

Curriculum vitae

Mahmoud Hamed Abu-Moussa

Assistant professor of Mathematical Statistics

Cairo University



Born in Giza, Egypt on 10 August 1987

CONTACT INFORMATION

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Google Scholar:

<https://scholar.google.com/eg/citations?user=zQLiDQYAAAAJ&hl=en>

Scopus Profile:

<https://www.scopus.com/authid/detail.uri?authorId=57193708331>

RESEARCH INTERESTS

Probability and Statistics

Bayesian Statistics

Statistical Inference

Life testing and Reliability theory

EDUCATION

Ph. D., Mathematical Statistics, March 2019

- Thesis Topic: A Statistical Inference for Some Distributions Based on Different Types of Censored Samples
- Advisors: Prof. Moustafa M. Mohie El-Din and Prof. Laila F. Abd El-El
- Faculty of Science, Cairo University

M. Sc., Mathematical Statistics, September 2014

- Thesis Topic: *On Estimation of Stress-Strength Parameter Based on Progressive Censoring in Some Reliability Models*
- Advisors: Abd-Allah M. Abd-Elfattah and Mostafa M. EL-Faham
- Faculty of Science, Cairo University

Pre-Master, Mathematical Statistics, May 2012

- Courses: *Advanced Multivariate Statistics, Advanced Stochastic Processes (1), Advanced Stochastic Processes (2), Measure Theory (1), Measure Theory (2), Advanced Probabilities (1), Advanced Probabilities (2), Quality Control, Markov Chains (1)*
- Faculty of Science, Cairo University

Supplementary Courses, Statistics, Jan 2011

- Courses: *Sampling Theory, Statistical Analysis, Time Series, Multivariate Statistics, Experimental Design(1), Experimental Design(2), Stochastic Processes, Regression Analysis,*

Statistical Inference (1), Statistical Inference (2)

- Faculty of Science, Cairo University

B. Sc., Mathematics and Computer Science, May 2008

- Grade: Very Good with Honor
- Faculty of Science, Cairo University

EXPERIENCE

Demonstrator: from April 2009 to October 2014

- Department of Mathematics, Faculty of Science, Cairo University.

Part-time Lecturer of Mathematics and Statistics: from Sep. 2013 to Jan. 2014

- STEM school in Cairo, Egypt.

Assistant Lecturer: from November 2014 until January 2019

- Department of Mathematics, Faculty of Science, Cairo University.

Part-time Teaching Assistant: from Sep. 2015 to May. 2016

- Arab Academy for Science, Technology & Maritime Transport, Cairo.

Part-time Teaching Assistant: from Sep. 2016 to Jan. 2017.

- German University in Cairo (GUC).

Part-time Teaching Assistant: from Sep. 2017 to May 2019.

- The American University in Cairo (AUC).

Assistant Professor of Mathematical Statistics: from May. 2019 until now

- Department of Mathematics, Faculty of Science Cairo University.

Part-time Assistant Professor of Mathematics and Statistics: from September. 2019 until Jun 2020

- Department of basic sciences, Arab Academy for Science, Technology & Maritime Transport, smart village, Cairo.

Part-time Assistant Professor of Mathematics and Statistics: from September 2020 until now

- Department of basic sciences, Faculty of Advanced basic science, Galala University, Suez, Egypt.

COURSES

- Calculus 1(Differentiation), Calculus 2 (Integration), Calculus 3 (Vectors and functions in two random variables), Mathematics for Business, Probability and Statistics, Statistical analysis, Biostatistics, Differential equations, Multivariate statistics, Linear regression, non-parametric statistics, Design of Experiments, Order statistics, Reliability Theory, Vector calculus, Linear algebra, Complex analysis, and Quantitative management.

ONLINE TEACHING PLATFORMS

I am experienced in online teaching and making online exams using the following educational platforms.

- Blackboard • Google Classroom.
- Microsoft teams
- Zoom
- Schoology

TRAINING

Faculty and Leadership Development Center, Cairo University

- Modern Directions in teaching 4/2010.
- Good Presentation Skills 7/2010.
- International publishing of research papers 2/2011.
- Examination and evaluation systems of students 7/2011.
- The Credit hours systems 6/2012.
- Communication skills in different types of education 6/2013.
- Legal and financial aspects in university work 7/2014.
- Creative thinking 4/2015.
- University code of ethics 12/2020.
- Essentials of integrated education 9/2021.
- Sustainable development in university education 9/2022.
- Egyptian knowledge bank (EKB) and searching for sources 4/2023.

