

# Mehmet Ziya FIRAT, (BSc. MSc. Ph.D.)

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## Education

- ▶ Bachelor
  - University of Cukurova, Faculty of Agriculture, Department of Animal Science, 1986
- ▶ Master
  - University of Reading, Department of Applied Statistics, 1991
- ▶ Doctorate
  - University of Edinburgh, Department of Mathematics and Statistics, 1995

## Academic Employment

- ▶ Research Assistant University of Cukurova, Faculty of Agriculture, Department of Animal Science, 1986-1988
- ▶ Tutor and Demonstrator, University of Reading, Department of Applied Statistics, 1990-1991
- ▶ Tutor and Demonstrator, University of Edinburgh, Department of Maths and Stats, 1991-1995
- ▶ Assistant Professor, University of Cukurova, Faculty of Agriculture, Department of Animal Science, 1995-1997
- ▶ Postdoctoral Researcher, Michigan State University, Department of Animal Science, 1997
- ▶ Associate Professor, University of Cukurova/Akdeniz, Faculty of Agriculture, Department of Animal Science, 1997-2003
- ▶ Postdoctoral Researcher, Iowa State University, Department of Animal Science, 2003-2004
- ▶ Professor, Akdeniz University, Faculty of Agriculture, Department of Animal Science, 1997-2003 to date

## Professional Employment

- ▶ Akdeniz University, Faculty of Agriculture, Department of Animal Science, Deputy Head of Department, 1999-2006
- ▶ Akdeniz University, Faculty of Agriculture, Department of Animal Science, Head of Biometry and Genetics Unit, 1999-2013
- ▶ Akdeniz University, Alanya Faculty of Management, Member of Faculty Board, 2005-2008
- ▶ Akdeniz University, Alanya Faculty of Management, Member of University Senate, 2005-2009

- ▶ Akdeniz University, Faculty of Agriculture, Department of Animal Science, Head of Department, 2009-2012
- ▶ Akdeniz University, Faculty of Agriculture, Department of Animal Science, Member of Faculty Board, 2009-2012
- ▶ Akdeniz University, Faculty of Agriculture, Department of Animal Science, Member of Faculty Administrative Board, 2006- to date

## Publications

### *Academic Articles*

- ▶ **Firat, M.Z.** (1991) An investigation of the effects of Mastitis on milk yield. Master Thesis, University of Reading, UK.
- ▶ **Firat, M.Z.** (1993) Susceptibility of clinical mastitis in successive lactations. *Livest. Prod. Sci.*, 34, 175-180.
- ▶ **Firat, M.Z.** (1993) An investigation into the effects of clinical mastitis on milk yield in dairy cows. *Livest. Prod. Sci.*, 36, 311-321.
- ▶ **Firat, M.Z.** (1995) Bayesian Methods in the Selection of Farm Animals for Breeding. PhD Thesis, University of Edinburgh, UK.
- ▶ **Firat, M.Z.** (1996). A comprehensive review of history and use of variance components with special reference to animal breeding. *Turkish J. of Vet. and Anim. Sciences*, 20: 343-351.
- ▶ **Firat, M.Z.** (1996). Some aspects of the Bayesian approach to statistical modelling in animal breeding. *Turkish J. of Vet. and Anim. Sciences*, 20: 353-357.
- ▶ **Firat, M.Z.** (1996). Bayesian methods in animal breeding with different prior specification using Gibbs sampling. *Turkish J. of Vet. and Anim. Sciences*, 20: 359-365.
- ▶ **Firat, M.Z.** and Thompson, R. (1996). Investigation of bimodality in likelihoods and posterior densities. *Journal of Statistical Computation and Simulation*, 54: 374-386.
- ▶ Theobald, C.M., **Firat, M.Z.**, and Thompson, R. (1997). Gibbs sampling, adaptive rejection sampling and robustness to prior specification for mixed linear model. *Genetic Selection Evolution*, 29: 59-72.
- ▶ Onay, A., **Firat, M.Z.**, Namlı, O. (1997). An improved method for embling production in Pistachio, *Pistacia vera L.* using liquid medium matured somatic embryos. *Turkish J. of Biology*, 21: 159-174.
- ▶ **Firat, M.Z.** (1997). Problems with multiple-trait analysis in animal breeding and solutions. *Turkish J. of Vet. and Anim. Sciences*, 21: 227-231 (in Turkish).
- ▶ **Firat, M.Z.** and Bek, Y. (1997). Comparative investigation of maximum likelihood methods for the estimation of variance components. *Cukurova University J. of the Faculty of Agriculture*, 12: 1-8 (in Turkish).
- ▶ **Firat, M.Z.** (1997). Negative estimates of variance components and investigation of estimation methods in animal breeding. *Cukurova University J. of the Faculty of Agriculture*, 12: 169-176 (in Turkish).
- ▶ **Firat, M.Z.** (1997). Use of univariate sire model in animal breeding, some restrictions problems and solutions. *Cukurova University J. of the Faculty of Agriculture*, 12: 119-126 (in Turkish).
- ▶ **Firat, M.Z.** (1997). A bridge from least squares regression to generalized estimating equations. *Cukurova University J. of the Faculty of Agriculture*, 12: 127-136 (in Turkish).
- ▶ Torun, O., Özcan, L., **Firat, M.Z.**, Çekici, A., and Ceyhan, A. (1997). Possibilities of using exotic breeds in improving milk and meat production characteristics of Awassi sheep in GAP area 10. Fattening performance. *Cukurova University J. of the Faculty of Agriculture*, 12: 89-98 (in Turkish).
- ▶ Torun, O., Özcan, L., **Firat, M.Z.**, Ceyhan, A., and Çekici, A. (1997). Possibilities of using exotic breeds in improving milk and meat production characteristics of Awassi

