Ayman A. Amin

PhD, Swinburne University of Technology, Australia
Associate Professor of Applied Statistics, Egypt
Acting Head of Insurance, Mathematics and Statistics Department

ABOUT ME

I am an Associate Professor of Applied Statistics with a background on mathematics, theoretical statistics, Bayesian statistics, time series analysis, machine learning, software quality attributes forecasting and statistical programming, along with excellent academic and research experiences. I received my PhD degree from Faculty of Science, Engineering and Technology, Swinburne University of Technology, Australia (in January 2014), and my MSC in Statistics (with excellent degree in October 2009) and BSC in Statistics and Social Science Computing (with excellent degree in June 2006) from Faculty of Economics and Political Science (FEPS), Cairo University, Egypt. Most of my research work is in Bayesian statistics, time series analysis and forecasting methods. I always learn new things related to statistics and data science, and I love working with researchers and data scientists at global level. Since 2020, I am acting Head of Department of Insurance, Mathematics and Statistics at Faculty of Commerce, Menoufia University, Egypt.

CONTACT INFORMATION

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RESEARCH INTERESTS

Time Series Forecasting, Predictive Modelling, Bayesian Statistics, Machine Learning, Sequential Analysis, Statistical Composite Indicators, Statistical Process Control, Quantitative Analysis of Quality Attributes, and Software Performance and Reliability Forecasting.

EDUCATION

I. **Ph.D.** in Information Technology and Statistics (April 2010 - January 2014); Faculty of Science, Engineering, and Technology (FSET), Swinburne University of Technology, Australia. [Ph.D. degree equivalency in Statistics from Egyptian Universities.]

- Thesis Topic: *Automated Statistical Forecasting for Quality Attributes of Web Services*
- Supervisor: Prof. Lars Grunske & Dr. Alan Colman
- Area of Study: Quantitative Analysis for Quality Attributes of Software Systems
- Thesis Abstract: This study proposes a collection of automated forecasting approaches for quality of service (QoS) attributes of Web services. Each one of these approaches is able to fit and forecast a specific type of QoS stochastic characteristics, however, taken together they will be able to fit different dynamic behaviors of QoS attributes and forecast their future values. In particular, the thesis proposes an automated forecasting approach for nonlinearly dependent QoS attributes, two automated forecasting approaches for linearly dependent QoS attributes with volatility clustering, and two automated forecasting approaches for nonlinearly dependent QoS attributes with volatility clustering. The accuracy and performance of the proposed forecasting approaches are evaluated and compared to those of the baseline ARIMA time series models using real-world QoS datasets of Web services characterized by nonlinearity and volatility clustering. The evaluation results show that each one of the proposed forecasting approaches outperforms the baseline ARIMA models.

II. **M.Sc.** in Statistics with excellent degree (October 2006 - October 2009); Faculty of Economics and Political Science (FEPS), Cairo University, Egypt.

- Thesis Topic: *Bayesian Inference for SARMA Models: A Gibbs Sampling Approach*
- Supervisor: Prof. Mohamed Ismail & Prof. Emad Soliman
- Area of Study: Bayesian Time Series Analysis
- Thesis Abstract: This study develops a Bayesian inference for multiplicative seasonal ARMA model by implementing a fast, easy and accurate MCMC Gibbs sampling algorithm. The proposed algorithm does not involve any Metropolis-Hastings generation, but it simulates from normal and inverse gamma distributions. The proposed algorithm is illustrated using simulated examples and real datasets.

III. **Pre-M.Sc.** (M.Sc Preparatory Year, September 2006 - July 2007);
   FEPS, Cairo University, Egypt. Main courses of this year include:
   - Theory of Statistics   - Time Series Analysis (Classical and Bayesian)
   - Advanced Mathematics   - Robust Regression Diagnostics
   - Advanced Econometrics   - Biostatistics and Demography
   Grade: Very Good
IV. **B.Sc.** in Statistics and Social Science Computing (September 2002 - July 2006);
   FEPS, Cairo University, Egypt.

- Grade: excellent with honor degree
- Major Specialization: Statistics
- Minor Specialization: Social Science Computing

Awards

I. Association for Computing Machinery (ACM), USA
- **WOSP/SIPEW International Conference on Performance Engineering Support Travel Grant (ICPE, 2012)**, is the SIG Travel Grant for the students/researchers.
II. Swinburne University of Technology, Australia
- **Chancellors Research Scholarship (CRS, 2009)**, is the Swinburne University's premier research award.

Experience

Faculty of Commerce, Menoufia University, Egypt   **May 2007 - Present**

Associate Professor of Applied Statistics & Acting Head of Statistics Department   *October 2020 - Present*

Assistant Professor of Statistics   *September 2015 - October 2020*

Teaching Assistant of Statistics   *May 2007 - April 2010*

- Associate Professor of Applied Statistics, and I teach the following courses for the undergraduate students:

  - Applied Mathematics   - Applied Statistics

  - Operations Research   - Principles of Statistics

  - Pure Mathematics   - Quantitative Analysis

- I teach the following courses for the postgraduate students:

  - Advanced Statistics   - Theory of Statistics

  - Mathematics for Statisticians   - Demography

Faculty of Management Sciences, MSA University, Egypt   **February 2015 - June 2024**

Part-time Associate Professor   *October 2020 - June 2024*

Part-time Assistant Professor   *February 2015 - October 2020*

- (Part-time) Associate Professor, and I taught the following courses:

  1. MTH112 Basic Mathematics for Social Sciences.
  2. STAT215 Statistics for Economists I.
  3. STAT16 Statistics for Economists II.

