

# Ahmed Mahmoud Gad

## Contact Information

**Statistics Department**  
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## **Employment**

- **Academic rank:** Associate Professor (Senior Lecturer)
- **University:** Cairo University
- **Faculty:** Economics and Political Science
- **Department:** Statistics Department
- **Specialization:** Biostatistics (Medical Statistics)

## **Current Research Interests**

- Longitudinal data analysis
- Missing data problems
- Markov chain Monte Carlo methods (MCMC)
- Repeated measurements data analysis
- Clinical trials
- Change-point problems
- Sampling techniques

## **Education**

- Ph.D. Statistics, University of Kent at Canterbury, Kent, UK, 1999.
- M.Sc. Statistics, Department of Statistics, Faculty of Economics and Political Science, Cairo University, Egypt, 1991.
- B.Sc. Statistics, Department of Statistics, Faculty of Economics and Political Science, Cairo University, Egypt, 1984.

## **Academic Experiences**

- 2007 – present Associate Professor of Statistics, Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt.
- 2002 – 2008 Assistant Professor of Statistics, Quantitative Methods Department, College of Administrative Sciences, King Saud University, Kingdom of Saudi Arabia
- 1999 – Feb. 2007 Assistant Professor of Statistics, Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt.
- 1995 – 1999 Full time PhD student, University of Kent at Canterbury, Kent, UK
- 1991 – 1999 Assistant Lecturer, Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt
- 1984 – 1991 Teaching Assistant, Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt.

## **Professional Memberships and Affiliations**

- Royal Statistical Society  
Elected fellow, 1996 – present
- International Biometrics Society  
Elected fellow, 1996 – present

## **Journals Editor**

- International Journal of Probability and Statistics.
- International journal of Epidemiology & Infection.
- Econometrics.
- Research Journal of Computation and Mathematics.

## **Journals Referee**

- Communication in Statistics.
- Journal of Applied Statistics.
- Open Journal of Statistics.
- International Journal of Probability and Statistics.
- Advancement in Medicinal Plant Research.
- International journal of Epidemiology & Infection.
- Open Journal of Mathematical Modeling.

## **Teaching Experience**

### **1. Teaching Assistant and Assistant Lecturer:**

- 1987 – 1991, a wide range of Introductory and Applied Statistics courses in different departments such as Statistics, Sociology and Psychology.
- 1990 – 1993, Mathematical Programming course, Operations Researches Diploma, Department of Statistics, Faculty of Economics and Political Science (FEPS), Cairo University.
- 1991 – 1995, a wide range of Elementary and Applied Statistics and Mathematics courses in different departments such as Statistics and Economics.

### **2. Professor:**

#### **(i) Undergraduate Courses:**

- Applied Statistics, Higher Technological Institute, The 10<sup>th</sup> of Ramadan City, Higher Education Ministry, Egypt, 1999/2000 (one term).
- Statistical Readings (In English), Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt, 1999 – 2002 (six terms).
  1. Introductory Statistics for Business (In English), Faculty of Commerce and Business Administration (English Section), Helwan University, Egypt, 2000/2001 (two terms).
  2. Applied Statistics for Business (In English), Faculty of Commerce and Business Administration (English Section), Helwan University, Egypt, 2001/2002 (two terms).
  3. Quantitative Methods I, Quantitative Methods Department, College of Administrative Sciences, King Saud University, Saudi Arabia, 2002/2003 (one term)
  4. Quantitative Methods II, Quantitative Methods Department, College of Administrative Sciences, King Saud University, Saudi Arabia, 2002/2003 (one term)
  5. Introduction to Quantitative Methods I, Quantitative Methods Department, College of Administrative Sciences, King Saud University, Saudi Arabia, 2002 – 2007 (eight terms).
  6. Introduction to Quantitative Methods II, Quantitative Methods Department, College of Administrative Sciences, King Saud University, Saudi Arabia, 2002 – 2008 (eleven terms).
  7. Sampling Techniques and Design of Experiments, Quantitative Methods Department, College of Administrative Sciences, King Saud University, Saudi Arabia, 2003 – 2008 (eight terms).
  8. Mathematics for Economists (S220), Statistics Department, Faculty of Economics and Political Science, Cairo University, 2008/2009, (one term).
  9. Introductory statistics to psychologist, Psychology Department, Faculty of Arts, Cairo University, 2008/2009, 2009/2010 (Two term).