sheep in GAP area 11. Carcass merits. *Çukurova University J. of the Faculty of Agriculture*, 12: 117-126 (in Turkish).

- ▶ **Firat, M.Z.**, Theobald, C.M. and Thompson R. (1997) Univariate analysis of test day milk yields of British Holstein Friesian heifers using Gibbs sampling. *Acta Agric. Scand. Sect A Animal Sci.*, 47: 213-220.
- ▶ **Firat, M.Z.**, Theobald, C.M. and Thompson R. (1997) Multivariate analysis of test day milk yields of British Holstein Friesian heifers using Gibbs sampling. *Acta Agric. Scand. Sect A Animal Sci.*, 47: 221-229.
- ▶ **Firat, M.Z.** (1998). Application of vec and vech operators to a multivariate mixed sire model. *Turkish J. of Vet. and Anim. Sciences*, 22: 255-256 (in Turkish).
- ▶ **Firat, M.Z.** and Bek, Y. (1998). The mathematical basis of inverse  $\chi^2$  and inverse-Wishart distributions used in animal breeding applications. *Turkish J. of Vet. and Anim. Sciences*, 22: 485-488 (in Turkish).
- ▶ **Firat, M.Z.** and Onay, A. (1999). Analysis of binomial data obtained from plant tissue culture studies using generalized linear models. *Turkish J. of Biology*, 23: 261-267 (in Turkish).
- ▶ Çelik, K., Darcan, N., Güney, O. and **Firat, M.Z.** (1999) Effect of diet with different lasalocid sodium levels on the fattening performances and carcass characteristics of crossbred male lambs. *J. Appl. Anim. Res.*, 16: 195-200.
- ▶ **Firat, M.Z.** (2000) Comparative investigation of variance analysis, maximum likelihood and restricted maximum likelihood for the estimation of variance components in balanced two-stage random nested designs. *Anadolu University Journal of Science and Technology*, 1: 105-113 (in Turkish).
- ▶ **Firat, M.Z.** (2001) Bayesian analysis of test day milk yields in an unbalanced mixed model assuming random herd-year-month effects. *Turkish J. of Vet. and Anim. Sciences*, 25: 327-333 (in Turkish).
- ▶ **Firat, M.Z.** (2001) Multiple-trait Analysis Using Bayesian Methods in Animal Breeding: A Gibbs Sampling Approach. *Turkish J. of Vet. and Anim. Sciences*, 25: 855-862 (in Turkish).
- ▶ Ercan, A.G., Taşkın, K.M, Turgut, K., Bilgen, M. and **Firat, M.Z.** (2002) Characterization of Turkish Sesame (*Sesamum Indicum* L.) Landraces Using Agronomic and Morphologic Descriptors. *Akdeniz Universitesi Ziraat Fakültesi Dergisi*, 15: 45-52.
- ▶ Karabag, K., Balcioglu, M.S., **Firat, M.Z.** and Yolcu, H.İ. (2002) Potassium and haemoglobin polymorphism in hair goat raising in Antalya province *Turkish J. of Vet. and Anim. Sciences*, 26: 761-764 (in Turkish).
- ▶ Yolcu, H.İ., Balcioglu, M.S., **Firat, M.Z.** and Karabag, K. (2004) Estimation of variance components for live weights of New Zealand white rabbits by using different methods *Journal of the Faculty of Agriculture*, 17: 81-85 (in Turkish).
- ▶ Isik, M., Ekimler, F., Ozen, N., and **Firat, M.Z.** (2004) Effects of using probiotics on the growth performance and health of dairy calves *Turkish J. of Vet. and Anim. Sciences*, 28: 63-69 (in Turkish).
- ▶ Grapes, L., **Firat, M.Z.**, Dekkers, J.C.M., Rothschild, M.F. And Fernando, R.L. (2004) Optimal haplotype structure for linkage disequilibrium-based fine mapping of quantitative trait loci. *J. Anim. Sci.*, Suppl. 2, 82: 41.
- ▶ **Firat, M.Z.**, Pita, F.V.C., Gilbert, H., Totir, Fernando, R.L. And L.R., Dekkers, J.C.M. (2004) A strategy to improve the computational efficiency of mapping quantitative trait loci by the identity by descent method. *J. Anim. Sci.*, Suppl. 1, 82: 41.
- ▶ Gilbert, H., **Firat, M.Z.**, Totir, L.R., Dekkers, J.C.M. and Fernando, R.L. (2004) A new method to fine map a quantitative trait locus using linkage disequilibrium *J. Anim. Sci.*, Suppl. 1, 83 / *J. Dairy Sci.*, Suppl. 1, 87: 415-416.