Faculty of Business Administration, Ahram Canadian University, Egypt

Part-time Assistant Professor   **September 2016 - January 2019**

- (Part-time) Assistant Professor, and I taught the following courses:

  1. BUSGB213 Financial Mathematics.
  2. BUSGB211 Quantitative Analysis.
  3. BUSGB323 Risk Management and Insurance.

Faculty of Science, Engineering, and Technology (FSET), Swinburne University of Technology, Australia **April 2010 - February 2017**

Adjunct Research Fellow *March 2014 - February 2017*

PhD Student and Tutor *April 2010 - June 2014*

- Tutor, and I taught the following courses:

1. HMS215 Engineering Mathematics 3C.
2. HMS214 Engineering Mathematics 4B.
3. HMS211M Engineering Mathematics 3M.
4. HES5102/HES5103 Research Project.

Information and Decision Support Center (IDSC), Egyptian Cabinet, Egypt **October 2006 - June 2009**

Statistician in Population Program Evaluation Unit *April 2007 - June 2009*

During this period, the most important outputs are:

* Participated in preparing a series of periodic (monthly and quarterly) reports aiming at determining the national population program's progress at regions and governorates level.
* Participated in developing the quantitative values for the monitoring and evaluation indicators needed for evaluating the progress in the Population National Strategic Goal and assisting decision makers in identifying alternatives within the context of specific scenarios of the strategic goal.
* Participated in "Indicators Guide and Data Dictionary of Monitoring and Evaluating the Egyptian Population Program".
* Proposed a methodology for building the House Price Index (HPI) for Egypt.

Statistician in Data Quality Unit *October 2006 - April 2007*

During this period, the most important outputs are:

* Participated in "Evaluation of the ministries and governorates' publications study".
* Prepared a technical course about "Appropriate Statistical Techniques using SPSS".
* Participated in building a full detailed documentation about Timeliness as a data quality element, and measuring the timeliness of some Egyptian datasets.
* Participated in determining the social, demographic and economic indicators of "Egypt's Description by Information 2007".

CONSULTATIONS EXPERIENCE

I deliver statistical consultations for many clients such as regional projects, companies, and postgraduate students in different fields including information technology, social and educational sciences, linguistics, and medicine.

Measurement and Evaluation Project, Menoufia University

Funded by the Ministry of Higher Education **November 2018 -April 2021**

- Head of Statistics and Opinion Polls Unit in the project at Faculty of Commerce.

Precision Knowledge for Technical Systems

A company provides various IT services **October 2018 - January 2021**

- I have been working as a Data Scientist at this company in order to produce some machine learning-based data products.

Arab Knowledge Indicator (AKI) - 2015

Project funded by United Nations Development Programme (UNDP) & Mohammed Bin Rashid Al Maktoum Knowledge Foundation **August 2015 - November 2015**

- My participation in this project was writing a technical paper titled "On Constructing Composite Indicators: Background Paper," giving all the required background to construct the Arab Knowledge Indicator (AKI) 2015.

Planning [in] Justice Project

A joint effort between Takween Integrated Community Development (in Egypt) and the American University in Washington, D.C. **June 2015 - December 2015**

- I was the statistician of this project, proposing and constructing composite indicators to measure multidimensional spatial inequalities.

Consultations for Postgraduate Students

I have been working as a statistical consultant for many PhD studies especially that include surveys as a main component of the thesis. Examples of these PhD studies include:

- Politeness and Requests in Contemporary Arabic: A Case Study of Saudi Women (PhD in Linguistics).
- Analysis of Economic Policies of Foreign Direct Investment (FDI): A case study of Libya (PhD in Economics).
- Adaptive IT Capability and its Impact on the Competitiveness of Firms: A Dynamic Capability Perspective (PhD in Computer Science).
- Hospitalised Children: Reactions of Siblings (PhD in Nursing).

TRAINING EXPERIENCE

I deliver training in statistics and data science for many clients such as researchers at governmental and private institutions as well as undergraduate and postgraduate students at universities. A sample of delivered training is given below:

1. "Data science and related soft skills for Business", Internal summer training at Faculty of Commerce, Menoufia University, Egypt, July - September, 2024.

2. "Data Management with Data Quality", Department of Statistics and Community Development, Sharjah, UAE, 14 - 15 February 2024.

3. "Statistics in Decision Support Studies", Department of Statistics and Community Development, Sharjah, UAE, 7 - 8 February 2024.

4. "Data Types and Appropriate Statistical Methods", Department of Statistics and Community Development, Sharjah, UAE, 24 - 25 January 2024.

5. "Data Analysis using Microsoft Excel - intermediate level", Ajman Statistics Center, Ajman, UAE, 5 - 7 December 2023.

6. "Statistics and its role in planning, monitoring and decision-making", Ajman Statistics Center, Ajman, UAE, 17 - 19 October 2023.

