



PETER CHEN, M.S.M.E., M.B.A., P.E., CFEI, CVFI

PROFESSIONAL BIOGRAPHICAL OUTLINE

BACKGROUND

Mr. Chen earned a Master of Science and a Bachelor in Mechanical Engineering from the Georgia Institute of Technology, where he focused on Tribology, the study and application of the principles of friction, lubrication and wear. He has established his career in the field of forensic engineering in areas such as: fire cause and origin investigation; product failure and liabilities; accident reconstruction; car and truck failure analysis; industrial equipment (manufacturing, production, assembly, construction and HVAC); elevator/escalator failure analysis; worksite safety; aviation; medical/rehabilitative and exercise equipment; warnings and instruction; and transportation, including railroad mishap investigation.

Mr. Chen's involvement with forensic engineering began at Pratt & Whitney, the country's leading military jet engine manufacturer, where he held numerous roles with increasing responsibility during his 11 years there. He then worked for CED Investigative Technologies, where he investigated product liability, industrial machinery, accident reconstruction, fire cause and origin, and slip, trip and fall cases prior to joining ARCCA.

Mr. Chen is also a contributing author for a New York PE-approved training provider and a canvass committee member for ANSI/BIFMA.

SPECIALITIES

Mr. Chen is a Mechanical Engineer, Fire Origin and Cause expert, Construction and Industrial Equipment expert, and an ACTAR-certified Accident Reconstructionist for ARCCA, Inc.

AREAS OF EXPERTISE

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| Mechanical Engineering | Mechanical Equipment Evaluations |
| Machine Analysis and Guarding | Analysis and Testing |
| Human Factors Analysis | Accident Reconstruction |
| Fire Origin & Cause Determination | Aviation/Gas Turbine Engine Systems |
| Product Liability | Tribology |
| Automobiles | Motorcycles |
| Trains | Pedestrian Impact |
| Workplace Safety / Fall / Aerial Lifts | Elevators/Escalators |
| Chairs and Furniture | Doors and Electronic Doors |

EDUCATION

- Master of Business Administration, University of Hartford, 2003
- Master of Science, Mechanical Engineering, Georgia Institute of Technology, 1995
- Bachelor of Mechanical Engineering, Georgia Institute of Technology, 1993

PROFESSIONAL EXPERIENCE

Mechanical Engineer, April 2015 to Present

ARCCA, Incorporated, Penns Park, Pennsylvania

Mechanical Engineer, November 2006 to 2015

CED Investigative Technologies, Shelton, Connecticut

- Forensic Engineering in multiple fields including Fire Cause and Origin, Motor Vehicle Accidents, Product Liabilities, Heavy Equipment Accidents, Premises Liabilities, Railroad Crossings, Signage, and Line of Sight.

Mechanical Engineer, December 1995 to 2006

Pratt & Whitney, Division of United Technologies, East Hartford, Connecticut

Engineering Manager, 2003-2006

Combustor & Nozzle Modules

- F135 IFR and FFR Turbine Exhaust Case Module IPT Leader, Combustor and Nozzle Module Center. Multidisciplinary team leader for engine performance critical hardware module. Execute manufacturing, engineering, and financial processes to design, manufacture, and deliver development and flight quality hardware on time, on budget, and positive variances to EVMS. Team leadership growth to Cost Account Manager of multi-million dollar labor and hardware programs. Role growth to include engine validation/verification reporting, flight clearance, and production.
- F135 IFR LE and Fwd Rings IPT Leader, Combustor and Nozzle Module Center. Multidisciplinary team leader for engine performance critical hardware. Execute manufacturing, engineering, and financial processes to design, manufacture, and deliver development and flight quality hardware on time, on budget, and positive variances to EVMS.

Design Engineer, 2001-2003

Combustor & Nozzle Modules

- F135/JSF Turbine Exhaust Case Structures and Design Engineer, Combustor and Nozzle Module Center. Conceptual, Preliminary, and Detailed Design Phase structural analysis of Block 1 TEC CTOL and STOVL Cold Frame. Mechanical design of Block 1 TEC STOVL Cold Frame. Successful execution of Engineering Standard Work to deliver milestones on time and with minimal re-work.

