

FUNDED RESEARCH PROJECTS & CONSULTING

1. “Dynamic Analysis of Special Purpose Machines”, Funded by U.S. Army Tank and Automotive R & D Command, Warren, Michigan, Project No. DAAK-30-80-C-0042, January 1982 - July 1983, (Investigator).
2. “Automated Analysis of Multibody Mechanical Systems with Impact”, Funded by University of Alabama Research Board, UAB-FRG-86/87, (Principal Investigator).
3. “Mechanical Performance Evaluation of Elevators & Escalators in Al-Waha Mall, Dammam”, Saudi Arabia, Project No. SQ5510, Research Institute, KFUPM, Funded by Al-Waha Mall Inc., April 26 - June 24, 1997. (Consulting Team Member)
4. “Detection and Localization of Leaks in Pipelines”, September 1999-August 2001, Funded by King Abdulaziz City for Science & Technology (KACST), Saudi Arabia, Project No. AR-17-34. (Principal Investigator)
5. “Flow-induced Vibrations in Heat Exchangers”, Project No. ME2212, Funded by Saudi Aramco, November 15, 2000 to June 30, 2004. (Investigator)
6. “Drillstring Vibration Diagnostics for Improving Drilling Performance”, King Abdulaziz City for Science & Technology (KACST), Saudi Arabia, Project No. AR-22-11, May 2007. (Principal Investigator)
7. "Effects of high vane passing frequency of the turbine boiler feed pump (PFBT) on damaging other related/connected components", *Project No. CER2289, Funded by SEC*, January 2005 – December 2007. (Investigator).
8. “Establishment of Engineering Academic Program, infrastructure and specifications requirements for Al-Thurayyah College, Jeddah”, Project No. CEMS2236, *Funded by Al-Thurayyah College Co.*, Jeddah, KSA, June 2005 - October 2006, (Consulting Team Member).
9. “Vortex Shedding-free Strainer”, Project No. ME2254, *Funded by Saudi Aramco*, November, 2005 to November 30, 2007. (Investigator).
10. “Development of Pass-Through Electric Submersible Pump - Phase II: Design of a Prototype”, Project No. CPM2253, *Funded by Saudi Aramco*, November, 2005 to April 2008. (Investigator-Task leader).
11. “Introduction to Engineering Ethics (مقدمة في أخلاقيات مهنة الهندسة)”, Arabic Book Translation Project No. AR06003, *Funded by KFUPM Desnship of Scintific Resreach*, February 2007 – February 2008. (Principal Investigator)

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1. **Khulief, Y.A.** and Shabana, A. "Impact Responses in Multibody Systems with Consistent and Lumped Masses", *J. Sound & Vibration*, Vol. 104(2), 1986, p.187-207.

2. **Khulief, Y.A.** and Shabana, A. "Dynamic Analysis of Constrained System of Rigid and Flexible Bodies with Intermittent Motion", *ASME J. Mechanisms, Transmission & Automation in Design*, Vol.108, 1986, p.38-45. **Also as ASME Paper 84-DET- 116.**
3. Changizi, K., **Khulief, Y.A.**, and Shabana, A. "Transient Analysis of Flexible Multibody Aircraft, Part II", *J. Computer Methods in Applied Mechanics & Engineering*, Vol.54, 1986, p.93-110.
4. **Khulief, Y.A.** and Shabana, A. "Dynamics of Multibody Systems with Variable Kinematic structure ", *ASME J. Mechanisms, Transmission & Automation in Design*, Vol.108, 1986, p.167-175. **Also as ASME Paper 85-DET-83.**
5. **Khulief, Y.A.** and Shabana, A. "A Continuous Model for the Impact Analysis of Flexible Multibody Systems", *J. Mechanisms & Machine Theory*, Vol.22 (3), 1987, p.213-224.
6. **Khulief, Y.A.** and Yi, L. "Lead-lag Vibrational Frequencies of a Rotating Beam with End Mass", *Int. J. Computers & Structures*, Vol.29 (6), 1988, p.1075-1025.
7. **Khulief, Y.A.** and Chiu, H. "Transient Dynamics of Aircraft Propeller During Touchdown Impact", *Int. J. Computers & Structures*, Vol.31 (3), 1988, p.413-419.
8. **Khulief, Y.A.**, and Sun, S. "Finite Element Modeling and Semi-active Control of Vibrations in Long Road Vehicles", *ASME J. Dynamic Systems, Measurements & Control*, Vol.111, 1989, p.521-527. **Also as ASME Paper 87-WA/DSC 39.**
9. **Khulief, Y.A.** "Vibration Frequencies of a Rotating Tapered Beam with End Mass", *J. Sound & Vibration*, Vol.134 (1), 1989, p.87-97.
10. **Khulief, Y.A.** "Constrained Lagrangian Formulation for Multibody Systems Using Bond Graphs", *JSME International Journal*, Series III, Vol.34 (3), p.362-369, 1991.
11. **Khulief, Y.A.** and Bazoune, A., "Frequencies of Rotating Tapered Timoshenko Beams with Different Boundary Conditions", *Int. J. of Computers and Structures*, Vol.42 (5), pp.781-795, 1992.
12. Bazoune, A. and **Khulief, Y.A.**, "A Finite Beam Element for Vibration Analysis of Rotating Tapered Beams", *Journal of Sound & Vibration*, Vol.156 (1), pp.141-164, 1992.
13. **Khulief, Y.A.**, "On the Finite Element Dynamic Analysis of Flexible Mechanisms" *J. Computer Methods in Applied Mechanics & Engineering*, Vol.97, pp.23-32, 1992.
14. Mohiuddin, M. and **Khulief, Y.A.** "Modal Characteristics of Rotors using a Conical Shaft Finite Element", *J. Computer Methods in Applied Mechanics & Engineering*, Vol.115, pp.125-144, 1994.
15. **Khulief, Y.A.** "Sudden Imposition of Massless-Link Constraint in Elastic Structural Systems," *Int. J. of Computers and Structures*, Vol.52 (3), pp.541-549, 1994.
16. Al-Bedoor, B. and **Khulief, Y.A.**, "Finite Element Dynamic Modeling of a Translating and Rotating Flexible Link", *J. Computer Methods in Applied Mechanics & Engineering*, Vol.131, p.173-189, 1996.
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22. Mohiuddin, M. and **Khulief, Y.A.**, "Modal Characteristics of Cracked Rotors using a Conical Shaft Finite Element", *J. Computer Methods in Applied Mechanics & Engineering*, Vol.162, 1998, p.223-247.
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25. **Khulief, Y.A.**, "Spatial Formulation of Elastic Multibody Systems with Impulsive Constraints", *Journal of Multibody System Dynamics*, Vol. 4(4), 2000, p.383-406.
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30. Mohiuddin, M. and **Khulief, Y.A.**, "Dynamic Response Analysis of Rotor-Bearing Systems with Cracked Shaft", *ASME Journal of Mechanical Design*, 2002.
31. H.E. Shabaik, **Y. Khulief**, and I. Hussaini, "A Nonlinear Multiple-model State Estimation Scheme for Pipeline Leak Detection and Isolation", *J. Systems & Control Engineering*, Vol. 216, Part I, 2002, p.497-512.
32. A. Bazoune, **Y. Khulief** and N. Stephen "Shape functions of Three-dimensional Timoshenko Beam Elements", *J. Sound & Vibration* Vol. 259 (2), 2003, p.473-480_
33. H.E. Shabaik, **Y. Khulief**, and I. Hussaini, "Simulation of Fluid Flow in Pipelines for Computer-based Monitoring" *Int. Journal for Numerical Methods in Fluids*, Vol. 44, 2004, p.257-275 2004.