7. "Soft skills required to the labor market", Internal summer training at Faculty of Commerce, Menoufia University, Egypt, July - September, 2023.

8. "Data science and the labor market", Internal summer training at Faculty of Commerce, Menoufia University, Egypt, July - September, 2022.

9. "Future work is digital- initiative and the labor market", Internal summer training at Faculty of Commerce, Menoufia University, Egypt, July - September, 2021.

10. "Statistical analysis and freelancing", Internal summer training at Faculty of Commerce, Menoufia University, Egypt, July - September, 2020.

11. "Econometric and statistical analysis using EViews", Faculty of Economics and Political Science, Cairo University, Egypt, 21 - 25 June 2015.

12. "Econometric and statistical analysis using EViews", Faculty of Economics and Political Science, Cairo University, Egypt, 14 - 18 June 2015.

13. "Econometric and statistical analysis using EViews", Faculty of Economics and Political Science, Cairo University, Egypt, 3 - 7 May 2015.

14. "Introduction to research statistics using SPSS", Faculty staff, faculty of agriculture, Menoufia University, Egypt, 24 February 2015

15. "Introduction to statistical analysis using SPSS", Saudi Arabian PhD Students Community, Melbourne, Australia, 20 October 2013

16. "Introduction to statistical analysis using SPSS", Libyan Students in Australia Community, Melbourne, Australia, 9 September 2012

17. "Introduction to statistical analysis using Minitab", undergraduate students, Faculty of Economics and Political Science, Cairo University, Egypt, 9 - 11 January 2010.

PUBLICATIONS   A summary of my publications is given in the following table:

Publication Type	Counts
International Journals	20
International Conferences	16
Book Chapters	1
Local Journals	2
Local Conferences	3
Technical Reports	5
Theses	2
Total	**49**

A complete list of all my publications is given below:

1. **Amin, A.**, "Gibbs Sampler for Bayesian Prediction of Triple Seasonal Autoregressive Processes," *Communications in Statistics - Theory and Methods*, DOI: 10.1080/03610926.2024.2329780, 2024.

2. **Amin, A.**, "Full Bayesian analysis of double seasonal autoregressive models with real applications," *Journal of Applied Statistics*, 51(8), Pages 1524–1544, 2024.

3. **Amin, A.**, "Full Bayesian Analysis of Triple Seasonal Autoregressive Models," *Australian & New Zealand Journal of Statistics*, Accepted (But not published yet), 2024.

4. Elkady, A., **Amin, A.**, Ismael, W., "Analysing the Factors Affecting the Cost of Health Insurance in Egyptian Market," *Scientific Journal for Commercial Research*, Accepted (But not published yet), 2024.

5. **Amin, A.**, "Gibbs sampling for Bayesian estimation of triple seasonal autoregressive models," *Communications in Statistics - Theory and Methods*, 52(20), Pages 7303–7322, 2023.

6. **Amin, A.**, and Saeed A., "Bayesian Identification Procedure for Triple Seasonal Autoregressive Models," *Mathematics*, 11 (18), 2023.

7. **Amin, A.**, Emam, W., Tashkandy, Y., and Chesneau, C., "Bayesian Subset Selection of Seasonal Autoregressive Models," *Mathematics*, 11 (13), 2023.

8. **Amin, A.**, "Bayesian Inference of Triple Seasonal Autoregressive Models," *Pakistan Journal of Statistics and Operation Research,*, 18 (4), Pages 853–865, 2022.

9. **Amin, A.**, "A Kullback-Leibler Divergence Based Comparison of Approximate Bayesian Estimations of ARMA Models," *Communications for Statistical Applications and Methods (CSAM) Journal*, Volume 29, Issue 4, Pages 471–486, 2022.

10. Khater, S., **Amin, A.**, Dora, I., "Socio-economic determinants of mothers' health care in Egypt," *Scientific Journal for Commercial Research*, 44(1), Pages 185-22, 2022. (In Arabic)

11. **Amin, A.**, "Bayesian Estimation of Triple Seasonal Autoregressive Models Using Gibbs Sampling," *Research Report, August 2021*.

12. Yousef, A., **Amin, A.**, Hassan, E. E., & Hamdy, H. I., "Multistage Estimation of the Rayleigh Distribution Variance," *Symmetry*, 12(12), 2020.

13. Yousef, A., Hassan, E. E., **Amin, A.**, & Hamdy, H. I., "Multistage Estimation of the Scale Parameter of Rayleigh Distribution with Simulation," *Symmetry*, 12(11), 2020.

14. **Amin, A.**, "Bayesian Analysis of Double Seasonal Autoregressive Models," *Sankhya B: The Indian Journal of Statistics,* 82(2), 328-352, 2020.

15. **Amin, A.**, "Gibbs Sampling for Bayesian Prediction of SARMA Processes," *Pakistan Journal of Statistics and Operation Research,* 15(2), 397-418, 2019.

16. Mansour, A. and **Amin, A.**, "Open-Circuit Faults Detection Using Control Charts Technique ," *Accepted for presentation at the 21st International Middle East Power Systems Conference (MEPCON)*, 17-19 December 2019, Egypt.

