**Dr. James W. Davidson** 832-266-8780 jamesdavidsonconsulting@gmail.com

Education

Ph.D. Engineering Structures, Dynamics & Materials U.C.L.A. 1974

M.Sc. Engineering Structures, Dynamics & Materials U.C.L.A. 1969

B.Sc. Engineering Structures & Mechanics U.C.L.A. 1966

A.A. Engineering Santa Monica CC 1964

Academic Experience

Texas State University Ingram School of Engineering Assistant Prof. of Practice 2023-Present

Texas State University Ingram School of Engineering Lecturer 2019-2023

Texas State University Ingram School of Engineering Adjunct Professor 2016-2019

Non-Academic Experience

## Management & Technology Consultant 1995 – Present

* EDM International, Composite Materials Technology/Newmark, Corrosion Controllers, PowerTrusion, U.S. Mergers & Acquisitions, Ameron International/National Oilwell Varco, Lucintel and others. Gave national and international lectures and seminars on composite pipe and poles.

## Ameron International/NOV 2006 – 2012

## Product Manager -

* Created a new product line of FRP utility poles called uPoles and developed the market. Earned a patent on the uPole manufacturing materials and processes.

## Sargent Industries/Airtomic

## Director of Engineering, Quality, and New Product Development 2004-2006

* Responsible for the strategy and operational aspects of technology and manufacturing development, product application and commercialization as well as the quality activity.

**Shakespeare Composite Products 1995-2004**

**Sr. Vice President of Technology**

* Responsible for the commercialization of new products from each major manufacturing process. Re-engineered process equipment to improve quality and increase production out-puts. Developed state-of-the-art computerized controls for composite filament winding, pultrusion, and coating processes.

**ODESSA ENGINEERING 1993 - 1995**

**Chief Operating Officer**

 Turned a $5.0 million computer and systems business around from a significant loss to solid profit, with a sales increase to $8.3 million. Instituted new technical project management systems, financial controls and a new MRP system as a first major step. Restructured the organization to provide for the increased sales with no growth in headcount.

**CIBA-GEIGY COMPOSITES DIVISION 1990 - 1993**

**Vice-President, General Manager**

**Vice-President, World-Wide Technology and New Ventures**

* Increased sales from $53 million to $65 million in two years in a multi-plant mixed product operation (Anaheim, CA - Miami, FL - Bellingham, WA). Improved bottom line by $8 million.

 Led the implementation of a Total Quality Management approach achieving the highest Malcolm-Baldrige related scores in the composite materials industry as well as swift approval to Boeing's D1-9000 quality standard at multiple plant sites.

 Responsible for the prioritization, organization and conduct of world-wide R&D projects between six divisions. Led a staff of technical managers, chemists, engineers and technicians in the development of key new resin based materials, processes and products for future business.

* Provided overall leadership in the development of floor panels, fiberglass and carbon prepregs for windmill blades, bicycles, aerospace and building components, radomes and sporting goods, as well as honeycomb and weaving technology, and a wide variety of other commercial and industrial composite components.

**CTEC/CFAN & ROHR INDUSTRIES 1985-1990**

**President – CTEC/CFAN**

 Set up a joint venture startup manufacturing company between GE and Rohr called CTEC (Composite Technology Engine Components…now named CFAN) to serve the international gas turbine engine community, having full technical and P&L responsibility.

* Created and staffed the high technology team-based organization at all levels. Plant now at 700 people.

**Director of Engine Components – Rohr Industries**

 Led a technology development organization in a business segment for Rohr Industries in composite and metal gas turbine engine components as an entry into this $500 million business that includes customers such as GE, Pratt & Whitney, Rolls-Royce, SNECMA, Allison, and Garrett.

**HITCO FABRICATED COMPOSITES 1980 - 1985**

**Director, Research and Development**

 Managed a staff of 90 scientists, engineers and technicians, some of which were involved in limited production of fabricated products and pre-impregnated composite fabric materials.

 Developed new processes and products in most forms of advanced composite materials using fiberglass, quartz and carbon fiber reinforcements.

* Processes included fiber heat treatment, weaving, wet winding, prepregging, RTM and RIM, state of the art tooling techniques, machining, and material and product inspection and testing.

**AMERON International 1970-1980**

**Manager of Special Projects**

 Worked under the V.P. of Engineering to develop composite filament winding and molding processes, coating processes, machinery and tooling, and precision machining operations.

