AYŞE ARIK

CURRENT POSITIONS

Research Associate (January 2018 - Present)
IFoA funded research project (Modelling, Measurement and Management of Longevity and Morbidity Risk) at **Heriot-Watt University, UK**

Research Assistant (December 2009 - Present)
Faculty of Science, Department of Actuarial Sciences, **Hacettepe University, Turkey**

LICENCES

Registered Actuary
Registration number: 125
Republic of Turkey Prime Ministry Undersecretariat of Treasury since December 2012

EDUCATION

PhD (September 2011 - November 2016)
Graduate School of Science and Engineering, Department of Actuarial Sciences, Hacettepe University, Turkey

Thesis: Pricing Pension Buy-outs

MSc (September 2009 - July 2011)
Graduate School of Science and Engineering, Department of Actuarial Sciences, Hacettepe University, Turkey

Thesis: Pricing Longevity Bonds: Extreme Value Theory and Risk Cubic Pricing Model(published in Turkish)

BSc (September 2005 - June 2009)
Faculty of Science, Department of Actuarial Sciences, Hacettepe University, Turkey

Minor Degree (September 2007 - June 2009)
Faculty of Economics and Administrative Sciences, Economics, Hacettepe University, Turkey

RESEARCH VISITS

Business College, Finance Department, University of Nebraska-Lincoln, US
PhD Visiting - worked on *"Pricing Buy-ins and Buy-outs"* between July–December, 2013.

SCHOLARSHIPS and AWARDS

Scholarship for PhD research in the University of Nebraska–Lincoln from Hacettepe University, Turkey (July 2013 - December 2013)

Scholarship for PhD research from the Scientific and Technological Research Council of Turkey (October 2011 - March 2016)

Scholarship for MSc research from the Scientific and Technological Research Council of Turkey (October 2009 - August 2011)

Honor Award received from Faculty of Science of Hacettepe University, Turkey (June 2009)

İhsan Doğramacı Award for High Accomplishment received from Hacettepe University, Turkey (2009)

Certificate of High Accomplishment received from Faculty of Science, Hacettepe University, Turkey (September 2008)

PUBLICATIONS and WORKING PAPERS

Arık, A., Dodd, E., Streftaris, G., Cancer Morbidity Inequalities in England with a Bayesian Analysis, expected completion September 2019, working paper.

Arık, A., Uğur, Ö., Kleinow, T., Pension Buy-out Pricing using Jump Diffusion Models, expected completion November 2019, working paper.

Arık, A., Okur, Y.Y., Şahin, Ş., Uğur, Ö., 2017, "Pricing Pension Buy-outs under Stochastic Interest and Mortality Rates", Scandinavian Actuarial Journal (Indexed in Science Citation Index Expanded, Scopus, Social Science Citation Index etc.).

Lin, Y., Shi, T., **Arık**, A., 2017, "Pricing Buy-ins and Buy-outs", Journal of Risk and Insurance, Vol:84, No:S1, pp 367-392 (Indexed in the SSCI, EconLit, RePEc, Lexis-Nexis, Dow Jones Interactive etc.).

Karabey, U., Şahin, Ş., **Arık**, A., 2016, "Pricing Turkish Longevity Risk", IJEES International Journal of Ecological Economics and Statistics, Vol:37, Issue 2 (Indexed in Web of Science, SCOPUS, EconLit, JEL, CIS, ISI, IndecCopernicus).

Arık, A., Bulut, B., Sucu, M., 2013, "Measuring Financial Risks with Extreme Value Theory", Anadolu University Journal of Science and Technology-A Applied Sciences and Engineering (International Refereed Journal, Listed in EBSCO, DOAJ and TÜBİTAK-ULAKBİM Mühendislik ve Temel Bilimler Veri Tabanı, published in Turkish).

