

SKILLS: Broad and deep electro-optical engineering skill set with 35+ years of experience spanning many disciplines:

- Electro-Optical / Infrared (EO/IR) System Engineering
- Focal Plane Array (FPA) & Sensor Subsystem Design
- Engineering Leadership & Technical Management
- IR & VIS Imaging and Remote Sensing
- EO Test & Integration
- Test System Design
- Infrared Scene Projection
- Technical Proposals
- Proposals & Technical Writing
- Mentoring & Training

EDUCATION: BSEE, University of California, Santa Barbara (1988)

EMPLOYMENT: Left Coast Consulting (LCC)

President (2005 – present)

Independent electro-optical engineering consultant providing design, analysis, and system engineering support to the EO/IR, remote sensing, aerospace, electronics, and instrumentation industries. Technical director for NASA's Landsat Data Continuity Mission (LDCM — a.k.a. Landsat 8 and 9) focal plane modules, and DigitalGlobe's WorldView-3 multispectral SWIR image sensor (SWIM) and atmospheric sounder (CAVIS) modules. Prime mover in the development of advanced visible and IR imaging systems, test equipment, and related instrumentation — including advanced digital pixel IR&D. Developed and conducted highly effective one-on-one mentoring program for junior technical staff.

Raytheon Vision Systems (RVS)

Engineering Fellow (2014 – present)

Technical director for development of advanced infrared and visible image sensors and EO subsystems for airborne and space-based applications. Engineering leadership for next-generation IR camera systems, ultra-high-dynamic-range passive and active SWIR imagers, ultra-low-noise/low-background focal plane arrays, and EO modeling tools. Experienced mentor, teacher, and collaborator to early- and mid-career engineering staff.

Santa Barbara Infrared (SBIR)

Technical Director (2001 – 2005)

Lead engineer/scientist for successful test equipment firm. Responsible for technical direction of advanced EO tester development programs involving dynamic IR scene projectors (IRSPs), spectral radiometers, VIS/IR target projectors, laser range finder testers, blackbody sources, visible sources, and related products. Led development of 512² and 1024² IR scene projector systems incorporating large CMOS arrays, MEMS IR emitter structures, real-time video processing electronics, and advanced thermal subsystems. Directed development of a high-performance MWIR/LWIR spectral radiometer, and led the design of custom multi-spectral test systems for characterization of single- and multi-aperture IR, visible, and laser sensors.

Also responsible for company system engineering practices, IR&D activities, conferences, technical recruiting, engineering training, and mentoring/employee development.

Santa Barbara Research Center (SBRC)

Raytheon Infrared Operations (RIO)

Senior Principal System Engineer (1995 – 2001)

System Engineer (1988 – 1995)

FPA Engineer (1986 – 1988)

Broad experience base in infrared and visible focal plane array and sensor subsystem engineering. Led development of advanced scanning and staring focal plane systems incorporating virtually all types of detectors, preamplifiers, and electronics. Lead system engineer for NASA's Earth Observing-1 (EO-1) space-based, multi-spectral, Advanced Land Imager (ALI) focal plane system, plus numerous tactical and strategic FPA development programs. Responsible for most aspects of design, prototyping, and integration. Led development of advanced magneto-resistive sensors for automotive applications.

PATENTS: U.S. PATENT 5,402,064 - "Magneto-resistive Integrated Circuit Sensor with High Output Voltage Swing & Temperature Compensation."

PUBLICATIONS: Listing available at <http://www.leftcoastconsulting.net/Site/Publications.html>

INTERESTS: Songwriting, audio recording, photography, astronomy, gastronomy, and experimental viticulture.

REFERENCES: Available upon request.