

## RÉSUMÉ OF JAMES O. WILKES (2011)

Name: James Oscroft Wilkes  
Birthdate: 24 January, 1932  
Citizenship: U.S.A. & U.K.

### *Home Address*

805 Colliston Road  
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### *University Address*

Department of Chemical Engineering  
3146A Dow Building  
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### Full-Time Positions Held

<i>Dates</i>	<i>Position</i>
1957–1960	University of Cambridge, Demonstrator (Assistant Professor) in Chemical Engineering.
1960–2000	University of Michigan, Department of Chemical Engineering, Instructor through Professor.
1971–1977	Chairman, Department of Chemical Engineering, University of Michigan.
1989–1992	Arthur F. Thurnau Professor.
1990–1994	Assistant Dean for Admissions and Instruction, College of Engineering.
2000–	Arthur F. Thurnau Professor Emeritus.

### University Degrees (all in chemical engineering)

<i>Date</i>	<i>Institution</i>	<i>Degree</i>
1954	University of Cambridge	B.A. (with First-Class Honors)
1956	University of Michigan	M.S.E.
1960	University of Cambridge	M.A.
1963	University of Michigan	Ph.D.
1994	University of Cambridge	M.Eng.

### Honors and Awards

<i>Dates</i>	<i>Position</i>
1951	Associate (in Organ Performance), Trinity College of Music, London.
1951	Open Scholarship to Emmanuel College, Cambridge.
1955–56	English-Speaking Union King George VI Memorial Fellowship.
1966	University of Michigan Class of 1938E Distinguished Service Award.

1967	University of Michigan Chapter of Phi Lambda Upsilon, Outstanding Teaching Award.
1970	American Foundrymen's Society, Steel Division, Outstanding Paper Award.
1975–1992	Listed in <i>Who's Who in America</i> .
1979–	Listed in <i>Dictionary of International Biography</i> .
1980	Recipient of First Annual University of Michigan College of Engineering Excellence in Teaching Award.
1981	Service-Playing Certificate, American Guild of Organists.
1987	Amoco Foundation University of Michigan Good Teaching Award.
1988	Tau Beta Pi Michigan Gamma Chapter Outstanding Service Award.
1991	Listed in <i>American Men and Women of Science</i> .
1991	Best Paper Award (with T.X. Hou and R.D. Pehlke), American Foundrymen's Casting Congress.
1995	U–M Chemical Engineering Department Teaching Excellence Award.
1996	Tau Beta Pi Michigan Gamma Chapter Outstanding Teaching Award.
1997	College of Engineering Excellence in Service Award.

### Research Interests

Numerical methods and their solution of engineering problems, with applications in the co-extrusion of polymers through dies, atomization of paint sprays, heat transfer in metal-castings, injection-molding of fiber-filled polymers, stability of paint films, and Joule-Thomson cooling in underground storage of natural gas. Solution of partial-differential equations using the finite-element method. Chairman or cochairman of 21 doctoral students, 1957–2000.

### Books Published

1. *Applied Numerical Methods*, (with B. Carnahan and H.A. Luther), xvii + 604 pp., Wiley, New York (1969).
2. *Digital Computing and Numerical Methods with FORTRAN-IV, WATFOR, and WATFIV Programming*, (with B. Carnahan), xi + 477 pp., Wiley, New York (1973).
3. *FORTRAN for the Macintosh and IBM PS/2*, (with B. Carnahan), x + 486 pp., published by the authors, Ann Arbor, Michigan (1994).
4. *Pipe Organs of Ann Arbor* 160 pp., published by the author, Ann Arbor, Michigan (1995).
5. *The Macintosh, the PC, and Unix Workstations*, (with B. Carnahan), xiv + 734 pp., published by the authors, Ann Arbor, Michigan (1996).
6. *Chemical Engineering Fluid Mechanics*, xiv + 594 pp., Prentice Hall (1999).
7. *A Century of Chemical Engineering at the University of Michigan*, xx + 642 pp., with 560 photographs, published by the Department of Chemical Engineering, University of Michigan (2002).
8. *Chemical Engineering Fluid Mechanics, Second Edition, with Microfluidics and CFD*, xvii + 755 pp., Prentice Hall (2006).