10. Mathematics for Economists (ECO113), Management Department, Faculty of Management Sciences, Modern Science and Arts University (MSA), 2008/2009, 2009/2010, 2010-2011 (Five terms).
11. Regression Analysis (STAT325), Statistics Department, Faculty of Economics and Political Science, Cairo University, 2009/2010, 2010-2011 (English Section and Arabic Section, two terms).
12. Nonparametric Methods (STAT402), Statistics Department, Faculty of Economics and Political Science, Cairo University, 2009/2010, 2010-2011 (English Section, two terms).
13. Econometrics (ECO413), Faculty of Management Sciences, Modern Science and Arts University (MSA), 2009/2010 (One term).
14. Basic Mathematics (MATH112), Faculty of Management Sciences, Modern Science and Arts University (MSA), 2010/2011 & 2011/2012 (Three terms).
15. Quantitative Analysis (Operations Researches), Faculty of Commerce, Banha University, English Section, 2010/2011 – 2012/2013 (three years).
16. Mathematics of Finance, Faculty of Commerce, Banha University, English Section, 2010/2011 – 2012/2013 (three years).
17. Risk and Insurance, Faculty of Commerce, Banha University, English Section, 2010/2011 - 2011/2012 (two years).
18. Sampling Techniques, Faculty of Commerce, Banha University, English Section, 2010/2011 – 2012/2013 (three years).
19. Statistical Forecast of Time Series, Faculty of Commerce, Banha University, English Section, 2010/2011 – 2012/2013 (three years).
20. Statistical Applications Using the SPSS Software, Faculty of Commerce, Banha University, English Section, 2011/2012 – 2012/2013 (two years).
21. Introduction to Biostatistics (STAT401), English Section, Statistics Department, Faculty of Economics and Political Science, Cairo University, 2011/2012 – 2012/2013 (two years).
22. Business Statistics (in English), College of Management and Technology, Arab Academy for Science, Technology and Maritime Transportation, 2012-2013 (One Term).

## **(ii) Postgraduate Courses**

23. Mathematical Programming, Operations Researches Diploma, Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt, 1999/2000 (one year).
24. Operations Researches Models, Operations Researches Diploma, Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt, 2001/2002 (one year).
25. Operations Researches and Decisions Making, Industrial Statistics and Quality Control Diploma, Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt, 2000 – 2002 (two years).

26. Biostatistics, MSc level, Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt, 2000 - 2002 (two years).
27. Biostatistics, PhD level, Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt, 2000 - 2002 (two years).
28. Statistical Techniques (In English), MSc level, Public Administration Department, College of Administrative Sciences, King Saud University, Saudi Arabia, 2005 - 2008 (three terms).
29. Statistical Techniques (In Arabic), MSc level, Public Administration Department, College of Administrative Sciences, King Saud University, Saudi Arabia, 2007 - 2008 (three terms).
30. Statistical Techniques (In English), MSc level, Business Administration Department, College of Administrative Sciences, King Saud University, Saudi Arabia, 2007 – 2008 (one term).
31. Biostatistics, MSc and PhD level, Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt, 2011/2012 – 2012/2013 (two years).

## Consulting Experience

- Statistical consultant, ERF, MSEs Research Program, Advised in sample selection, data collection, training for the field work and data analysis.
- Statistical consultant, Listener and Viewer Research Unit, Radio and Television Union, Egypt. Advised on sampling techniques that can be used to carry out researches on listener and viewer opinions towards programs preferred times.
- Statistical consultant, Public Opinion Studies and Research centre, Faculty of Mass Communication, Cairo University. Advised on statistical analyses for the collected data.

