

**Khalid S. Al-Gahtani, Ph.D.**  
Professor of Construction Engineering and Management,  
King Saud University, Civil Engineering  
P.O. Box 800, Riyadh 11421  
Kingdom of Saudi Arabia  
E-mail: [kgahtani@ksu.edu.sa](mailto:kgahtani@ksu.edu.sa)

My website on King Saud University: <https://faculty.ksu.edu.sa/en/kgahtani>

My website on Google Scholar:

<https://scholar.google.com/citations?user=pqKeAWkAAAAJ&hl=en>

- **Academic Qualification:**

- Ph.D. in Civil Engineering, State University of New York at Buffalo, Construction Engineering and Management, 2006.
- Master in Civil Engineering, King Saud University, 1999, Construction Engineering and Management.
- Bachelor of Science in Civil Engineering, King Saud University, 1994.

- **Academic Experience:**

- Professor at King Saud University, Civil Engineering, 2022-Current
- Associate Professor at King Saud University, Civil Engineering, 2014-2022.
- Assistant Professor at King Saud University, Civil Engineering, 2006-2014.
- Adjunct Assistant Professor at "Missouri University of Science and Technology (MS&T), Engineering Management Department." 2009-2012.
- Teaching Assistant at King Saud University, Civil Engineering, 1994-2006.

- **Administrative Experience:**

- Secretary-General of King Saud University Endowments (KSUE), November 2015 – Current. During this period, the following main tasks were achieved:
  - Managing the KSUE Towers project, whose assets are estimated at more than 1 billion US dollars, the work's progress increased from 65% to more than 95%, and the operation of 4 office buildings, a hospital, and a hotel.
  - Advancing the governance of endowments, developing their regulations, and their financial and administrative organization, including establishing their commercial companies.
  - Participating and coordinating effectively for meetings between Saudi universities' endowments. The most achievements of these meetings are:
    - Contributing to the Saudi Universities Regulation amendment approved in November 2019 in coordination with the General Authority of Endowments.
    - Developing a draft of Unified Regulation for Saudi University Endowments.
  - Initiating and establishing the King Saud University Endowment Fund.
  - Establishing the management of the facilities and operation of King Saud University Endowment Towers.

- Managing the pre-opening operation of King Saud University Hilton.
- Supervisor of King Saud University Collages, Almuzahimiyah Branch, for Projects and Operating and maintenance affairs, August 2013-November 2015.
- Chairman of Civil Engineering Department at King Saud University, Nov. 2012 – Nov. 2013
- Vice Dean for Technical Affairs, Deanship of Admissions & Registration, King Saud University. 2011-2012.
- Vice CEO of "Riyadh Techno Valley, RTV" project 2006-2011. I managed and participated in establishing the RTV Project. The project is a Science Park located on the KSU Campus with an area of around 1.7 square meters. During this time, I participate in:
  - Developing the Master plane of the project – Jorag office in Singapore.
  - Developing the Feasibility Study of the Project, Stanford Research Institute, USA, Washington D.C.
  - Managing the construction of the RTV main Building.
  - Developing the Sustainability Standards of RTV tenants.
- Coordinator of Joint Master Program in Engineering Management between King Saud University & Missouri University of Science and Technology 2008-Current.
- Two years working in Saudi Telecom Company, 1994-1996:
  - Participated in managing the Telephone Network Design process of the Telephone Expansion Project– 6 (TEP-6), 1.5 million Telephone lines.
  - Monitored the project schedule and budget.
  - Coordinated among project parties.

• **Journal Papers:**

1. Alnaser, Aljawharah A., Naif M. Alsanabani, and **Khalid S. Al-Gahtani**. "BIM Impact on Construction Project Time Using System Dynamics in Saudi Arabia's Construction." *Buildings* 13, no. 9 (2023): 2267. <https://doi.org/10.3390/buildings13092267>
2. Alsugair, Abdullah M., **Khalid S. Al-Gahtani**, Naif M. Alsanabani, Abdulmajeed A. Alabduljabbar, and Abdulmohsen S. Almohsen. "Artificial Neural Network Model to Predict Final Construction Contract Duration." *Applied Sciences* 13, no. 14 (2023): 8078. <https://doi.org/10.3390/app13148078>
3. Alassafi, Hassan, **Khalid S. Al-Gahtani**, and Abdulmohsen S. Almohsen. 2023. "Medical Gas Systems Maintainability Risks in Healthcare Facilities: A Design Optimization Approach" *Sustainability* 15, no. 12: 9204. <https://doi.org/10.3390/su15129204>
4. Alsanabani, Naif M., **Khalid S. Al-Gahtani**, Abdulrahman A. Bin Mahmoud, and Saad I. Aljadhahi. 2023. "Integrated Methods for Selecting Construction Foundation Type Based on Using a Value Engineering Principle" *Sustainability* 15, no. 11: 8547. <https://doi.org/10.3390/su15118547>
5. Alsugair, Abdulah M., Naif M. Alsanabani, and **Khalid S. Al-Gahtani**. "Forecasting the Final Contract Cost on the Basis of the Owner's Cost Estimation Using an Artificial Neural Network." *Buildings* 13, no. 3 (2023): 786. <https://doi.org/10.3390/buildings13030786>

