



PROFILE

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An accomplished German mathematician and AI innovator, Dr. Mais Alkhateeb merges deep expertise in graph-theoretic modeling with pioneering biomedical AI applications. She earned her PhD in Graph Theory from TU Freiberg and an MA in Data Analysis for Health Management at HBKU—defending her April 2025 thesis, “AI-based Analysis of Rare Skin Diseases from Multi-Model Datasets.” At Weill Cornell Medicine–Qatar’s AI Center, she architects hybrid LSTM–ARIMA pipelines to forecast critical biosignals at Hamad Medical Corporation and co-authors cross-institutional publications on anomaly detection. She spearheaded EBAnet, an EfficientNet-based classifier achieving 96.7 % accuracy for Epidermolysis Bullosa Acquisita detection via DIF imaging, and led a stacked ensemble model fusing CNNs, Vision Transformers, and XGBoost to achieve an AUC of 0.9007 on the ISIC 2024 rare skin-cancer challenge. As a Teaching Fellow at HBKU’s College of Science &

Mais Alkhateeb
Assistant Professor

Mathematics, Data Analysis, AI & Deep learning

EDUCATION

MA in Data Analysis for Health Management Hamad Bin Khalifa University 2025

- Major: Data Analysis for Health Management (completed)
- Area of Emphasis: Data Analysis, AI in Health Management
- Specializations: Deep Learning, Machine Learning, Image Processing, Data analysis
- Dissertation Title: "AI-based Analysis of Rare skin Diseases from Multi-Model Dataset"

PhD in Mathematics Technical University of Freiberg, 2012

- Major: Mathematics
- Areas of Emphasis: Statistics, Combinatorics, Graph Theory, Discrete Mathematics
- Dissertation Title: "On b-Coloring and b-Continuity of Graphs"

Higher Diploma in Analysis (Pure Mathematics) Damascus University, 2003

- Major: Analysis (Pure Mathematics)
- Areas of Emphasis: Topology & Analysis
- Dissertation Title: "Topological Graph Theory"

Higher Diploma in Teaching Qualification and Teaching Methods Damascus University, 2003

- Major: Teaching Qualification and Teaching Methods
- Areas of Emphasis: Pedagogy
- Dissertation Title: "Interactive Learning Program in Mathematics"

BA in Mathematics from Damascus University, 2002

- Major: Mathematics
- Areas of Emphasis: Abstract Mathematics
- Dissertation Title: "Topics in Random Graph Theory"

Engineering, she delivers graduate courses in digital signal processing, probability & random processes, and mathematical modeling—co-designing curricula and assessments. Her current research focuses on multimodal data fusion (clinical, imaging, omics, EHR), advanced feature-selection algorithms (PCA, SHAP, correlation analysis), and energy-efficient deep-learning compression techniques to deploy scalable AI solutions in resource-constrained clinical environments.

CONTACT

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WORK EXPERIENCE

- Dr. Mais Alkhateeb's academic journey unfolds as follows:

ACADEMIC APPOINTMENTS & WORK EXPERIENCE

Research Assistant, AI Center

Weill Cornell Medicine–Qatar
Feb 2025 – Present

- Designed and deployed LSTM–ARIMA hybrid forecasting pipelines for biosignal prediction at HMC
- Developed deep-learning frameworks for hypoglycemia prediction and anomaly detection
- Co-authored cross-institutional white papers and journal submissions

Assistant Professor, Lusail University, Qatar
Aug 2022 – Present

- Designed and delivered courses in Calculus, Business Mathematics, Differential Equations, Probability & Statistics, and Linear Algebra

Assistant Professor, Community College of Qatar
Aug 2016 – Present

- Developed interdisciplinary curricula integrating mathematics with computer science and engineering

Mathematics Lecturer, Qatar University
Sep 2014 – Jun 2016

- Launched peer-tutoring initiatives and improved retention through interactive learning modules

Lecturer & Researcher, TU Freiberg & Damascus University
2006 – 2013

- Led graph-theory research projects, organized international seminars, and published peer-reviewed articles
- Developed and delivered advanced courses in abstract mathematics for undergraduate and graduate cohorts.
- Collaborated on analytical and topological research projects, contributing to peer-reviewed publications.

