitation by Professor Ralf Korn)

02/2007–09/2007 Department of Mathematics, Technical University of Kaiserslautern, and Fraunhofer ITWM, Germany (upon invitation by Professor Ralf Korn in connection with DAAD)

08/2005–09/2005 Department of Numerical Methods in Mechanical Engineering, Darmstadt University of Technology, Germany (upon invitation by Professor Michael Schäfer)

06/2005–08/2005 Department of Mathematics, Technical University of Kaiserslautern, and Fraunhofer ITWM, Germany (upon invitation by Professor Ralf Korn)

08/2004–09/2004 Department of Numerical Methods in Mechanical Engineering, Darmstadt University of Technology, Germany (upon invitation by Professor Michael Schäfer)

PROJECTS & RESEARCH AREA OF INTEREST

(On Going) Projects…

- Computational Finance and Option Pricing
- Optimizing Partially Separable Functions using Derivative Free Optimization (PSDFO): Domain Decomposition Examples
- Meteorology and Oceanography: Data Assimilation
- Gene-Network and Gene-Environmental Network
- Statistical and Quantum Mechanics
- Uncertainty Quantification: Financial Applications

General…

- Differential Equations: impulsive equations, dynamical systems
- Numerical Solutions of (Partial) Differential Equations
- Applications of Wavelets in ODEs and PDEs
- Computational Finance and Option Valuations
- Monte Carlo Methods: particle filters
- Optimisation: large-scale optimization
- High Performance (Scientific) Computing

Projects Accomplished…

- Kredi İletişim ve Danışmanlık Platformu
  TÜBİTAK 1507 TÜBİTAK KOBİ AR-GE Başlangıç Destek Programı, 2011–2012
- Development of a First LIBOR Market Simulation for Valuation (Pricing) of Complex Interest Rate Derivatives
  Funded by ValuePrice AG, 2009–2010
- Pricing Fixed Rate Mortgages in Inflationary Economies: The Case of Turkey
  Funded by Scientific and Technical Research Council of Turkey (TÜBİTAK), 2007–2009
- Composable Derivative Contracts
  The project is a part of the research cluster
  Dependable Adaptive Systems and Mathematical Modeling (DASMOD)
  Cluster of Excellence in Rhineland-Palatinate, 2005–2007
- Optimization of Stirrer Configuration in a Tank
  Funded by Volkswagen Foundation, 2002-2005

Bilimsel Araştırma Projeleri (BAP)...

- Bankacılık Sektöründe Gözetimli Öğrenme Yaklaşımları Kullanılarak Kredi Riskinin Belirlenmesi (GAP-705-2018-2780), 2018. (in progress)
- Algoritmik Ticaret ve Finansal Araçlar için Gerçek Zamanlı Çalışan Bir Prototip (DAP-705-2018-2783), 2018.
- Finansal, Ekonomik ve Bilimsel Süreçlere Ait Sıçramalı Stokastik Hibrit Sistemler: Optimal Kontrol ve Optimizasyon (BAP-07-05-2017-001), 2017.
- Türev Araçların Lévy Modeli Altında Monte Carlo Benzetimi ile Fiyatlandırılması (BAP-07-05-2017-006), 2017.
- Navier-Stokes Denklemleri için Kontrol Problemleri ve Uygulamaları (BAP-07-05-2016-004), 2016.
- Monte Carlo simülasyon teknikleri ile iflas olasılıklarının tahmininde CVaR optimizasyonu (BAP-07-05-2016-003), 2016.
- Adveksiyon- ve Reaksiyon-Difuzyon Sistemleri için Optimal Kontrol ve Parametre Tahmin Yöntemleri (BAP-07-05-2015-009), 2015.
- Türev Araçların Lévy Modeli Altında Monte Carlo Benzetimi ile Fiyatlandırılması (BAP-07-05-2015-008), 2015.
- Sıçramalı Difüzyon Süreçleri Varsayımı Altında Bariyer Opsiyonlarının Fiyatlandırılması (BAP-07-05-2015-003), 2015.
- Biyokimyasal Sistemlerin Stokastik Simülasyon Algoritmalarıyla Yaratılması ve İmpuls İçerecek Şekilde Genişletilmesi (BAP-08-11-2014-007), 2014–2016.
- Hisse Senetlerinin Fiyat Süreçlerinin Kesirli Difüzyon Süreçleri Kullanılarak Parametre Tahminleri (BAP-08-11-2012-102), 2012–2013
- Unified and Hybrid Approaches to Identification, Optimization and Control of Stochastic Financial Processess-Theory, Methods and Applications (BAP-07-05-2012-003), 2012.
- Biyolojik Veri Madenciliğinin ve Sınıflandırılmasının İstatistiksel Öğrenmesi, Sürekli Optimizasyon, Makina Öğrenmesi ve Semi(yarı)-Sonsuz Programlama Kullanılarak Geliştirilmesi (BAP-2007-07-05-02), 2007–2008.
- Türkiye Finans Piyasalarına Uyum Sağlayacak Risk Modelleri Araştırma, Geliştirme Ve Uygulamaları (BAP-2005(R)-07-05-01), 2006.
- Biyolojik Veri Madenciliğinin ve Sınıflandırılmasının İstatistiksel Öğrenmesi, Sürekli Optimizasyon, Makina Öğrenmesi ve Semi(yarı)-Sonsuz Programlama Kullanılarak Geliştirilmesi (BAP-2006-07-05-01), 2006.

