Raymond K. Yee, Ph.D., P.E.
Professor
Mechanical Engineering Department
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SUMMARY

A strong background in mechanical design, reliability and safety evaluations with broad skills & knowledge in machine design, fracture and fatigue evaluation, and finite element analysis & simulation. Over ten (10) years of industrial and research experience in Silicon Valley and fifteen (15) years of academic teaching with six (6) years of academic leadership experience as Associate Chair and ME Program Director. By virtue of education and experience, equally adept in management, teaching, engineering design, applied research, and expert witness testimony services.

EDUCATION

1990 Ph.D., Mechanical Engineering, University of California, Berkeley, California.
Dissertation: Shear Localization and Ductile Fracture in Metal Cutting

1981 M.S., Mechanical Engineering, University of California, Berkeley, California.
Master's Research Project: Fracture Behavior in Mode II Fatigue Cyclic Loading

1980 B.S., Mechanical Engineering, California Polytechnic State University, San Luis Obispo, California (Graduated with Highest Honors).

PROFESSIONAL CREDENTIAL

- Registered Professional Engineer (P.E. in Mechanical Engineering), State of

2006 – 2010 Department Associate Chair & Professor San Jose State University, San Jose, California
Director of Product Design Laboratory

- In the Mechanical & Aerospace Engineering Department, worked closely with the Department Chair on various leadership roles and administrative assignments such as on Department budget and operation, Chair of the U/G Academic Advising Team, representative to the College of Engineering Council of Chair meetings/retreats, faculty recruitment/justification, P/T faculty appointments, staff hiring, semester class scheduling, freshmen/transfer students advising, new graduate student information forum, and also acted as Chair to run Department business when the Chair absent. As a faculty, teach undergraduate and graduate courses, supervise graduate students on theses/projects, conduct research, and provide academic advising to students.

2000 – 2006 Associate Professor San Jose State University, San Jose, California
Director of Product Design Laboratory

- In the Mechanical & Aerospace Engineering Department, teach undergraduate and graduate courses, conduct research and laboratory development, serve in various committees on campus, supervise graduate students on thesis and research, and provide academic advising to students.

1997 - 2000 Adjunct Professor for Engineering Transfer Program Laney College, Odu2nos -2(d5g1)-4(iBDC BT [(O)ovi)-t1(.)]TJ EMCr0 12 162 4TJ ET 162 437.6sn0

COURSES DEVELOPED/TAUGHT

Graduate Courses:

- Product Design & Development (ME 297)
- Applied Stress Analysis (ME 260)
- Precision Machine Design (ME 250)
- Computer-Aided Mechanical Engineering Design (ME 265)
- AE and ME Master's Project/Thesis (ME 295A/B & 299)

Undergraduate Courses:

- Mechanical Engineering Design: Synthesis and Analysis (ME 154)
- Mechanical Systems Design (ME 157)
- Senior Design Project I and II (ME 195A/B)
- Engineering Mechanics (Engr 35 at Laney College campus)

PROFESSIONAL MEMBERSHIP & ACTIVITIES

- Committee Member of the American Society of Mechanical Engineers and American Petroleum Institute (ASME/API) Joint Fitness-for-Service Standard Committee

- Member of the Undergraduate Curriculum Committee in the COE
- Member of the Assessment Committee in the COE
- Member of the University General Education Advisory Panel (GEAP) Committee on Critical Thinking

RECENT PUBLICATIONS

Research and Innovative Design of a Zero-Emissions Vehicle by Multidisciplinary Student Teams in Multi-Years, Proceedings of the IEEE Green Energy and Systems Conference, Long Beach, CA, November 25, 2013 (paper submitted for the Conference).

Design of Zero-Emissions Vehicles by Multidisciplinary Student Teams in Multi-Years – A Model for Engineering Design Education, Proceedings of the ASME 2010 International Design Engineering Technical Conferences (IDETC), Montreal, Quebec, CANADA, August 15-18, 2010.

Three Dimensional Finite Element Analysis of Weld Overlay Application on a Plastically Formed Feeder Tube, Proceedings of the 34th Annual Conference of the Canadian Nuclear Society and the Canadian Nuclear Association, Montreal, QC, CANADA, May 24-27, 2010.

Weld Overlay Size Sensitivity on Residual Stresses in a Welded Pipe, Proceedings of the ASME Pressure Vessels and Piping Division Conference, Chicago Illinois, July 27-31, 2008.

A Finite Element Study of Geometric Modifications to Reduce Thermal Mismatch Curvature in Wafer Bonding, the ASME International MeT0 1 Tf 27.32 0 2nBoWeA(l)-2( )]T(t)-2(iP-2(s)-11(gs)-1())-3

Structural Behavior of Storage Rack Design Under Earthquake Ground Motion, the Disaster Resistant California Conference 2003 in San Jose, California, April, 2003.

Significance of Mechanical Design Laboratory on Student Projects, A Preliminary Study, the American Society for Engineering Education (ASEE) Annual Conference in Montreal, CANADA, June 2002.

The Benefits of Engineering Design Projects for Engineering Curriculum, presented at the ASEE/Pacific Southwest (PSW) Section Conference in Fresno, California, April, 2002 (published in Conference Proceedings in "Creative Concepts in Engineering Instruction" session).

Prediction of High Energy Piping Creep Relaxation, Transaction of the ASME Journal of Pressure Vessel Technology, Vol. 122, No. 4, November 2000, pp 488-493.

Engineering Evaluation of Column Continuity Plate Detail Design and Welding Issues in Seismic Moment Resisting Frame Connections, presented at the International Conference on Welded Construction in Seismic Areas in Maui, Hawaii, October 1998.

TEXTBOOK/MANUSCRIPT REVIEW

Wiley Publishing Company book reviewer for the 4th edition of the mechanical design textbook titled Fundamentals of Machine Component Design by Robert Juvinall and Kurt Marshek.

Prentice Hall Publishing Company book reviewer for the 4th edition of the mechanical design textbook titled Machine Design, An Integrated Approach by Robert L. Norton.

ASME/API FITNESS-OF-SERVICE JOINT STANDARD

Served in the ASME Fitness-for-Service Committee at the national level and contributed to the development of the ASME/API Fitness-of-Service Joint Standard document for pressure equipment (such as energy processing pressure vessels) used in all industries worldwide. The Standard was released in 2007. The Standard consists of several hundred pages in volume and has 12 Parts, and it provides national impact to the engineering community. This document has become an invaluable resource for practitioners to assess equipment integrity and safety engineering.

PARTIAL LIST OF GRADUATE STUDENT SUPERVISION A S COMMITTEE CHAIR

No,	Students	MS Thesis/Project Title
1	Hok Chan	Structural Optimization of the Hybrid Human Powered Vehicl

37	Daniel Aldama	Computational Model to Predict Wear in Total Knee Replacement
38	Richard Ling	Suspension System Design for a 3-Wheel Electric Scooter
39	Wai Kun Lai	Analysis of Dynamic Stability of TCII 3-Wheel Electric Scooter
40	Lam Duong	Drive-train Design and Integration for an electric 3-Wheel scooter
41	Hans Tuft	Design of a Piezoelectric Energy Harvesting Device for Automotive Suspension-based on-board Power Generation
42	Robert Jones	Prediction of Residual Stress and Distortion in Heat Treated Machined Aluminum 6061 and 7075