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PhD 1997, University of Wisconsin, Madison

MS 1992, University of Michigan

BS 1990, Calvin College

Teaches ABE 48400, ABE 485, ABE 48600, ASM 494, ASM 495, ASM 496

Recent Papers

Karcher, E., Guberman, D., Bonem, E., & Lumkes, J. 2022. Instructor Perception of Incorporating Active Learning in College of Agriculture Classrooms. *Teaching and Learning Inquiry*, 10. <https://doi.org/10.20343/teachlearning.10.36>

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S Xiong, G Wilfong, J Lumkes Jr. 2019. Components sizing and performance analysis of hydro-mechanical power split transmission applied to a wheel loader. *Energies* 12 (9), 1613.

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Valve Delay Estimation in Digital Pump/Motors. *International Journal of Fluid Power*, 271–294.

J Marschand, T Helmus, J Lumkes. 2018. Comparison of a Variable Displacement 3-Piston Inline Digital Pump Using Electrically and Mechanically Actuated Poppet Valves. *Universitätsbibliothek der RWTH Aachen*.

F Breidi, J Garrity, J Lumkes Jr. 2017. Investigation of a real-time pressure based valve timing correction algorithm. *Fluid Power Systems Technology* 58332, V001T01A070.

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J Garrity, F Breidi, J Lumkes. 2016. Design of a high performance energy coupling actuated valve. In *Proceedings of the 10th International Fluid Power Conference*, Dresden.

Recent Patents

JH Lumkes, TS Helmus, FY El Breidi. Direct actuated valve control hydraulic pump and motor. 2018. US Patent App. 15/785,427.

JH Lumkes, MA Batdorff, KJ Merrill, MA Holland, GJ Wilfong. Fluid control valve systems, fluid systems equipped therewith, and methods of using. 2015. US Patent 9,200,648 4.

J Andruch III, JH Lumkes Jr. Regenerative hydraulic systems and methods of use. 2015. US Patent 9,194,107 37.