THESES SUPERVISED

PhD Theses...

- Elif Kırdağ, Schwarz Methods for Parabolic Problems, PhD Thesis, (in progress).
- Süleyman Cengizci, Numerical solutions of Navier-Stokes Equations, PhD Thesis, (in progress).
- Özge Tekin, Quantifying Uncertainty and Nonlinear Option Pricing, PhD Thesis, (in progress).
- Deniz Kenan Kılıç, Improving Feature Detection Algorithms by Applied Mathematics, PhD Thesis, (in progress).
- Abdulwahab Adinoyi Animoku, Uncertainty Quantification of Parameters in Local Volatility Model via Frequentist, Bayesian and Stochastic Galerkin Methods, PhD Thesis, September 2018.
- Burcu Aydoğan, Stochastic Control Approach for Nonlinear Pricing Problems, PhD Thesis, (in progress).
  (Co-advisor: Ümit Aksoy)
- Cansu Evcin, Optimal Control in Fluid Flow Problems with POD Applications to FEM Solutions, PhD Thesis, September 2018.
- Abdulwahab Adinoyi Animoku, Uncertainty Quantification of Parameters in Local Volatility Model via Frequentist, Bayesian and Stochastic Galerkin Methods, PhD Thesis, September 2018.
- Sinem Kozpınar, Pricing Spread and Basket Options under Markov-Modulated Models, PhD Thesis, September 2018.
  (Co-advisor: Zehra Ekşi-Altay)
- Serkan Zeytun, Risk Measurement, Management and Option Pricing via a New Log-Normal Sum Approximation Method, PhD Thesis, October 2012.
  (Co-advisor: Ralf Korn)
- Derya Altıntan, An Extension to the Variational Iteration Method for Systems and Higher-Order Differential Equations, PhD Thesis, June 2011.
- Ayşegül İşcanoğlu Çekiç, Pricing and Hedging of Constant Proportion Debt Obligations, PhD Thesis, February 2011.
  (Co-advisor: Ralf Korn)

MSc Theses...

- Mustafa Elçi, Numerical Analysis of Short Laser Pulses in the Atmosphere, MSc Thesis, (in progress).
  (Advisor: Burak Yedierler)
- Selin Tekten, Parameter Estimation for Stochastic Differential Equations, MSc Thesis, (in progress).