6. **Al-Gahtani, Khalid**, Abdulah Alsugair, Naif Alsanabani, Abdulmajeed Alabduljabbar, and Bader Almutairi. "Forecasting delay-time model for Saudi construction projects using DEMATEL–S.D. technique." *International Journal of Construction Management* (2022): 1-15. <https://doi.org/10.1080/15623599.2022.2152944>
7. Alshihri, S.; **Al-Gahtani, K.**; Almohsen, A. "Risk Factors That Lead to Time and Cost Overruns of Building Projects in Saudi Arabia". *Buildings* 2022, 12, 902. <https://doi.org/10.3390/buildings12070902>
8. Saud, Ammar M., **Khalid S. Al-Gahtani**, and Abdullah M. Alsugair. "Exterior walls selection framework using Building Information Modeling (BIM)." *Cogent Engineering* 9, no. 1 (2022): 2088642. DOI: <https://doi.org/10.1080/23311916.2022.2088642>
9. Alanazi, Abdulkareem, **Khalid Al-Gahtani**, and Abdullah Alsugair. 2022. "Framework for Smart Cost Optimization of Material Logistics in Construction Road Projects" *Infrastructures* 7, no. 5: 62. <https://doi.org/10.3390/infrastructures7050062>
10. Alassafi, Hassan, **Khalid Al-Gahtani**, Abdulmohsen Almohsen, and Ghasan Alfalah. 2022. "The Causal Factors of Elevator Maintenance: A Perspective from Saudi Arabia Healthcare Facility Management" *Buildings* 12, no. 5: 532. <https://doi.org/10.3390/buildings12050532>
11. Al-Ghamdi MA, **Al-Gahtani KS**. "Integrated Value Engineering and Life Cycle Cost Modeling for HVAC System Selection". *Sustainability*, 2022; 14(4):2126. <https://doi.org/10.3390/su14042126>
12. Mohamed A. Al Rahhal Al Orabi, **Khalid S. Al-Gahtani**, "A Framework of Selecting Building Flooring Finishing Materials by Using Building Information Modeling (BIM)", *Advances in Civil Engineering*, vol. 2022, Article ID 8556714, 22 pages, 2022. <https://doi.org/10.1155/2022/8556714>
13. **Khalid S. A. Al-Gahtani**, (2022). Review Current Value Engineering Studies Towards Improve Automation within Building Information Management (BIM). *SSRG International Journal of Civil Engineering* 9(2), 1-9. DOI: 10.14445/23488352/IJCE-V9I2P10, <https://www.internationaljournalssrg.org/IJCE/paper-details?Id=497>
14. **Khalid S. Al-Gahtani**, Ibrahim Al-Sulaihi and Hassan Al-Assafi, "Discrete-Event Simulation of Viaduct Construction Methods in Riyadh Metro", *Journal of Civil Engineering and Architecture*, 15 (2021) 604-613. DOI: 10.17265/1934-7359/2021.12.002, <https://www.davidpublisher.com/index.php/Home/Article/index?id=46940.html>
15. Marzouk, M., I. Abdelbasset and **K. Al-Gahtani**, "Evaluating Building Systems Energy Performance Superiority and Inferiority Ranking." *Journal of Environmental Informatics*, Vol 38, Issue 1 (September 2021), doi:10.3808/jei.202000448. <http://www.jeionline.org/index.php?journal=mys&page=article&op=view&path%5B%5D=202000448>
16. M. Mrad, **K. S. Al-Gahtani**, R. Hulchafo, N. Souayah and K. Bamatraf, "Risk Assessment for Discrete Stochastic Time-Cost-Quality Trade-Off Problem Using Simulation-Based Integer Linear Programming Approach," in *IEEE Access*, vol. 7, pp. 32453-32463, 2019. doi: 10.1109/ACCESS.2019.2903229
17. Ibrahim A. Alsulaihi, **Khalid S. Al-Gahtani**, Abdullah M. Alsugair, Aref A. Abadel, "Systematic approach for assessing the sustainability of Buildings using Building Information Modeling", *International Journal of Advances in Mechanical and Civil Engineering*, Volume-5, Issue-3, Jun.-2018, ISSN: 2394-2827

