



# Rahim Alhamzawi

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## Education

PhD Mathematics, [Brunel University](#), UK, 2013.  
MSc Statistics, [Baghdad University](#), Iraq, 1999.  
BSc Statistics, [Al-Qadisiyah University](#), Iraq, 1992.

## Experience

Assistant Lecturer, [Al-Qadisiyah University](#), Department of Statistics, June 2000–October 2003.  
Lecturer, [Al-Qadisiyah University](#), Department of Statistics, October 2003– October 2006.  
Course in Mathematical statistics, [Université de Grenoble \(France\)](#), 2006.  
Assistant Professor, [Al-Qadisiyah University](#), October 2006–present.  
Teaching Assistant (GTA), [Brunel University](#), October 2010– June 2013.  
Received Graduate Teaching Academy (GTA) Fellow Certification in 2013 from Brunel University.

## Fields of Research Interest

[Quantile regression and distributions](#), [Model Selection](#), [Bayesian inference](#), [R Statistical packages](#).

## Biography

I joined Baghdad University Statistics Department in October 1996 as a MSc student, supervised by Prof. Kamal Al-Mashhadani. My thesis is entitled "Study of partially balanced incomplete block designs with practical application". In June 2000, I was appointed an Assistant Lecturer at the Al-Qadisiyah University Statistics Department where I am working on different types of experimental designs. Then, I joined the Brunel University Mathematical Sciences Department in June 2009 as a PhD student, supervised by Dr Keming Yu. My thesis is entitled "Prior Elicitation and Variable Selection for Bayesian Quantile Regression".

## Publications

H-index 6 with Publications 2010 onwards

1. Rahim Alhamzawi (2016). Bayesian model selection in ordinal quantile regression. *Computational Statistics & Data Analysis*. 103, 68–78.
2. Taha Alshaybaweeab, Habshah Midi, Rahim Alhamzawi (2016). Bayesian elastic net single index quantile regression. *Journal of Applied Statistics*. 1–19.
3. Keming Yu, Xi Liu, Rahim Alhamzawi, Frauke Becker, and Joanne Lord (2016). Statistical methods for body mass index: A selective review. *Statistical Methods in Medical Research*. Accepted.
4. Alhamzawi, A. and Alhamzawi, R. (2015). Gravitational lensing by  $f(R, T)$  gravity. *International Journal of Modern Physics D*. Accepted.
5. Alhamzawi, A. and Alhamzawi, R. (2015). Circular orbits in modified gravity. *Astrophysics and Space Science*. Accepted.
6. Hashem, H., Vinciotti, V., Alhamzawi, R. and Yu, K. (2015). Quantile regression with group Lasso for classification. *Advances in Data Analysis and Classification*. 1-16.
7. Alhamzawi, R. (2014). Model selection in quantile regression models. *Journal of Applied Statistics*. 42, 445–458.
8. Alhamzawi, R. and Yu, K. (2014). Bayesian Tobit quantile regression using g-prior distribution with ridge parameter. *Journal of Statistical Computation and Simulation*. 1-16.
9. Alhamzawi, R. (2014). Bayesian elastic net Tobit quantile regression. *Communications in Statistics - Simulation and Computation*. Accepted.
10. Yu, K., Dang, W., Zhu, H. and Alhamzawi, R. (2013). Comment on Article by Spokoiny, Wang and Härdle. *Journal of Statistical Planning and Inference*. 143: 1140–1144.
11. Alhamzawi, R. and Yu, K. (2013). Conjugate priors and variable selection for Bayesian quantile regression. *Computational Statistics and Data Analysis*. 64: 209–219.
12. Benoit, D., Alhamzawi, R. and Yu, K. (2013). Bayesian Lasso Binary Quantile regression. *Computational Statistics*. 28: 2861-2873.
13. Alhamzawi, R. (2013). Tobit Quantile Regression with the adaptive Lasso penalty. The Fourth International Arab Conference of Statistics. Accepted Oct 2013.
14. Alhamzawi, R. and Yu, K. (2012). Bayesian Lasso mixed quantile regression. *Journal of Statistical Computation and Simulation*. 1:13.
15. Alkenani, A., Alhamzawi, R., & Yu, K. (2012). Penalized Flexible Bayesian Quantile Regression. *Applied Mathematics*, 3, 2155–2168.
16. Alhamzawi, R. and Yu, K. and Benoit, D. (2012). Bayesian adaptive Lasso quantile regression. *Statistical Modelling*, 12: 279-297.
17. Alhamzawi, R. and Yu, K. (2012). Variable selection in quantile regression via Gibbs sampling. *Journal of Applied Statistics*, 39: 799-813.
18. Alhamzawi, R., Yu, K., Vinciotti, V. and Tucker, A. (2011). Prior elicitation for mixed quantile regression with an allometric model. *Environmetrics*, 22: 911-920.

19. Alhamzawi R, Yu, K., Pan, J. (2011). [Prior Elicitation in Bayesian Quantile Regression for Longitudinal Data](#). *J Biomet Biostat* 2:115.
20. Alhamzawi, R. and Yu, K. (2011). [Power Prior Elicitation in Bayesian Quantile Regression](#). *Journal of Probability and Statistics*, vol. 2011, Article ID 874907, 16 pages, 2011.

