Curriculum Vitae

Hanan M. Aly Hasan, Ph.D.

# Personal Data

# Name: Hanan Mohamed Aly Hasan

**Sex:** Female

# Date of Birth: November 5, 1964

**Nationality:**  Egyptian

**Occupation:** Associate Professor, Department of Statistics, Faculty of Economics and Political Science, Cairo University.

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# [hananhasan@feps.edu.eg](mailto:hananhasan@feps.edu.eg)

# Research interest

Reliability, Life Testing, Statistical Inference, Bayesian Analysis, Goodness of Fit Techniques, Public Opinion Polls.

# Academic Qualification

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| **1997** | Ph. D. in Statistics, Faculty of Economics and Political Science, Cairo University, Egypt.  Thesis: “Accelerated Life Testing under Mixture Distributions,” Advisors: Abdallah. A. Abdel-Ghaly and Ahmed. F. Attia. |
| **1991** | M.Sc. in Statistics, Grade Excellent, Department of Statistics, Faculty of Economics and Political Science, Cairo University.  Thesis: “Some Estimation Methods for Error Components Models (A Comparative Study),” Advisor: Heba F. Al-Laithy. |
| **1985** | Bachelor of Science in Statistics, Grade Excellent with honors, Department of Statistics, Faculty of Economics and Political Science, Cairo University. |

# Work Experience

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| August **2008** - till present | **Associate Professor**,Department of Statistics, Faculty of  Economics and Political Science, Cairo University, Egypt. |
| Fall **2014**, Spring **2015,** Fall **2015,** and Spring 2016 | **Adjunct Associate Professor**, Department of Mathematics and Actuarial Science, School of Sciences and Engineering, The American University in Cairo, Egypt. |
| August **2001** – July **2008** | **Assistant Professor**, Department of Statistics and Operations Research, College of Sciences, King-Saud University, Riyadh, Kingdom of Saudi Arabia. |
| April **1997** –  August **2001** | **Assistant Professor**, Department of Statistics, Faculty of  Economics and Political Science, Cairo University, Egypt. |
| **1998 - 1999** | **Statistical Analysist**, Social Research Center, American University in Cairo, Egypt. |
| October **1991** – April **1997** | **Lecturer**, Department of Statistics, Faculty of Economics and Political Science, Cairo University, Egypt. |
| **1993 - 1997** | **Research Assistant**, Social Research Center, American University in Cairo, Egypt. |
| December **1985**  – October **1991** | **Demonstrator**, Department of Statistics, Faculty of Economics and Political Science, Cairo University, Egypt. |

# ****Administrative experience****

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| October **2008** –  June **2012**. | **Statistical Consultant**,Public Opinion Poll Center – Information and Decision Support Center, the Egyptian Cabinet, Egypt. |
| September **2003** – January **2004** and August **2004** – June **2008** | **Associate Chair of Statistics and Operations Research Department for Girls' Section**, College of Sciences, King-Saud University, Riyadh, Kingdom of Saudi Arabia. |

# 6. Awards and Honors

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| **2013 and 2014** | The Cairo University Award for international publication. |
| **2010, 2011, 2012,**  **2013, 2015 and 2016** | Outstanding Teaching Award, Faculty of Economics and Political Science, Cairo University. |
| **2008** | College of Science Award for the Second Best Website of King Saud University. |
| **1985 and 1986** | Suez Canal Bank Award for the top ranking undergraduate student. |
| **1984 and 1985** | Highest Ranking Student Award, Faculty of Economics and Political Science, Cairo University. |
| **1985** | Dr. Ahmed Omar Award for the top ranking undergraduate student in Statistics, Cairo University. |