Arık, A., Nevruz, E., Karabey, U., 2013, "Measuring Financial Risks of Some Emerging Markets by using Extreme Value Theory", İstatistikçiler Dergisi: İstatistik&Aktüerya, Vol:6, No:2, pp 86-95 (National Refereed Journal, Indexed in CIS, TÜBİTAK-ULAKBİM and Google Scholar, published in Turkish).

Arık, A., Sucu, M., 2011, "Pricing Longevity Bonds: Extreme Value Theory and Risk Cubic Pricing Model", İstatistikçiler Dergisi, Vol:4, No:2, pp 69-85 (National Refereed Journal, Indexed in CIS, TÜBİTAK-ULAKBİM and Google Scholar, published in Turkish).

SEMINARS

Arık, A., 2018, "Pricing Pension Buy-outs under Stochastic Interest and Mortality Rates" (joint work with Yeliz Yolcu-Okur, Şule Şahin and Ömür Uğur), Heriot-Watt University, UK.

Arık, A., 2017, "Pricing Pension Buy-outs" (joint work with Şule Şahin and Yeliz Yolcu-Okur), University of Lausanne, Switzerland.

CONGRESS

Arık, A., Dodd, E., Streftaris, G., "Modelling Cancer Morbidity Risk over Time using a Bayesian Framework", 23rd International Congress on Insurance: Mathematics and Economics (oral presentation), Munich, Germany, 10–12 July, 2019.

Arık, A., Dodd, E., Streftaris, G., "Trends and Regional Differences in Cancer Morbidity and Mortality Risk in the UK", Seminar on Public Policy, Social Security and Trends in Mortality, Washington DC, US, **as an invited speaker**, 14 May, 2019.

International Actuarial Association Council and Committee Meetings, Washington DC, US, as a member, 15–19 May, 2019.

International Actuarial Association Council and Committee Meetings, Mexico City, Mexico, as a member, 27 November – 02 December, 2018.

Arık, A., Dodd, E., Streftaris, G., "Modelling of Cancer Morbidity Risk in a Bayesian Framework", European Actuarial Journal Conference 2018 (oral presentation), Leuven, Belgium, 10–11 September, 2018.

Arık, A., Okur, Y.Y., Şahin, Ş., Uğur, Ö., "Pricing Pension Buy-outs under Stochastic Interest and Mortality Rates", 31st International Congress of Actuaries (oral presentation), Berlin, Germany, 04–08 June, 2018.

International Actuarial Association Council and Committee Meetings, Berlin, Germany, as a member, 30 May – 03 June, 2018.

Arık, A., Okur, Y.Y., Uğur, Ö., "Valuation of Defined Benefit Pension Schemes Based on Solvency II", 21st International Congress on Insurance: Mathematics and Economics (oral presentation), Vienna, Austria, 03–05 July, 2017.

Arık, A., Okur, Y.Y., "Investigation of Dependency between Short Rate and Transition Rate on Pension Buy-outs", The Joint IACA and PBSS Colloquium (oral presentation), Cancun, Mexico, 04–07 June, 2017.

International Actuarial Association Council and Committee Meetings, Budapest, Hungary, as a member, 18–23 April, 2017.

Arık, A., Şahin, Ş., Okur, Y.Y., "Pricing Pension Buy-outs in the Presence of Correlated Interest and Mortality Rate Risks: A Change of Measure Approach", Perspectives on Actuarial Risks in Talks of Young Researchers (oral presentation), Ascona, Switzerland, 08–13 January, 2017.

International Actuarial Association Council and Committee Meetings, Cape Town, South Africa, as a member, 18–21 November, 2016.

Arık, A., Şahin, Ş., Okur, Y.Y., "On the Pension Buy-out Pricing in Presence of Stochastic Interest and Mortality Rates", The Joint IACA, IAAHS, PBSS and IPEBLA Colloquium (oral presentation), St. John's, NL, Canada, 27–29 June, 2016.

International Actuarial Association Council and Committee Meetings, St. Petersburg, Russia, as a member, 24–29 May, 2016.