- Oğuz Koç, Comparison of Machine Learning Algorithms on Consumer Credit Classification, MSc Thesis, September 2019.
  (Advisor: A. Sevtap Selçuk-Kestel)
- Merve Haksever, Stochastic Modeling of Biochemical Systems with Filtering and Smoothing, MSc Thesis, September 2019.
  (Co-advisor: Derya Altıntan)
- Ali Gençay Özbekler, An Affine Term Structure Model for Turkish Interest Rate Swap Market: Do Swaps Span Volatility Risk?, MSc Thesis, August 2019.
  (Co-advisor: İrem Talaslı)
- Darkhan Rysbek, Sentiment Analysis with Recurrent Neural Networks on Turkish Reviews Domain, MSc Thesis, May 2019.
- Mehmet Alp Üreten, Applications of Stochastic Galerkin Methods to Uncertainty Quantification, MSc Thesis, September 2018.
  (Advisor: Hamdullah Yücel)
- Caner Karakurt, Volatility Indexes and an Implementation of the Turkish BIST 30 Index, MSc Thesis, June 2018.
- Meral Şimşek, Stochastic Surplus Processes with VaR and CVaR Simulations in Actuarial Applications, MSc Thesis, June 2016.
  (Co-advisor: A. Sevtap Selçuk-Kestel)
- Seyed Amir Hamed Zakeri, Time Series Analysis and Forecasting Electricity Prices in Turkey, MSc Thesis, November 2015.
  (Advisor: Ceylan Yozgatlıgil)
- Özge Tekin, Object-Oriented Implementation of Option Pricing via MATLAB: Monte Carlo Approach, MSc Thesis, July 2015.
  (Co-advisor: Yeliz Yolcu Okur)
- Deniz Kenan Kılıç, Multiresolution Analysis of S&P500 Time Series, MSc Thesis, June 2015.
- Ekin Baylan, Simulating Stochastic Differential Equations using Ito-Taylor Schemes, MSc Thesis, September 2014.
  (Advisor: Yeliz Yolcu Okur)
- Abdulwahab Adinoyi Animoku, Modelling and Implementation of Local Volatility Surfaces, MSc Thesis, September 2014.
  (Advisor: Yeliz Yolcu Okur)
- Burcu Aydoğan, Computational Methods for Pricing American Options, MSc Thesis, July 2014.
  (Advisor: Ümit Aksoy)
- Alev Meral, Optimal Portfolio Strategies under Various Risk Measures, MSc Thesis, August 2013.
- Cansu Evcin, Analysis of Threshold Dynamics of Epidemic Models in a Periodic Environment, MSc Thesis, February 2013.
- İsmail Hakkı Gökgöz, Stochastic Credit Default Swap Pricing, MSc Thesis, September 2012.
  (Co-advisor: Yeliz Yolcu Okur)

- Bengisen Pekmen, Derivative Free Multilevel Optimization Methods, MSc Thesis, August 2009.

  (Advisor: Bülent Karasözen)

- Hüseyin Şentürk, An Empirical Comparison of Interest Rate Models For Pricing Zero-Coupon Bond Options, MSc Thesis, August 2008.

  (Co-advisor: Kasırga Yıldırak)

- Hatice Anar, Credit Risk Modeling and Credit Default Swap Pricing under Variance Gamma Process, MSc Thesis, August 2008.

  (Co-advisor: Azize Hayfavi)

PUBLICATIONS

International Journals

[1] Cansu Evcin, Ömür Uğur, Münevver Tezer-Sezgin, Controlling the Power-Law Fluid Flow and Heat Transfer Under the External Magnetic Field Using the Flow Index and the Hartmann Number, *International Journal of Computational Methods*, **XX**(x), pp. XX–XX, (2018). DOI: 10.1142/S0219876218501438

[2] Cansu Evcin, Ömür Uğur, Münevver Tezer-Sezgin, Determining the Optimal Parameters for the MHD Flow and Heat Transfer with Variable Viscosity and Hall Effect, *Computers and Mathematics with Applications*, **76**(6), pp. 1338–1355, (2018). DOI: 10.1016/j.camwa.2018.06.027

[3] Abdulwahab Animoku, Ömür Uğur, Yeliz Yolcu-Okur, Modeling and Implementation of Local Volatility Surfaces in Bayesian Framework, *Computational Management Science*, **15**(2), pp. 239–258, (2018). DOI: 10.1007/s10287-018-0302-4

[4] Ayşe Arık, Yeliz Yolcu-Okur, Şule Şahin, Ömür Uğur, Pricing Pension Buy-outs under Stochastic Interest and Mortality Rates, *Scandinavian Actuarial Journal*, **2018**(3), pp. 173–190, (2018). DOI: 10.1080/03461238.2017.1328370

[5] D. Altıntan, V. Purutçuoğlu, Ö. Uğur, Impulsive Expressions in Stochastic Simulation Algorithms, *International Journal of Computational Methods*, **15**, p.1750075[16 pages], (2018). DOI: 10.1142/S021987621750075X

[6] B. Aydoğan, Ü. Aksoy, Ö. Uğur, On the Methods of Pricing American Options: case study, *Annals of Operations Research*, **260**(1–2), pp. 79–94, (2018). DOI: 10.1007/s10479-016-2267-4