# 7. Publications

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| **2016** | A. A. Abdel-Ghaly, **H. M. Aly** and E. A. Abdel-Rahman. Adapting the Modified Extended Neyman's Smooth Test to Be Used in Accelerated Failure Time Models. ***Journal of Data Science***, 14 (2), Pp. 271-294. |
| **2016** | A. A. Abdel-Ghaly, **H. M. Aly** and E. A. Abdel-Rahman. The Use of Conditional Probability Integral Transformation Method for Testing Accelerated Failure Time Models. ***Pakistan Journal of Statistics and Operation Research***, 12 (2), Pp. 369-387. DOI:10.18187/pjsor.v12i2.1035. |
| **2016** | A. A. Abdel-Ghaly, **H. M. Aly** and R. N. Salah. Diﬀerent Estimation Methods for Constant Stress Accelerated Life Test under The Family of The Exponentiated Distributions. ***Quality and Reliability Engineering International***, 32, Pp.1095-1108. |
| **2013** | **H. M. Aly** and S. O. Bleed. Bayesian Estimation for the Generalized Logistic Distribution under Type-II Censored Accelerated Life Testing. ***International Journal of Contemporary Mathematical Sciences*,** 8 (20), Pp. 969 – 986. |
| **2013** | **H. M. Aly** and S. O. Bleed. Estimating and Planning Step Stress Accelerated Life Test for Generalized Logistic Distribution under Type-I Censoring. ***International Journal of Applied Mathematics & Statistical Sciences*,** 2 (2), Pp. 1 – 16. |
| **2012** | **H. M. Aly** and H. Z. Muhammed. Estimation of the Bivariate Generalized Linear Failure Rate Distribution Parameters under Random Censoring. ***International Journal of Contemporary Mathematical Sciences***, 7 (17), Pp. 821 – 837. |
| **2011** | A. F. Attia, **H. M. Aly** and S. O. Bleed. Estimating and Planning Accelerated Life Test using Constant Stress for Generalized Logistic Distribution under Type-I Censoring. ***ISRN Applied Mathematics***, vol. 2011, Article ID 203618, 15 pages. DOI:10.5402/2011/203618. |
| **2008** | **H. M. Aly** and A. A. Ismail. Optimum Simple Time-Step Stress Plans for Partially Accelerated Life Testing with Censoring. ***Far East Journal of Theoretical Statistics***, 24(2), Pp. 175-200. |
| **2006** | K. S. Sultan, **H. M. Aly** and N. H. Alsadat. Correlation Goodness-of-Fit Test of Mixture of Two Weibull Distributions. ***The Egyptian Statistical Journal***, 50(1), Pp. 48-59. |
| **2001** | A. F. Attia, **H. M. Aly** and E. A. El-Dessouky. Estimation for the Parameters of Log-Logistic Distribution and the Reliability Function Using Accelerated Life Testing with Type II Censoring. ***The Egyptian Statistical Journal***, 45(2), Pp. 163-171. |
| **1998** | A. A. Abdel-Ghaly, A. F. Attia and **H. M. Aly**. Estimation of The Parameters of Pareto Distribution and The Reliability Function Using Accelerated Life Testing with Censoring. ***Communications in Statistics, Simulation and Computation***, 27(2), Pp. 469-484. |