## Papers Under Revision

1. Rahim Alhamzawi. Bayesian Quantile Regression for Ordinal Longitudinal Data.
2. Rahim Alhamzawi, Taha Alshaybawee and Habshah Midi. Bayesian variable selection and coefficient estimation in heteroscedastic linear regression model.

## Computer Skills

1. [FORTRAN](#)
2. [Mathematica](#)
3. [MATLAB](#)
4. [SPSS](#)
5. [L<sup>A</sup>T<sub>E</sub>X](#)
6. [The R Project for Statistical Computing](#)

## R Softwares

- (a) Benoit, D., Alhamzawi, R., Yu, K., Poel, D. V. (2013). [bayesQR: Bayesian quantile regression](#). R package version 2.1.
- (b) Alhamzawi, R. (2012). [Brq: Bayesian analysis of quantile regression models](#). R package version 1.0.
- (c) Alhamzawi, R. (2012). [Aelasticnet: Bayesian Adaptive Elastic-Net for high dimensional sparse quantile regression models](#). R package version 2.13.1.

## Mathematica Software

- (a) Alhamzawi, A. and Alhamzawi, R (2014). [ATA: Advanced Tensor Analysis](#). Mathematica package.

## Recent Talks and Posters

- i. Alhamzawi, R. (2013). Tobit Quantile Regression with the adaptive Lasso penalty. [The Fourth International Arab Conference of Statistics](#). Al Rasheed Baghdad Hotel.
- ii. Alhamzawi, R. (2013). [Bayesian Tobit quantile regression using g-prior distribution with ridge parameter](#). YSM2013, UK. Imperial College London. 4th–5th July 2013, UK.

- iii. Alhamzawi, R. (2013). *Bayesian subset selection for fixed and random effects in quantile regression models*. YSM2013. Imperial College London. 4th–5th July 2013, UK.
- iv. Alhamzawi, R.(2013). *Bayesian Quantile Regression*. Day on Quantile Regression at the Royal Statistical Society Ő London, 29 May, UK.
- v. Alhamzawi, R. and Yu, K. (2012). *Bayesian censored quantile regression using g-prior*. Young Statisticians' Meeting. 2nd - 3rd April 2012. University of Cambridge, UK.
- vi. Alhamzawi, R. (2011). *Young Researchers in Mathematics*. The University of Warwick, UK.
- vii. Alhamzawi, R. and Yu, K. (2010). *Prior elicitation in mixed quantile regression models*. 3rd International Conference of the ERCIM WG on COMPUTING & STATISTICS (ERCIM'10), Senate House, University of London, UK.

## Professional Activities

### Editorial Board

1. *Eastern European Business and Economics Journal*
2. *Journal of Computation and Mathematics (USA)*
3. *Journal of Mathematical Modeling (USA)*
4. *Journal of Biomedical Materials Research (USA)*

### Reviewer

1. *Statistics & Probability Letters*
2. *BMC Medical Research Methodology*
3. *Journal of Statistical Computation and Simulation*
4. *Journal of Applied Statistics*
5. *Journal of Computation and Mathematics*
6. *Journal of Mathematical Modeling*
7. *Journal of Biomedical Materials Research*
8. *Hacettepe Journal of Mathematics and Statistics*
9. *JSciMed Central*
10. *Journal of Chemometrics*

### Teaching

*Brunel University (United Kingdom)*

Mathematics for Economics (EC1005 level one modules): (2010-2011), (2011-2012), (2012-2013).

Statistics III (MA3970 Module): (2010-2011), (2011-2012).

Essential Skills: (2010-2011), (2011-2012).

Statistics II (MA2770 Module): (2011-2012).

Probability: (2011-2012).

Statistics: (2011-2012).

*Al-Qadisiyah University*

Statistics, Computer Programming (2000-2008).

Operation Research (2000-2007).

Stochastic Process, Simulations (2006-2008).

Statistical Inference, Time Series Analysis (2002-2004).

Multivariate, Linear Algebra (2000-2001).

Design and Analysis of Experiments (1999-2004).

Regression Analysis (2002-2004).

Mathematics (2000-2006).

**Awards and Honors**

1. Ministry of higher education and scientific research prize for best postgraduate student who published a paper from his research project in international scientific journals sober (May 2014)
2. Brunel Vice-Chancellor's Prize for Doctoral Research (July 2013)

**Grants**

1. National Institute of Health Research: £68883, 2014-2015, PI with Joanne Lord and Keming Yu. Project: Bayesain quantile regression analysis of BMI. (2014-2015)

**Acknowledgements**

1. Acknowledgement from Cogent Mathematics -Taylor & Francis. Reviewer acknowledgement.
2. Acknowledgement from BMC Medical Research Methodology, 2013. Reviewer acknowledgement.
3. Acknowledgement from Journal of Applied Statistics, 2010-2011. Reviewer acknowledgement.