

Dr. Ahmad Ali Hanandeh, Ph. D.



Address

Yarmouk University
Department of Statistics
465 New Building
Irbid, JO 21163

Phone:

+962 791542383

Email:

ahmad.hanandeh@yu.edu.jo

Homepage:

<https://faculty.yu.edu.jo/ahmad.hanandeh/>

SCOPUS ID:

57208532515.

Web of Science ID:

AAJ-6059-2021

ORCID:

0000-0001-9208-7083

Research Gate:

Researchgate.

Google Scholar:

Googlescholar.

A Short bio

I hold a Ph.D. degree in Statistics from the University of Cincinnati, August 2017. I received a full scholarship from Yarmouk University to complete my Ph. D degree. Right after my graduation, I joined the faculty members at Yarmouk University at the rank of Assistant Professor in September, 2017.

My research interests include ranked set sampling, distribution theory, statistical methodologies and computational statistics for large spatial data.

I taught many courses since my Ph.D. graduation in 2017 at Yarmouk University. In total, I taught more than 9 different undergraduate courses and a graduate course. My teaching load is usually various between 9 to 12 CRH per a semester and in total, I used to teach about 30 CRH per a year, including the summer semester. The number of students is relatively high, in average, 50-80 students for general courses and 40-50 students for major ones.

My student's evaluation is usually above the department, college and university averages.

Personal

Position: Assistant Professor.

Nationality: Jordanian.

Gender/ Age/ Status: Male/ 34 years/ Married (2 kids).

Education

General High School Certificate, Irbid Secondary School, Jordan, 2006

Grade: Very Good - (80.4%).

B.Sc. in Statistics (Minor: Computer Science), Yarmouk University, Irbid, Jordan, 2009.

Grade: Very Good - (83.1%).

Rank: (1) out of (38).

M.Sc. in Statistics, Yarmouk University, Irbid, Jordan, 2011.

Grade: Very Good - (80.9%)

Rank: (2) out of (9).

Title of Master Thesis: Estimation of the Parameters of Downton's Bivariate Exponential Distribution Using Moving Extreme Ranked Set Sampling.

Advisor: Prof. Dr. M. F. Al-Saleh.

Ph.D. in Statistics, University of Cincinnati, OH, USA, 2017.

Grade: Excellent - ($3.88/4 \approx 97\%$)

Title of Ph.D. Dissertation: Nonstationary nearest Neighbors Gaussian Process Models.

Advisor: Dr. Bledar A. Konomi.

Co-Advisor: Dr. Emily L. Kang.

Research Interests

Ranked Set Sampling

Distribution Theory

Statistical Quality Control

Big Spatial Data Analysis

Awards

Granted a prize (during my final undergraduate year) named: "Pioneer Statistician's Prize for Scientific and Research Excellence", 2008.

Faculty of Science Award for first-place B.Sc. graduate in Statistics, Yarmouk University, 2009.

Presented a watch from the president of Yarmouk University for getting the highest GPA among all of the Bachelor students graduating from the Statistics Department in the academic year 2008/2009.

Graduated from the B.Sc. degree in 3.5 years and my name was added to the university honor's list three times.

Received financial awards for being the first-place student in Statistics at Yarmouk University. I received two awards between 2006 - 2009.

Teaching Assistantship, Yarmouk University, Irbid, Jordan. 2009-2011.

Full (four years) scholarship to complete PhD in Statistics for outstanding students, Yarmouk University, Irbid, Jordan. August, 2012 - August, 2016.

Henry Laws Fellowship and the Taft Enhancement Award: Dept. of Mathematical Sciences, University of Cincinnati, OH, USA, August, 2016 - December, 2016.

Levine Summer Fellowship: Dept. of Mathematical Sciences, University of Cincinnati, OH, USA, May, 2016 - August, 2016.

Different Graduate and Research Assistantships, Dept. of Mathematical Sciences, University of Cincinnati, OH, USA, September, 2013 - May, 2017.

Employment

Assistant Professor: (September, 2017 - Now). Dept. of Statistics, Yarmouk University, Irbid, Jordan.

Research Assistant: (January, 2017 - May, 2017). Dept. of Mathematical Sciences, University of Cincinnati, OH, USA.

Graduate Assistant: (September, 2013 - December, 2014). Dept. of Mathematical Sciences, University of Cincinnati, OH, USA.

Lecturer (Part-Time): (September, 2011 - January, 2012) Dept. of Statistics, Yarmouk University, Irbid, Jordan.

Teaching Assistant: (September, 2009 - May, 2011) Dept. of Statistics, Yarmouk University, Irbid, Jordan.