- ▶ Balcioglu, M.S., Yolcu, H.İ., **Firat, M.Z.**, Karabag, K. and Sahin, E. (2004) Estimation of genetics parameters for live weights and live weights gain in Japanese Quail. *Journal of the Faculty of Agriculture*, 18: 35-39 (in Turkish).
- ▶ Grapes, L., **Firat, M.Z.**, Dekkers, J.C.M., Rothschild, M.F. and Fernando, R.L. (2006) Optimal haplotype structure for linkage disequilibrium – based fine mapping of quantitative trait loci using identity by descent. *Genetics*, 172: 1955-1965.
- ▶ Mutaf, S., Seber Kahraman, N. and **Firat, M.Z.** (2008) Surface Wetting and Its Effect on Body and Surface Temperatures of Domestic Laying Hens at Different Thermal Conditions. *Poultry Science*, 87: 2441-2450.
- ▶ Kulakaç, Ö., Öncel, S., **Firat, M.Z.**, Akcan A. (2008) Menstruasyon tutum ölçeği: geçerlik ve güvenilirlik çalışması (Menstrual attitude Questionnaire: Validity and Reliability Study). *Türkiye Klinikleri, Jinekoloji ve Obstetrik Dergisi (J Gynecol Obst)*, 18: 347-356.
- ▶ **Firat, M.Z.**, Kulakaç, Ö., Öncel, S., and Akcan A (2009) Menstrual Attitude Questionnaire: confirmatory and exploratory factor analysis with Turkish samples. *Journal of Advanced Nursing*, 65(3): 652–662.
- ▶ Mutaf, S., Seber Kahraman, N. and **Firat, M.Z.** (2009) Intermittent partial surface wetting and its effect on body-surface temperatures and egg production of white and brown domestic laying hens in Antalya (Turkey). *British Poultry Science*, 50: 33-38.
- ▶ Cubukçu Firat, S., Çetin, Z., Samancı, N., Aydın, F., Balcı, N., Bilgen, T., Güngör, F., **Firat, M.Z.**, Lüleci, G. and Berker Karüzüm S. (2009) No Association Between Bone Mineral Density and Transforming Growth Factor Beta Gene T<sup>861-20</sup>-C Polymorphism in Turkish Postmenopausal Women. *Genetic Testing and Molecular Biomarkers*, 13: 349-353.
- ▶ Cubukçu Firat, S., Çetin, Z., Samancı, N., Aydın, F., Balcı, N., Güngör, F., **Firat, M.Z.**, Lüleci, G. and Berker Karüzüm S. (2009) Evaluation of *eNOS* gene polymorphisms in relation to BMD in postmenopausal women. *Maturitas*, 63: 352-356.
- ▶ Ozer, Z.C., **Firat, M.Z.**, Bektaş, H.A. (2009) Confirmatory and exploratory factor analysis in the caregiver quality of life index-cancer with Turkish samples. *Quality of Life Research*, 18: 913-921.
- ▶ Ozcatalbas, O., Akcaoz, H., **Firat, M.Z.** Ve Kutlar, I. (2009) The analysis of socio-economic factors in the dairy farming of Antalya province of Turkey. *Journal of Animal and Veterinary Advances*, 8(12): 2692-2698.
- ▶ Nariñç, D., Karaman, E., **Firat, M.Z.** and Aksoy, T. (2010) Comparison of non-linear growth models to describe the growth in Japanese quail. *Journal of Animal and Veterinary Advances*, 9(14): 1961-1966.
- ▶ Nariñç, D., Karaman, E., **Firat, M.Z.** and Aksoy, T. (2011) Estimation of Multiple-trait Genetic Parameters and BLUP Using Different Estimation Methods For Some Egg Traits in Japanese Quails. *Kafkas Üniversitesi Veteriner Fakültesi Dergisi*, 17: 117-123.
- ▶ Albayrak, T., Erdogan, A. and **Firat, M.Z.** (2011) A model of habitat suitability for Krueper's Nuthatch *Sitta krueperi*. *Bird Study*, 58: 50-56.
- ▶ Cay, H.F., Sezer, I., **Firat, M.Z.** and Kaçar, C. (2011) Which is the dominant factor for perception of rheumatic pain: meteorology or psychology?. *Rheumatology International*, 31: 377-385.
- ▶ Simsek, B. and **Firat, M.Z.** (2011) Application of multilevel analysis in animal sciences. *Applied Mathematics and Computation*, 218: 1067–1071.
- ▶ Karacaören, B. and **Firat, M.Z.** (2012) Comparison of statistical methods used in the calculation of genetic responses . *Ankara Üniversitesi Veteriner Fakültesi Dergisi*, 59: 115–120.
- ▶ Korukcu, O., Kukulcu, K. and **Firat, M.Z.** (2012) The reliability and validity of the Turkish version of the Wijma Delivery Expectancy/Experience Questionnaire (W-DEQ) with pregnant women. *Journal of Psychiatric and Mental Health Nursing*, 19: 193–202.