**8. Conference Papers and Unpublished Work**

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| **2016** | **H. M. Aly**, H. Z. Muhammed and O. A. Abuelamayem. Estimation of the Bivariate Kumaraswamy Lifetime Distribution under Random Censoring. The Proceedings of the 28th Annual Conference on Statistics and Modeling in Human and Social Science, Faculty of Economics and Political Science, Cairo University. (to appear) |
| **2015** | **H. M. Aly**, H. Z. Muhammed and O. A. Abuelamayem. Estimation of the Bivariate Kumaraswamy Lifetime Distribution under Progressive Type I Censoring. Proceedings of the 50th Annual Conference on Statistics, Computer Science and Operation Research, Institute of Statistical Studies and Research, Cairo University, Pp. 157 – 179. |
| **2012** | A. F. Attia, **H. M. Aly** and H. Z. Muhammed. Estimation of the Bivariate Generalized Linear Failure Rate Distribution under Different Censoring Schemes. Proceedings of the 47th Annual Conference on Statistics, Computer Science and Operation Research, Institute of Statistical Studies and Research, Cairo University, Pp. 37 – 55. |
| **2011** | A. F. Attia, **H. M. Aly** and S. O. Bleed. Estimating and Planning Constant Stress Accelerated Life Test for Generalized Logistic Distribution under Type-II Censoring. Proceedings of the 46th Annual Conference on Statistics, Computer Science and Operation Research, Institute of Statistical Studies and Research, Cairo University, Pp. 29 - 44. |
| **2009** | N. A. Amin and **H. M. Aly**. Interviewer Effect in Telephone Surveys in Egypt. The Second International Conference on Public Opinion Polls, “Public Opinion Polls in a Changing Society”. Public Opinion Poll Center – Information and Decision Support Center, the Egyptian Cabinet, Cairo. |
| **2009** | A. R. Farag and **H. M. Aly**. Response Rate in Public Opinion Poll Center. The Second International Conference on Public Opinion Polls, “Public Opinion Polls in a Changing Society”. Public Opinion Poll Center – Information and Decision Support Center, the Egyptian Cabinet, Cairo. |
| **2008** | **H. M. Aly**. Planning Step-Stress Accelerated Life Test for Log-Logistic Distribution under Progressive Type I Group Censoring. Proceedings of the 20th Annual Conference on Statistics and Modeling in Human and Social Science, Faculty of Economics and Political Science, Cairo University, Pp. 107-125. |
| **2007** | K. S. Sultan, **H. M. Aly** and N. H. Alsadat. Goodness-of-Fit Tests Using Order Statistics and Record Values. Proceedings of the 3rd Saudi Science Conference, "New Horizons in Science and Their Applications", King Saud University, Riyadh, Saudi Arabia. |
| **2001** | A. F. Attia, **H. M. Aly** and I. B. Taib. The Bayesian Estimation of the Reliability Function Using Delay Time Model. Proceedings of the 36th Annual Conference on Statistics, Computer Science and Operation Research, Institute of Statistical Studies and Research, Cairo University, Pp. 24-35. |
| **2001** | A. F. Attia, **H. M. Aly** and E. A. El-Dessouky. Bayesian Estimation for the Log-Logistic Distribution Using Accelerated Life Testing with Type II Censoring. Proceedings of the 13th Annual Conference on Statistics and Computer Modeling in Human and Social Sciences, Faculty of Economics and Political Science, Cairo University, Pp. 19-34. |
| **1999** | A. A. Abdel-Ghaly, **H. M. Aly** and M. A. Abou-Elenein. A Model for Maximizing the Audit Discrepancies in Sales Tax Department. Proceedings of the 29th Annual Seminars on Population & Sustainable Development, Cairo Demographic Center. |
| **1996** | A. A. Abdel-Ghaly, A. F. Attia and **H. M. Aly.** Maximum Likelihood Estimators of Pareto Distribution Using Accelerated Life Testing with Type-I Censoring. Proceedings of the 8th Annual Conference on Statistics and Computer Modeling in Human and Social Science, Faculty of Economics and Political Science, Cairo University, Pp. 134-145. |
| **1996** | A. F. Attia, A. A. Abdel-Ghaly and **H. M. Aly.** Maximum Likelihood Estimation of Step-Stress Accelerated Life Test for The Parameters of Pareto Distribution Under Censoring. Proceedings of the 31st Annual Conference on Statistics, Computer Science and Operation Research, Institute of Statistical Studies and Research, Cairo University, Pp. 141-149. |

# ****9. Technical Reports****

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| **2010** | **H. M. Aly**. Modeling Factors Affecting the Ownership of Fixed and Mobile Phones in Egypt. Technical Report. Public Opinion Poll Center – Information and Decision Support Center, the Egyptian Cabinet, Cairo. **DOI:** 10.13140/RG.2.1.3410.2485. |
| **2010** | **H. M. Aly**. Perception of Administrative Corruption in Egypt: Telephone Polls versus Face-to-Face Surveys. Technical Report. Public Opinion Poll Center – Information and Decision Support Center, the Egyptian Cabinet, Cairo. **DOI:** 10.13140/RG.2.1.4458.8242. |

# 10. Refereeing Research Papers for:

* [British Journal of Mathematics & Computer Science](http://www.sciencedomain.org/journal-home.php?id=6).
* IEEE Transactions on Reliability.
* International Journal of Information Technology and Decision Making.
* Journal of Institute of Industrial Engineers (IIE) Transactions.
* Journal of Statistical Computation and Simulation.
* Journal of Statistics Applications & Probability.
* Journal of Testing and Evaluation.
* Pakistan Journal of Statistics and Operation Research.
* The Annual Conferences on Statistics and Modeling in Human and Social Science, Faculty of Economics and Political Science, Cairo University.

