

CURRICULUM VITAE OF JAMIE ERVIN

Professor Mechanical & Aerospace Engineering, Modeling & Simulation Group Leader, EEE Division

Education

B.S.M.E. Michigan Technological University
M.S.M.E. Michigan Technological University
Ph.D.M.E. University of Michigan, Ann Arbor

Research Interests

- CFD simulations and experimental studies involving the thermal-oxidative and pyrolytic chemistries of hydrocarbon fuels
- Chemical and physical methods to reduce surface deposition and fuel thermal degradation
- CFD simulations of fuel freezing in flowing systems, fundamental experimental low-temperature studies, and low-temperature additive studies
- Simulations of complex aircraft fuel tanks and other fuel system components
- Simulations of flowing fuels under conditions of high heat flux levels and supercritical conditions
- Methods of thermal energy storage using fuel and innovative materials and thermal energy management
- CFD simulations of FT processes
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Work Experience

- University of Dayton, Faculty Mechanical & Aerospace Eng. Dept., 1991-present
- University of Dayton Research Institute, Group Leader Modeling & Simulation, 2004-present
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Professional Society Memberships & Participation

- AIAA-Terrestrial Energy Systems Technical Committee (1996-2001), Student Section Faculty Advisor (2000-2002)
- ASME-Senior Member
- IASH-Member
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Awards & Honors

Univ. of Dayton Sigma Xi Research Award, Univ. of Dayton Faculty Research Award, Univ. of Dayton School of Eng. Research Award, AIAA Associate Fellow, AIAA Dayton-Cincinnati Service Award, Dayton-Cincinnati Aero. Sci. Symp. Best Paper Award in Fuels and Combustion with Rajee Assudani

Publications

R. Assudani, J.S. Ervin, L. Riehl, "Experiments and Simulations of the Freezing of Jet Fuel in Forced Flow," *Journal of Propulsion and Power*, Vol. 23, pp. 1123-1133, 2007.

R. Assudani, J.S. Ervin, and S. Zabarnick, "Experimental and Modeling Studies of Jet Fuel Flow Near the Fuel Freeze Point Temperature," *AIAA Journal of Propulsion and Power*, Vol. 22, pp.534-541, 2006.

T. Dounghip, J.S. Ervin, S. Zabarnick, T.F. Williams, "Simulation of the Effect of Metal-Surface Catalysis on the Thermal Oxidation of Jet Fuel," *Energy and Fuels*, Vol. 18, pp. 425-437, 2004.

T.A. Ward, J.S. Ervin, R.C. Striebich, S. Zabarnick, "Simulations of Flowing Mildly-Cracked Normal Alkanes Incorporating Proportional Product Distributions," *AIAA Journal of Propulsion and Power*, Vol. 20, pp. 394-402, 2004.