17. **Amin, A.**, "Bayesian Identification Methods for Autoregressive Models: A Comparison Study," *in Proceedings of the 54th Annual International Conference of Statistics, Computer Science and Operations Research*, 9 - 11 December 2019, ISSR, Cairo University, Egypt.

18. Talaat, E., Rady, E., and **Amin, A.**, "Chaotic Analysis of Egyptian Stock Market with the Application to EGX 30 price Index," *in Proceedings of the 54th Annual International Conference of Statistics, Computer Science and Operations Research*, 9 - 11 December 2019, ISSR, Cairo University, Egypt.

19. Talaat, E., **Amin, A.**, and Rady, E., "Detecting Nonlinear Structure in Egyptian Stock Market Indices," *Presented at the 31st Annual International Conference on Statistics and Computer Modeling in Human and Social Sciences*, 28-30 March 2019, FEPS, Cairo University, Egypt.

20. **Amin, A.**, "A New Look at Bayesian Identification of Moving Average Models," *in Proceedings of the 53rd Annual International Conference of Statistics, Computer Science and Operations Research*, 3 - 5 December 2018, ISSR, Cairo University, Egypt.

21. **Amin, A.**, "Bayesian Identification of Double Seasonal Autoregressive Time Series Models," *Communications in Statistics - Simulation and Computation*, DOI: 10.1080/03610918.2018.1458130, 2018.

22. **Amin, A.**, "Kullback-Leibler Divergence to Evaluate Posterior Sensitivity to Different Priors for Autoregressive Time Series Models," *Communications in Statistics - Simulation and Computation*, DOI: 10.1080/03610918.2017.1410709, 2018.

23. **Amin, A.**, "Bayesian Inference for Double SARMA Models," *Communications in Statistics - Theory and Methods*, DOI: 10.1080/03610926.2017.1390132, 2017.

24. **Amin, A.**, "Sensitivity to Prior Specification in Bayesian Identification of Autoregressive Time Series Models," *Pakistan Journal of Statistics and Operation Research*, Volume 13, Issue 4, Pages 699–713, 2017.

25. **Amin, A.**, "Bayesian Inference for Double Seasonal Moving Average Models: A Gibbs Sampling Approach," *Pakistan Journal of Statistics and Operation Research*, Volume 13, Issue 3, Pages 483–499, 2017.

26. **Amin, A.**, "Identification of Double Seasonal Autoregressive Models: A Bayesian Approach," *in Proceedings of the 52nd Annual International Conference of Statistics, Computer Science and Operations Research*, 25-27 December 2017, ISSR, Cairo University, Egypt.

27. **Amin, A.**, "Gibbs Sampling for Double Seasonal ARMA Models," *in Proceedings of the 29th Annual International Conference on Statistics and Computer Modeling in Human and Social Sciences*, 28-30 March 2017, FEPS, Cairo University, Egypt.

28. Ismail, M., and **Amin, A.**, and Abd-Elnasser, M., "A Comparison of Approximate Bayesian Estimation Methods for ARMA Models," *in Proceedings of the 29th Annual International Conference on Statistics and Computer Modeling in Human and Social Sciences*, 28-30 March 2017, FEPS, Cairo University, Egypt.

29. Herbst, N., **Amin, A.**, Andrzejak, A., Grunske, L., Kounev, S., Mengshoel, O., and Sundararajan, P., "Online Workload Forecasting," *Self-Aware Computing Systems*, Pages 529–553, Springer, 2017.

30. Abdelhaliem, R., **Amin, A.**, and Eissa, R., "Composite Indicator to Measure Multidimensional Spatial Inequality in Cairo," *in Proceedings of the Fifth International Scientific Conference of Arab Statisticians*, Egypt, 9 - 10 February 2016.

31. **Amin, A.** and Ismail, M., "On Constructing Composite Indicators: Background Paper," *Technical Paper for Arab Knowledge Indicator (AKI) Project funded by UNDP and Mohammed Bin-Rashid AL Maktoum Foundation, November 2015*.

32. **Amin, A.** and Ismail, M., "Gibbs Sampling for Double Seasonal Autoregressive Models," *Communications for Statistical Applications and Methods (CSAM) Journal*, Volume 22, Issue 6, Pages 557–573, 2015.

33. Ismail, M. A. and **Amin, A.**, "Gibbs Sampling for Double Seasonal Moving Average Models," *in Proceedings of the 60th ISI World Statistics Congress (WSC), Rio de Janeiro - Brazil, 26-31 July 2015*.

34. **Amin, A.** and Ismail, M., "Gibbs Sampling for Double Seasonal Moving Average Models," *Research Report, January 2015*.

35. Grunske, L. and **Amin, A.**, "Reactive vs. Proactive Detection of Quality of Service Problems," *in Proceedings of the Software Engineering Conference (SE)*, Germany, 25 - 28 February 2014.

36. **Amin, A.**, "Automated statistical forecasting for quality attributes of web service," *PhD thesis*, Faculty of Science, Engineering, and Technology, Swinburne University of Technology, Australia, January 2014.

37. Ismail, M. A. and **Amin, A.**, "Gibbs Sampling for SARMA Models," *The Pakistan Journal of Statistics (PJS)*, Volume 30, Issue 2, Pages 153–168, 2014.