34. **Y. Khulief**, and H. Al-Naser, "FEM Dynamic Analysis of Drillstring Vibrations", *J. Finite Element in Analysis & Design*, Vol.41, 2005, pp.1270-1288.
35. **Y. A. Khulief** and H. Shabaik "Application of Multiple-model State Estimation Scheme to Leak Detection and Isolation in a Laboratory Pipeline Setup", *J. Systems & Control Engineering, IMechE Vol. 220 Part I, 2006*, p.1-13.
36. **Y. A. Khulief**, F. Al-Sulaiman, and S. Bashmal, "Vibration Analysis of Drillstrings with Self-Excited Stick-Slip Oscillations", *Journal of Sound & Vibration*, Vol.299, 2007, pp. 540-558.
37. **Y.A. Khulief**, S.A. Al-Kaabi, S.A. Said and M. Anis, "Flow-induced Vibrations in Tubular Heat Exchangers, Part I: FEM Dynamic Modeling", accepted for publication in **ASME J. Pressure Vessels Technology**.
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53. **Y. Khulief**, "The Gulf Engineer & Professional Engineering License", **Proceedings of Fourth Gulf Engineering Meeting- the Gulf Engineer and the New Millennium**, Riyadh, February 22-24, 2000, p.71-76.
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55. M.A. Mohiuddin and **Y.A. Khulief**, "Dynamic Response of Rotors with Cracked Shafts", Proceedings of the Workshop on Vibrations in Rotating Machinery, **WVRM-2000, KFUPM, Saudi Arabia**, April 29-May 1, 2000, p.223-238.
56. **Khulief, Y.A.**, Shabaik, H.E. and Hussaini, I., "Modeling and Simulation of Leaks in Pipelines", **Proceedings of 3rd Int. Symposium on Computational Technologies of Fluid Systems with Industrial Applications**, **ASME-PVP Division Conference**, July 22-26, 2001, Atlanta, GA, USA, PVP-Vol. 424 (2), p-107-114.
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63. **Y. A. Khulief**, S. Bashmal and F. Al-Sulaiman, "Coupled Torsional Vibrations in Drilling Systems", Proceedings of IMECE2005, 2005 ASME International Mechanical Engineering Congress & Exposition, November 5-11, 2005, Orlando, Florida USA.
64. **Y. A. Khulief**, "Ethics Education for Engineering Students", Proceedings of the Second Conference on Education and Applied Research Planning in Arab Countries, to be held at KFUPM, 2005.
65. **Y. A. Khulief** and F.A. Al-Sulaiman "Experimentally-Tuned Mathematical Model for Drillstring Vibrations", **Proceedings of IDETC/CIE 2007, ASME 2007 International Design Engineering Technical Conference**, Paper No. DETC2007-350357, September 4-7, 2007, Las Vegas, Nevada, USA. *Revised manuscript is currently under review for publication in the ASME J. Computational & Nonlinear Dynamics; invited by the Journal Editor.*
66. **Y. A. Khulief** and F.A. Al-Sulaiman "Drillstrings Vibration Diagnostics for Improving Drilling Performance", **Final Report AR-22-11, KACST**, August 2007.
67. **Y. A. Khulief**, "Smooth vs. Pieced-Interval Dynamic modeling of Impulsive Events in Mechanical systems", **Proceedings of IASTED Conference on Modeling and Simulation**, Paper No. 571-099, October 8-10, 2007, Beijing, China.