Scholarly Activities

Member of research committees

Member of the program committee of the 4th Al Falah University international conference: Toward Advanced Scientific Knowledge (TASK4-2021) "TASK in Crisis Times". Dubai, UAE, May, 19-20, 2021.

College Services

Member of the College Council, Faculty of Science, Yarmouk University: Sept. 2020 - Now.

Member of the College Council, Faculty of Science, Yarmouk University: Sept. 2018 - Sept. 2019.

Member of Several Committees in the Faculty of Science, and the Department of Statistics. Yarmouk University.

Department Services

I coordinated the following courses at Yarmouk university several times: Stat 101, Stat 107, Stat 111. The number of students in some of them was more than 500 students. My duties were: providing instructors with a detailed syllabus, preparing the common exams together with their solution keys and detailed partial credits for each item, holding several meetings with instructors from the department, setting the final version of exam online, etc.

Member of Several Committees the Department of Statistics. Yarmouk University.

Journal Issues Edited

Guest Editor, *Electronic Journal of Applied Statistical Analysis*, Spring, 2021. Special issue on "**Inference and Sampling in Statistics.**"

Journal Referee

Revised paper for *Hacettepe Journal of Mathematics and Statistics*.

Revised paper for *Journal of The Turkish Statistical Association*.

Revised paper for *Austrian Journal of Statistics*

Revised paper for *Electronic Journal of Applied Statistical Analysis*

Revised paper for *Investigacion Operacional*.

Revised paper for *The Jordanian Journal of Mathematics and Statistics*.

Revised paper for *Pakistan Journal of Statistics*.

Revised paper for *Journal of Mathematics and Statistics*

Book Error Correction

I have corrected some errors in *Categorical Data Analysis*, third edition by Alan Agresti

Community Services

Beside my teaching and research activities, I was involved in several activities. For instance,

I gave a lecture via Zoom on "introduction to SPSS software" to teachers at Ahbab Al-Rahman academy school.

I also was involved in several social activities outside the university.

Seminars

Hanandeh, A. A. (2017). Low-Cost Nonstationary Gaussian Processes via Data-Driven Partitioning and Nearest Neighbors. Dept. of Statistics, Yarmouk University, Irbid, Jordan.

Hanandeh, A. A. (2015). Bayesian Spatial Statistics. Dept. of Mathematical Sciences, University of Cincinnati, OH, USA.

Hanandeh, A. A. (2015). Covariance Tapering for Interpolation of Average Temperature over the US in January, 2015. Department of Statistics, Yarmouk University, Jordan.

Hanandeh, A. A. (2014). Inference on Downton's bivariate exponential distribution based on moving extreme ranked set sampling. Dept. of Mathematical Sciences, University of Cincinnati, OH, USA.

Publications

Journal Articles

Hanandeh, A. A., Al-Nasser, A. D. & Al-Omari, A. I. (*accepted in Stat*). New Mixed Ranked Set Sampling Variations.

Hanandeh, A. A. & Eidous, O. M. (2021). A New One-Term Approximation to The Standard Normal Distribution. *Pakistan Journal of Statistics and Operation Research*, 17(2), 381-385.

Hanandeh, A. A. & Al-Nasser, A. D. (2021). Modified Minimax Ranked Set Sampling. *Pakistan Journal of Statistics*, 37(2), 159-177.

Hanandeh, A. A. & Al-Nasser, A. D. (2021). New Distribution for Fitting Discrete Data: The Poisson-Gold Distribution and it's Statistical Properties. *Austrian Journal of Statistics*, 50(4), 19-35.

Hanandeh, A. A. & Al-Nasser, A. D. (2020). Improved Shewhart Control Chart Using MINI-MAX Ranked Set Sampling. *Investigacion Operacional*, 41 (7), 923-934.

Konomi, B. A., **Hanandeh, A. A.**, Ma, P., & Kang, E. L. (2019). Computationally efficient nonstationary nearest-neighbor Gaussian process models using data-driven techniques. *Environmetrics*, 30(8), e2571.

Hanandeh, A. A. & Al-Saleh, M. F. (2013). Inference on Downton's bivariate exponential distribution based on moving extreme ranked set sampling. *Austrian Journal of Statistics*, 42(3), 161-179.

Submitted Articles

Hanandeh, A. A. & Al-Omari, A. I. (submitted). Estimation based on Ranked Set Sampling for Farlie-Gumbel-Morgenstern Bivariate Weibull Distribution Parameters.

Irshad, M. R., Maya, R., Arun, S. P., **Hanandeh, A. A.**, & Al-Omari, A. I. (submitted). Estimation of a parameter of Farlie-Gumbel-Morgenstern Bivariate Bilal Distribution by Ranked Set Sampling.

