

# Curriculum Vitae

## Hanan M. Aly Hasan, Ph.D.

### 1. 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.  
**E-mail:** han\_m\_hasan@yahoo.com  
hananhasan@fepe.edu.eg

### 2. Research interest

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

### 3. Academic Qualification

- 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.

### 4. Work Experience

- August **2008** - **Associate Professor**, Department of Statistics, Faculty of Economics and Political Science, Cairo University, Egypt.  
till present
- 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** – **Assistant Professor**, Department of Statistics and Operations Research, College of Sciences, King-Saud University, Riyadh, Kingdom of Saudi Arabia.  
July **2008**

April <b>1997</b> – August <b>2001</b>	<b>Assistant Professor</b> , Department of Statistics, Faculty of Economics and Political Science, Cairo University, Egypt.
<b>1998 - 1999</b>	<b>Statistical Analyst</b> , Social Research Center, American University in Cairo, Egypt.
October <b>1991</b> – April <b>1997</b>	<b>Lecturer</b> , Department of Statistics, Faculty of Economics and Political Science, Cairo University, Egypt.
<b>1993 - 1997</b>	<b>Research Assistant</b> , Social Research Center, American University in Cairo, Egypt.
December <b>1985</b> – October <b>1991</b>	<b>Demonstrator</b> , Department of Statistics, Faculty of Economics and Political Science, Cairo University, Egypt.

## 5. Administrative experience

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

## 6. Awards and Honors

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

## 7. Publications

- 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

- 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 28<sup>th</sup> 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 50<sup>th</sup> 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 47<sup>th</sup> 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 46<sup>th</sup> 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 20<sup>th</sup> 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 3<sup>rd</sup> 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 36<sup>th</sup> 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 13<sup>th</sup> 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 29<sup>th</sup> Annual Seminars on Population & Sustainable Development, Cairo Demographic Center.
- 1996** **H. M. Aly**, A. F. Attia and A. A. Abdel-Ghaly. Maximum Likelihood Estimators of Pareto Distribution Using Accelerated Life Testing with Type-I Censoring. Proceedings of the 8<sup>th</sup> 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 31<sup>st</sup> Annual Conference on Statistics, Computer Science and Operation Research, Institute of Statistical Studies and Research, Cairo University, Pp. 141-149.

## 9. Technical Reports

- 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.

- 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

- 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:**

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

## 16. Data Handling and Projects

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| <b>2005</b> | 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, <b>Kingdom of Saudi Arabia.</b> |
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- 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**

- 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.**