- ▶ Korukcu, O., Kukulu, K. and **Firat, M.Z.** (2012) The Wijma Delivery Expectancy/Experience Questionnaire (W-DEQ) with Turkish sample: Confirmatory and Exploratory factor analysis. *International Journal of Medical and Biological Sciences*, 6: 259–265.
- ▶ Nariñç, D., Karaman, E., Aksoy, T. and **Firat, M.Z.** (2013) Investigation of nonlinear models to describe long-term egg production in Japanese quail. *Poultry Science*, 92: 1676-1682.
- ▶ Nariñç, D., Aksoy, T., Karaman, E., Uygun, A., **Firat, M.Z.** and Uslu, M.K. (2013) Japanese quail meat quality: Characteristics, heritabilities, and genetic correlations with some slaughter traits. *Poultry Science*, 92: 1735-1744.
- ▶ Karaman, E., Nariñç, D., **Firat, M.Z.** and Aksoy, T. (2013) Nonlinear mixed effects modeling of growth in Japanese quail. *Poultry Science*, 92: 1942-1948.
- ▶ Karaman, E. ve **Firat, M.Z.** (2013) Modeling the Test Day Milk Yields via Time Series Method. *Kafkas Üniversitesi Veteriner Fakültesi Dergisi*, 19: 639-644.
- ▶ Nariñç, D., Karaman, E., Aksoy, T. and **Firat, M.Z.** (2014) Genetic parameter estimates of growth curve and reproductive traits in Japanese quail. *Poultry Science*, 93: 24-30.
- ▶ Karaman, E., **Firat, M.Z.** and Nariñç, D. (2014) Single-Trait Bayesian Analysis of Some Growth Traits in Japanese. *Brazilian Journal of Poultry Science*, 16: 51-56.
- ▶ Arslan-Özkan, I., Okumuş, H., Lash, A.A. and **Firat, M.Z.** (2014) Cultural validation of the Turkish version of the infertility self-efficacy scale-short form (TISE-SF). *Journal of Transcultural Nursing*, 25: 232-240.
- ▶ Cinar, R., Ucar, M., Celik, H.K., **Firat, M.Z.** and Rennie, A.E.W. (2014) Pressure Determination Approach in Specific Pressure Regions and FEM-Based Stress Analysis of the Housing of an External Gear Pump. *Experimental Techniques*, XX: 1-11.
- ▶ Karaman, E., Kaya Başar, E. and **FIRAT, M.Z.** (2014) Bayesian Hierarchical Modeling Applied to Test Day Milk Yield Data. *Proceeding of the ISDS'2014*, Side, Turkey 10-14 2014.
- ▶ Kaya Başar, E. and **Firat, M.Z.** (2016) Comparison of Methods of Estimating Variance Components in Balanced Two-Way Random Nested Designs. *Anadolu Üniversitesi Bilim ve Teknoloji Dergisi B – Teorik Bilimler*, 14: 1-10.
- ▶ Karaman, E., Cheng, H., **Firat, M.Z.**, Garrick, D.J. and Fernando, R.L. (2016) An Upper Bound for Accuracy of Prediction Using GBLUP. *Plos One*, 11: -18.
- ▶ **Firat, M.Z.**, Karaman, E., Kaya Başar, E. and Nariñç, D. (2016) Bayesian Analysis for the Comparison of Nonlinear Regression Model Parameters: an Application to the Growth of Japanese Quail. *Brazilian Journal of Poultry Science*, 19-26.
- ▶ Cemal, I., Karaman, E., **Firat, M.Z.**, Yilmaz, O. Ata, N. and Karaca, O. (2017) Bayesian inference of genetic parameters for ultrasound scanning traits of Kivircik lambs. *Animal*, 11: 375-381.
- ▶ Sucu Dağ, G. Dicle, A. and **Firat, M.Z.** (2017) Psychometric properties of the critical care family needs inventory-emergency department. *Applied Nursing Research*, 33: 113-120.
- ▶ Ertekin, C. and **Firat, M.Z.** (2017) A comprehensive review of thin-layer drying models used in agricultural products. *Critical Reviews in Food Science and Nutrition*, 57: 701-717.
- ▶ **Firat, M.Z.** Aksu, A. and Ehtiyar, R. (2017) First International Expo of Turkey, Horticultural Expo 2016 Antalya: Research on The Profile, Expectation And Satisfaction Levels of Visitors. *Journal of Research in Business and Management*, 5(5): 17-27.
- ▶ **Firat, M.Z.**, Ehtiyar, R. and Aksu, A (2017) The effect of human resources managers' orientation towards the future on psychological well-being and turnover intention. *Journal of Research in Business and Management*, 5(6): 6-18.