Hanandeh, A. A. (submitted). Some improvements for existing simple Approximations of the Normal Distribution Function.

Articles presented in Conferences

Hanandeh, A. A., Al-Nasser, A. D. & Al-Omari, A. I. (2021). New double stage Ranked Set Sampling variation for Estimating the Population Mean. (Accepted for presentation in the 4th AFU International Conference. Dubai, UAE, May, 19-20, 2021.)

Articles Under Preparation

Hanandeh, A. A. & Al-Omari, A. I. (2021). Parameter Estimation for Farlie-Gumbel-Morgenstern Bivariate Weibull Distribution Parameters using Bivariate Ranked Set Sampling.

Hanandeh, A. A. & Al-Nasser, A. D. (2021). Control Chart based on New Mixed Ranked Set Sampling Variations.

Posters

P1. **Hanandeh, A. A.** (February 10, 2017). Nonstationary Nearest Neighbors Gaussian Process. Poster presented at the Graduate Student Expo and Poster Forum. University of Cincinnati, Cincinnati, OH, USA. 2017.

Ideas for Future Research

- I1. Merging Nearest Neighbors Gaussian Process (NNGP) with Covariance Tapering in on methodology to analyze big spatial data.
- I2. Investigating the choices of neighbors in NNGP.
- I3. Estimating different distribution parameters using Ranked Set Sampling and some of its variations.
- I4. Investigating merging different RSS methods and applying that to control charts.

Advising/Mentoring

Supervision of Graduate Students

Abed Al-Rahman Bany Issa (2021-On going). Parameter Estimation of the The Kumaraswamy Pareto IV Distribution Under Ranked Set Sampling, Yarmouk University, Jordan.

Mohammad Hussein Al-Hamdan (2021-On going). On Approximating Standard Normal Cumulative Distribution Function, Yarmouk University, Jordan.

Proposal to M.Sc. Examination Committees

Arwa Salem Maabreh (2021). A Close Look at the Cauchy Distribution and the Estimation of its Location Parameter Using Some of the Ranked Set Sampling Techniques, Yarmouk University, Jordan.

Hibah Adnan AL-Tarabsheh (2021). General Method to Estimate the Stress-Strength Reliability $P(X > Y)$, Yarmouk University, Jordan.

Qais Khaled Momani (2021). Improvements and Suggestions of Some Approximations for Cumulative Normal Distribution Function, Yarmouk University, Jordan.

Waleed Alomari (2021). A Penalized Spline Method for Population Abundance Estimation Using Line Transect Sampling, Yarmouk University, Jordan.

Mohammad Abedalqader (2021). Estimating Percentiles of Time-To-Failure Distribution Obtained from a Weibull Accelerated Degradation Model, Yarmouk University, Jordan.

Moath Ahmad (2020). Estimation of the Common Mean of Two Normal Distributions Using Ranked Set Sampling and Some of its Variations, Yarmouk University, Jordan.

Salam Daradkeh (2020). Estimation of Overlapping Coefficients for Two and Three Populations in Case of Normal Distribution, Yarmouk University, Jordan.

Ezadine Al-Wajeeh (2020). Shrinkage and the Biasing Parameters Estimation for Multiple Linear Regression Model, Yarmouk University, Jordan.

Bara Junaidy (2019). Theory and Optimization of Generalized Maximum Fuzzy Entropy Methods, Yarmouk University, Jordan.

Ro'ya Debe'i (2018). Fitting Measurement Error Models Using Repetitive Estimation Procedure, Yarmouk University, Jordan.

Master's Thesis Committee Member

Hala Khaled Maqableh (2021). Estimation of Overlapping Measures for Two Weibull Distributions, Yarmouk University, Jordan.

Conferences Activities

Session Chair and Presenter, the 4th Al Falah University international conference: Toward Advanced Scientific Knowledge (TASK-2021) "TASK in Crisis Times". Dubai, UAE, May, 19-20, 2021.

Accreditation Council for Business Schools & Programs (ACBSP) 2020 Region 1 Fall Conference October 29-30, 2020 – Regional Virtual Conference (due to COVID-19)

Courses, training and workshops

Let's Break the Chain of COVID-19 Infection course, Mohamad bin Rashid university, March, 2021.

Remote working and Productivity, Hamdan Bin Mohammed Smart University, October, 2020.

Design an Online Course in 24 Hours Course, Hamdan Bin Mohammed Smart University, October, 2020.

Be an Online Tutor in 24 Hours Course, Hamdan Bin Mohammed Smart University, October, 2020.

E-learning (Level II) Using Moodle, Yarmouk University, Irbid, Jordan, July, 2020.

