

SUMMARY VITA – James W. Hiestand, Ph.D., P.E.
Professor

Years on the Faculty: 25 (1972-73, 1985-2009)

Degrees:

B.E. Aeronautical Engineering, Rensselaer Polytechnic Institute, 1965.

M. E. Aerospace Engineering, Cornell University, 1966.

Ph.D. Aerospace Engineering, Cornell University, 1973.

Other Related Experience:

Combustion Engineering, Chattanooga, Tenn. (1973-1985),

Clarkson College, Potsdam, NY (Instructor, 1967-1969).

States in which Registered: Tennessee (inactive status)

Consulting and Patents:

Westinghouse (flow code modification);

Mesa Associates (heat transfer, energy usage analysis, spreadsheet improvement);

FBT (ANSYS heat transfer modeling);

McKee Bakery (non-Newtonian flow modeling);

TVA (economic analysis of coal usage, baghouse modeling, fluidized bed heat transfer coefficient development, calcination and sulfation modeling)

Combustion Engineering (modification of HTGR computer code; parametric analysis of accident loading, computer modeling of lab test)

Roper Corp. (ANSYS heat transfer modeling)

Maytag Corp. (ANSYS heat transfer modeling)

Principal Publications of Last Five Years:

“Optimal design of a bar with an attached mass”, Belinskiy, Hiestand, and McCarthy, to be submitted to the *Electronic Journal of Differential Equations*.

Numerical Methods with VBA Programming, Jones & Bartlett, 2009

R. T. Bailey, S. Ryan, F. Jones, S. Wilson, and J. Hiestand, “Effects of Packing and Aspect Ratio on Mixing and Heterogeneous Catalysis in Microchannels,” in *Proceedings of the 5th Joint ASME/JSME Fluids Engineering Conference*, San Diego, CA, July 2007.

Frank Jones, Rob Bailey, Stephanie Wilson, and Jim Hiestand, “The Effects of Engineering Design on Heterogeneous Biocatalysis in Microchannels.” *Applied Biochemistry and Biotechnology*, Vol. 136-140, 859-873 (2007).

Alp, Neslihan; Jones, Frank; Bailey, Rob; and Hiestand, Jim; “Use of Taguchi Methods to Optimize the Design of Biomicroreactors,” Institute of Industrial Engineers (IIE) Annual Conference (peer-reviewed) Proceedings, pp. 108-113, May 20-24, 2006, Orlando, FL.

Scientific and Professional Society Memberships:

ASME

Sigma Xi

Honors and Awards:

“Exceptional Merit” Faculty Performance Awards in 2007, 2009.

Institutional Service in the Last Five Years (committee assignments, etc.):

UTC Curriculum Committee 2008-09

UTC General Education Committee, (2006-2008)

UTC Handbook Committee, (2005-2006)

UTC Grade Appeals Committee (2004-2005)

UTC Faculty Senate (2004-2008), Parliamentarian
Engineering Ad-hoc Laptop Computer Committee (2009)
Engineering Scholarship Committee, Chair (2004-2009)
Engineering Curriculum Committee (2004-2008)
Advisor and Treasurer, Tau Beta Pi Student Chapter (2004-2009)

Professional Service in the Last Five Years:

Tau Beta Pi site visit WKU (2008)

Professional Development Activities in the Last Five Years:

UTC Instructional Excellence Retreat (2006)

Creative Educational Activities in last five years:

Text book published (2009)

Master's thesis: "Boiler Failure Problems", T. Grant (2009)

On-going work on modeling of room airflow with CFDRC-Ace

Conferences and Meetings attended in last five years:

Presenter at the Balance of Plant Heat Exchanger Conference, June, 2009, Chattanooga, TN
ASCE Regional Conference, 2006, Session Chair