Gregory Peter Le Sage

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SUMMARY

I am a senior RF, microwave, and systems engineer with a Ph.D. in Electromagnetics and more than twenty-eight years of experience in HFSS-based EM simulation, high-frequency measurement, antenna design, waveguide structures, high-power microwave systems, and high-power laser systems at SLAC, LLNL, and the CIA. My work spans concept development, simulation, fabrication, and validation of advanced RF systems. I have a strong record of peer-reviewed publication in RF, microwave, and electromagnetic system design, reflecting sustained technical leadership and impact.

CORE TECHNICAL STRENGTHS

- HFSS (expert), microwave structures, waveguides, resonators, antennas
- RF/microwave measurement: VNA, spectrum/network analyzers
- High-power RF systems: klystrons, modulators, high-voltage pulsed systems
- RF optimization and data analysis (Python, MATLAB, LabView)
- System-level RF architecture, troubleshooting, and validation

EXPERIENCE

SLAC National Accelerator Laboratory – Senior Electrical Engineer / Scientist
2020–2025 | Menlo Park, CA
• Designed, simulated, and validated microwave RF components including communication systems and accelerator-related RF systems
• Performed full-wave EM modeling in HFSS for complex structures, including optimization, parametric sweeps, and high-accuracy 3D field extraction
• Worked extensively with high-power RF systems: multi-hundred-kV, multi-hundred-amp modulators and klystron systems
• Built and executed high-fidelity RF measurement setups using VNAs and other advanced diagnostic instrumentation
• Led technical teams, mentored junior engineers, and coordinated cross-disciplinary design efforts

Central Intelligence Agency – Technical Officer
2004–2017, 2019–2020 | Washington, DC
• Research scientist and technology innovator supporting numerous overseas assignments
• Designed and evaluated RF and electromagnetic systems for specialized operational

technology
- Guided contractor development of technology for national security missions
- Developed miniature power systems
- Contributed engineering expertise in RF propagation, antenna design, and system-level reliability

U.S. Department of State – Information Management Specialist
2017–2019 | Afghanistan
- Operation and upgrade of overseas communication system
- Frequent executive presentations and system-improvement planning
- Technical mentoring role for others who rotated through the site on a regular basis

Lawrence Livermore National Laboratory – Electrical Engineer
1997–2004 | Livermore, CA
- Principal Investigator for development of a state-of-the-art electron injector system for a 100 MeV linac facility
- Supported advanced laser and RF experiments, including electron-beam diagnostics, ultrafast laser systems, and custom RF hardware
- Led the execution of an LLNL Strategic Initiative for Thomson Scattering
- Group leader with a programmatic role including fielding of experiments at the Nevada Test Site

EDUCATION

Ph.D., Electromagnetics – University of California, Los Angeles (UCLA)
- Minor fields: Lasers, Plasma Physics
M.S., Electrical Engineering – UCLA
B.S., Electrical Engineering – UCLA

PUBLICATIONS & IMPACT

- 7 first-author peer-reviewed journal papers
- 2,357 citations (Google Scholar)
- Research includes microwave structures, RF systems, and advanced EM modeling

ADDITIONAL SKILLS

- CAD tools (SolidWorks)
- UHV experience
- Precision machining
- Advanced 3D printing