## Refereed Publications

1. Gad, A.M. (1991) An interactive algorithm for solving parametric multiobjective programming problems, *Proceedings of the 3<sup>rd</sup> Conference for Statistics and Computer Modelling in Human and Social Sciences*, Faculty of Economics, Cairo University, **75-81**.
2. Gad, A. M. and Kenward, M. G. (2001) The Stochastic EM algorithm and sensitivity analysis for nonrandom dropout models, *Proceedings of the 12<sup>th</sup> Conference for Statistics and Computer Modelling in Human and Social Sciences*, Faculty of Economics, Cairo University.
3. Gad, A. M. and Kenward, M. G. (2002) Skewed distribution models for longitudinal data with non-random dropout, *Proceedings of the 1<sup>st</sup> Conference for Statistics and its Commercial Applications*, Faculty of Commerce and Business Administration, Helwan University, Egypt.
4. Gad, A. M. (2004) Treatments comparison in longitudinal clinical trials, *The Egyptian Statistical Journal*, **48**, 61-73.
5. Gad, A. M. and Ahmed, A. S. (2006) Analysis of longitudinal data with intermittent

missing values using the stochastic EM algorithm, *Computational Statistics and Data Analysis*, **50**, 2702 - 2714.

6. Gad, A. M. and Youssif, N. A. (2006) Linear mixed models for longitudinal data with nonrandom dropouts, *Journal of Data Science*, **4**(4), 447 - 460.
7. Abd-Rabou, A. S. and Gad, A. M. (2006) Change-Point Rank Tests with Epidemic Alternative, *The Egyptian Statistical Journal*, **50**(2), 114 - 135.
8. Gad, A. M. and Ahmed, A. S. (2007) Sensitivity analysis of longitudinal data with intermittent missing values, *Statistical Methodology*, **4**, 217 - 226.
9. Abd-Rabou, A. S. and Gad, A. M. (2007) A new change-point rank test, *Journal of Data Science*, **5** (3), 379 - 392.
10. Gad, A. M. and Ahmed, A. S. (2007) Longitudinal data with intermittent missing values: a sensitivity analysis approach, *The Egyptian Statistical Journal*, **51**(2), 37 - 47.
11. Gad, A. M. (2011) A selection model for longitudinal data with missing values, *Journal of Data Science*, **9**, 171-180.
12. Gad, A. M. and El Kholy, R. B. (2012) Generalized linear models for longitudinal data, *International Journal of Probability and Statistics*, **1**, 41 – 47.
13. Abd-Rabou, A-E. S. and Gad, A. M. (2013) Non-parametric tests for change in distribution function. *American Journal of Mathematics and Statistics*, **3**, 379 – 392.
14. Gad, A. M. and Darwish, N. M. M. (2013) A shared parameter model for longitudinal data with missing values, *American Journal of Applied Mathematics and Statistics*, **1**, 30-35.
15. Gad, A. M. and Abdelraheem, I. Z. (2013) A new imputation strategy for incomplete longitudinal data, *International Journal of Statistics and Applications*, **3**, 00-00 .

## **Books Review**

1. Everitt, B. S. and Gunn, G. (eds.) (1998) *Statistical analysis of medical data: new developments*, Arnold, London. In the *Nahdha*, Vol. **3**, 82-87, Faculty of Economics and Political Science, Cairo University, Egypt.

## **Other Publications**

1. Gad, A.M. (1991) Comparative study of multiobjective programming problems, *MSc Thesis*, Statistics Department, Faculty of Economics and Political Science, Cairo University.
2. Gad, A.M. (1999) Fitting selection models to longitudinal data with dropout using the Stochastic EM algorithm, *PhD thesis*, University of Kent at Canterbury, Kent, UK.

## **Presentations**

3. March 2011, The 23<sup>rd</sup> Conference for Statistics and Computer Modelling in Human and Social Sciences, Faculty of Economics, Cairo University, Egypt.
4. March 2009, The 21<sup>st</sup> Conference for Statistics and Computer Modelling in Human and Social Sciences, Faculty of Economics, Cairo University, Egypt.