18. Saud Alshammari, **Khalid Al-Gahtani**, Ibrahim Alhammad and Nuhu Braimah, "A Systematic Method to Analyze Force Majeure in Construction Claims", *Buildings* 2017, 7(4), 115 (5 December 2017). <https://doi.org/10.3390/buildings7040115>
19. **Khalid Al-Gahtani**, Ibrahim Alsulaihi, Mohamed Ali and Mohamed Marzouk (2017). Production of Green Concrete using Recycled Waste Aggregate and Byproducts. *Built Environment Project and Asset Management*, Vol. 7 Issue: 4, pp.413-425, <https://doi.org/10.1108/BEPAM-09-2016-0047>.
20. Al-Sulaihi, I. A, **Khalid S. Al-Gahtani**, Abdullah M. Al-Sugair and Mohamed Marzouk (2017). "Developing a rating system for sustainable office buildings using Simos' procedure", *Journal of Engineering Research*, Vol.5, No. (1), pp 59-88.
21. Marzouk, Mohamed, Eslam Mohammed Abdelkader, and **Khalid Al-Gahtani**. "Building information modeling-based model for calculating direct and indirect emissions in construction projects." *Journal of Cleaner Production*, Vol.152 (20 May 2017): pp 351-363.
22. **Al-Gahtani, K. S.**, AlSulaihi, I. A., & Iqpal, A., "Total Float Management: Computerized Technique for Construction Delay Analysis", *Canadian Journal of Civil Engineering*, 2016, Vol.43 No. (5), pp 391-401.
23. **Al-Gahtani, K.**, Alsulaihi, I., El-Hawary, M., & Marzouk, M., "Investigating sustainability parameters of administrative buildings in Saudi Arabia", *Technological Forecasting and Social Change*, Volume 105, April 2016, pages 41–48
24. **Al-Gahtani, K.**, Al-Sulaihi, I., Al Rashed, R., & Batarfi, A., "Key Performance Indicators for Value Management in Saudi Construction Industry", *International Journal of Application or Innovation in Engineering & Management (IJAIEM)*, ISSN 2319 – 4847, November 2015, Volume 4, Issue 11, 54-62.
25. Ibrahim Al-Sulaihi, **Khalid Al-Gahtani**, Abdullah Alsugair and Ibrahim Tijani. "Assessing Indoor Environmental Quality of Educational Buildings Using BIM", *Journal of Environmental Science and Engineering B*, 4 (2015), 451-458, doi:10.17265/2162-5263/2015.08.006
26. Al-Sulahi, I., Al-Sugair, A., **Al-Gahtani, K.**, "Framework for Evaluating the Sustainability of Buildings' Design in Saudi Arabia Using Building Information Modeling", *International Journal of Structural Analysis & Design– IJSAD*, Volume 2: Issue 1, April 2015, [ISSN: 2372-4102]
27. Mohamed M. Marzouk, Mohamed Hisham, and **Khalid S. Al-Gahtani**; "Applications of bridge information modeling in bridges life cycle"; *Smart Structures and Systems*, Vol. 13, No. 3, March, 2014, ISSN: 1738-1584 (Print), 1738-1991 (Online).
28. **Khalid S. Al-Gahtani**, Ibrahim A. Al-Sulaihi, Saad Al-Shihri, Mohammed Al-Rsheed; "Investigation into Sustainability in Saudi Construction Industry"; *Pensee Journal* (ISSN: 0031-4773) Vol. 76, Issue. 1, January 2014.
29. **Khalid S. Al-Gahtani**, Ibrahim A. Al-Sulaihi; "Systematic Approach to Analyze Change Order and Delay Claim"; *Pensee Journal* (ISSN: 0031-4773) Vol 64, No. 3, March 2014.
30. Ali, H., Al-Sualihi, I., and **Al-Gahtani, K.** "Indicators for Measuring Performance of Building Construction Companies in Kingdom of Saudi Arabia." *Journal of King Saud University - Engineering Sciences*, [Volume 25, Issue 2](#), July 2013, Pages 125–134.
31. **Khalid S. Al-Gahtani**, "Risk Assessment for Scheduling Acceleration", *International Journal of Application or Innovation in Engineering & Management (IJAIEM)*, vol.2, no. 2, ISSN: 2319 - 4847, February 2013.

32. **Khalid S. Al-Gahtani**, "Addressing Scheduling Software for Analyzing Delay Claim," *International Journal of Engineering and Technology*, vol. 4, no. 4, ISSN: 1793-8244, pp. 471-474, 2012.
33. **Al-Gahtani, Khalid S.** and Mohan, Satish B; "Delay Analysis Techniques Comparison", *Journal of Civil Engineering and Architecture*, ISSN 1934-7359, USA, Aug. 2011, Volume 5, No. 8 (Serial No. 45), pp. 740-747.
34. **Al-Gahtani, Khalid S**, "Method for integrating EVM with Delay Analysis Technique", *Canadian Journal on Environmental, Construction and Civil Engineering*, AM Publisher, Vol. 2, No. 1, January 2011, Pages: 80-88.
35. **Al-Gahtani, Khalid S.**; "Float Allocation using Total Risk Approach", *American Society of Civil Engineering, ASCE, Journal of Construction Engineering and Management*, Vol. 135, No. 2, February 2009.
36. **Al-Gahtani, Khalid S.** and Mohan, Satish B.; "Total Float Management for Delay Analysis", *Cost Engineering*, Vol. 49, No. 02, AACE International, Morgantown, WV, Feb. 2007
37. Mohan, Satish B and **Al-Gahtani, Khalid S.**; "Current Delay Analysis Techniques and Improvements", *Cost Engineering*. Vol. 48, No. 09, AACE International, Morgantown, WV, Sep. 2006.