38. **Amin, A.**, Grunske, L., and Colman, A., "An Approach to Software Reliability Prediction based on Time Series Modeling," *The Journal of Systems and Software (2013)*, Volume 86, Issue 7, Pages 1923–1932, 2013.

39. **Amin, A.**, Grunske, L., and Colman, A., "An Automated Approach to Forecasting QoS Attributes Based on Linear and Non-linear Time Series Modeling," *in Proceedings of the 27th IEEE/ACM International Conference on Automated Software Engineering (ASE)*, Germany. IEEE/ACM, 2012.

40. **Amin, A.**, Colman, A., and Grunske., L., "An Approach to Forecasting QoS Attributes of Web Services Based on ARIMA and GARCH Models," *in Proceedings of the 19th IEEE International Conference on Web Services (ICWS)*, USA. IEEE, 2012.

41. Meedeniya, I., Aleti, A., Avazpour, I., and **Amin, A.**, "Robust ArcheOpterix: Architecture Optimization of Embedded Systems Under Uncertainty," *in Proceedings of the 2nd International ICSE Workshop on Software Engineering for Embedded Systems (SEES)*, Switzerland. IEEE, 2012.

42. **Amin, A.**, Colman, A., and Grunske., L., "Statistical Detection of QoS Violations Based on CUSUM Control Charts," *in Proceedings of the 3rd ACM/SPEC International Conference on Performance Engineering (ICPE)*, USA. ACM, 2012.

43. **Amin, A.**, Colman, A., and Grunske., L., "Time Series Based Forecasting Methods," *Research Report, October 2011*.

44. **Amin, A.**, Colman, A., and Grunske., L., "Using Automated Control Charts for the Runtime Evaluation of QoS Attributes," *in Proceedings of the 13th IEEE International High Assurance Systems Engineering Symposium (HASE)*, USA. IEEE, 2011.

45. Ismail, M. A. and **Amin, A.**, "Gibbs Sampling for SARMA Models," *in Proceedings of the Inauguration Conference for Launching IDSC-WPS*, (IDSC, Egypt), 28 March 2010.

46. **Amin, A.**, "House Price Index: International Experiences and A Methodology for Application in Egypt," *Research Report, January 2009.* (In Arabic)

47. Ismail, M. A. and **Amin, A.**, "Bayesian Inference for Seasonal ARMA Models: A Gibbs Sampling Approach," *in Proceedings of the Tenth Islamic Countries Conference on Statistical Sciences (ICCS-X),* (American University in Cairo, Egypt), 20-23 December 2009.

48. **Amin, A.**, "Bayesian Inference for Seasonal ARMA Models: A Gibbs Sampling Approach," *Master's thesis,* Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt, October 2009.

49. **Amin, A.**, Geel, F. E., and Ahmed, M. R., "Estimating the quantitative values for the monitoring and evaluation indicators of the population problem (2005-2017)," *in Proceedings of the 1st Regional Conference on Facing Population Problems in Upper Egypt,* (Assiut University, Egypt), 1-2 April 2009. (In Arabic)

THESES
SUPERVISION

⋆ **PhD Theses**

• *Yara Khaled* **December 2022 - To Date**

　Thesis title: Improvements in Panel Data Analysis With Real Applications
　Department of Statistics, Faculty of Commerce, Menoufia University, Egypt

• *Walaa Ismail* **June 2019 - To Date**

　Thesis title: Modeling the factors affecting the cost of health insurance in Egypt
　Department of Statistics, Faculty of Commerce, Menoufia University, Egypt

⋆ **MSc Theses**

• *Asmaa Saeed Eldeeb* **January 2023 - To Date**

　Thesis title: State Risk Management of Road Accident: Applied to Menoufia Governorate
　Department of Statistics, Faculty of Commerce, Menoufia University, Egypt

• *Safaa Ahmed* **December 2022 - To Date**

　Thesis title: On Regression Analysis: Assumptions, Diagnostics and Remedies
　Department of Statistics, Faculty of Commerce, Menoufia University, Egypt

• *Rania Yousef* **September 2022 - To Date**

　Thesis title: Studying the Impact of Free- Participation on the Solvency of Private Insurance Funds of Egyptian Universities
　Department of Statistics, Faculty of Commerce, Menoufia University, Egypt

• *Sandy safwat Faiek* **September 2021 - To Date**

　Thesis title: Testing Random Effects in Linear Mixed Regression Models: A Comparison Study
　Department of Quantitative Sciences and Computer, Faculty of Commerce, Suez University, Egypt

• *Eman Talaat* **February 2019 - December 2022**

　Thesis title: An empirical analysis of price dynamics in Egyptian financial market using Chaos theory
　Department of Applied Statistics, Faculty of Graduate Studies for Statistical Research, Cairo University, Egypt

• *Eslam Elbana* **May 2018 - June 2022**

　Thesis title: The level of health for children under five in Egypt: current and future

Department of Biostatistics and Demography, Faculty of Graduate Studies for
Statistical Research, Cairo University, Egypt

- *Islam Dora* **March 2018 - December 2021**

  Thesis title: Socio-economic determinants of maternal and child healthcare in
  Egypt "A Statistical Approach"
  Department of Statistics, Faculty of Commerce, Menoufia University, Egypt

- *Yara Khaled* **April 2017 - March 2019**

  Thesis title: Statistical Model to specify the determinants affecting liver diseases
  spread: Applied on Menoufia Governorate
  Department of Statistics, Faculty of Commerce, Menoufia University, Egypt

COMMITTEES
MEMBERSHIP

- Acting Head of Insurance, Mathematics and Statistics Department, Faculty of Commerce, Menoufia University, Egypt (since 2020).