International Actuarial Association Regional Development Meetings (Eurasia and Middle East), Baku, Azerbaijan, as a member, 28–29 September, 2015.

Arık, A., Okur, Y.Y., Şahin, Ş., "Pricing of Pension Buy-outs under Dependence Assumption", 11th International Longevity Risk and Capital Markets Solutions Conference (oral presentation), Lyon, France, 07–09 September, 2015.

International Actuarial Association Council and Committee Meetings, Zurich, Switzerland, as a member, 07–12 April, 2015.

Lin, Y., Shi, T., **Arık**, A., "Pricing Buy-ins and Buy-outs", 18th International Congress on Insurance: Mathematics and Economics, Shanghai, China, 10–12 July, 2014.

Şimşek, G., **Arık**, A., Okur, Y.Y., "Analyzing Collateralized Debt Obligations as a Hedging Instrument for a Pension Plan", 18th International Congress on Insurance: Mathematics and Economics, Shanghai, China, 10–12 July, 2014.

Arık, A., Şahin, Ş., "Impact of Different Investment Strategies on Pricing of Pension Bulk Annuities", 18th International Congress on Insurance: Mathematics and Economics (oral presentation), Shanghai, China, 10–12 July, 2014..

Karabey, U., Şahin, Ş., **Arık**, A., "Selecting the Best Pricing Model to Conform to a Country's Available Data", 30th International Congress of Actuaries (oral presentation), Washington DC, US, 30 March – 4 April, 2014.

Arık, A., Nevruz, E., Karabey, U., "Extreme Value Theory and Risk Analysis: An Application for Emerging Financial Markets", 17th International Congress on Insurance: Mathematics and Economics, Copenhagen, Denmark, 01–03 July, 2013.

Arık, A., Bulut, B., Özkök, E., Sucu, M., "A Bayesian Approach to Modelling Turkish Mortality Rates and Pricing a Longevity Bond", 26th European Conference on Operational Research, Rome, Italy, 01–04 July, 2013.

Annuity and Longevity Seminar, Istanbul, Turkey, 05 March, 2012.

Arık, A., Bulut, B., Özkök, E., Sucu, M., "The Lee-Carter Method and Poisson Log-Bilinear Model: An Application to Turkish Census Data", 25th European Conference on Operational Research (oral presentation), Vilnius, Lithuania, as a chair, 08–11 July, 2012.

TEACHING ACTIVITIES

Teaching assistant at Heriot-Watt University, UK

F79BI Bayesian Inference and Computational Methods (January – April, 2019)

F78AA Actuarial and Financial Mathematics A (September – December, 2018)

Teaching assistant at Hacettepe University, Turkey

AKT 385 Actuary
(October 2016 – January 2017; September – December, 2015; September – December, 2014)

AKT 303 Insurance Statistics
(September – December, 2014)

AKT 420 Financial Time Series
(February – May, 2014)

AKT 204 Actuarial Numerical Analysis
(March – June, 2013)

AKT 208 Life Insurance Mathematics
(March – June, 2013; March – May, 2012; March – May, 2011; September 2009 – January 2010)

AKT 311 Actuarial Mathematics I
(October 2012 – January 2013; September – December, 2011; September – December, 2010)

AKT 309 Simulation
(September – December, 2011)

INSTITUTIONAL RESPONSIBILITIES

Postdoctoral member (April 2018 – Present)
Heriot-Watt University, School Research Committee, UK

Undergraduate Student Advisor (September 2010 – December 2017)
Hacettepe University, Department of Actuarial Sciences, Turkey

MEMBERSHIP OF SOCIETIES

International Actuarial Association Population Issues Working Group (December 2016 – Present)

International Actuarial Association Mortality Working Group (July 2015 – Present)

International Actuarial Association Eurasia and Middle East Subcommittee (2014 – Present)

Actuarial Society of Turkey (December 2012 – Present)

ADDITIONAL INFORMATION

Language: native Turkish speaker; fluent in English