[7] D. K. Kılıç, Ö. Uğur, Multiresolution Analysis of S&P500 Time Series, *Annals of Operations Research*, **260**(1–2), pp. 197–216, (2018). DOI: 10.1007/s10479-016-2215-3

[8] İ. H. Gökgöz, Ö. Uğur, Y. Yolcu Okur, On the Single Name CDS Price under Structural Modeling, *Journal of Computational and Applied Mathematics*, **259**(B), pp. 406–412, (2014). DOI: 10.1016/j.cam.2013.07.052

[9] D. Altıntan, Ö. Uğur, Solution of Initial and Boundary Value Problems by the Variational Iteration Method, *Journal of Computational and Applied Mathematics*, **259**(B), pp. 790–797, (2014). DOI: 10.1016/j.cam.2013.07.012

[10] A. İ. Çekic, Ö. Uğur, Pricing Formulae for Constant Proportion Debt Obligation Notes: the Laplace Transform Technique, *Journal of Computational and Applied Mathematics*, **259**(B), pp. 362–370, (2014). DOI: 10.1016/j.cam.2013.06.006

[11] D. Altıntan, Ö. Uğur, Generalisation of the Lagrange Multipliers for Variational Iterations Applied to Systems of Differential Equations, *Mathematical and Computer Modelling*, **54**, pp. 2040–2050, (2011). DOI: 10.1016/j.mcm.2011.05.013

[12] A. İ. Çekic, R. Korn, Ö. Uğur, A Mean-Square Approach to Constant Proportion Debt Obligations, *Wilmott Journal*, **53**, Technical Paper, (2011). WEB: https://www.wilmott.com/?s=ugur

[13] D. Altıntan, Ö. Uğur, Variational Iteration Method for Sturm-Liouville Differential Equations, *Computers and Mathematics with Applications*, **58**(2), pp. 322–328, (2009). DOI: 10.1016/j.camwa.2009.02.029

[14] G.-W. Weber, Ö. Uğur, P. Taylan, A. Tezel, On Optimization, Dynamics and Uncertainty: A Tutorial for Gene-Environment Networks, *Discrete Applied Mathematics*, **157**(10), pp. 2494–2513, (2009). DOI: 10.1016/j.dam.2008.06.030

[15] Ö. Uğur, S. W. Pickl, G.-W. Weber, R. Wünschiers, An Algorithmic Approach to Analyze Genetic Networks and Biological Energy Production: An Introduction and Contribution where OR Meets Biology, *Optimization*, **58**(1), pp. 1–22, (2009). DOI: 10.1080/02331930701761169

[16] Ö. Uğur, B. Karasözen, M. Schäfer, K. Yapıcı, Derivative Free Optimization Methods for Optimizing Stirrer Configurations, *European Journal of Operational Research*, **191**, pp. 855–863, (2008). DOI: 10.1016/j.ejor.2007.01.058

[17] G. W. Weber, P. Taylan, B. Akteke-Öztürk, Ö. Uğur, Mathematical and Data Mining Contributions to Dynamics and Optimization of Gene-Environment Networks, *Electronic Journal of Theoretical Physics (EJTP)*, **4**, 16(II), pp. 115–146, (2007). ISBN: 978-1-61668-037-4

[18] Ö. Uğur and G. W. Weber, Optimization and Dynamics of Gene-Environment Networks with Intervals, *Journal of Industrial and Management Optimization*, **3**(2), pp. 357–379, (2007). WEB: 10.3934/jimo.2007.3.357

[19] Ö. Uğur and M. Akhmet, Boundary Value Problems for Higher Order Linear Impulsive Differential Equations, *Journal of Mathematical Analysis and Applications*, **319**(1), pp. 139–156, (2006). DOI: 10.1016/j.jmaa.2005.12.077

[20] Ö. Uğur and M. Akhmet, The Sturm-Liouville Operator on the Space of Functions with Discontinuity Conditions, *Computers & Mathematics with Applications*, **51**, pp. 889–896, (2006). DOI: 10.1016/j.camwa.2005.11.034

[21] M. Schäfer, B. Karasözen, Y. Uludağ, K. Yapıcı and Ö. Uğur, Numerical Method for Optimizing Stirrer Configurations, *Computers & Chemical Engineering*, **30**(2), pp. 183–190, (2005). DOI: 10.1016/j.compchemeng.2005.08.016