- **Conference Papers:**

38. Ahmed Y. El Sayed, Dr. Waleed M. El Nemr, and **Khalid S. Al-Gahtani** "Legal Pitfalls of the "Window" Delay Analysis Method", AACE's 2023 Annual Meeting, AACE International, CDR- 4068, 11-13 June 2023, Chicago, Illinois, USA
39. **Al-Gahtani, Khalid** and Naif Alsanabani, "Impact Factors on Time and Cost in Pile Construction", Twelfth International Structural Engineering and Construction Conference (ISEC-12) proceedings, ISSN: 2644-108X, Chicago, USA, August 14-18, 2023. doi: 10.14455/ISEC.2023.10(1).CON-06
40. Naif Alsanabani and **Al-Gahtani, Khalid**, "Method for Evaluating Foundations Alternatives Using Value Engineering Concept", International Conference on Advances in Structural and Geotechnical Engineering, ICASGE'23, Hurghada, Egypt, 6-9 March 2023
41. Alorabi, Mohamed A., **Al-Gahtani, Khalid S.** and Alhammad, Ibrahim A., "Proposed Systemic Method for selecting finishing materials for building flooring using building information modeling (BIM)", The 4th International Conference on Improving Sustainability Concept in Developing Countries (ISCDC), organized by International Experts for Research Enrichment and Knowledge Exchange (IEREK), 6-8 April 2020, Cairo, Egypt.
42. Ammar M. Saud, **Khalid S. Al-Gahtani**, Ibrahim A. Alhammad, and Ghasan A. Alfalah4, "Systematic Approach of Selecting Building Materials Using Value Engineering Concept", International Conference on Advances in Structural and Geotechnical Engineering, ICASGE'19, Hurghada, Egypt, 25-28 March 2019.
43. Mrad, M., **Al-Gahtani, K.**, & Hulchafo, R., "Time-Cost-Quality Trade-Off Problem Using Simulation-Based Integer Linear Programming Optimization Model: (Selection of Feasible Construction Projects at The Early Phase)". Ninth International Conference On



Science, Technology, Engineering and Management 2017 (ICSTEM 2017), (pp. 25-30). Dubai

44. Al-Sulahi, I., **Al-Gahtani, K.**, Al-Sugair, A., "Toward Developing a Systematic Approach for Assessing Green Buildings in Saudi Arabia Using BIM." "7th SAUDI GREEN BUILDING FORUM, 17-19 October, 2016
45. AlSulahi, I., **Al-Gahtani, K.**, Al-Sugair, A., Tijani, I. (2015). "Framework for Assessing the Indoor Environmental Quality for Educational Buildings using BIM" 2nd International Workshop on Civil Engineering and Architecture, IWCEA-2015, Istanbul, 12-13 Sep. 2015.
46. Marzouk Mohamed, Gamal Ibrahim, **Al-Gahtani Khalid**, "Tracking Indoor Air Quality of Buildings using BIM", ICSC15 - Canadian Society for Civil Engineering Construction Specialty Conference, the University of British Columbia, Vancouver, June 7 to 10, 2015
47. Mohamed Marzouk, Mahmoud Metawie, Mohamed Hisham, Ibrahim Al-Sulahi, Mohab Kamal and Khalid Al-Gahtani. "Modeling Sustainable Building Materials in Saudi Arabia." ICCCB/ASCE/CIB W078 International Conference, June 23-25, 2014.
48. Al-Sulahi, I., Al-Sugair, A., **Al-Gahtani, K.**, "Framework for Evaluating the Sustainability of Buildings' Design in Saudi Arabia Using Building Information Modeling" Proc. of the Second Intl. Conf. on Advances In Civil, Structural and Environmental Engineering- ACSEE 2014, Zurich, Switzerland, 25 – 26 October 2014.
49. **Al-Gahtani, K.**, Al-Sulahi, I., Alsehami, A. "Responsibility of Nonworking Days in Analyzing Delay claim", AACE's 2013 Annual Meeting, AACE International, CDR-1353, 30 June-3 July 2013, Washington, DC, USA
50. Mohamed Marzouk, Mohamed Hisham, Mohamed Elsheikh, **Khalid Al-Gahtani**. Building Information Model for selecting environmental building materials. 7th international structural Engineering and construction conference. Honolulu, Hawaii, USA, Jun 18-23 2013.
51. Alsehami, Abdullah; **Al-Gahtani, Khalid**, "Improving Construction Management Practices: Call for New Research Approach", 18th International ICE-Conference on Engineering, Technology and Innovation, 18 - 20 June 2012, Munich, Germany.
52. **Al-Gahtani, Khalid S.**, "Addressing Scheduling Software for Analyzing Delay Claim", 2010 International Conference on Construction and Project Management, Chengdu, China, November 16-18, 2010.
53. Aldusari, Abdulaziz N. and **Al-Gahtani, Khalid S.** "Utilizing Architectural Identity in Conveying Riyadh Techno Valley's Values", 20th Biennial Congress & General Assembly, "Leadership for Innovation", Dubai Institute of Technology (DIT), Dubai, United Arab Emirates, October 11-14, 2010.
54. **Al-Gahtani, Khalid S.** and Ghani, Syed Raiyan; "Knowledge management Tools: Adaption in Construction Management", Second International Conference on Engineering Systems Management and its Applications "ICESMA'10", the American University of Sharjah, United Arab Emirates, March 30 – April 1, 2010, IEEE Conferences, ISBN: 978-1-4244-6520-0.
55. Al-Harkan, Ibrahim M., **Al-Gahtani, Khalid S.** and Chavez, Raul S.; "Role of Engineering Management in Gulf State Countries", Second International Conference on Engineering Systems Management and its Applications "ICESMA'10", American University of Sharjah, United Arab Emirates, March 30 – April 1, 2010, IEEE Conferences, ISBN: 978-1-4244-6520-0.

