

Frank C. Owen

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PROFILE

- **Professional Mechanical Engineer:** Technically competent over a broad range of Mechanical Engineering fields, primarily Control Theory, System and Product Design, Machine Dynamics and Vibrations, Dynamics/Modeling/Simulation of Physical Systems
- **Engineering Software Applications:** Adept at the application and use of a wide variety of engineering software design and analysis tools, including dynamic systems modeling and control software, control software for machine control, finite element software, solid modeling software, spreadsheets for engineering applications, general computer programming tools, Android programming with Java
- **Modeling and simulation:** Hydraulic, pneumatic, mechanical, electrical, and hybrid systems
- **Life-Long Learning:** I enjoy new learning challenges and broadening my engineering knowledge and skills
- **Foreign languages:** Fluent in German and Italian, good knowledge of French, reading capability in Spanish
- **Aviation:** Licensed private and commercial glider pilot

EXPERIENCE

- **Computer Simulation and Control of Machines:** Simulation and control of electric, hydraulic, pneumatic servo control systems, simulation and control of machines with Matlab/Simulink, with Java on Android platforms, and with Arduino microprocessors
- **Robotics Control:** Control and end-effector path management of a large, hydraulically-actuated robot, programming in C++ and Java
- **Steam Power Plant Simulation:** Simulation of a large, coal-fired, steam power generation station
- **Steam Turbine Design via Computer:** Development of finite element model generation for steam turbine design, programming in IDEAS, Fortran, and Excel
- **Ship Stability via Spreadsheets:** Development of spreadsheet-based ship loading, trim and stability system
- **International Training:** Mission to Nigeria to teach Nigerian National Petroleum Co. executives the use of software tools for logistics and management. Three years of teaching ME in German at German universities.
- **Forensic Engineering:** Expert witness investigation for product liability/personal injury. In depth understanding of dynamics at work in vehicular collisions.

EMPLOYMENT

- **Co-founder, polyXEngineering, Inc., San Luis Obispo, California, 2016-present**
polyXEngineering, Inc. is a group of experts in all fields of Mechanical Engineering. The corporation has access to specialized laboratories, instrumentation, and expertise across the broad field of Mechanical Engineering.
- **President, Alpha Omega Engineering, Inc., San Luis Obispo, California, 2011-2016**
Engineering consultant in automation, system dynamics, control, design, forensic engineering.
- **Mechanical Engineering Professor, California Polytechnic State University, San Luis Obispo, California, 1998-Present**
Teach classes in Control Systems, Design, Vibrations, Dynamics, Machine Design and have managed countless industrial design projects
- **Research Engineer, Laboratorio di Automatica, University of Bergamo, Bergamo, Italy, 2014-2016**
Applied research on industrial projects involving automation and control of machinery. Modelling and simulation of mechanical systems to be controlled by automatic controllers.
- **Mechanical Engineering Guest Professor, Hochschule Karlsruhe – Technik und Wirtschaft, Karlsruhe, Germany, 2009-2010**
Taught classes in Technical Dynamics, Control Systems, and Simulation
- **Mechanical Engineering Professor, Fachhochschule München, Munich, Germany, 2005-2007**
Taught classes in Technical Dynamics and Control Systems and manage design projects in English and in German
- **Consultant, 1998-Present**
Various industrial clients, improvement of manufacturing methods, destructive testing of prototype products, analysis of hydraulic control system for oil well drilling operation, engineering analysis and design of injury prevention systems for elderly people prone to falling
- **Software Development/Test Engineer, Fisher Rosemount, Inc., Austin, Texas, 1997-8**
HAWK Site, DeltaV process control system, responsible for analyzing and testing DeltaV Function Blocks
- **Mechanical Engineering Professor, Maine Maritime Academy, Castine, Maine, 1989-1995**
Taught classes in Power Plant Systems, Software Tools for Engineering Design, Thermodynamics, Ship Design, Yacht Design
- **Project Manager for Project Probe, American Electric Power, Columbus, Ohio, Summer 1995**

	<p>Managed design projects for senior engineering students at Gavin Station, Cheshire, Ohio</p> <ul style="list-style-type: none"> ▪ Senior Software Engineer, Computervision Corp., Bedford, Massachusetts, 1986-7 Programmed special applications for state-of-the-art CAD system, programming in Fortran and C ▪ Rotor Design Engineer, General Electric Co., Medium Steam Turbines, Lynn, Massachusetts, 1984-6 Design of steam turbine rotors for industrial and shipboard applications, development of computer software for turbine design ▪ Senior Structural/Software Engineer, Advanced Marine Enterprises, Arlington, Virginia, 1984-6 Developed software for ship hull design, also FE analysis of shipboard structures ▪ Mechanical Design Engineer, J. Ray McDermott & Co., New Orleans, Louisiana, 1978-80 Design of engineering systems for offshore oil production, field engineer for construction and installation of oil platform in Dubai and Bombay High North oilfield
<p style="text-align: center;">EDUCATION</p>	<ul style="list-style-type: none"> ▪ PhD Mechanical Engineering, University of Texas at Austin, 1998 ▪ MS Mechanical Engineering, Oregon State University, Corvallis, 1984 ▪ BS Mechanical Engineering, Mississippi State University, Starkville, 1978 ▪ BA History, Duke University, Durham, North Carolina, 1975
<p style="text-align: center;">PROFESSIONAL AFFILIATIONS</p>	<ul style="list-style-type: none"> ▪ Licensed Professional Engineer – California license M35733, Maine license 6250 ▪ Society of Automotive Engineers ▪ Verein Deutscher Ingenieure ▪ California Association of Accident Reconstruction Specialists – Former newsletter editor ▪ ACTAR Accreditation – Full accreditation (#2619) as a Traffic Accident Reconstructionist by The Accreditation Commission for Traffic Accident Reconstruction (ACTAR) ▪ Licensed private pilot

References available upon request