DAAD Kairo Akademie (German Academic Exchange Service)

- Face the Challenge: How to Strengthen the Employability of Egyptian Students 30, 31 March 2015
- Self – Management 8 April 2015
- Visualization Techniques in Teaching 31 May 2015
- Stata Program training 2019

SOFTWARE SKILLS

Computer Skills

- Microsoft Office (ICDL certificate)
- Latex (mathematical writing)

Mathematical Programming

- Mathematica

Statistical Programming

- Spss
- Minitab
- R

LANGUAGE KNOWLEDGE

- Arabic Mother tongue
- English V. Good (Cairo University TOEFL test score 467, 4 November 2012) (IELTS Test score 5, 2016).

GRADUATE STUDENTS SUPERVISING

1. **M. Sc. Student Name:** Rana Mahmoud Moussa, Department of Mathematics, Cairo university, faculty of science.

Thesis Title: Bayesian Inference for Some Lifetime Distributions Based on Different Types of Censoring Competing Risks Data.

Co-supervisors: Prof. Dr. Amal Soliman Hassan: Department of Mathematical Statistics Faculty of Graduate Studies for Statistical Research, Cairo University Prof. Dr. Eid Doha: Department of Mathematics, Cairo university, faculty of science.

Finishing time: 3/2023.

2. **M. Sc. Student Name:** Zineb Ghanem, Department of Mathematics, Cairo university, Al-Azhar University.

Thesis Title: On stress-strength models under censored data.

Co-supervisors: Prof. Dr. Moustafa Mohamed Mohie El-Din: Department of Mathematics, Faculty of Science, Al-Azhar University, Cairo, Egypt.

Finishing time: under progress.

3. **Ph. D.**

1) **Student Name:** Sara Omar Abd El-Azeem, Department of Basic Sciences, Faculty of Engineering, MTI University, Cairo, Egypt

Thesis Title: On accelerated life testing under different Types of censored data.

Co-supervisors: Prof. Dr. Lamiaa Sabry Diab: Department of Mathematics, Faculty of Science, Al-Azhar University, Cairo, Egypt

Finishing time: under progress.

2) **Student Name:** Mariam Sabry Attallah, Department of Mathematics, Faculty of Science, Cairo University, Giza, Egypt

Thesis Title: Statistical inference based on accelerated life testing under censored data.

Co-supervisors: Prof. Dr. Naser Hassan Sewlim: Department of Mathematics, Faculty of Science, Cairo University, Giza, Egypt

Dr. Hossam M. Hassan: Department of Mathematics, Faculty of Science, Cairo University, Giza, Egypt

Finishing time: under progress.

AWARDS

1. Awarding the prize of best Ph.D. thesis in mathematical statistics from the Egyptian Mathematical Society at the level of Egyptian universities.

JOURNAL PAPERS

1. Mohie El-Din, M. M., Sharawy, A., & **Abu-Moussa, M. H.** (2023). E-Bayesian estimation for the parameters and hazard function of Gompertz distribution based on progressively type-II right censoring with application. *Quality and Reliability Engineering International*, 39(4), 1299-1317.
2. Amal S. Hassan, Rana M. Mousa & **M. H. Abu-Moussa.** Analysis of the Inverted Topp-Leone Distribution Based on Progressive Type-II Competing Risks Data with Applications, Accepted, Lobachevskii Journal of Mathematics, 2023.
3. El-Azeem, S. O. A., **Abu-Moussa, M. H.**, El-Din, M. M. M., & Diab, L. S. (2022). On step-stress partially accelerated life testing with competing risks under progressive type-II censoring. *Annals of Data Science*, 1-22.

