DR. HUMA BASHEER

(PhD Statistics)

Assistant Professor (Statistics)
Department of IT & Computer Sciences, Pak-Austria Fachhochschule: Institute of Applied Sciences and Technology, Khanpur Road, Mang Haripur Pakistan
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Biography

Huma Basheer was born in Lakki Marwat, KPK, Pakistan. She received her Bachelor degree in 2009, major in Statistics from University of Science & Technology Bannu, Pakistan and Master of Science (M.Sc.) in Statistics in 2012 from Gomal University, Dera Ismail Khan, Pakistan. She earned her doctorate (Ph.D) in Science (Statistics) in 2021 from Universiti Tun Hussien Onn Malaysia (UTHM), Malaysia. She worked as Research Associate (2021-2022) and has successfully carried out funded research projects at the Department of Mathematics & Statistics, Faculty of Applied Sciences and Technology (FAST), Universiti Tun Hussein Onn Malaysia (UTHM), Malaysia. She has presented her research work at various renowned international conferences and won Best Oral Presenter Award. She has several publications in reputed journals. She taught and supervised undergraduate and postgraduates' students. Currently, she is working as an Assistant Professor at the Department of IT & Computer Sciences, Pak-Austria Fachhochschule: Institute of Applied Sciences and Technology, Haripur Pakistan. She is teaching courses of probability and statistics, applied Statistics, Business Mathematics & Statistics, and Mathematics at the Department of IT & Computer Sciences, Biomedical Sciences and Business School at Pak-Austria Fachhochschule: Institute of Applied Sciences and Technology. Her main research interest is in Statistical Modelling, Neural Networks, Applied Statistics, Time Series forecasting, GMDH and Data Science Applications.

EDUCATION

Universiti Tun Hussein Onn Malaysia (UTHM), Malaysia (2015 – 2021)
Doctor of Philosophy in Science (Ph.D.)/ Statistics
Department of Mathematics & Statistics, Faculty of Applied Sciences and Technology (FAST) UTHM.

Gomal University, Dera Ismail Khan, Pakistan
2009 - 2012
Master of Science (M.Sc.) in Statistics, Department of Statistics

University of Science & Technology Bannu, Pakistan
2007 - 2009
Bachelor degree major in Statistics

WORK EXPERIENCE

Assistant Professor
Department of IT & Computer Sciences, Pak-Austria Fachhochschule: Institute of Applied Sciences and Technology, Haripur Pakistan
8 March 2023 – 17 Oct 2023 (Adjunct Faculty)
18 Nov, 2023 -   till (Assistant Processor-SPS-13)

Research Associate (Dec 2021–Dec 2022)
Department of Mathematics & Statistics, FAST UTHM
Academic Research & assist in project supervision

Graduate Research Assistantship (May 2015 – Jan 2018)
Department of Mathematics & Statistics, UTHM
Academic Research & Teaching

Subject Specialist (Feb 2014 – Feb 2015)
Army Public School & College, Jarrar Camp, Rawalpindi Pakistan

AWARDS & HONORS

- **Best Oral Presenter Award** at International Seminar on Mathematics in Industry 2021 Organized by UTM-Centre for Industrial and Applied Mathematics, 17-19 August 2021.

- **Graduate Incentive Award**, UTHM, Malaysia ,2015-2018

- **Travel Grant**, HEC, 2015

TAUGHT COURSES AT PAK-AUSTRIA FACHHOCHSCHULE:

1. **MTH -206**: Probability and Statistics (Department of IT & Computer Sciences)
2. **MTH-211**: Applied Statistics (Department of IT & Computer Sciences)
3. **BUS-107**: Business Mathematics & Statistics (Business School)
4. **MTH-111**: Mathematics (Biomedical Sciences)

ICT EXPERIENCE/QUANTITATIVE SKILLS/STATISTICAL PROGRAMMING SKILLS

GMDH Shell for Data Science
- Knowledge level: Good
- GMDH is a global innovative provider of supply chain planning and predictive analytics solutions.
- GMDH Shell application is an advanced predictive analytics suite that provides sophisticated time series forecasting, regression, classification, and clustering tools.
- GMDH has assembled a team of leading experts in data analysis, software development, business forecasting, and supply chain management

MATLAB Knowledge level: Basic
- Mathematics
- Graphics
- Programming
- Statistical calculation
- MATLAB tools for different applications

Origin Pro (Origin Lab Corporation)
- Knowledge level: Good
- data analysis
- Graphing software of scientists and engineers in commercial industries
- In academia, and government laboratories worldwide.

