

## Curriculum Viate of Jyh-Yuan Chen (J.-Y.)

### **Professional Experience:**

<i>Vice Chair</i>	2012-present
<i>Professor</i>	1999-present
<i>Associate Professor</i>	1993-1999
<i>Assistant Professor</i>	1991-1993
Department of Mechanical Engineering, University of California Berkeley, California	
<i>Senior Member of Technical Staff</i>	1985-1991
Combustion Research Facility, Sandia National Laboratories Livermore, California	
<i>Research Assistant</i>	1981-1985
Sibley School of Mechanical and Aerospace Engineering Cornell University, Ithaca, New York	
<i>Senior Engineer</i>	1979-1981
Boeing Commercial Airplane Company Seattle, Washington	
<i>Research Assistant</i>	1977-1979
Sibley School of Mechanical and Aerospace Engineering Cornell University, Ithaca, New York	

### **Degrees Awarded:**

Ph.D.	Cornell University	1985
M.S.	Cornell University	1979
B.S.	Tsing Hua University (Taiwan)	1977

### **Professional Society:**

Combustion Institute

### **Honors and awards:**

Best Paper at 1987 AIAA Aerospace Technical Meeting with R.W. Dibble

Best paper at 1999 ASPAC meeting with Rioji Homma

Fellow of Institute of Physics, UK

### **Journal Editorial Services:**

Editor Board of Combustion Theory and Modelling

Editor Board of International Journal of Dynamics of Fluids

Combustion Institute Board of Executive Committee, Western States

Assocaite Editor:Journral of Aeronautics, Astronautics, and Aviation

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Professor J.-Y. Chen has near thirty years of experience on research of combustion processes after Ph.D. degree and two years of practical engineering with Boeing aircraft company. His research topics include air pollution, supersonic combustion, reduced reaction mechanisms, soot formation, flame extinction and re-ignition, applications of catalysts to combustion processes. Professor Chen earned his Ph.D. degree from Cornell University in 1985 with his thesis research on modeling of turbulent reacting flows. Since then, he has worked at Sandia National Laboratories Combustion Research Facility at Livermore as a senior scientist staff member for six years. During this period, he continued and expanded his numerical modeling work in many areas of turbulent reacting flows. This research included development of realistic chemical kinetics for Probability Density Function (PDF) methods, reduced reaction mechanisms,

turbulent mixing models, and models for interactions between turbulence and chemical kinetics. These model developments have been applied to studies of combustion in supersonic flows, soot formation in turbulent flows, flame extinction and re-ignition, and  $\text{NO}_x$  formation in turbulent flames. Many of these topics are related to gas turbine combustion. Professor Chen joined the faculty of Mechanical Engineering Department of University of California, Berkeley, in the Fall of 1991. His current research focuses on combustion-generated pollutants in laminar and turbulent flames, catalyst combustion, multi-component droplet combustion, homogeneous charge ignition and GDI engines, and large eddy simulations of turbulent flows, reduced chemistry for transportation fuels, and microwave assisted combustion. Professor Chen has co-authored one textbook of combustion and some one hundred and twentyfour journal reviewed papers of various topics in combustion and fluid mechanics.