- ▶ Tutar Güven, Ş., **Firat, M.Z.** and Isler Dalgic, A. (2017) Seizure Self-Efficacy Scale for Children with Epilepsy: Confirmatory and Exploratory Factor Analysis. *Journal of Pediatric Research*, 4: 220-226.
- ▶ Hatipoğlu, M., Aytekin, Z., Daltaban, Ö., Felek, R., **Firat, M.Z.** and Üstün, K. (2017) The Effect of Diode Laser as an Adjunct to Periodontal Treatment on Clinical Periodontal Parameters and Halitosis: A Randomized Controlled Clinical Trial. *Cumhuriyet Dental Journal*, 20: 152-160.
- ▶ Celik, H.K., Yilmaz, H., Rennie, A.E.W., Cinar, R. and **Firat, M.Z.** (2018) Determination of the Failure Susceptibility of a Flat Die Used in Biomass Pelletizing Machines by Means of FEA-Based Design Exploration. *J Fail. Anal. and Preven.*, 18: 1099-1110.
- ▶ Ustun. K., Hatipoğlu, M., Daltaban, Ö., Felek, R. and, **Firat, M.Z.** (2018) Clinical and Biochemical Effects of Erbium, Chromium: Yttrium, Scandium, Gallium, Garnet Laser Treatment as a Complement to Periodontal Treatment. *Nigerian Journal of Clinical Practice*, 20: 152-160.

### *Proceedings*

- ▶ **Firat, M.Z.** (1993). Bayesian methods in the selection of farm animals. The 16th Research Students Conference in Probability and Statistics, 26-29 March 1993, Lancaster, England.
- ▶ Efe, E., Polat, A. and **Firat, M.Z.** (1994). Practical problems of fitting Von Bertalanffy type curves to observed fish growth data and comparative investigation of four methods. International Symposium and Workshop on Stock Assessment in Inland Fisheries, 11-15 April 1994, Hull, England.
- ▶ **Firat, M.Z.** and Theobald, C.M. (1994). Decision theory for multiple-trait selection of farm animals. The 5th Valencia International Meeting on Bayesian Statistics, 5-9 June 1994, Alicante, Spain.
- ▶ **Firat, M.Z.** (1995). A comparison of analysis of variance, maximum likelihood and Bayesian methods for the estimation of variance components. Proceedings of the 3rd Balkan Conference on Operational Research, 1035-1047, 16-19 October 1995, Thessaloniki, Greece.
- ▶ **Firat, M.Z.** (1996). Problems with multiple-trait analysis in animal breeding and solutions. Proceedings of the Animal Science 96 Congress, 679-686, 18-21 September 1996, İzmir, Turkey (in Turkish).
- ▶ Gürsoy, O., Pollott, G.E., Kirk, K. and **Firat, M.Z.** (1996). Objective orientated recording in small ruminants. Proceedings of the Animal Science 96 Congress, 152-158, 18-21 September 1996, İzmir, Turkey (in Turkish).
- ▶ Gürsoy, O., Kirk, K., Pollott, G.E. and **Firat, M.Z.** (1997). Selection based on progeny testing in the breeding of Awassi sheep for milk yield. Proceedings of the 2nd Animal Science Symposium in Thrace Region, 201-209, 9-10 January 1997, Tekirdağ, Turkey (in Turkish).
- ▶ Tempelman, R. and **Firat, M.Z.** (1998) Beyond the linear mixed model: Perceived versus real benefits. Proceedings of the 6th World Congress on Genetics Applied to Livestock Production, 25, 605-612, 11-16 January 1998, Armidale, Australia.
- ▶ **Firat, M.Z.** (2000). Profile likelihood method for variance components in a simple random model. Proceedings of Statistics Research Symposium 2000, 130-135, 27-29 November 2000, Ankara, Turkey (in Turkish).
- ▶ Mutaf, S., **Firat, M.Z.**, Alkan, S., Yapıcı, N. and Şeber, N. (2000). The principles of designing dairy cattle barns in ecological agriculture. Proceedings of the 2000 GAP Environment Congress, 99-108, 16-18 October 2000, Şanlıurfa, Turkey (in Turkish).