Lecturer, Technical University of Freiberg, Germany
(July 2010 – June 2012)

- Crafted and taught customized mathematics curricula for both bachelor's and master's students.
- Organized and led seminars and workshops to promote peer learning and academic collaboration.

Scientific Researcher, Technical University of Freiberg, Germany (January 2006 – June 2012)

- Conducted cutting-edge graph-theory research, culminating in multiple peer-reviewed journal articles.

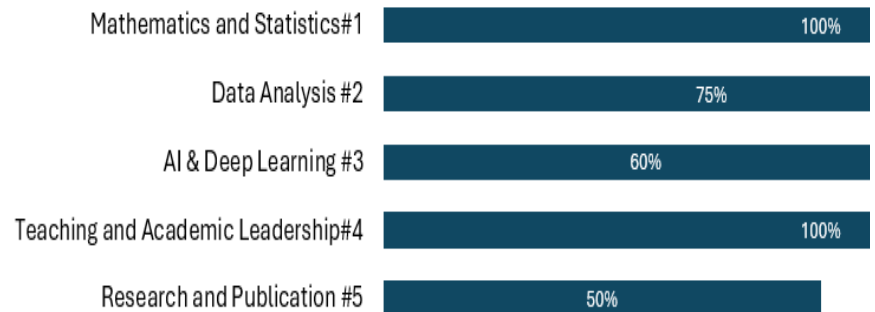
- Partnered on international, grant-funded studies to advance theoretical and applied mathematics.

Teaching Assistant, Damascus University (June 2002 – May 2004)

- Supported faculty with course planning, lecture delivery, and assessment to ensure high-quality instruction.
- Mentored undergraduate students in mathematical concepts and professional development.

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SKILLS



PROFESSIONAL COMPETENCIES

- Teaching advanced mathematics, statistics, and Discrete Mathematics .
- Conducting international research in Mathematics & Educational Mathematics.
- Multilingual proficiency in Arabic, English, and German.
- Utilizing Learning Management Systems like Blackboard and MS Team.
- Expertise in data analysis for informed decision-making.
- Developing efficient data collection systems and statistical strategies.
- Proficiency in deep learning programming methods using Python.

COURSES TAUGHT

Course Name	Program	Level
Concepts of Mathematics	Computer Science	Undergraduate
Statistics & probability	Computer Science	Undergraduate
Principles of Imperative Computing	Computer Science	Undergraduate
Electrical Circuit Theory	Computer Science	Undergraduate
Advanced Probability I & II	Electrical & Electronics Engineering	Postgraduate
Advanced Engineering Mathematics	Electrical & Electronics Engineering	Postgraduate
Optimization	Computer Science	Undergraduate
Graph Theory and complex theory	Electronic System Engineering	Postgraduate
Business Mathematics	Business	Undergraduate
Probability and Statistics	Electrical & Electronics Engineering	Undergraduate
Complex Analysis and Geometry	Electrical & Electronics Engineering	Undergraduate
Linear Algebra	Electrical & Electronics Engineering	Undergraduate
Mathematical Analysis	Electrical & Electronics Engineering	Undergraduate
Calculus I, II, III	Engineering/Foundation	Foundation
MATLAB: Simulation & Programming	Electrical & Electronics Engineering	Undergraduate
Numerical Methods	Electrical & Electronics Engineering	Undergraduate
Concepts of Mathematics	Computer Engineering	Undergraduate
Digital Signal Processing	Computer Engineering	Undergraduate
Senior Design Project I–III	Computer Engineering	Undergraduate

Probability Theory
& Random
Processes

Computer
Engineering

Undergraduate

DEPARTMENTAL & COLLEGE SERVICE

Faculty Senate Chair (2021-2022)
Hiring Committee Member (2021-2022)
Tutorial Program Chair (2021)
Chair of Math Education Curriculum Program (2021-2022)
Scheduling & Advising Committee Chair (2021-2022)
TLC Support & Training Committee Member (2021-2022)
Student Transfer - Academic Committee Chair (2021-2022)
Core Courses Review and Development Committee Member (2021)
Courses Coordinator (2019-2021)
Quality Assurance & PLO Committee Member (2020-2021)
Centers Strategy Development Committee Member (2020)

SOME OF THE PUBLICATIONS

M. T., Alkhateeb, M., Musleh, S., El Hajj, N., & Alam, T. (2024, July). EBAnet: Improved Deep Learning Model for the Detection of Epidermolysis Bullosa Acquisita. In 2024 6th International Conference on Communications, Signal Processing, and their Applications (ICCSPA) (pp. 1-6). IEEE.