5. March 2002, The 1<sup>st</sup> Conference for Statistics and its Commercial Applications, Faculty of Commerce and Business Administration, Helwan University, Egypt (Contributed paper).
- March 2001, The 12<sup>th</sup> Conference for Statistics and Computer Modelling in Human and Social Sciences, Faculty of Economics, Cairo University, Egypt (Contributed paper).
- April 1999, Research Students Conference (RSC), Bristol, UK (Contributed paper).
- April 1998, Biometrics Society Conference (British region), Edinburgh, UK (Contributed paper).
- December 1998, International Biometrics Conference (IBC98), Cape Town, South Africa (Invited Paper).
- March 1991, Statistics and Computer Modelling in Human and Social Sciences Conference, Faculty of Economics, Cairo University, Egypt (Contributed paper).

## **Seminars**

- Department of Statistics, Faculty of Economics, Cairo University, April 2012.
- Department of Statistics, Faculty of Economics, Cairo University, October 1999.
- Institute of Mathematics and Statistics, University of Kent at Canterbury, Kent, UK, July 1998.
- Institute of Mathematics and Statistics, University of Kent at Canterbury, Kent, UK, July 1997.
- Institute of Mathematics and Statistics, University of Kent at Canterbury, Kent, UK, July 1996.
- Department of Statistics, Faculty of Economics, Cairo University, May 1994.
- Department of Statistics, Faculty of Economics, Cairo University, October 1990.

## **Conferences**

6. March 2011, The 23<sup>rd</sup> Conference for Statistics and Computer Modelling in Human and Social Sciences, Faculty of Economics, Cairo University, Egypt.
7. March 2009, The 21<sup>st</sup> Conference for Statistics and Computer Modelling in Human and Social Sciences, Faculty of Economics, Cairo University, Egypt.
8. March 2002, The 1<sup>st</sup> Conference for Statistics and its Commercial Applications, Faculty of Commerce and Business Administration, Helwan University, Egypt.
- March 2001, The 12<sup>th</sup> Conference for Statistics and Computer Modelling in Human and Social Sciences, Faculty of Economics, Cairo University, Egypt.
- October 2000, The 11<sup>th</sup> Conference for Statistics and Computer Modelling in Human and Social Sciences, Faculty of Economics, Cairo University, Egypt.
- April 1999, Young Statisticians' Meeting (YSM99), Bristol, UK.
- April 1999, Research Students Conference (RCS99), Bristol, UK.
- April 1998, Biometrics Conference (the 50<sup>th</sup> anniversary of the British region), Edinburgh, UK.
- March 1991, The 3<sup>rd</sup> Conference for Statistics and Computer Modelling in Human and Social Sciences, Faculty of Economics, Cairo University, Egypt.

## **Postgraduate Students**

### **Theses have been completed**

1. Noha A. Youssif (2004), "Linear Mixed Models for Longitudinal Data with Nonrandom Dropouts", MSc Thesis in Statistics, Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt.
2. Abeer S. Ahmed (2000 – 2004), "Longitudinal Data with Intermittent Missing Values", PhD Thesis in Statistics, Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt.
3. Racha Elkholy (2008- 2012), "Generalized Linear Models for Longitudinal Data", PhD Thesis in Statistics, Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt.
4. Iman Zakeria (2010 – 2013 ), "Multiple Imputation in Longitudinal Data", MSc Thesis in Statistics, Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt.
5. Nesma Mady (2010 – 2013 ), "Shared Parameters Model for Longitudinal Data", MSc Thesis in Statistics, Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt.

### **Undergoing Theses**

6. Mohamed Yousef (2011 – Present) “ Generalized Linear Models for Longitudinal Data with Missing Values” PhD Thesis in Statistics, Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt.
7. Maha Quara (2012 – present) “ Regression Analysis in the Presence of Outliers” MSc in Statistics, Statistics Department, Banha University, Banha, Egypt.
8. Abdelrahman Mahmoud (2012 – present) “Regression Analysis in Small Samples” MSc in Statistics, Statistics Department, Banha University, Banha, Egypt.
9. Haitham Youssef (2013 - present) “Parametric and Semi-parametric Methods in Regression Analysis” PhD in Statistics, Statistics Department, Banha University, Banha, Egypt.
10. Abdullah Soliman (2012 – present) “Parametric Fractional Imputation for Longitudinal Data” MSc Thesis in Statistics, Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt.
11. Fatima Alzhrara (2013- present) “Count Longitudinal Data” MSc Thesis in Statistics, Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt.
12. Neviene Elzayat (2013 – present) “Multivariate Longitudinal Data” PhD in Statistics, Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt.
13. Rania Abdelkhalik (2013 – present) “Imputation Methods in Longitudinal Data with Missing Values” PhD Thesis, Statistics Department, Banha University, Banha, Egypt.