# 11. Supervising M. Sc. and Ph. D. Theses

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| **2015 –**  till present | **Ph. D.** thesis entitled “Applying the Copula Approach on Accelerated Life Test under Censoring”; by Rana N. Salaah Eldeen, **Faculty of Economics and Political Science, Cairo University.** |
| **2015 –**  till present | **Ph. D.** thesis entitled “Optimal Design of Accelerated Censored Test Plan Using Alphabetical Optimality Criteria and Mathematical Programming”; by Heba A. El Deeb, **Faculty of Economics and Political Science, Cairo University.** |
| **2015 –**  till present | **Ph. D.** thesis entitled “The Use of Progressive Stress Accelerated Life Testing under Weibull Extension Distribution”; by Elham A. Abdel-Rahman, **Faculty of Economics and Political Science, Cairo University.** |
| **2015 –**  till present | **M. Sc.** thesis entitled “Estimation of the Parameters of the Bivariate Kumaraswamy Lifetime Distribution under Censoring”; by Ola A. Abuelamayem, **Faculty of Economics and Political Science, Cairo University.** |
| **2009 –**  **2014** | **Ph. D.** thesis entitled “Bayesian and Non Bayesian Approach for Accelerated Life Testing under Generalized Inverse Gaussian Distribution”; Prepared by Reda. M. Refaey, **Faculty of Commerce, Girls' Branch, Al-Azhar University**. |
| **2010 –**  **2013** | **M. Sc.** thesis entitled “Optimal Replacement Policy for a Multistate Degenerative System”; Prepared by Mohamed R. Nasef, **Institute of Statistical Studies and Research, Cairo University**. |
| **2012 –**  **2013** | **M. Sc.** thesis entitled “Accelerated Life Testing under the Family of the Exponentiated Distributions”; Prepared by Rana N. Salaah Eldeen, **Faculty of Economics and Political Science, Cairo University**. |
| **2011 –**  **2013** | **Ph. D.** thesis entitled “Accelerated Life Testing using the Family of the Generalized Logistic Distribution”; prepared by Salma. O. Bleed, **Institute of Statistical Studies and Research, Cairo University**. |
| **2011 –**  **2013** | **Ph. D.** thesis entitled “Contribution to Bivariate Models with Proportional Reversed Hazard Marginals”; prepared by Heba. Z. Muhammed, **Institute of Statistical Studies and Research, Cairo University**. |
| **2010 –**  **2012** | **M. Sc.** thesis entitled “On Use of Goodness-of-fit Techniques in Accelerated Life Testing”; Prepared by Elham. A. Abd El-Rahman, **Faculty of Economics and Political Science, Cairo University**. |
| **2004 –**  **2006** | **M. Sc.** thesis entitled “Goodness-of-fit Tests for Some Life Models Based on Different Statistics”; Prepared by Najwan. H. EL-Sadat, **College of Sciences, King-Saud University**. |
| **2000 –**  **2004** | **M. Sc.** thesis entitled “Statistical Prediction Based on Censored Data”; Prepared by Ebtsam A. Abdel-Azim, **Institute of Statistical Studies and Research, Cairo University**. |
| **1999 –**  **2002** | **M. Sc.** thesis entitled “On the Estimation of the Reliability Function with Inspection”; Prepared by Ibrahim B. Taib, **Institute of Statistical Studies and Research, Cairo University**. |
| **1998 –**  **2001** | **M. Sc.** thesis entitled “On the Use of Bayesian Approach in Accelerated Life Testing”; Prepared by Eman. A. El-Dessouky, **Institute of Statistical Studies and Research, Cairo University**. |
| **1997 –**  **2000** | **M. Sc.** thesis entitled “A Model for Maximizing the Audit Discrepancies in Sales Tax Department”; Prepared by Mohamed A. Abou- Elenein, **Faculty of Economics and Political Science, Cairo University**. |

# 12. A Committee Member for:

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| June **2015** | **M. Sc.** thesis entitled “McDonald Generalized Linear Failure Rate Distribution”; Prepared by Walid Marzouk, **Institute of Statistical Studies and Research, Cairo University.** |
| December **2014** | **Ph. D.** thesis entitled: "Contributions to a Study on the Design and Evaluation of Sampling Inspection Plans by Variables using Non-normal Distributions",Prepared by S. Geetha, **Bharathiar University, Coimbatore, Tamil Nadu, India.** |
| February **2013** | **M. Sc.** thesis entitled “Entropy Density Maximization with Application to Income Distribution (Case Study)”; Prepared by Ahmed H. Ali, **Institute of Statistical Studies and Research, Cairo University.** |
| December **2011** | **M. Sc.** thesis entitled “Parameters Estimation Based on Ranked Set Sampling”; Prepared by Hamada. A. Salama, **Institute of Statistical Studies and Research, Cairo University.** |
| July **2011** | **M. Sc.** thesis entitled “A Comparative Study of Some Goodness of Fit Tests for the Skew-Normal Distribution”; Prepared by Amira. M. Shelbaia, **Institute of Statistical Studies and Research, Cairo University.** |
| July **2009** | **M. Sc.** thesis entitled “Estimation of the Burr-XII Distribution for Partially Accelerated Life Tests Using Censored Data”; Prepared by Dalia A. Omar, **Faculty of Economics and Political Science, Cairo University.** |
| January **2008** | **M. Sc.** thesis entitled “Mixture of Some Bivariate Distributions”; Prepared by Ghada. Al-Omani, **College of Sciences, King-Saud University**. |
| April **2006** | **M. Sc.** thesis entitled “Statistical Inference Based on Finite Mixture Distributions”; Prepared by Asmaa Al-Moisheer, **College of Sciences, King-Saud University**. |

# 13. Supervising Graduation Projects

Supervised graduation projects in 1999, 2000, 2001, 2010, 2011, 2012, 2013 and 2016.