- ▶ **Firat, M.Z.** (2001) A FORTRAN program to apply Gibbs sampling method to sire models for variance component estimation: MZFGIBBS. Proceedings of the 4th Symposium on Agricultural Informatics, 11-17, 20-22 September 2001, Kahramanmaraş, Turkey (in Turkish).
- ▶ Akbaş, Y, **Firat, M.Z.** and Yakupoğlu, Ç. (2001) Comparison of different models used in the analysis of repeated measurements in animal science and their SAS applications. Proceedings of the 4th Symposium on Agricultural Informatics, 28-38, 20-22 September 2001, Kahramanmaraş, Turkey (in Turkish).
- ▶ Karacaören, B. and **Firat, M.Z.** (2001) A FORTRAN program to construct selection indices using ANOVA, ML and REML methods. Proceedings of the 4th Symposium on Agricultural Informatics, 169-174, 20-22 September 2001, Kahramanmaraş, Turkey (in Turkish).
- ▶ **Firat, M.Z.** (2002) Bayesian inferences about variance components in a mixed linear model *via* Gibbs sampling. Journal of Statistical Research, 2 (special issue), 225-235, Proceedings of Statistics Research Symposium 2001, 12-14 November 2001, Ankara, Turkey (in Turkish)
- ▶ **Firat, M.Z.** (2002) Selection of the most suitable mixed model for the statistical analysis of repeated measures data. The 3rd Statistical Days 2002, 23-24 Mays 2002, Hacettepe University, Ankara, Turkey (in Turkish).
- ▶ Unver, Y., Akbas, Y., **Firat, M. Z.** and Oguz, I. (2002) estimation of heritability for egg production in laying hens using Mivque, MI, Reml and Gibbs sampling methods. Proceedings of the 7th World Congress on Genetics Applied to Livestock Production, CD-ROM communication no 17-25 ISBN 2-7380-1052-0, 19-23 August 2002, Montpellier, France.
- ▶ **Firat, M.Z.** and Kumlu, S. (2002) Genetic parameters for milk yield of Turkish Holstein-Friesian cows using bayesian analysis. Proceedings of the 7th World Congress on Genetics Applied to Livestock Production, CD-ROM communication no 17-27 ISBN 2-7380-1052-0, 19-23 August 2002, Montpellier, France.
- ▶ **Firat, M.Z.** (2002) Implementation of Gibbs sampling in animal breeding : convergence assessment and absorbing state. The 3rd National Animal Science Congress, 14-16 September 2002, Ankara University, Ankara, Turkey (in Turkish).
- ▶ Galiç, A. ve **Firat, M.Z.** (2002) Genetic parameter estimation in sire model via Gibbs sampling. The 3rd National Animal Science Congress, 14-16 September 2002, Ankara University, Ankara, Turkey (in Turkish).
- ▶ **Firat, M.Z.**, Pita, F.V.C., Gilbert, H., Totir, L.R., Fernando, R.L. and Dekkers, J.C.M. (2004) A strategy to improve the computational efficiency of mapping quantitative trait loci by the identity by descent methods. American Society of Animal Science Meeting, Midwestern Section ADSA, 15-17 March 2004, Des Moines, Iowa, U.S.A..
- ▶ Grapes, L., **Firat, M.Z.**, Dekkers, J.C.M., Rothschild, M.F. and Fernando, R.L. (2004) Optimal haplotype structure for linkage disequilibrium – based fine mapping of quantitative trait loci. American Society of Animal Science Meeting, Midwestern Section ADSA, 15-17 March 2004, Des Moines, Iowa, U.S.A..
- ▶ Gilbert, H., **Firat, M.Z.**, Totir, L.R., Dekkers, J.C.M. and Fernando, R.L. (2004) A new method to fine map a quantitative trait locus using linkage disequilibrium. ADSA – ASAS – PSA Joint Meeting, 25-29 July 2004, St. Louis, Missouri, U.S.A..
- ▶ **Firat, M.Z.** (2004) Univariate and multivariate Student-t distributions based on the scale mixtures of normal distributions. The 4th National Animal Science Congress, 01-04 September 2004, Süleyman Demirel University, Isparta, Turkey (in Turkish).
- ▶ **Firat, M.Z.** (2004) Effects of outliers on parameter estimates and robust statistical modelling in animal breeding. 55th Annual Meeting of the European Association for Animal Production, 05-09 September 2004, Bled, Slovenia.