14. Heba Emera (2013 – present) “Sensitivity Analysis in Longitudinal Data with Missing values” PhD in Statistics, Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt.

### **Professional Activities**

- Attended successfully the training program for university teachers' preparation, Cairo University, Egypt (1994).
- Student representative, Research Committee, Faculty of Information Technology and Medical Studies, University of Kent at Canterbury, Kent, UK (1996/1997).
- Seminar Co-ordinator, Department of Statistics, Faculty of Economics, Cairo University (1999/2000).
- Supervised a graduation project of two final year undergraduate students (Statistics Department, Faculty of Economics and Political Science) titled “Juvenile crimes: the problem and solutions” (1999/2000).
- Vice-chair of the Statistical Society, Department of Statistics, Faculty of Economics, Cairo University (2000/2001).
- Supervised a graduation project of two final year undergraduate students (Statistics Department, Faculty of Economics and Political Science) titled “Public and private universities: a comparative study” (2000/2001).
- Supervised a graduation project of two final year undergraduate students (Statistics Department, Faculty of Economics and Political Science) titled “Problems of the staff members at the Faculty of Economics and Political Science, Cairo University” (2001/2002).
- Supervised a graduation project of two final year undergraduate students (Statistics Department, Faculty of Economics and Political Science) titled “Awareness of environmental problems among university’s students: a comparative study between two universities” (2001/2002).
- Department’s seminar coordinator, Statistics Department, Faculty of Economics and Political Science, Cairo University, 2008/2009.
- Supervised a graduation project of four final year undergraduate students (Statistics Department, Faculty of Economics and Political Science) titled “Awareness of political participation among university students” (2008/2009).
- Egypt local representative of the International Biometric Society IBS, 2008 – present.
- Supervised a graduation project of three final year undergraduate students (Statistics Department, Faculty of Economics and Political Science) titled “Choosing the future partner” (2011/2012).
- Attended successfully the training program of faculty members, Cairo University, Egypt (6 Courses).

### **Computer Skills**

- Extensive programming in MATLAB. Good knowledge of different statistical packages such as Minitab, STATA, R, SAS, S-Plus and SPSS.
- Extensive knowledge of LATEX.

- Good knowledge of WORD and EXCEL.
- UNIX and PC (Windows) platforms.

## **Language Skills**

Fluent in Arabic and English.

## **References**

- Professor Michael Kenward (PhD supervisor), Medical Statistics Unit, London School of Hygiene and Tropical Medicine, London, UK.  
*Email: [mike.kenward@lshtm.ac.uk](mailto:mike.kenward@lshtm.ac.uk). Tel. +44 0207 927 2472*
- Professor Nadia Makary (MSc supervisor), Department of Statistics, Faculty of Economics and Political Science, Cairo University, Egypt.  
*Email: [nmakary@aucegypt.edu](mailto:nmakary@aucegypt.edu)*
- Professor Abdelnasser Abdrabou, Department of Statistics, Faculty of Economics and Political Science, Cairo University, Egypt.  
*Email: [abdr@hotmail.com](mailto:abdr@hotmail.com)*
- Professor Ramadan Hamid, Department of Statistics, Faculty of Economics and Political Science, Cairo University, Egypt.  
*Email: [ramadhan@aucegypt.edu](mailto:ramadhan@aucegypt.edu)*
- Professor Magued Osman, Department of Statistics, Faculty of Economics and Political Science, Cairo University, Egypt.  
*Email: [mosman@aucegypt.edu](mailto:mosman@aucegypt.edu)*