56. **Al-Gahtani, Khalid S.** and Mohan, Satish B; "Delay Analysis Techniques Comparison", *Fifth International Conference on Construction in the 21st Century (CITC-V)*, May 20-22, 2009, Istanbul, Turkey.
57. **Al-Gahtani, Khalid S.** and Taher, Khalid A.; "Analysis of Construction Delay Responsibilities using Expert System" *4th Saudi Engineering Conference, Riyadh, Saudi Arabia, December 2007 (Arabic Language)*.
58. **Al-Gahtani, Khalid S.**; "Risk Assessment for Scheduling Acceleration" AACE international transaction, Nashville, TN – July 2007.
59. **Al-Gahtani, Khalid S.** and Mohan, Satish B; "Total Float Management for Delay Analysis", AACE international transaction, New Orleans – June 2005.
60. Mohan, Satish B, and **Al-Gahtani, Khalid S.**; "Current Delay Analysis Techniques and Improvements", AACE international transaction, New Orleans – June 2005.

• **Conference, Forum, and Lecture Presentation:**

1. **Al-Gahtani, Khalid S.**, "The King Saud University Endowments as Model for Saudi University Endowments," *Saudi Universities Conference for Awqaf*, Organized by General Authority for Awqaf, Riyadh, Saudi Arabia, June 22-23, 2022.
2. **Al-Gahtani, Khalid S.**, "Educational Endowment Investments in Saudi Universities - The Experience of King Saud University," a workshop at King Khalid University, Abha, Saudi Arabia, December 2, 2020.
3. **Al-Gahtani, Khalid S.**, "Educational Endowment Investments in Saudi Universities - The Experience of King Saud University", Virtual Lecture by the United Arab Emirates University, Sharjah, United Arab Emirates, July 23, 2020.
4. Marzouk, Mohamed M., and **Al-Gahtani, Khalid S.**, "Introduction to 3D printing and laser scanning technology for Buildings", King Saud University, The Saudi Umran Society, Project Management Section, online lecture, 11 May 2020.
5. **Al-Gahtani, Khalid S.**, and Alfayz, Omar F. "Technologies used to manage risks in projects", King Saud University, The Saudi Umran Society, Project Management Section, online lecture, 22 April 2020.
6. **Al-Gahtani, Khalid S.**, "King Saud University experience in developing the non-profit sector", Development Grant Forum "Donor", Hail University, Hail, Saudi Arabia, 17-18 December 2019.
7. **Al-Gahtani, Khalid S.**, "Application of Building Information Modeling on Civil Engineering", Department of Civil Engineering, College of Engineering, Al-Imam Mohammad Ibn Saud Islamic University, Riyadh, Saudi Arabia, 17 November 2019.
8. **Al-Gahtani, Khalid S.**, "Education Endowment Investment in Saudi Universities: King Saud University Model", Forum of Endowments Role in Supporting and Financing Education, the Education Council, Muscat, Sultanate of Oman, 23 November 2019
9. Al-Sulahi, Ibrahim A., and **Al-Gahtani, Khalid S.**, "Using BIM for Sustainable design", The First Prince Sultan University BIM Forum, Riyadh, Prince Sultan University, 25 December 2017.
10. **Al-Gahtani, Khalid S.**, "World endowment experiences and the experience of King Saud University." Associate Conference with Jazan University-seventh book exhibition, Gazan, Saudi Arabia, 28 Jun- 8 July 2017.

11. **Al-Gahtani, Khalid S.**, "Successful experiences in investment between public universities and the private sector." The Fifth Saudi Conference on Project Management (Managing of public-private projects), Saudi Council of Engineers, Riyadh, Saudi Arabia, 4-5 May 2016.
12. **Al-Gahtani, Khalid S.**, "King Saud University investments toward achieving the Kingdom vision 2030." Exhibition and International Conference on Higher Education, Ministry of Education, Riyadh, Saudi Arabia, 12-13 April 2016.
13. **Al-Gahtani, Khalid S.**, "The role of university endowments in advancing the international universities." Investment and finance of educational buildings conference, Ministry of Education, Riyadh, Saudi Arabia, 10-11 Jan 2016.
14. **Al-Gahtani, Khalid S.**, "Construction Delay Analysis Techniques", The 4th Project Management Conference, organized by Saudi Council of Engineering. 28-29 April, 2015.
15. **Al-Gahtani, Khalid S.**, "Application of Building Information Modeling on Civil Engineering" – Activities of ASCE student's chapter at the Department of Civil & Environmental Engineering at King Faisal University, Alahsa, Saudi Arabia April 5, 2015.
16. **Al-Gahtani, Khalid S.**, "Construction Delay Analysis Techniques at Civil Engineering Department", Construction Engineering and Management Division – Purdue University, West Lafayette, Indian, USA – August 2014.
17. **Al-Gahtani, Khalid S.**, "Role of Saudi Universities in Preparing Project Managers", The 3rd Project Management Conference, organized by Saudi Council of Engineering. 16-19 April, 2011.