* Created new business opportunities in the industrial products sectors related to steel and concrete poles, concrete and fiberglass piping, coatings, and construction products.
* Developed financial models for business investment and program management models for project control.

**NORTH AMERICAN ROCKWELL 1966-1970**

**Stress Analysis Engineer**

 Co-Author of the “Structural Design Guide for Advanced Composite Applications” for the Advanced Composites Division of the Air Force Materials Laboratory, Air Force Command, Wright-Patterson Air Force Base, Ohio

* Worked on further structural enhancement of the X-15 rocket plane and Apollo program capsule heat shields.

**TX State Courses Taught by Dr. James Davidson**

**FALL 2024 (scheduled) - Assistant Professor of Practice**

* MFGE 4390.001 Senior Design for Manufacturing Engineering
* MFGE 4390.L01 Lab for Senior Design for Manufacturing Engineering
* ENGR 2300.002 Engineering Materials
* ENGR 2300.003 Engineering Materials

**SPRING 2024 - Assistant Professor of Practice**

* MFGE 4391.251 Senior Design for Manufacturing Engineering
* MFGE 4391.L01 Lab for Senior Design for Manufacturing Engineering
* ENGR 2300.252 Engineering Materials
* ENGR 2300.253 Engineering Materials

**FALL 2023 - Assistant Professor of Practice**

* MFGE 4390.001 Senior Design for Manufacturing Engineering
* ENGR 3311.002 Mechanics of Materials

**SPRING 2023 - Lecturer**

* ENGR 2301.251 Statics
* ENGR 2301.252 Statics
* ENGR 2301.253 Statics
* ENGR 3311.253 Mechanics of Materials

**FALL 2022 - Lecturer**

* ENGR 2301.001 Statics
* ENGR 2301.002 Statics
* ENGR 2301.003 Statics
* MFGE 4367.001 Polymers and Polymer Processing

**SPRING 2022 - Lecturer**

* CE 1210.252 Introduction to Smart Infrastructure
* ENGR 2301.251 Statics
* ENGR 2301.252 Statics
* ENGR 2301.253 Statics

**FALL 2021 - Lecturer**

* CE 1210.002 Introduction to Smart Infrastructure
* ENGR 2301.001 Statics
* ENGR 2301.002 Statics
* ENGR 2301.003 Statics

**SUMMER 2021 - Lecturer**

* ENGR 2300.501 Engineering Materials

**SPRING 2021 - Lecturer**

* ENGR 3311.253 Mechanics of Materials
* ENGR 2301.251 Statics
* ENGR 2301.252 Statics
* ENGR 2301.253 Statics

**FALL 2020 - Lecturer**

* ENGR 3311.003 Mechanics of Materials
* ENGR 2301.001 Statics
* ENGR 2301.002 Statics
* ENGR 2301.003 Statics

**SPRING 2020 - Lecturer**

* ENGR 2300.251 Engineering Materials
* ENGR 2300.253 Engineering Materials
* ENGR 3375.252 Mechanics Statics

**FALL 2019 - Lecturer**

* ENGR 2300.003 Engineering Materials
* ENGR 3375.001 Mechanics Statics
* ENGR 3375.003 Mechanics Statics
* MFGE 4367.001 Polymers and Polymer Processing

**SPRING 2019 - Lecturer**

* ENGR 2300.252 Engineering Materials
* ENGR 3375.252 Mechanics Statics
* MFGE 4367.251 Polymers and Polymer Processing

**FALL 2018 - Lecturer**

* ENGR 2300.003 Engineering Materials
* ENGR 3375.003 Mechanics Statics
* MFGE 4367.001 Polymers and Polymer Processing

**SPRING 2018 – Adjunct Professor**

* ENGR 2300.252 Engineering Materials
* MFGE 4367.251 Polymers and Polymer Processing

**FALL 2017 – Adjunct Professor**

* ENGR 2300.003 Engineering Materials
* MFGE 4367.001 Polymers and Polymer Processing

**SPRING 2017 – Adjunct Professor**

* ENGR 2300.251 Engineering Materials
* MFGE 4367.251 Polymers and Polymer Processing

**FALL 2016 – Adjunct Professor**

* ENGR 3375.003 Mechanics Statics

**SPRING 2016 – Adjunct Professor**

* MFGE 4367.251 Polymers and Polymer Processing