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- ▶ **Firat, M.Z.**, Gilbert, H., Fernando, R.L. and Dekkers, J.C.M. (2005) Optimal haplotype size for combined linkage disequilibrium and co-segregation based fine mapping of quantitative trait loci. 56th Annual Meeting of the European Association for Animal Production, 05-08 June 2005, Uppsala, Sweden.
- ▶ Karacaören, B. and **Firat, M.Z.** (2005) The effect of different statistical analysis methods on the genetic responses obtained from selection indexes. Swiss Statistics Meeting, 09-11 November 2005, Zurich, Switzerland.
- ▶ Mencet, M.N., **Firat, M.Z.** and Sayın C. (2006) Cointegration analysis of wine prices for France, Greece and Turkey. 98th European Association of the Agricultural Economists (EAAE), Marketing Dynamics within the Global Trading System: New Perspectives, 29 June-02 July 2006, Crete, Greece.
- ▶ **Firat, M.Z.** (2007) Multiple trait selection indices using Gibbs sampling. 5. Ulusal Zootekni Bilim Kongresi, 05-08 Eylül 2007 Yüzüncü Yıl Üniversitesi, Van.
- ▶ **Firat, M.Z.** Albayrak, T. and Erdoğan, A. (2007) An Automatic Stepwise Logistic Regression Method for Modelling Habitat Suitability of Krueper's Nuthatch In South Anatolia. 2<sup>nd</sup> International Eurasian Ornithology Congress, 26-29 Ekim 2007, Boğazkent, Antalya
- ▶ **Firat, M.Z.** (2008) Graphical Representation of Multiple Trait Index Weights. 59th Annual Meeting of the European Association for Animal Production, 24-27 August 2008, Vilnius, Lithuania.
- ▶ Kaya, E., Narınç, D., **Firat, M.Z.**, Aksoy, T. And Çürek, D. (2010) Estimating Weekly Live Weight in Free-Range Broiler Chickens by Modelling Covariance Structure. The XIIIth European Poultry Conference, 23-27 August 2010, Tours, France.
- ▶ Karaman, E., Narınç, D., **Firat, M.Z.** And Aksoy, T. (2010) Examining the Effect of Genotype on Interior Egg Quality Traits of Japanese Quail (*Coturnix coturnix japonica*) via Profile Analysis. The XIIIth European Poultry Conference, 23-27 August 2010, Tours, France.
- ▶ Kaya, E., Narınç, D. and **Firat, M.Z.** (2011) Application of Repeated Measures Analysis Using Different Covariance Structures. The 24th Congress of The Jangeon Mathematical Society, ICJMS'2011, 20-23 July 2011, Konya, Turkey.
- ▶ Kaya, E. and **Firat, M.Z.** (2012) Comparison of Methods of Estimating Variance Components in Nested Designs. International Congress in Honour of Professor Hari M. Srivastava, 23-26 August 2012, Bursa, Turkey.
- ▶ Karaman, E., Kaya, E., Narınç, D. and **Firat, M.Z.** (2012) Effect of Prior Specification on Posterior Inferences in Mixed Linear Model: A Simulation Study. International Congress in Honour of Professor Hari M. Srivastava, 23-26 August 2012, Bursa, Turkey.
- ▶ Kaya, E., Karaman, E., Narınç, Ç, D. and **Firat, M.Z.** (2012) Japon Bildirenlerinde Döllülük-Yumurta Ağırlığı İlişkisinin Bayesian Lojistik Regresyon Analizi ile İncelenmesi. II. Kümes Hayvanları Kongresi, 3-5 Ekim, İzmir, Türkiye.
- ▶ Karaman, E., Kaya, E., Narınç, D. and **Firat, M.Z.** (2013) Bayesian Hierarchical Modeling of Growth via Gompertz Model: An Application in Poultry. Bayesian Young Statisticians Meeting (BAYSM), 5-6 June 2013, Milan, Italy.
- ▶ Kaya, E., Karaman, E., Firat, M.Z. (2013) Bayesian Analysis of Two-Way ANOVA Models. VIII. Ulusal Zootekni Bilim Kongresi, 5-7 Eylül, Çanakkale, Türkiye.