Analytical Engineer, 1999-2001

Mechanical Components

- JSF CIPT Lubrication Systems Engineer, Mechanical Components. Lubrication Systems engineer and analytical lead for Joint Strike Fighter program. Presented Boeing and Lockheed Martin CDA post-STOVL AMT ACI Flight Clearance Reviews to military customer. Performed a majority of the post-STOVL AMT ACI of Mechanical Systems hardware and wrote documentation. Responsibility also included systems analysis and planning for full production, test coverage and data reduction for flight test, editing Flight Test Letter 4008 and 4006 work packages belonging to mechanical components, authorship of EI449B Oil Consumption check run procedures, and authorship of lube systems portion of the Acceptance Test Plan.
- Analytical Engineer, Mechanical Components Business Center. Lubrication Systems engineer for JSF, F100, F119, and commercial engine rig programs. Responsibility includes systems analysis, test coverage, data reduction, and minor hardware coordination. Heat transfer analysis of F100 telemetry package design and author of test run procedure to maintain package health. Author of JSF telemetry package test run procedure to maintain package health.

▪ **Product Development, 1997-1999**

Engine Design, Testing, and Manufacturing

- Product Engineering Development Rotation. Rotation 4: Propulsion Systems Analysis Flight Test and Development Test Engineering. Rotation 3: BU330 Military Disk Manufacturing Engineering. Rotation 2: Vibrations Group of the Rapid Component Response Division of Materials Engineering. Rotation 1: OME Externals Design Engineering.

▪ **Analytical Engineer, 1995-1997**

Thermal Management Systems/Lubrication Systems

- Analytical Engineer Grade 42-44, Mechanical Components Component Center. Thermal Management System analysis and 2/3 and 4/5 bearing compartment thermal analysis for the Joint Strike Fighter. Analytical bearing analysis and lube system component analysis for the PW-F100-100, 220, 229. Project engineering for the TF30 and TF33.

Graduate Research Assistant, 1993-1995

Georgia Institute of Technology, Dr. Jeffrey Streater

- Design, research, and instrumentation in tribology (friction, lubrication, and wear). Focus on tribology of magnetic information storage devices. Teaching assistant to undergraduate classes.

PATENT

- Wong, Joey, Chen, Peter, Stewart, Dana P., Waxman, David N., Mike, Michael A. Gas turbine engine systems involving I-beam struts. U.S. Patent 8,312,726, filed December 21, 2007, and issued November 20, 2012.
- Wong, Joey, Chen, Peter, Stewart, Dana P., Waxman, David N., Mike, Michael A. Gas turbine engine systems involving I-beam struts. U.S. Patent 10,132,196, filed June 29, 2012, and issued November 20, 2018.

PUBLICATIONS

- "Static Numerical Analysis of the Fully-Flooded Magnetic Head-Disk Interface", 1995
- Co-Author of Initial Releases of JSF Engine Acceptance Test Plan.
- Contributor to Altitude Verification Testing Final Report.

PROFESSIONAL QUALIFICATIONS

- Registered Professional Engineer, State of Connecticut, License No. 22776
- Registered Professional Engineer, State of Rhode Island, License No. 8806
- Registered Professional Engineer, Commonwealth of Massachusetts, License No. 47205
- Registered Professional Engineer, State of New York, License No. 086231
- Registered Professional Engineer, State of New Jersey, License No. 24GE05427500
- Certified Fire & Explosion Investigator and Certified Vehicle Fire Investigator, Registration No. 11967-5832
- Secret Security Clearance Available
- JLG Certified Equipment Trainer (2007-2017)
- Genie Certified Equipment Trainer (2017-present)
- Certified Crash Data Retrieval (CDR) Analyst
- 2008 IAAI Forensic Fire Scene Reconstruction Seminar
- Accredited Traffic Accident Reconstructionist, ACTAR 2053
- Motorcycle Safety Foundation (MSF) Basic Ridercourse – CT DOT Rider Education Program (ConREP) – State of CT Motorcycle license endorsement– September, 2019.
- NYSTARS Commercial, Auto and Light Truck Vehicle Inspection, Post-Accident Inspection, Failure Modes, and Tire Investigation Seminar – March, 2010
- IPTM Pedestrian and Bicycle Crash Investigation Training



- IPTM Motorcycle Crash Investigation Training
- OSHA 10 – Construction Industry - October 2011, November 2016
- OSHA 30 – General Industry - April 2012
- SB Disaster Relief New England Team Leader

PROFESSIONAL SOCIETIES

- American Society of Mechanical Engineers (ASME)
- Society of Automotive Engineers (SAE)
- Human Factors and Ergonomics Society (HFES)
- National Association of Fire Investigators (NAFI)
- National Association of Professional Accident Reconstruction Specialists (NAPARS)

SKILLS

Fire Dynamics Simulator (FDS)

Unigraphics/Autocad – Solid Modeling

Rotor Dynamics/Roller Element Fundamentals

ISO 9000

ANSYS – Finite Element Analysis

Root Cause Corrective Action

Enterprise Resource Planning