The R Project for Statistical Computing
- Knowledge level: Good
- R is a programming language for statistical computing and graphics
- R provides a wide variety of statistical (linear and nonlinear modelling, classical statistical tests, time-series analysis, classification, clustering,) and graphical techniques, and is highly extensible.
- R is an integrated suite

PROJECT / RESEARCH EXPERIENCE

Project:

A hybrid Group Method of Data Handling (GMDH) with the Wavelet Decomposition for Time Series Forecasting

Scope / workload:

Participation in workshops, seminars, International conferences and publications

Funding source:

Economy / size:

RM 45, 000, 00 & 2 years & 7 months

Project Achievements:

1. Academic Research & Teaching assistant-ship of undergraduate students
2. Successfully performed Research Assistant job for PhD research work.
3. Participation in seminars, workshops, Training and International conferences as a presenter.
4. Assist PhD supervisor in project supervision
5. Successfully achieved key performance indicators (KPIs) and made significant contribution in advanced research, training and teaching.

COURSEWORK/SUBJECTS STUDIED IN GRADUATE-LEVEL/MASTER LEVEL

Major Subjects:

1. Statistical Methods-I

2. Probability & Random Variable.

3. Sampling & Survey Methods-I

4. Data Processing & Statistical Computing-I

5. English-I

6. Statistical Methods-II

7. Probability Distribution

8. Sampling & Survey Methods-II

9. Data Processing & Statistical Computing-II

10. English-II

11. Statistical Inference-I

12. Design & Analysis of Experiment-I

13. Regression Analysis & Econometrics-I

14. Applied Non-Parametric Methods

15. Operation Research

16. Statistical Inference-II

17. Design & Analysis of Experiment-II

18. Regression Analysis & Econometrics-II

19. Population Studies.

20. Statistical Quality Control

COURSEWORK/SUBJECTS STUDIED IN UNDERGRADUATE-LEVEL

Major Subjects:
1. Statistics-I
2. Economics-I
3. English-I
4. Islamic Education
5. Statistics-II

6. Economics-II

7. ENGLISH-II

PUBLICATIONS

1. Modelling and Forecasting of Monthly Crude Palm Oil Price of Malaysia using Hybrid Wavelet-Modified GMDH Model, **ASM Science Journal,** 2022, pp 1–12, https://doi.org/10.32802/asmscj.2022.1158
   Huma Basheer, Azme Khamis,

2. Crude Palm Oil Price Forecasting: Comparative Study of Hybrid GMDH Neural Network and ARIMA Model, **Springer Proceeding in Physics**, 2022, pp 289–308, SPPHY, volume 273, https://doi.org/10.1007/978-981-16-8903-1_27
   Huma Basheer, Azme Khamis,

3. Forecasting of crude palm oil price using hybridizing wavelet and group method of data handling model. **Mal. J. Fund. Appl. Sci**., 2017, 13, 642–648. https://doi.org/10.11113/mjfas.v13n4.735
   Huma Basheer, Azme Khamis,

4. A Hybrid Group Method of Data Handling (GMDH) with the Wavelet Decomposition for Time Series Forecasting. **ARPN Journal of Engineering and Applied Sciences**, 2016, 11(18), pp. 10792–10800

5. Forecasting of crude palm oil price (CPO) and Soybean Oil (SBO) Prices using Group Method of Data Handling. **Proceedings of 4th International Science Postgraduate Conference 2016 (ISPC2016),** Universiti Teknologi Malaysia ISBN 978-967-0194-54-7, Pp. 265–274.

6. Forecasting of crude palm oil price using hybrid model of Group Method of Data Handling with wavelet decomposition. **Proceedings of 6th International Graduate Conference on Engineering Science & Humanity (6th IGCESH 2016)**, UTM, Malaysia, ISBN: 978-967-0194-67-7, Pp. 520–523.