Alkhateeb, M., & Al Moaiad, M. Y., Alokla, M. (2024). Deep analysis of iris print and fingerprint for detecting drug addicts. *Journal of Electrical Systems*, 20(3).

Alkhateeb, M., Alam, T., & Belhaouari, S. B. (n.d.). Stacking-based hybrid deep learning model for rare skin cancer detection. Manuscript submitted for *Data Science Method, infrastructure, and applications*, Sage Journal.

Alkhateeb, M., Nayeem, A., Abd-Alrazaq, A., & Alsahli, M. (n.d.). Artificial intelligence for detecting and predicting postpartum depression: A scoping review. Manuscript submitted for publication to the *Journal of Medical Research*.

Alkhateeb, M., Nayeem, A., Abd-Alrazaq, A., Artificial intelligence for detecting and predicting rare skin diseases: A scoping review. Manuscript submitted for publication to the *Journal of Medical Research*.

Alkhateeb, M., & Alokla, M. (2022). Hybrid Learning Aided Technology-Rich Instructional Tools - A Case Study: Community College of Qatar. *Studies in Educational Management*, 18-33. Retrieved from <https://doi.org/10.32038/sem.2021.10.02>

Mais Alkhateeb, Mosa Alokla, M. QU concludes First Arab Universal Design for Learning Conference, "Assistive Technology for Special Needs for Teaching Online Based Pre-during Corona 2019," Qatar University, DOHA, Qatar. (November 14, 2021).

M. Alkhateeb, M. Okla, M. Shehab, M. ICT Learning, "Hybrid Learning Aided Technology-Rich Instructional Tools - A Case Study CCQ (1)," CCQ, Doha, Qatar. (February 23, 2021).

Alkhateeb, M., Okla, M., Abbad, M. (2019). Customer Relationship Management: A Review and Classification In *Transnational Marketing Journal*. *Transnational Marketing Journal*. Vol 7, No 2 (2019), 187-210.

Abbad, M. M., Okla, M., Alkhateeb, M., Jaber, F. CRM Academic Literature and classification. *International Business Research* (2019), 361-381.

Alkhateeb, M., 19th C5 Graph Theory Workshop "Cycles, Colourings, Cliques, Claws and Closures", "b-colourings of graphs (Mais Alkhateeb, Anja Kohl)," Technical University of Freiberg, Kurort Rathen, Germany. (May 5, 2015).

Alkhateeb, M. H., Kohl, A. (2014). Investigating the b-chromatic number of bipartite graphs by using the bi-complement. *Discrete Applied Mathematics*, 163(2)(30), 113-126. <http://www.sciencedirect.com/science/article/pii/S0166218X13003065>

Alkhateeb, M., 17th C5 Graph Theory Workshop "Cycles, Colourings, Cliques, Claws and Closures", "About b-coloring of graphs," TU Bergakademie Freiberg, Kurort Rathen, Germany. (April 25, 2013).

Alkhateeb, M. (2012). On-b-coloring and b-continuity of graphs (vol. 510, pp. 0-110). Freiberg: Technische Universität Bergakademie Freiberg. http://tubaf.qucosa.de/recherche/frontdoor/cache.off?tx_slubopus4frontend%5Bid%5D=9185

Alkhateeb, M., Kohl, A. (2010). upper Bound for the b-chromatic number and results for restricted graph classes.

Discussiones Mathematicae Graph Theory, 31(4)(2011), 709-735.

<http://www.discuss.wmie.uz.zgora.pl/gt/index.php?doi=10.7151/dmgt.1575>

Alkhateeb, M., Optimal Discrete Structures and Algorithms Conference, "Results on b-coloring of Graphs," Universität Rostock, Rostock, Germany. (September 15, 2010).

Alkhateeb, M. Workshop über Kombinatorik, Graphentheorie und Algorithmen der "Southeastern Germany"-Gruppe, "b-colorings of graphs," Dresden, Germany. (June 20, 2010).

Alkhateeb, M., kolloquium über kombinatorik, "Combinatorics," otto von Guericke Universität, Freiberg, Germany. (November 15, 2008).

REFEREE

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