• **Book and Chapter on Book**

1. **Al-Gahtani, Khalid S.** "Construction Delay Analysis Techniques, Technique Comparison, Float Analysis, and I.T. Solution", LAP LAMBERT Academic Publishing, ISBN-13:978-3-8433-5070-9, 2010.
2. **Al-Gahtani, Khalid S.**, "Construction Contract Claims, Changes & Dispute Resolution", Levin, Paul, ASCE, ISBN-10: 0784402760, June 1998, Translated to Arabic, King Saud University Publisher, 2011.
3. Alrahhah Alorabi M.A., **Al-Gahtani K.S.**, Alhammad I.A. (2021) Proposed Systemic Method for Selecting Finishing Materials for Building Flooring Using Building Information Modeling (BIM). In: Alalouch C., Piselli C., Cappa F. (eds) Towards Implementation of Sustainability Concepts in Developing Countries. Advances in Science, Technology & Innovation (IEREK Interdisciplinary Series for Sustainable Development). Springer, Cham. [https://doi.org/10.1007/978-3-030-74349-9\\_13](https://doi.org/10.1007/978-3-030-74349-9_13)
4. Abdulah M Alsugair, Naif M Alsanabani, Khalid S Al-Gahtani. Forecasting the Final Contract Cost on the Basis of the Owner's Cost Estimation Using an Artificial Neural Network. In: Mohamed Ali Hajjaji, editor. Prime Archives in Engineering. Hyderabad, India: Vide Leaf. 2023. <https://videoleaf.com/forecasting-the-final-contract-cost-on-the-basis-of-the-owners-cost-estimation-using-an-artificial-neural-network/>
5. Ammar M Saud, Khalid S Al-Gahtani, Abdullah M Alsugair. Exterior Walls Selection Framework using Building Information Modeling (BIM). In: Mohamed Ali Hajjaji, editor. Prime Archives in Engineering. Hyderabad, India: Vide Leaf. 2023.



<https://videleaf.com/exterior-walls-selection-framework-using-building-information-modeling-bim/>

6. Abdulkareem Alanazi, Khalid Al-Gahtani, Abdullah Alsugair. Framework for Smart Cost Optimization of Material Logistics in Construction Road Projects. In: Mohamed Ali Hajjaji, editor. Prime Archives in Engineering. Hyderabad, India: Vide Leaf. 2023. <https://videleaf.com/framework-for-smart-cost-optimization-of-material-logistics-in-construction-road-projects/>

- **Graduation Projects:**

- Ph.D. Dissertation - A comprehensive construction delay analysis technique: Enhanced with a float ownership concept, 2006.
- Master theses – Construction Delay Claim Analysis using Expert System, Dec 1999.
- 4th Year senior project – An Intelligent Bid Evaluations System, June 1994.

- **Award**

- Distinguished Research and Publication Quality Awards, KSU, June 2009
- In September 2023, Ranked 38 among the top scientists in Saud Arabia in Civil Engineering-Construction Engineering and Management (World Scientist and University Rankings 2023). <https://www.adscientificindex.com/scientist/khalid-saad-al-gahtani/336995>
- Ranked among the top 10 researchers in Analyzing Delay Claims (Çevikbaş and Işık. Buildings 11, no. 3, 2021). <https://doi.org/10.3390/buildings11030109>

- **Teaching Courses:**

- EMGT 461, Global Project Management, – MS&T.
- CE 602, Modeling of Engineering Processes and Systems – KSU.
- CE 610, Advanced Topics in Value Engineering – KSU.
- CE 611, Maintenance Engineering and Management – KSU.
- CE 613, Planning and Modeling Construction Processes – KSU.
- CE 614, Selected Topics in Construction Engineering & Management – KSU.
- CE 572, Computer Applications in Civil Engineering – KSU.
- CE 511, Construction Planning and Control – KSU
- CE 512, Construction Management – KSU
- CE 513, Construction Engineering – KSU
- CE 517, Computer Applications in Construction – KSU.
- CE 518, Special Topics in Construction Engineering & Management – KSU.
- SFE 551, Safety in Civil Engineering Projects – KSU.
- GE 401/403, Engineering Economics– KSU.
- GE 402/404, Engineering Project Management – KSU.
- CE 417, Construction Equipment and Methods– KSU.
- CE 496/497, capstone Project 1 & 2- KSU.
- GE 209, Computer Programming, Teaching Assistance– KSU.