- Served as an external Member of the Development Committee of the Bachelor of
  Mathematical Sciences Program, Faculty of Science and Arts, Najran University,
  Saudi Arabia (during 2023 - 2024).

- Serving as a Member of the Faculty Board, Faculty of Commerce, Menoufia University, Egypt (since 2020).

- Served as a Member of the Students Affairs Committee, Faculty of Commerce,
  Menoufia University, Egypt (during 2019 and 2024).

- Serving as a Member of the Laboratory Committee, Faculty of Commerce, Menoufia
  University, Egypt (during 2017, 2022, and 2023).

- Serving as a Member of the Public Service Center, Faculty of Commerce, Menoufia
  University, Egypt (during 2017 - 2022).

- Serving as a Member of the Crisis Management Unit, Faculty of Commerce, Menoufia
  University, Egypt (during 2017 - 2022).

- Served as a Member of the Library Committee, Faculty of Commerce, Menoufia
  University, Egypt (during 2016, 2018, and 2021).

- Served as a Member (and meeting Coordinator) of Insurance, Mathematics and
  Statistics Department, Faculty of Commerce, Menoufia University, Egypt (during
  2015 - 2020).

REVIEWER @
JOURNALS

- Journal of Applied Statistics.

- Pakistan Journal of Statistics and Operation Research (PJSOR).

- Communications for Statistical Applications and Methods (CSAM).

- Journal of Modern Applied Statistical Methods.

- Pakistan Journal of Statistics (PJS).

- Journal of Systems and Software (JSS).

- Applied Computing and Informatics (ACI).

- European Journal of Advances in Engineering and Technology (EJAET).

- Universal Journal of Computational Mathematics.

PC Member or
Reviewer @
Conferences

- The 10th International conference on Time Series and Forecasting, 15 - 17 July 2024, Gran Canaria, Spain.

- The 9th International conference on Time Series and Forecasting, 12 - 14 July 2023, Gran Canaria, Spain.

- The 8th International conference on Time Series and Forecasting, 27 - 30 June 2022, Gran Canaria, Spain.

- The 7th International conference on Time Series and Forecasting, 19 - 21 July 2021, Gran Canaria, Spain.

- The 29th Annual International Conference on Statistics and Computer Modeling in Human and Social Sciences, 28-30 March 2017, FEPS, Cairo University, Egypt.

- The 4th ACM/SPEC International Conference on Performance Engineering (ICPE), 21-24 April 2013, Prague, Czech Republic.

- The 26th IEEE/ACM International Conference on Automated Software Engineering (ASE), 6-12 November 2011, Lawrence, Kansas, USA.

- The 2nd ACM/SPEC International Conference on Performance Engineering (ICPE), 14-16 March 2011, Karlsruche, Germany.

- The 1st International Conference on Runtime Verification (RV), 1-4 November 2010, St. Julians, Malta.

Conferences,
Seminars and
Workshops
Attended

1. The 54th Annual International Conference of Statistics, Computer Science and Operations Research, 3 - 5 December 2019, FGSSR, Cairo University, Egypt.

2. The 53rd Annual International Conference of Statistics, Computer Science and Operations Research, 3 - 5 December 2018, FGSSR, Cairo University, Egypt.

3. The 30th Annual International Conference on Statistics and Computer Modeling in Human and Social Sciences, 3-5 April 2018, FEPS, Cairo University, Egypt.

4. The 52nd Annual International Conference of Statistics, Computer Science and Operations Research, 25-27 December 2017, ISSR, Cairo University, Egypt.

5. The 29th Annual International Conference on Statistics and Computer Modeling in Human and Social Sciences, 28-30 March 2017, FEPS, Cairo University, Egypt.

6. The First Egypt Urban Forum (EUF), 14-16 June 2015, Cairo, Egypt.

7. The 27th Annual International Conference on Statistics and Computer Modeling in Human and Social Sciences, 24-26 March 2015, FEPS, Cairo University, Egypt.

8. The 22nd Australasian Software Engineering Conference (ASWEC), 4-7 June 2013, Melbourne, Australia.

9. The 19th IEEE International Conference on Web Services (ICWS), 24-29 June 2012, Honolulu, Hawaii, USA.

10. The 9th IEEE International Conference on Service Computing (SCC), 24-29 June 2012, Honolulu, Hawaii, USA.

11. The 5th IEEE International Conference on Cloud Computing (CLOUD), 24-29 June 2012, Honolulu, Hawaii, USA.

12. The 3rd ACM/SPEC International Conference on Performance Engineering (ICPE), 22-25 April 2012, Boston, MA, USA.

13. Australian Software Developer Conference (YOW!2011), 1-2 December 2011, Melbourne, Australia.

14. The Eighth Annual Melbourne Computing Education Conventicle (MCEC2011), 17-18 November 2011, Melbourne, Australia

15. ALTC Improving Practice Workshop: Improving Teaching, 17 November 2011, Australian Learning and Teaching Council in cooperation with Swinburne University of Technology, Australia.