[22] H. Taşeli, İ. M. Erhan and Ö. Uğur, An Eigenfunction Expansion for the Schrödinger Equation with Arbitrary Non-Central Potentials, *Journal of Mathematical Chemistry*, **32**(4), pp. 323–338, (2002). DOI: 10.1023/A:1022949421571

Proceedings and Chapters in Books

[1] Ö. Uğur, K. Yapıcı, Y. Uludağ and B. Karasözen, Computer Simulation and Optimization of Stirrer Hydrodynamics at High Reynolds Numbers, in: *Computational Fluid Dynamics: Theory, Analysis and Applications*, Alyssa D. Murphy (Editor), Nova Publishers, 2013, pp. 493–510. `ISBN: 978-1-61209-276-8`

[2] G. W. Weber, P. Taylan, B. Akteke-Öztürk, Ö. Uğur, Mathematical and Data Mining Contributions to Dynamics and Optimization of Gene-Environment Networks, in: *Crossing in Complexity: Interdisciplinary Application of Physics in Biological and Social Systems*, Ignazio Licata and Ammar Sakaji (Editors), Nova Publishers, 2010. `ISBN: 978-1-61668-037-4`

[3] Ayşegül İşcanoğlu Çekiç, Ralf Korn, Ömür Uğur, Constant Proportion of Debt Obligations under the Geometric Brownian Asset Dynamics, in: *Readings in Social Sciences: Volume 5, Selected Proceedings of the Second International Conference on Social Sciences organized by Social Sciences Research Society, ICSS 2009*, İzmir, Turkey, September 10-11, 2009, pp. 139-152.

[4] Ö. Uğur, G.-W. Weber, Optimizing Gene-Environment Networks: Generalized Semi-Infinite Programming Approach with Intervals, in: *HIBIT –Proceedings of International Symposium on Health Informatics and Bioinformatics*, Ankara, Turkey, April 30 - May 2, 2007.

[5] M. Schäfer, B. Karasözen, Ö. Uğur, K. Yapıcı, Derivative Free Optimization of Stirrer Configurations, in: Proceedings of *The Sixth European Conference on Numerical Mathematics and Advanced Applications*, ENUMATH 2005, USC, Santiago de Compostela, Spain, 2005, Springer-Verlag, 2006, pp. 1031–1039. `ISBN: 978-3-540-34287-8`

Editorial Work

[1] Numerical Mathematics and Advanced Applications ENUMATH 2015 (2016)
Editors: Karasözen, B., Manguoğlu, M., Tezer-Sezgin, M., Göktepe, S., Uğur, Ö. (Eds.), *in.* Lecture Notes in Computational Science and Engineering, `ISBN: 978-3-319-39929-4`

[2] Recent Advances in Applied and Computational Mathematics: ICACM-IAM-METU On the occasion of 10th anniversary of the foundation of Institute of Applied Mathematics, Middle East Technical University, Ankara, Turkey
Edited by Ersan Akyıldız, Ömer L. Gebizlioğlu, Bülent Karasözen, Ömür Uğur and Gerhard Wilhelm Weber, *Special Issue.* Journal of Computational and Applied Mathematics Volume 259, Part B, Pages 327-978 (15 March 2014), `ISSN: 0377-0427`

Books

[1] Ömür Uğur, *An Introduction to Computational Finance*, Imperial College Press, December 2008. `ISBN: 978-1-84816-192-4`

SELECTED RECENT ABSTRACTS

International

[1] Cansu Evcin, Ömür Uğur, Model Order Reduction on Control Problems of Navier-Stokes Equations, in: *7th International Conference on Advanced COmputationalMethods in ENgineering* (ACOMEN 2017), Ghent, Belgium, September 18–22, 2017, pp. 83–84.

[2] Meral Şimşek, Ömür Uğur, Sevtap Kestel, Stochastic Risk Assessment of an Insurance Portfolio under Renewal Process with VaR and CVaR as Initial Capital, in: *2nd International Conference on Computational Finance* (ICCF 2017), Lisbon, Portuguese, September 4–8, 2017, p. 93.

[3] Yeliz Yolcu-Okur, Sinem Kozpınar, Ömür Uğur, Cansu Evcin, Pricing Equity Options under a Double-Exponential Jump-Diffusion Process in the presence of Stochastic Barrier, in: *Vienna Congress on Mathematical Finance* (VCMF 2016), Wien, France, September 12–14, 2016, (online, poster).