LIST OF CONFERENCES PRESENTATION

1. "The International Seminar on Mathematics in Industry 2021 (ISMI2021)" organized by **UTM-Centre for Industrial and Applied Mathematics** (UTM-CIAM) and Department of Mathematical Sciences, Faculty of Science, UTM, 17-19 August 2021 "Modelling and Forecasting of Monthly Crude Palm Oil Price of Malaysia using Hybrid Wavelet-Modified GMDH Model"
   Huma Basheer, Azme Khamis

2. "International Conference on the Application of Science and Mathematics (SCIEMATHIC)", organized by Faculty of Applied Sciences and Technology, UTHM, Oct 27-28, 2021

3. "FAST POSTGRADUATE SYMPOSIUM 2019" organized by Faculty of Sciences and Technology (FAST), **Universiti Tun Hussein Onn Malaysia** (UTHM), Modeling and forecasting of monthly crude palm oil prices of Malaysia: A comparative study of GMDH, hybrid wavelet- modified GMDH and ARIMA models
   Huma Basheer, Azme Khamis

4. International Graduate Conference on Engineering Science & Humanity 2016 (IGCESH 2016), organized by **Universiti Teknologi Malaysia**, Johor Bahru, Johor, Malaysia on 15 - 17 August 2016. Forecasting of crude palm oil price using hybrid model of group method of data handling with wavelet decomposition
   Huma Basheer, Azme Khamis

5. 4th ISPC 2016 (UTM): (4th International Science Post Graduate Conference 2016), 22-24 February 2016, organized by **Universiti Teknologi Malaysia**, Johor Bahru, Johor, Malaysia Forecasting of crude palm oil price (CPO) and Soybean Oil (SBO) Prices using Group Method of Data Handling

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6. MUCET2015: (Malaysian Technical Universities Conference on Engineering and Technology) 11-13, Oct, 2015 (UTHM): organized by **Universiti Tun Hussein Onn Malaysia**, Johor Bahru, Johor, Malaysia A Hybrid Group Method of Data Handling (GMDH) with the Wavelet Decomposition for Time Series Forecasting,

Huma Basheer, Azme Khamis

SEMINARS & WORKSHOP

➢ Mendeley Training Certification of Achievement organized by Elsevier, 18 October 2021.

➢ Odyssey 101: Graduated: What's Next? Organized by Centre for Graduate Studies UTHM, 29 September 2021.

➢ Postgraduate Thesis Writing: From Examiner Point of View.
Presented by Prof. Dr. Ismail bin Abdul Rahman, Dean Centre for Graduate Studies, UTHM, 28 August 2016.

➢ GRADUATE ON TIME (GOT) WORKSHOP, 7th Jan, 2015 UTM Johor Bahru Organized by UTM-PGSS In collaboration with School of Graduate Studies (SPS) UTM Johor Bauru.

➢ HOW to PUBLISHED WORKSHOP 7th Jan, 2015 held at UTM, Organized by Yemeni Student Society & ISC-UTM.

➢ EZTEMPLATE + MENDELEY WORKSHOP 2016, 3 Jan, 2016 held at Department of Mathematical Sciences, Faculty of Science, UTM Johor Bahru, Johor Malaysia Organized by PGSS-FS.

PERSONAL SKILLS

❖ Great capacity of adaptation, used to work in multicultural contexts

❖ Capacity to work in team and autonomously

❖ Strong oral and written communication capacities

❖ High level networking and coordination skills

❖ Dynamism, constructive, high level of motivation and with a strong result-oriented approach

SOCIETIES ACTIVITIES

1. Sports Basketball Championship UTHM, Date: 12th - 14th May 2016 Venue: UTHM, Organizer: UTHM Sports Center.

2. UTHM CULTURAL WEEK, Dec 8, 2016,Pakistan

3. International Cultural Day, Dec 29, 2015... UTHM Johor Malaysia

REFERENCES

✓ **PROF. Ts. Dr. AZME BIN KHAMIS**
Department of Mathematics & Statistics, Faculty of Sciences and Technology (FAST) UTHM
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+60-137190434

✓ **Dr. Rashid Naseem**
Department of IT & Computer Sciences, Pak-Austria Fachhochschule: Institute of Applied Sciences and Technology, Khanpur Road, Mang Haripur Pakistan
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✓ **PROF. MADYA Dr. MOHD SAIFULLAH BIN RUSIMAN**
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