

## BIOGRAPHY

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Dr. Hamoud Bin Obaid is an Assistant Professor in the Industrial Engineering program at King Saud University, Riyadh, Saudi Arabia. He earned his B.S. degree in Industrial Engineering from King Saud University, an M.S. in Industrial Engineering from University of Pittsburgh, and a Ph.D. in Industrial and Systems Engineering from University of Oklahoma.

His expertise lies in Operations Research, with a focus on mathematical programming and data analytics. His work addresses fairness in resource allocation, optimization of flow networks, and decision-making under multiple and competing objectives, with applications to complex systems in scheduling, workforce planning, location allocation, supply chain and logistics, and routing problems.

## EDUCATIONAL QUALIFICATIONS

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- **University of Oklahoma - Gallogly College of Engineering – Industrial and Systems Engineering**  
Ph.D.'s Degree in Industrial and Systems Engineering 2015 - 2020
- **University of Pittsburgh - Swanson School of Engineering - Industrial Engineering**  
Master's Degree in industrial engineering 2013 - 2015
- **King Saud University – College of Engineering - Industrial Engineering**  
Bachelor's degree in industrial engineering 2006 - 2011

## PROFESSIONAL EXPERIENCE

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- Assistant professor, Industrial Engineering, King Saud University 2020 – present
- Lecturer, Industrial Engineering, King Saud University 2018 – 2020
- Teaching assistant, Industrial Engineering, King Saud University 2011 – 2018

## CONSULTING AND PROFESSIONAL SERVICE

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- **Operations Research Consultant**  
Exam Scheduling Optimization, Saudi Commission for Health Specialties 2023 – 2025
  - Developed an optimization-based exam scheduling system.
  - Addressed capacity, resource, and constraint satisfaction requirements.
  - Improved scheduling efficiency, equity, and feasibility at a national scale

## PUBLICATIONS

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- Bin Obaid, H. S., & Trafalis, T. B. (2017). Linear Max-Min Fairness in Multi-commodity Flow Networks. In *International Conference on Network Analysis* (pp. 3-10). Springer, Cham.
- Bin-Obaid, H. S., & Trafalis, T. B. (2020). Fairness in Resource Allocation: Foundation and Applications. In *International Conference on Network Analysis* (pp. 3-18). Springer, Cham.

- Bin Obaid, H. S., & Trafalis, T. B. (2020). An approximation to max min fairness in multi commodity networks. *Computational Management Science*, 17(1), 65-77.
- Alkahtani, M., Abidi, M. H., Obaid, H. S. B., & Alotaik, O. (2023). Modified Gannet Optimization Algorithm for Reducing System Operation Cost in Engine Parts Industry with Pooling Management and Transport Optimization. *Sustainability*, 15(18), 13815.
- Bin Obaid, H. B. (2025). Direct Progressive Filling Algorithm to Find Max-Min Fairness in Non-convex Structure Problems. *IEEE Transactions on Network Science and Engineering*, .
- Almoghathawi, Y. A., Bin Obaid, H. S., & Selim, S. Z. (2024). Optimal Location of Base Stations for Cellular Mobile Network Considering Changes in Users Locations. *Journal of Engineering Research*.
- Bin Obaid, H. B. (2023). Double Direct Progressive Filling Algorithm to Find the Double Mmf Nurse Schedule at a Pediatric Intensive Care Unit. *Journal of Engineering Research*.
- Obaid, H. B., Trafalis, T. B., Abushaega, M. M., Altherwi, A., & Hamzi, A. (2024). Optimizing Dynamic Evacuation Using Mixed-Integer Linear Programming. *Mathematics*, 13(1), 12.
- Bin Obaid, H. S., Almoghathawi, Y. A., & Algefri, M. (2025). Max-Min Fair Restoration of Infrastructure Networks. *Mathematics*, 13(19), 3112.

## CONFERENCES

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- INFORMS Annual Meeting, Nashville, Tennessee 2016
- INFORMS Annual Meeting, Houston, Texas 2017
- INFORMS Annual Meeting, Phoenix, Arizona 2018
- IEOM Australia, Melbourne 2025

## TEACHING

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- IE222 Industrial Operations Analysis (Operations Research I)
- IE420 Industrial Systems Simulation
- IE314 Operations Management

## AWARDS

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- Certificate of Research Excellence for Publication in a Top 5% Journal 2025
- Best dissertation award by the ISE department, University of Oklahoma 2020
- Best capstone project by the Industrial Engineering department, King Saud University 2011

## MEMBERSHIPS

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- A member of the Saudi Council of Engineers
- A member of the Institute for Operations Research and Management Science