



# Combustion

Science & Engineering, Inc.

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

## **KEVIN E. COLBURN**

Contact: [kcolburn@csefire.com](mailto:kcolburn@csefire.com)

### **EDUCATION:**

B.S, Mechanical Engineering, Minor in Economics, Rensselaer Polytechnic Institute, 1995.

### **PROFESSIONAL EXPERIENCE:**

#### **Senior Engineer, Combustion Science & Engineering, Inc., Aug. 2004 to present.**

Application of CFD methods in the design of combustion systems. Primary field of application is the turbomachinery and related systems. Additional combustion systems analysis with main emphasis in emission predictions. Additional applications include gas phase and solid particle radiation. Generation of automation routines and improving the efficiency of CFD analysis for design cycles responsible for leading aerodynamic and combustion design.

#### **Team Leader/CFD Engineer, McLaren International Ltd., May 1998 – July 2004.**

Application of CFD methods in the design of Formula One cars. Analysis, design and application using Navier Stokes and panel method codes in the pursuit of high performance aerodynamics. Leading a team of 6 CFD engineers providing CFD analysis as a key development tool with the Aerodynamic Group. Evaluation and procurement of software programs, various CFD methods, and hardware solutions. Generation of automation routines and improving the efficiency of CFD analysis for a very short design cycles responsible for leading aerodynamic design.

#### **CFD Application Engineer, ADAPCO, Aug. 1994 – May 1998.**

Complex component and system analysis from a fluid dynamics standpoint, providing design assessments and recommendation for alternative designs through an iterative process with the client. Applications include complete car aerodynamics, transient in-cylinder flow, automotive coolant systems, transonic turbine blade passages, turbine swirlers, combustion and flow sleeve applications, and centrifugal HVAC fan units

#### **Co-op Program CFD Engineer, General Electric, Jan. 1994 – Aug 1994.**

Advanced engineering methods developing modeling capabilities for turbine components involving computational fluid mechanics modeling using Star-CD. Applications included film cooling effects, analysis of combustion geometries and exhaust stack configurations.

#### **B.S. Project, Rensselaer, 1993-1995.**

Collegiate based competition to design, build, test, and race a formula style race car. Involvement in the team as engine component designer and engine group leader. Applications included the design, manufacturing, and testing of the engine systems for the 1994 and 1995 SAE Team, manager of a 5 person engine development team, and dynamometer testing and mapping of out own engine management/electronic fuel injection system

**SOFTWARE:**

12+ years experience with StarCD  
2+ years experience with CFX  
8+ years experience with ICEM (tetra/prism, hexa)  
6+ years experience with Ensignt  
4+ years experience with Newpan  
3+ years experience with Harpoon  
ProEngineer  
Cadds5, CatiaV4, and Catia V5  
Unix Scripting  
Fortran90  
Parallelisation routines

**COMPUTER SKILLS:**

Unix  
Linux  
Windows  
SUN TCF  
SCI Origin3900  
IBM p655