[4] Meral Şimşek, Ömür Uğur, Sevtap Kestel, Stochastic Surplus Process and Constrained Portfolio Optimisation with VaR and CVaR, in: *The 3rd European Actuarial Journal (EAJ) Conference* (EAJ 2016), Lyon, France, September 5–8, 2016, p. 48.

[5] Yeliz Yolcu-Okur, Abdulwahab Animoku, Ömür Uğur, Estimation of Local Volatility Surfaces via Bayesian Approach, in: *The 12th International Conference on Applied Mathematical Programming and Modelling* (APMOD 2016), Brno, Czech Republic, June 8–10, 2016, (online).

[6] Cansu Evcin, Ömür Uğur, Nonlinear Model Order Reduction in PDE Constrained Optimal Control Problems, in: *European Conference on Numerical Mathematics and Advanced Applications* (ENUMATH), Ankara, Turkey, September 14–18, 2015, p. 162.

[7] Deniz Kenan Kılıç, Ömür Uğur, Wavelet Analysis of Financial Time Series: a case study on S&P500, in: *European Conference on Numerical Mathematics and Advanced Applications* (ENUMATH), Ankara, Turkey, September 14–18, 2015, p. 183.

[8] Derya Altıntan, Vilda Purutçuoğlu, Ömür Uğur, Functional Impulses in Exact Stochastic Simulation, in: *International Conference on Pure and Applied Mathematics* (ICPAM), Van, Turkey, August 25–28, 2015, p. 22.

[9] Alev Meral, Ömür Uğur, Optimal Portfolio Strategies under Various Risk Measures, in: *International Conference on Pure and Applied Mathematics* (ICPAM), Van, Turkey, August 25–28, 2015, p. 107.

[10] Sinem Kozpınar Sarı, Yeliz Yolcu Okur, Özge Tekin, Ömür Uğur, Pricing Stochastic Barrier Options in Presence of Jumps, in: *Advanced Modelling in Mathematical Finance: a conference in honour of Ernst Eberlein*, Kiel, Germany, May 20–22, 2015 (poster session).

[11] Abdulwahab Animoku, Ömür Uğur, Yeliz Yolcu Okur, Uncertainty Quantification and Implementation of Local Volatility Surfaces in Bayesian Framework, in: *55th Meeting of the EWGCFM*, Ankara, Turkey, May 14–16, 2015, p. 5.

[12] Sinem Kozpınar Sarı, Yeliz Yolcu Okur, Özge Tekin, Ömür Uğur, Pricing Stochastic Barrier Options in Presence of Jumps, in: *55th Meeting of the EWGCFM*, Ankara, Turkey, May 14–16, 2015, p. 6.

[13] Meral Şimşek, A. Sevtap Selcuk Kestel, Ömür Uğur, Özge Tekin, Surplus Process with Perturbations of a Brownian Motion in an Insurance Porftfolio, in: *55th Meeting of the EWGCFM*, Ankara, Turkey, May 14–16, 2015, p. 14.

[14] Deniz Kenan Kılıç, Ömür Uğur, Wavelet Analysis of Financial Time Series, in: *55th Meeting of the EWGCFM*, Ankara, Turkey, May 14–16, 2015, p. 12.

[15] Burcu Aydoğan, Ümit Aksoy, Ömür Uğur, Methods of Pricing American Options: Case Study for Comparison, in: *55th Meeting of the EWGCFM*, Ankara, Turkey, May 14–16, 2015, p. 3.

[16] Cansu Evcin, Ömür Uğur, Threshold Dynamics of Avian-Human Influenza in a Periodic Environment, in: *12th International Workshop on Dynamical Systems and Applications* (IWDSA), Atılım University, Ankara, Turkey, August 12–15, 2013.

[17] Derya Altıntan, Ömür Uğur, Solutions of Initial and Boundary Value Problems by the Variational Iteration Method, in: *International Conference on Applied and Computational Mathematics*, Ankara, Turkey, October 3–6, 2012, p. 88.

[18] Derya Altıntan, Ömür Uğur, Logistic Equation with Stochastic Modelling Approach, in: *International Conference on Applied and Computational Mathematics*, Ankara, Turkey, October 3–6, 2012, p. 26.