16. Seminar on "Swinburne University of Technology MathWorks Day", 07 October 2011, Swinburne University of Technology, Australia.

17. The IT Conference "CA World Expo '11 - The Era of Now Conference", 27 July 2011, Melbourne, Australia.

18. Seminar on "Data Mining and Empirical Software Engineering, Version 2.0", 24 November 2010, Swinburne University of Technology, Australia.

19. Seminar on "Swinburne University of Technology MathWorks Day", 25 October 2010, Swinburne University of Technology, Australia.

20. The 22nd Annual Conference on "Statistics and modeling in human and social sciences", 30-31 March 2010, FEPS, Cairo University, Egypt.

21. Inauguration Conference for Launching IDSC-WPS, 28 March 2010, IDSC, Egypt.

22. The Tenth Islamic Countries Conference on Statistical Sciences (ICCS-X),20-23 December 2009, American University in Cairo, Egypt.

23. Dissemination Conference on "Poverty, Job Quality, and Labor Market Dynamics in the Middle East and North Africa", 20-21 July 2009, Population Council (West Asia & North Africa Regional Office), Egypt.

24. The 1st Regional Conference on "Facing Population Problems in Upper Egypt", 1-2 April 2009, Assiut University, Egypt.

25. Seminar on "Early Childhood: Policy and Research Priorities", 25 January 2009, IDSC, Egypt.

26. The International conference on "The Role of Think Tanks in Developing Countries: Challenges and Solutions", 17-18 January 2009, IDSC, Egypt.

27. Seminar on "Social Policy Index in Egypt", 12 January 2009, IDSC, Egypt.

28. Seminar on "International Immigration and Employment Issues in Beginning of the 21st Century", 6 January 2009, Center For Economic and Financial Research and Studies, FEPS, Cairo University, Egypt.

29. The 43rd Annual Conference on "Statistics, Computer Sciences and Operation Research", 22-25 December 2008, Institute of Statistics Studies and Research, Cairo University, Egypt.

30. The 38th Annual Conference on "Population and Development Issues: Status Quo & Challenges" 16-18 December 2008, The Demographic Center, Institute of National Planning, Egypt.

31. Seminar on "The New Word Population Map and National Security", 28 December 2008, IDSC, Egypt.

32. Conference on "Labor Market in Egypt and Some Arab Countries: Current and Future", 25 November 2008, IDSC, Egypt.

33. Workshop Food Crisis & Population Status in Egypt, 16 November 2008, IDSC, Egypt.

34. Workshop on "Toward Community Partnership to Face Informal Areas Phenomenon", 20 October 2008, IDSC, Egypt..

35. Workshop on "Technical Academic Writing", 19 October 2008, IDSC, Egypt.

36. Egyptian-German Think Tanks Conference: Toward an Innovative Approach to Think Tanks Management, 30 June - 1 July 2008, IDSC, Egypt.

37. Conference on "Egypt's Political and Economic Development during 100 years", 12-13 May 2008, FEPS, Cairo University, Egypt.

38. Seminar on Best Practices in Legislation on Information Access and Disclosure, 25-28 March 2008, IDSC, Egypt.

39. The 32nd International Conference for Statistics, Computer Sciences and Applications, 15-19 April 2007, Cairo, Egypt.

40. Workshop on "Transition to the Digital Organizations", 18 December 2006, IDSC, Egypt.

41. Seminar on "Population, Surveys, Censuses and PES Statistics Systems", 14 November 2006, IDSC, Egypt.

42. The 14th International Annual Conference on "Statistics, Computer Modeling in Human and Social Science", 29-30 April 2003, FEPS, Cairo University, Egypt.

RESEARCH AND EDUCATIONAL TRAINING COURSES ATTENDED

1. Training course on "University Administration", 2 – 3 July 2024, Faculty and Leadership Development Center, Menoufia University, Egypt.

2. Training course on "Anti-Corruption", 4 – 5 June 2024, Faculty and Leadership Development Center, Menoufia University, Egypt.

3. Training course on "Fundamentals of Digital Transformation" - two modules: networking and mobile apps, August 2023, Information Technology Training Center, Menoufia University, Egypt.

4. Training course on "Usage of Global Databases (in Academia)" - Advanced Level, 13 – 14 august 2023, Faculty and Leadership Development Center, Menoufia University, Egypt.

5. Training course on "Creative Thinking For Leaders", 6 – 7 August 2023, Faculty and Leadership Development Center, Menoufia University, Egypt.

6. Training course on "Essentials skills for distance learning", 15 – 25 October 2020, Menoufia University, Egypt.

7. Training course on "Skills for using mind maps", 14 – 15 July 2020, Faculty and Leadership Development Center, Menoufia University, Egypt.

