



EDUCATION

- California Polytechnic State University, San Luis Obispo
 - Bachelor of Science, Mechanical Engineering, 2020
 - Master of Science, Fire Protection Engineering, 2023

PRACTICE AREAS

- Fire, Life Safety, and Egress Assessment
- Computational Fluid Dynamics and Zone Fire Modeling
- Smoke Control System Design, Analysis, and Inspection
- Performance-Based Design
- Wildland Fire Analysis
- Loss Investigation and Litigation Support
- Egress Modeling and Analysis
- Building Code, Fire Code, and NFPA Codes and Standards Consulting
- Small-Scale Fire Research

PROFESSIONAL AFFILIATIONS

- National Fire Protection Association
- Society of Fire Protection Engineers

CONTACT

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EXPERIENCE

Jacob David has contributed to projects involving computational fluid dynamics (FDS) and zone fire modeling, egress modeling and analysis, smoke control system design and inspection, performance-based designs, forensic fire analysis and litigation support, building code/fire code application and analysis, and wildland fire exposure analysis. Mr. David's unique perspective on fire protection engineering was established by conducting research that involved small-scale fire testing of timber construction materials during his graduate studies.

REPRESENTATIVE PROJECTS

Fire, Life Safety, and Egress Assessment

- Willis Tower Observation Deck - Chicago, IL: Simulation-based egress analysis (Pathfinder)
- Lubbock County Expo Hall - TX: Simulation-based egress analysis of stadium seating (Pathfinder)
- Aloha Stadium - Honolulu, HI: Life safety assessment and egress analysis of concert venue
- Central Pacific Bank - Honolulu, HI: Life safety and egress analysis for change in use
- Victory Pass/Arica O&M Building - Desert Center, CA: Fire protection and life safety assessment, building code analysis, and hazardous materials classification
- Verizon Telecommunications Building - Lowell, MA: Life safety assessment and egress analysis
- High-Rise Residential Condominium Buildings - Honolulu, HI: Fire protection and life safety systems assessment; building code analysis
- Vi at La Jolla Village - San Diego, CA: Life safety analysis; emergency preparedness and fire protection plan review and development
- ORBIS - Oconomowoc, WI: Analysis of the fire performance of plastic products
- Costco - Escondido, CA: Building and fire protection system assessment; building code analysis

Computational Fluid Dynamics and Zone Fire Modeling

- Lubbock County Expo Hall - TX: Life safety assessment; smoke hazard analysis using FDS

- MARTA Rail Station Concourse - Atlanta, GA: Life safety analysis, smoke hazard analysis using FDS

Smoke Control System Design, Analysis, and Inspection

- La Jolla Innovation Center - CA: Smoke control system analysis using computer modeling (CONTAM)
- Yaamava' Resort and Casino - Highland, CA: Special inspection of smoke control system in numerous structures
- Jersey City Justice Center - NJ: Smoke control system analysis using FDS
- Signature Hotel - Fort Worth, TX: CONTAM
- One America Plaza - San Diego, CA: Smoke control system special inspection

Performance-Based Design

- Harm Reduction Center - San Diego, CA: Alternate means and methods analysis; zone fire modeling
- Ritz-Carlton Residence - Honolulu, HI: Alternative fire resistance-rated construction analysis using FDS
- U.S. Air Force Academy Visitor Center - El Paso County, CO: Alternative means and methods analysis using FDS

Wildland Fire Analysis

- San Diego Zoo Safari Park - Escondido, CA: Wildland fire consulting for renovation of elephant enclosure and viewing area

Loss Investigation and Litigation Support

- Confidential: Origin and cause investigation of fireplace fire
- Confidential: Building code analysis of apartment fire
- Confidential: Origin and cause investigation of restaurant fire
- Confidential: Hotel fire loss investigation and testing