



# Combustion

Science & Engineering, Inc.

8940 Old Annapolis Road • Suite L • Columbia • MD • 21045 -2129 • Tel: 410 / 884-3266 • Fax: 410 / 884-3267

## LEO D. ESKIN, PH.D.

### EDUCATION

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Ph.D., Mechanical Engineering (Minor in Electrical Engineering), Stanford University, Stanford, CA, 1994.

M.S., Mechanical Engineering, Virginia Polytechnic Institute and State University, Blacksburg, VA, 1981.

B.S., Mechanical Engineering (Nuclear Engineering Option), Magna Cum Laude, Virginia Polytechnic Institute and State University, Blacksburg, VA, 1980.

### DISSERTATION

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Eskin, L.D., *The Electrical Boundary Layer and Current Transfer between a Thermal Plasma and a Plane Electrode*, Stanford University, September 1993

### THESIS

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Eskin, L.D., *Application of the Monte Carlo Method to the Transient Thermal Modeling of a Diffuse-Specular Radiometer Cavity*, Virginia Polytechnic Institute and State University, August 1981

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### PROFESSIONAL EXPERIENCE

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**President and Chief Operating Officer,**  
**Chief Technology Officer,**  
LPP Combustion, LLC, Columbia, MD

January 2007 to present  
July 2004 – December 2006

- Responsible for leading the development and commercialization of a novel lean, premixed, prevaporized (LPP) combustion technology. This technology has widespread applicability, allowing a broad range of liquid fuels, including biofuels, to be burned in dry, low-emissions (DLE) combustion hardware designed for use with natural gas. Initial product introductions are planned for use in the gas

turbine power generation industry. An enhanced configuration for the traditional Integrated Gasification Combined Cycle (IGCC) system has also been proposed. Commercial testing with full-scale gas turbine hardware is anticipated for 2008.

**Principal Engineer and Director of Advanced Energy Systems,**  
Combustion Science & Engineering, Columbia, MD

July 2004 to present

- Responsible for performing thermodynamic cycle analyses, computational fluid dynamic (CFD) simulation and software development for the nuclear, gas turbine, combustion and energy industries. Provide design and modeling assistance for Integrated Gasification Combined Cycle (IGCC) plant vendors. Perform gas turbine performance and failure analyses and Hydrogen detonation analyses. Provide engineering support for litigation cases.

**President and Founder,** Cogent Science, LLC, Darnestown, MD

September 2001 to present

- Founded engineering software development and consulting firm, specializing in thermodynamics and numerical modeling of gas turbine combined-cycle, coal fired, and nuclear power plants. Emphasis on steam turbine and nuclear reactor modeling. Implemented a nuclear steam turbine component model using the Baily, Booth, Cotton, Miller formalism and developed a GE boiling water nuclear reactor component model. Software development experience with Python, XML, C, C++, Pascal, FORTRAN, Assembly Language, UNIX, Linux, Microsoft Windows and Microsoft Office.

**President/CEO and Co-founder,** Tech, Inc., Reston, VA

July 1995 – June 2004

- Co-founded design/build systems integration and installation firm, specializing in security/access control, CCTV, sound and telecommunications infrastructure, and life safety systems. Led a team of twenty-five engineers and project managers, and as many as two hundred and fifty technicians. Successfully completed over 125 major projects with a total contract value in excess of \$70 million, and a maximum project size in excess of \$10 million.

**Director of Applications Engineering and Owner,**  
Enter Software, Menlo Park, CA

October 1991 – July 1995

- Project Director for EfficiencyMap, a real-time data acquisition and performance modeling system for combined-cycle gas turbine power plants. Designed, developed, configured and installed the EfficiencyMap and GateCycle software programs in plants throughout the United States and the United Kingdom.

**Partner and Co-founder,** Cogent Software, Menlo Park, CA

October 1989 – July 1995

- Developed scientific plotting software package (ProPLOT) used within Stanford University and various academic and research institutions worldwide.

**Member of Technical Staff,** Bell Telephone Laboratories, Indianapolis, IN

September 1981 – August 1982

- Worked with the Home Lab group in Indianapolis, IN and led the development and production of an emergency alert system water detector and transmitter.

## **ADDITIONAL PROFESSIONAL ACTIVITIES**

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- ASME PTC 47 Integrated Gasification Combined Cycle Codes and Standards Committee Member, 2008-Present
- Technical Ambassador for the United States as a member of the People to People Ambassador Program, Nuclear Technology in China for the New Century Delegation to China, October 2007
- Registered Communications Distribution Designer (RCDD), 2000 to present, Network Transport Systems (NTS) Specialist, 2003 to present, Building Industry Consulting Services International (BICSI).
- Emergency Coordinator for the Stanford University Amateur Radio Emergency Service (SUARES), Stanford University, 1994-1995. Established the Stanford area section of a VHF/UHF-based San Francisco Bay Area inter-hospital packet radio communications system. Assisted with communications for the World Cup Soccer events held at Stanford University. Licensed Amateur Extra Class Amateur Radio Operator.
- Licensed Nuclear Reactor Operator and Senior Nuclear Reactor Operator for the University Research Reactor Facility, Virginia Polytechnic Institute and State University, 1979-1981. Active in daily operations, annual maintenance and refueling operations. Performed neutron activation analysis experiments.

## **PROFESSIONAL MEMBERSHIPS**

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Member, American Society of Mechanical Engineers (ASME)  
 Member, American Nuclear Society (ANS)  
 Member, American Association for the Advancement of Science (AAAS)  
 Member, Tau Beta Pi Engineering Honor Society  
 Member, Pi Tau Sigma Honorary Mechanical Engineering Fraternity  
 Member, Building Industry Consulting Services International (BICSI)

## **COMMUNITY MEMBERSHIPS**

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Alumni Board Member, Saint Anselm's Abbey School, Washington, DC  
 Kennedy Center for the Performing Arts, Washington, DC  
 Corcoran Gallery of Art, Washington, DC