8. Training course on "Self-study for institutions of higher education", 7 – 8 July 2020, Faculty and Leadership Development Center, Menoufia University, Egypt.

9. Training course on "Crisis and Disaster Management", 9 – 10 June 2020, Faculty and Leadership Development Center, Menoufia University, Egypt.

10. Training course on "Learning Outcomes and Course Descriptions", 5 – 6 January 2020, Faculty and Leadership Development Center, Menoufia University, Egypt.

11. Training course on "Usage of World Databases (in Academia)", 29 – 30 December 2019, Faculty and Leadership Development Center, Menoufia University, Egypt.

12. Training course on "Decision Making and Problem Solving", 24 – 25 December 2019, Faculty and Leadership Development Center, Menoufia University, Egypt.

13. Training course on "Blended Learning Approach In Higher Education: Integrating E-Learning facilities in Teaching, Learning and Assessment practices", 9-11 February 2016, October University for Modern Sciences and Arts, Egypt.

14. Training course on "Exams and Students Evaluation", August 2014, Faculty and Leadership Development Center, Egypt.

15. Training course on "Management Principles for quality of educational process in higher education institutions", August 2014, Faculty and Leadership Development Center, Egypt.

16. Training course on " Management of Research Team ", August 2014, Faculty and Leadership Development Center, Egypt.

17. Training course on "Research Ethics", August 2014, Faculty and Leadership Development Center, Egypt.

18. Postgraduate Research Education Program (PREP), Organised by Swinburne University of Technology (2011), Australia.

19. Quantitative Analysis Research Training "Introduction to Structural Equation modelling using Amos", 27-29 January 2011, Swinburne University of Technology, Australia.

20. Training course on "A Primer on Project Valuation", 01 December 2010, Swinburne University of Technology, Australia.

21. A Short Course on "Scientific Writing", 30 November 2010, Swinburne University of Technology, Australia.

22. Research training on "Basic Research Skills for PhD Students", 27 Sept.- 3 Nov. 2010, Swinburne University of Technology, Australia.

23. Research training on "Gender and Work in the MENA Region", 17-21 August 2008, Population Council (West Asia & North Africa Regional Office), Egypt.

24. Training course on "Quality Management System (ISO 9001: 2008)", organized by "Engineering and Quality Experts (EQE)" in cooperation with IDSC, 15-17 March 2009, IDSC, Egypt.

25. Research training on "Policies of Competitiveness Ability Development", organized by "Arab Planning Institute in Kuwait" in cooperation with IDSC, 9-13 March 2008, IDSC, Egypt.

26. Research training on "Analysis of Competitiveness Ability", organized by "Arab Planning Institute in Kuwait" in cooperation with IDSC, 2-6 March 2008, IDSC, Egypt.

27. Training course on "Sampling Techniques & Methods", organized by "Eurostat" in cooperation with IDSC, 25-29 March 2007, IDSC, Egypt.

28. Training course on "Malaysian studies", February 2005, Faculty of Economic and Political Science (FEPS), Cairo University, Egypt.

PRACTICAL TRAINING IN DATA SCIENCE FIELD

I always learn new things in the data science field, and in the following some of my practical training at Coursera and DataCamp (with links to the certificates):

1. Data Science: Foundations using R Specialization @ Coursera

2. Data Scientist with R Track @ DataCamp

3. Developing Data Products @ Coursera

4. Importing & Cleaning Data with R Track @ DataCamp

5. Practical Machine Learning @ Coursera

6. R Programming Track @ DataCamp

TECHNICAL &
COMPUTER SKILLS

I. *Statistical Programming and Software*

1. Julia, especially for scientific computing and Big data analytics.

2. R & Python, especially for Data Science, Machine Learning and Time Series Forecasting.

3. MATLAB, especially for Simulation and Numerical Integration.

4. Stata, especially for Demographic and Survival Analysis.

5. EViews, especially for Cointegration, VAR & VECM Analysis.

6. TRAMO/SEATS, especially for Time Series Data with missing observations and outliers.

7. Minitab, especially for Time Series Analysis.

8. SPSS, especially for Descriptive & Basic Statistics.

II. *Text Editors*

1. Microsoft Office [Word].

2. LaTeX.

3. Markdown.

PERSONAL
INFORMATION

Full name: Ayman Ahmed Amin Abdellah

Citizenship : Egyptian

Date of birth: June 24, 1985 (Egypt)

LANGUAGES

Arabic (Native) & English

REFERENCES

Dr. Alan Colman, Swinburne University of Technology (Email: acolman@swin.edu.au)
Prof. Lars Grunske, University of Stuttgar (Email: lars.grunske@informatik.uni-stuttgart.de)
Dr. Monzur Imteaz, Swinburne University of Technology (Email: mimteaz@swin.edu.au)
Dr. Jawed Mohammed, Swinburne University of Technology (Email: jmohammed@swin.edu.au)
Prof. Mohamed Wahdan, Menoufia University, Egypt (Email: Wahdan@msm.nl)
Prof. Mohamed Abdellatif, Menoufia University (Email: mohamed.abdellatif@science.menofia.edu.eg)
Prof. Seham Mustafa, PAAET, Kuwait (Email: Sm.mustafa@paaet.edu.kw)
. . . More references are available upon request

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