- **Funded Project:**

- **Al-Gahtani. Khalid S.;** "Computerized System for Delay Analysis", Engineering Research Center, King Saud University, December 2007, SR30,000/\$8000.
- **Khalid Al-Gahtani,** Mohamed Marzouk, Mohab Kamal. "Framework for Sustainable Building Materials using Building Information Modeling Technology and Genetic Algorithm Optimization" National Plan for Science & Technology, September 2013, SR 1,924,000/ \$51,3000.
- **Supervised MS & Ph.D. students:**
  - Abdullah Nasser (M.S.), Theses title "Selection of building facade materials using integrated methods including SWARA and WASPAS", June 2023.
  - Rashed M. Al-Drees (M.S.), Theses title "An Automated Method for Evaluating Infrastructure Pipe Alternatives Using Value Engineering Concept", January 2023.
  - Hassan T. Alassafi (Ph.D.), Dissertation "Maintainability Assessment Framework in Design Stages for Healthcare Facilities Building Services Systems in Saudi Arabia", December 2022.
  - Zaidan A. Zanklo (M.S.), Theses title "Framework for Selection of the Quality of Internal Buildings Doors Using Building Information Modeling BIM", May 2022
  - Mohamed A. Alghamdi (M.S.), Theses title "HVAC system Selection method by using value engineering concept and enhanced with a predictive life cycle cost model", Co-Supervisor Dr. Abdulmohsen Almohsen, May 2022
  - Mohamed A. Al Orabi (M.S.), Theses title "A Framework of Selecting Finishing Materials of Building Flooring Using Building Information Modeling (BIM)", Co-Supervisor Prof. Ibrahim Alhammad, Feb. 2021
  - Ammar M. Saud (M.S.), Theses title "A Framework of Selecting Materials for Exterior Building Enclosure Elements Using Building Information Modeling BIM", Co-Supervisor Prof. Ibrahim Alhammad, May 2019
  - Ibrahim A. Al-Sulaihi, (Ph.D.), Dissertation title "Framework for Evaluating the Sustainability of Buildings' Design in Saudi Arabia Using Building Information Modeling", Co-Supervisor Dr. Abdullah Alsugair, May 2017
  - Rehmat Khalil, (M.S.), Theses title "Simulation Based Integer Linear Optimization Model for Solving Discrete Time Cost Quality Trade-off Optimization Problem in Construction Projects", Co-Supervisor Dr. Mahdi Murad, January 2018.
  - Saud A. Alshammari, (Ph.D.), Dissertation "A Comprehensive Methodology for Analyzing Excusable Non-Compensable Delay in Construction Delay Claims", Supervisor Prof. Ibrahim Alhammad, Co-Supervisor Khalid Al-Gahtani, February 2018
  - Ibrahim A. Al-Sulaihi, (M.S.), Thesis title "Identifying Key Performance Indicators for Benchmarking Performance of Construction Firms in Kingdom of Saudi Arabia", Supervisor Dr. Hany Abd Elshakour, Co-Supervisor Khalid Al-Gahtani, Jan 2012
- **Attending Workshop Training:**

- "Peer-Review program to improve teaching skills", Deanship of Skills Development, King Saud University, 10-13 April 2016.
- "KSU-KPIs and benchmarking", Deanship of Skills Development, King Saud University, 7-8 February 2016.
- "Change management and organizational development", Deanship of skills development, King Saud University, 27-28 January 2016.
- "Simulation Modeling Training, AnyLogic 7 Fundamental", AnyLogic Company, Paris, France, 12-14 October 2015.
- "Scientific Research Essentials for Professional Development of KSU Faculty", Kansas State University, Manhattan, Kansas, USA, July 27-31.
- "Positive Academic Leadership", Academic Leadership development Workshop, Ministry Of education - Riyadh, Saudi Arabia, 6 April 2015.
- "Building and Managing Teamwork", Deanship of Skills Development - King Saud University- During the period of 5-6 April 2015.
- "Flipped Classroom", Deanship of Skills Development - King Saud University- During the period of 29-30 March 2015.
- "Scientific Publishing in international Periodicals" Deanship of Skills Development - King Saud University- During the period of 10-11 March 2015.
- "Autodesk Revit Structure (Basic)" Engosoft Training & Education, 4 March 2015, Riyadh, Saudi Arabia, 25 hours.
- "Revit Structure Essentials" Kemet Academy, May 2014, Cairo, Egypt, 25 hours.
- "Excellence in University Teaching" Dalhousie University, Halifax, Canada - During the period of 9-10 June 2014.
- "Fundamental of e-learning management system (Blackboard)" Deanship of E-learning and distance learning- King Saud University- From 9-10 March 2014.
- "Statistical analysis Test using SPSS" Deanship of E-learning and distance learning- King Saud University- From 11-12 March 2014.
- "Certificate in Higher Education Leadership", Florida Atlantic University at Boca Raton, FL, USA, June 24-28, 2013.
- "Leadership Skills of Academic Departments" – Deanship of Skills Development- King Saud University- During April 21-22, 2013.
- "Recognition e-learning management system (Blackboard)" Deanship of E-learning and distance learning- King Saud University- During 11-Sept. 17, 2013
- "Implementing an Enterprise Project Management Environment"- A panel discussion of some the leaders in the public and private sectors in the field of project management- March 12, 2013
- "Meeting Management" – Elocution training center- General Organization for Technical Training- December 10, 2012.
- "Learning Outcomes Assessment" – Deanship of Skills Development- King Saud University- During March 14-15, 2012.
- "Course Design and Construction" – Deanship of Skills Development- King Saud University- April 7, 2012.
- "Student Learning Support" – Deanship of Skills Development- King Saud University- During April 1, 2012