# 14. Teaching Experience

# Programs Found

* The **Diploma** of “Public Opinion Measurements”, department of Statistics, Faculty of Economics and Political Science, Cairo University in **2011**.
* Preparing the **Professional Master** of "Measuring Public Opinion", department of Statistics, Faculty of Economics and Political Science, Cairo University in **2014**.
* Preparing the **Professional Master** of "Statistical Analysis of Market Research", department of Statistics, Faculty of Economics and Political Science, Cairo University in **2014**.

# Courses Developed

* Some courses in the “Public Opinion Measurements” Diploma, Faculty of Economics and Political Science, Cairo University.
* “Statistical Packages”, Faculty of Economics and Political Science, Cairo University.

# Courses Taught

* **Cairo University**
  + For post graduate level:
    - Advanced Studies in Statistics.
    - Advanced Theory of Statistics (2a).
    - Advanced Theory of Statistics (2b).
    - Analyzing and Interpreting Public Opinion Data (Diploma).
    - Methods and Models of Measurement. (Diploma)
    - Reliability Studies.
  + For undergraduate level:
    - Experimental Design (English Section).
    - Numerical Analysis and Simulation.
    - Reliability Theory.
    - Statistical Psychology.
    - Theory of Statistics (1).
    - Theory of Statistics (3) (English Section).
    - The Use of SPSS in Data Analysis (Training Courses).
    - The Use of SPSS in Medical Statistics (Training Courses).
* **King Saud University**
  + For post graduate level:
    - Regression Analysis.
    - Survival Analysis.
    - Testing of Hypothesis.
    - Theory of Statistics.
  + For undergraduate level:
    - Applied Statistics.
    - Bio-statistics.
    - Elementary Bio-statistics.
    - Introduction to Probability.
    - Introduction to Statistics.
    - Probability for students of Mathematics.
* **The American University in Cairo** 
  + For undergraduate level:
    - Probability and Statistics.
    - Selected Topic for Cure Curriculum.
    - Statistics for Business.
    - Statistical Inference.

# 15. Participating in Workshops

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| **2010** | Participation by a lecture about “Telephone Surveys” in the workshop organized by Public Opinion Poll Center – **Information and Decision Support Center, the Egyptian Cabinet, Egypt.** |
| March  **2006** | Participation by two lectures in the workshop “Statistical Analysis Using SPSS”, organized by Research center in Malaz, **King-Saud University, Kingdom of Saudi Arabia.** |
| March  **2004** | Participation by two lectures in the workshop “Skills of Scientific Research”, organized by Research center in Malaz, **King-Saud University, Kingdom of Saudi Arabia.** |

# 16. Data Handling and Projects

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| **2005** | Supervisor of statistical analysis of “A Study of Graduate Education for the Girl (Horizons)” survey, King Abdullah Institute for Research and Studies and Ministry of Graduate Education, **Kingdom of Saudi Arabia.** |
| **1999** | Supervisor of the statistical analysis team of “Social and Economic Positions for Labor in Cairo” survey, **Social Research Center - American University in Cairo, Egypt.** |
| **1998 -**  **1999** | Member in the statistical analysis team of “Transitions to Adulthood, A National Survey of Egyptian Adolescents” survey, Population Council, Regional Office for West Asia & North Africa, Social Research Center - American University in Cairo, High Institute for Public Health - University of Alexandria, and Department of Public Health & Community Medicine - Assiut University, **Egypt.** |

# 17. Membership in Committees

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| **2014 –**  Till present | Academic Advisor of post graduate students, Department of Statistics, Faculty of Economics and Political Science, **Cairo University**. |
| **2010 - 2011** | Head of the Committee of "TA affairs", Department of Statistics, Faculty of Economics and Political Science, **Cairo University.** |
| **2011** | Member of "The Arab Public Opinion Polls" **Network.** |
| **2006 –**  **2008** | Member in "The Academic Accreditation" committee, Department of Statistics and Operations Research, College of Sciences, **King-Saud University.** |
| **2005 –**  **2008** | Member in the committee of post graduate studies, Department of Statistics and Operations Research, College of Sciences, **King-Saud University.** |
| **2005 –**  **2008** | Member in the committee of appointing demonstrators, Department of Statistics and Operations Research, College of Sciences, **King-Saud University.** |