

RESUME

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LICENSURE: Licensed Professional Engineer, State of Louisiana.

PROFESSORSHIP: Alumni Association/BORSF Professorship in
Mechanical Engineering.

TERMINAL DEGREE

Ph. D., Mechanical Engineering, University of Pennsylvania,
Philadelphia, PA., 1972. GPA: 4.00.
Thesis: Effective Properties of Composite Material Using
High Order Statistical Information.

RECENT PUBLICATIONS:

REVIEWED JOURNAL ARTICLES

1. Raymond, D., Elsayed, M. et al., "Laboratory Simulation of Drill Bit Dynamics Using a Model-Based Servo-hydraulic Controller," ASME Journal of Energy Resources Technology, Vol. 130, No 4, pp. 043103-1 to 043103-12, 2008.
2. Elsayed, M.A. "A Novel Approach to Dynamic Representation of Drillstrings in Test Rigs," ASME Journal of Energy Resources Technology, Vol. 129 No. 4, Dec. 2007, pp.281-288.
3. Raymond, D. W. et al., Elsayed, M. A., "Controllable Damper Demonstrates Improved Stability For PDC Bits Drilling Hard-Rock Formations," Transactions of the Geothermal Council, Vol. 29, pp. 521-527, 2005.
4. Elsayed, M. A., Washington, L. F., "Drillstring Stability Based on Variable Material Cutting Stiffness and Using a Sharp Three-Insert Polycrystalline Diamond Compact (PDC) Coring Bit," ASME Journal of Energy Resources Technology, Vol. 123, pp.138-143, 2001.

REVIEWED PROCEEDINGS

1. Elsayed, M., Abhayankar, A., Aissi, C., "Modeling of Rock Surface Generated by a Coring Bit Subject to

- Dynamic Drilling," Proceedings of the Society of Experimental Mechanics (SEM) Conference, Albuquerque, NM., June, 2009, Paper #1.
2. Elsayed, M., Aissi, C., Yalamanchili, A., "Analysis of Mode Interaction in Drillstrings Using Active Circuits," Proceedings of the Society of Experimental Mechanics (SEM) Conference, Orlando, Florida, June 2008, Paper #124
 3. Elsayed, M., Yalamanchili, A., Aissi, C., "Visualization of Surface Topology in Unstable Drilling with PDC Bits" Proceedings of the 54th. International Instrumentation Symposium, Pensacola, Florida, May 2008, Paper #P022
 4. Elsayed, M., Aissi, C., Yalamanchili, A., "Using Active Circuits to Model Drillstrings and Analyze the Effect of Phase Shift on Stability Analysis," Proceedings of the OMAE 2007 Conference, June 2007, San Diego, California, Paper # OMAE2007-29380.

PATENTS

"Controllable Magneto-Rheological Fluid-Based Dampers for Drilling," Patent # 7,036,612, Issued 5/2/2006. Co-Inventor, IP is jointly held between UL and Sandia National Labs (SNL), Funds to secure the patent were paid by SNL with an agreement to split the fees in the future as royalties are realized.

RECENT FUNDED RESEARCH

1. Principal Investigator, "Development of a Shock Sub with Controllable Damping to Reduce Bit Failure in Oil and Gas Drilling," BoRSF Industrial Ties Program with Sandia National Labs and PSI Inc., \$180,000, 2004-2008. Contract #LEQSF(2004-07)-RD-B-10.
2. Co-Principal Investigator, "An Interdisciplinary Instrumentation and Measurement Laboratory for Undergraduate Instruction and Research," BoRSF, State of Louisiana, \$86,045.00, 2006-2007. Contract # LEQSF(2006-07)-ENH-TR-74
3. Principal Investigator, "Self-excited Vibrations in Drillstrings Equipped with PDC Bits," DOE (Sandia National Labs.), Baker-Hughes-Inteq, Unocal, Hughes Christensen, Petroleum Solutions Inc., \$60,000.00 (1997-1998), \$40,000.00 (1998-1999), \$50,000.00 (1999-2000), \$50,000.00 (2000-2001), \$55,000.00 (2001-2002), \$60,000.00 (2002-2003). \$31,600.00 (2003). Total = \$346,600.00.