- "Teaching methods in the education-oriented knowledge-based economy" - Prince Naif Institute for Research and Advisory Services - Islamic University of Imam Muhammad bin Saud – February 20-22, 2010.
- "Academic Leadership in Research-intensive Universities" – Deanship of Skills Development- King Saud University- January 19, 2010.
- "Project Scheduling by using MS-Project", Engineering College, King Saud University, 2007, 2010, and 2011.
- "Planning and Scheduling for Construction Project", Engineering College, King Saud University, 10 to 14 March 2007.
- "Construction Economics, Estimating & Tendering, and Progress Control", Engineering College, King Saud University, 5 - 9 May 2007.
- "Science Park in Saudi Arabia", Qassim University, June 2006.
- Short Courses in Primavera at AT&T company in 1995.
- 4 short courses in the joint program between the [University of Missouri-Rolla](#) and [King Saud University](#):
  1. Total Quality Management, from Oct. 30 to Nov. 3, 1999
  2. Production Planning & Scheduling, from Feb. 5 to Feb. 9, 2000
  3. Project Management, from April. 1 to April. 5, 2000
  4. Facilities Planning, from April. 8 to April. 12, 2000
- Three short courses in the [Division of Educational Outreach](#) at [Colorado State University](#):
  1. Team Dynamics for Project Management - from March 22 to April 5, 2001
  2. Project Management - Risk Management - from April 17 to May. 15, 2001
  3. Project Management and Contracting - from April. 18 to May. 5, 2001
- Seminar of "Construction Delay, Acceleration & Inefficiency claims", [Federal Publications Seminars LLC](#). June 9-10 2004.
- **Attending conferences:**
  - Middle East Facility Management Association (MEFMA) Conference 2017, Riyadh, Saudi Arabia, 23-24 Nov 2016.
  - The Third Forum of Endowments, Ministry of Islamic Affairs, Endowments, Dawah, and Guidance, Riyadh, Saudi Arabia, 14-15 Nov 2016.
  - ARAB ACRAO 32nd Conference- American University of Science and Technology-25-29-3-2012
  - International Conference on Sustainable Design and Construction- The University of Kansas-23-25/3/2011
  - Second Conference of Project Management "Project Management Reality and Ambition" - Saudi Council of Engineers - 5-9/4/2008
- **Membership Associations:**

- Association for the Advancement of Cost Engineering International, AACE International, since 2004.
- Saudi Council of Engineers, since 2006.
- American Association of Civil Engineering, ASCE, since 2007.
- International Association of Computer Science and Information Technology (IACSIT), since 2010
- **Other Participations:**
  - Chairman of Scientific Committee of Saudi Universities Conference for Awqaf, Organized by General Authority for Awqaf, Riyadh, Saudi Arabia, June 22-23, 2022.
  - Attending an event to present Sheikh Sulaiman Al-Rajhi endowments, Riyadh Chamber, Riyadh, Saudi Arabia, 18 April 2017.
  - Secretary-General of the Department of Civil Engineering between 2009 and 2011.
  - Coordinator of Construction Engineering and Management between the years 2010 - 2011.
  - Civil Eng. Committee for developing the department 2009 - 2011.
  - Civil Eng. Committee for Lab Equipment requirement 2009 - 2011.
  - Chairman of the Civil Engineering Club – 2011-2012.
  - Scientific Committee member of the First, Second, Third, and Fourth Conference for Project Management, organized by the Project Management chapter of the Saudi Council of Engineers, April 2007, 2009, 2011, 2015.
  - Registration Committee member for Civil Engineering Department, Spring and Fall Semester 2007.
  - Commercial Committee member of 4<sup>th</sup> Saudi Engineering Conference, Riyadh, Saudi Arabia, December 2007.
  - Review some papers and projects related to the Construction field.
- **Computer Experience:**
  - BIM software (Revit-Autodesk software).
  - Visual Basic, Microsoft FORTRAN PowerStation, and C++ (Programming Software).
  - STADD III, and SAP2000 (Structure Software).
  - Microsoft Project, Primavera Project Planning, and SureTrak (Scheduling Software).
  - Monte Carlo and Primavera Risk Analysis (Risk Management Software).
  - AnyLogic and UMI Cyclone (Simulation software).
  - V.P. Expert, LEVEL5 (Expert System Software).
  - DPI (Decision Support System Software).
  - NET (Neural Network software)
  - ArcGIS (GIS Software).