## Projects

- ▶ Çiftlik hayvanlarının genetik ıslahında Bayesian metodu kullanarak verime etki yapan varyans unsurlarının tahmini algoritmaları ve ıslah için en uygun bilgisayar programının geliştirilmesi. TUBITAK, VHAG -1221, 1996-1998
- ▶ İvesilerin süt verimlerinin seleksiyonla ıslahı. TUBITAK, VHAG - 1294, 1997-1999
- ▶ Ç.Ü. Ziraat Fakültesi Döner Sermaye İşletmesi Süt Sığırcılığı İşletmesi Kayıt Sisteminin Geliştirilmesi. Ç.Ü. Ziraat Fakültesi Araştırma Fonu, 1996-1997
- ▶ The Application of Advanced Genetic Analyses to Awassi Sheep Breeding. British Council Academic Links Scheme, 1995-1997
- ▶ Siyah Alaca Sürülerinin Genetik Islahında Bayesian Metodu Kullanarak Damızlık Değerlerinin Tahmini İçin En Uygun Bilgisayar Programının Geliştirilmesi. Akdeniz Üniversitesi Araştırma Fonu, 1999-2001
- ▶ Tek Karakter İçin Seleksiyon İndeksinin Değişik Yöntemlerle İstatistiksel Analizi. Akdeniz Üniversitesi Araştırma Fonu, 2000-2001
- ▶ Hayvan Islahında Boğa Modelinin Gibbs Örneklemesi Kullanılarak Bayesian Analizi. Akdeniz Üniversitesi Araştırma Fonu, 2002-2003
- ▶ Buzağılarda Su Verme Sıklığının Bazı Performans Özellikleri Üzerine Etkisi. Tarım ve Köyişleri Bakanlığı (TAGEM), 2002-2003
- ▶ Bombus Arılarının Tozlayıcı Olarak Kullanıldığı Cam Seralarda Polen Kaynağı Olması İçin Seranın bir Bölümüne Isıtma Uygulamasının Domatesin Verim ve Kalitesi Üzerine Etkileri. TUBITAK, TOVAG -1001, 2005-2007
- ▶ Bankacılık ve Menkul Kıymetler Piyasalarının Ekonomik Büyüme Üzerindeki Etkileri: Zaman Serisi Bulguları. TUBITAK, SBB-SOBAG-1002, 2006-2007
- ▶ Kontrol Günü Süt Verimlerinin Zaman Serisi Yöntemi ile Modellenmesi. Akdeniz Üniversitesi Araştırma Fonu BAPKB, 2010-2011
- ▶ Ankara Tavukçuluk Araştırma Enstitüsündeki Kahverengi Yumurtacı Ebeveyn Hatların Bazı Verim Özelliklerinin Belirlenmesi. Akdeniz Üniversitesi Araştırma Fonu BAPKB, 2012-2013
- ▶ Tarımsal Deneme Planlarının Bayesian Yöntemi ile Analizleri. Akdeniz Üniversitesi Araştırma Fonu BAPKB, 2012-2013

## Courses/Teaching

- ▶ GIDA 217 Statistics in Engineering
- ▶ ZOB 205 Statistics
- ▶ HMF 305 Biostatistics
- ▶ ITM 5001 Statistics
- ▶ TUR 5001 Statistics
- ▶ EKN 5017 Data Analysis
- ▶ TUR 7003 Statistical Applications
- ▶ ZOB 202 Methods for Research and Experiments
- ▶ UTL 7019 Advanced Statistical Methods
- ▶ ZOB 5014 Planning of Experiments
- ▶ ZOB 5019 Non Parametric Statistical Methods
- ▶ ZOB 5023 Statistical Methods
- ▶ ZOB 5026 Methods for Estimating Variance Components
- ▶ ZOB 5028 Statistical Inference

- ▶ ZOB 5030 Survey and Analysis Techniques
- ▶ ZOB 5037 Sampling Methods
- ▶ ZOB 7011 Theoretical Distributions
- ▶ ZOB 7020 Categorical Data Analysis
- ▶ ZOB 7022 Regression Analysis
- ▶ ZOB 7023 Bayesian Methods
- ▶ ZOB 7027 Analysis of Repeated Measures Data
- ▶ ZOB 7029 Statistical Analysis of Linear Models
- ▶ ZOB 7034 Applied Multivariate Statistical Analysis
- ▶ ZOB 7036 Applied Time Series Analysis
- ▶ ZOB 7038 Non-Linear Models
- ▶ TRM 441 Tourism Research Methodology and Project Management
- ▶ TRM 442 Capstone Project in Tourism and Hotel Management

### **Memberships**

- ▶ The Institute of Statisticians
- ▶ Turkish Statistical Association
- ▶ American Society of Animal Science (ASAS)

### **Research Interests**

- ▶ Bayesian Methods
- ▶ Categorical Data Analysis
- ▶ Estimation Methods of Variance Components
- ▶ Statistical Methodology for Mapping QTL,
- ▶ Mixed Model Methodology
- ▶ Quantitative Genetics
- ▶ Structural Equation Modelling

### **Languages**

- ▶ Turkish            Native
- ▶ English            Advanced
- ▶ French             Intermediate