[19] Ayşegül İşcanoğlu Çekiç, Ralf Korn, Ömür Uğur, A Pricing Formula for Constant Proportion Debt Obligations: A Laplace Transform Approach, in: *International Conference on Applied and Computational Mathematics*, Ankara, Turkey, October 3–6, 2012, p. 60.

[20] İsmail Hakkı Gökgöz, Yeliz Yolcu Okur, Ömür Uğur, Stochastic Credit Default Swap Pricing, in: *International Conference on Applied and Computational Mathematics*, Ankara, Turkey, October 3–6, 2012, p. 53.

CONFERENCES & WORKSHOPS

International

- **EUROPEAN NUMERICAL MATHEMATICS AND ADVANCED APPLICATIONS (ENUMATH)**, Ankara, Turkey, September 14–18, 2015: *Member of Organizing Committee*.
- **INTERNATIONAL ISTANBUL FINANCE CONGRESS 2013 (IIFC2013)**, İstanbul, Turkey, May 30–31, 2013: *Member of Organizing Committee, Member of Scientific Committee*.
- **MONTE CARLO METHODS IN FINANCE: BASIC METHODS AND RECENT ADVANCES**, Ankara, Turkey, April 17, 2013: *Member of Organizing Committee*.
- **CATASTROPHE INSURANCE IN TURKEY**, İstanbul, Turkey, March 14, 2013: *Member of Organizing Committee, Member of Advisory Committee*.
- **INTERNATIONAL CONFERENCE ON APPLIED AND COMPUTATIONAL MATHEMATICS (ICACM)**, Ankara, Turkey, October 3–6, 2012: *Member of Organizing Committee*.
- **24TH MINI EURO CONFERENCE ON CONTINUOUS OPTIMIZATION AND INFORMATION-BASED TECHNOLOGIES IN THE FINANCIAL SECTOR, (24TH MEC EUROPT 2010)**, İzmir, Turkey, June 23–26, 2010: *Member of Organizing Committee*.
- **WORKSHOP IN MEMORY OF PROFESSOR HAYRI KÖREZLIOĞLU: RECENT DEVELOPMENTS IN FINANCIAL MATHEMATICS AND STOCHASTIC CALCULUS**, METU, Ankara, Turkey, April 25–26, 2008: *Member of (Local) Organizing Committee*.
- **FIRST CONFERENCE OF ADVANCED MATHEMATICAL METHODS FOR FINANCE, (AMAMEF 2006)**, Side/Antalya, Turkey, April 26–29, 2006: *Member of (Local) Organizing Committee*.
- **RISK ANALYSIS AND MANAGEMENT**, Side/Antalya, Turkey, April 23–25, 2006: *Member of (Local) Organizing Committee*.

Others (National)

[1] **MONTE CARLO METHODS IN FINANCE: BASIC METHODS AND RECENT ADVANCES**, Ankara, Turkey, April 17, 2013: *Member of Organizing Committee*.

[2] **CATASTROPHE INSURANCE IN TURKEY**, İstanbul, Turkey, March 14, 2013: *Member of Organizing Committee, Member of Advisory Committee*.

PERSONAL HISTORY

Vita

Ömür UĞUR was born in İstanbul, Turkey, on 8th March, 1971. After completing his elementary and secondary education he was accepted to Uluğbey (Private) High School with scholarship from İstanbul Eğitim ve Kültür (İSTEK) Vakfı.

He started his undergraduate studies at the Department of Mathematics, Middle East Technical University (METU) in 1991 and took his B.S. degree in 1995. At the same time he completed courses in Physics Minor Programme. He became a research assistant at the Department of Mathematics, METU, in the same year, and started his graduate studies. He received his M.Sc. degree in Mathematics in 1998, with a thesis entitled "Hypervirial Analysis of Quantum Mechanical Systems", and published his first international article "An eigenfunction expansion for the Schrödinger equation with arbitrary non-central potentials" in the Journal of Mathematical Chemistry, Vol. 32, No. 4, 2002.

He recieved his Ph.D. degree in Mathematics, with a thesis entitled "Boundary Value Problems for Higher Order Linear Impulsive Differential Equations", in 2003. After working as a part-time instructor at the Department of Mathematics, METU, for half a year, he recieved a post-doc position at the Institute of Applied Mathematics (IAM), METU. His first international book "*An Introduction to Computational Finance*" was published by the Imperial College Press in December 2008.

Presently, he is a member of the faculty at IAM, METU.