4. Alzeley, O., Almetwally, E. M., Gemeay, A. M., Alshanbari, H. M., Hafez, E. H., & **Abu-Moussa, M. H.** (2021). Statistical inference under censored data for the new exponential-X Fréchet distribution: Simulation and application to leukemia data. *Computational Intelligence and Neuroscience*. **(ISI -IF 3.633-Q1)**
5. Abd El-Raheem, M Abd, Mona Hosny & **Mahmoud H Abu-Moussa**. (2021). On Progressive Censored Competing Risks Data: Real Data Application and Simulation Study. *Mathematics*, 9(15), 1805. **(ISI -IF 2.258-Q1)**
6. Nagy, M., Sultan, K. S., & **Abu-Moussa, M. H.** (2021). Analysis of the generalized progressive hybrid censoring from Burr Type-XII lifetime model. *AIMS Mathematics*, 6(9), 9675-9704. **(ISI -IF 1.427-Q2)**
7. **M. H. Abu-moussa**, A. M. Abd-Elfattah & E. H. Hafez. (2021). Estimation of Stress-Strength parameter for Rayleigh Distribution based on Progressive Type-II Censoring. *Information Sciences Letters*, 10(1), 101-110. **(Scopus)**
8. A. M. Abd El-Raheem, **M. H. Abu-moussa**, M. M. El-din & E. H. Hafez. (2020). Accelerated Life Tests under Pareto-IV Lifetime Distribution: Real Data Application and Simulation Study. *Mathematics*, 8(10), 1786; <https://doi.org/10.3390/math8101786>. **(ISI -IF 2.258-Q1)**
9. **Abu-Moussa, M. H.**, El-Din, M. M. M & M. A. Moslihy, (2020). Statistical Inference for Gompertz distribution using the Adaptive-General Progressive Type-II Censored Samples. *American Journal of Mathematical and Management Sciences*, DOI: 10.1080/01966324.2020.1835590. **(Scopus)**
10. El-Din, M. M., Nagy, M., & **Abu-Moussa, M. H.** (2019). Estimation and Prediction for Gompertz Distribution Under the Generalized Progressive Hybrid Censored Data. *Annals of Data Science*, 6 (4), 673-705. **(Scopus)**
11. El-Din, M. M. M., & **Abu-Moussa, M. H.** (2018). Statistical Inference and Prediction for The Gompertz Distribution Based on Multiply Type-I Censored Data. *Journal of the Egyptian Mathematical Society*, 26(2), 218-234. **(Scopus)**
12. **Abu-Moussa, M. H.**, & El-Din, M. M. M. (2018). On Estimation and Prediction for the Inverted Kumaraswamy Distribution Based on General Progressive Censored Samples. *Pakistan Journal of Statistics and Operation Research*, 14(3), 717-736. **(ISI- JCI 0.54 – Q2)**
13. El-Din, M. M., Abdel-Aty, Y., & **Abu-Moussa, M. H.** (2017). Statistical inference for the Gompertz distribution based on Type-II progressively hybrid censored data. *Communications in Statistics Simulation and Computation*, 46(8), 6242-6260. **(ISI - IF 1.118- Q3)**
14. Abd-Elfattah, A. M., & **Abu-Moussa, M. H.** (2016). Estimation of Stress-Strength Parameter for Burr Type XII Distribution Based on Progressive Type-II Censoring. *ANGLISTICUM. Journal of the Association-Institute for English Language and American Studies*, 3.

CONFERENCES PAPERS

1. Abd-Elfattah, A.M., El-Fahham M. M and Abu-Moussa, M. H., Estimation of Stress-Strength Parameter for Burr type XII Distribution Based on Progressive Type-II Censoring, *The First*

International Conference on New Horizons in Basic and Applied Science (ICNHBAS), 21 – 23 September 2013, Hurghada, Egypt.

2. Abd-Elfattah, A.M., El-Fahham M. M, and Abu-Moussa, M. H., Estimation of Stress-Strength Parameter for Rayleigh distribution Based on Progressive Type-II Censoring, *The 48th Annual Conference on Statistics, Computer Science and Operation Research*, Institute of Statistical Studies and Research (ISSR), Cairo University, Egypt, 2013.
3. Abd-Elfattah, A.M., El-Fahham M. M and Abu-Moussa, M. H. (2013). Estimation of Stress-Strength Parameter for Rayleigh distribution Based on Progressive Type-II Censoring, *The 48th Annual Conference on Statistics, Computer Science and Operation Research*, Institute of Statistical Studies and Research (ISSR), Cairo University, Egypt.
4. El-Din, M. M. M., & Abu-Moussa, M. H. (2017). Statistical inference for the Gompertz Distribution based on Multiply Type-I Censored Data, the 29th international conference for statistics and modeling, Faculty of Economics and Political science, Cairo University, Egypt.