Filling in the Course Portfolio using EXCEL Sheet, Yarmouk University, Irbid, Jordan, August, 2019.

The preparatory workshop for new faculty members Yarmouk University, Irbid, Jordan, January, 2018.

Online exam's preparation (QuestionMark®) workshop, Yarmouk University, Irbid, Jordan, October, 2017.

Skills

Languages:

1st: Arabic (Native).

2nd: English (Excellent).

I received a score of 597 (≈ 96 in TOEFL iBT) in TOEFL ITP (ETS at Yarmouk University, 18/07/2011): Listening: 57, Reading: 59, Structure & Written: 63.

Excellent computer knowledge in the following

Programming Languages: BASIC, C++, FORTRAN 90, L^AT_EX, Microsoft Office , Object Oriented.

Statistical Packages: MATHEMATICA, MATLAB, MINITAB, R, SPSS, SAS, Scientific Work-Place.

E-learning: Moodle, Adobe Connect, Adobe Presenter, Zoom

Online Survey Tools: SurveyMonkey, Google Forms.

Courses Taught

Below is a reverse-chronological list of my teaching classes (Note: **English is the language of instruction at all the schools listed below**)

A. Courses Taught At Yarmouk University (2017-2021):

Semester	Course code	Course Name
Summer 2021	STAT 107 STAT 101	Statistics for Business and Economics Students Introduction to Statistics (1)
Spring 2021	STAT 107 STAT 372	Statistics for Business and Economics Students Applied Biostatistics
Fall 2020	STAT 107 STAT 382 STAT 462	Statistics for Business and Economics Students Categorical Data Analysis Bayesian Methods
Summer 2020	STAT 101 STAT 107	Introduction to Statistics (1) Statistics for Business and Economics Students
Spring 2020	STAT 101 STAT 312 STAT 374	Introduction to Statistics (1) Probability Theory Design of Experiments and Analysis of Variance
Fall 2019	STAT 107 STAT 101 STAT 312 STAT 374	Statistics for Business and Economics Students Introduction to Statistics (1) Probability Theory Design of Experiments and Analysis of Variance
Summer 2019	STAT 101 STAT 201	Introduction to Statistics (1) Introduction to Statistics (2)
Spring 2019	STAT 111 STAT 382 STAT 611	Introduction to Probability (1) Categorical Data Analysis Probability Theory (Graduate level)
Fall 2018	STAT 101 STAT 382	Introduction to Statistics (1) Categorical Data Analysis
Summer 2018	STAT 201	Introduction to Statistics (2)
Spring 2018	STAT 111 STAT 374 STAT 382	Introduction to Probability (1) Design of Experiments and Analysis of Variance Categorical Data Analysis
Fall 2017	STAT 111 STAT 101	Introduction to Probability (1) Introduction to Statistics (1)
Fall 2012	STAT 107	Statistics for Business and Economics Students

B. Teaching Assistant for Courses At University of Cincinnati (USA) (2012-2017):

Semester	Course code	Course Name
Fall 2014	MATH 1060	Precalculus SRS
Spring 2014	MATH 2073	Differential Equations
	Math 2076	Linear Algebra
	MATH 2063	Multivariable Calculus
Fall 2013	STAT 2037	Probability and Statistics
	MATH 2076	Linear Algebra

Personal Skills

Excellent communication skills,
 A very good teamwork player,
 Ability to work under pressure,
 Have leadership characteristics,
 Energetic and enjoy dynamic and challenging environment,
 Fast adapter and have an optimistic view of life,
 Ability to learn and apply knowledge,
 Time management,
 Well organized.

Hobbies

Reading, Writing, visiting historical places, playing chess and football.

References

1. Prof. Dr. Amjad D. Al-Nasser - professor in Statistics, Department of Statistics, Yarmouk University, Irbid, Jordan, Email: amjadyu@yahoo.com
2. Prof. Dr. Omar M. Eidous - professor in Statistics, Department of Statistics, Yarmouk University, Irbid, Jordan, E-mail: omarm@yu.edu.jo
3. Prof. Dr. Mohammad Y. AL-Rawwash - professor in Statistics, Department of Statistics, Yarmouk University, Irbid, Jordan. Email: rawwash@yu.edu.jo
4. Prof. Dr. Amer I. Al-Omari- professor in Statistics, Department of Mathematics and Statistics. Al al-Bayt University, Al-Mafraq, Jordan. Email: alomari_amer@yahoo.com
5. Dr. Alex Konomi (**Thesis Advisor**) - associate professor in Statistics, Department of Mathematical Sciences, Division of Statistics and Data Science, University of Cincinnati, Ohio, USA. Email: konomibr@ucmail.uc.edu

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