



## **The Combustion Institute**

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## **Research & Development Heat Transfer Staff Engineer**

UTC Climate, Controls & Security is a leading provider of heating, ventilating, air conditioning and refrigeration systems, building controls and automation, and fire and security systems leading to safer, smarter, sustainable and high-performance buildings. UTC Climate, Controls & Security is a unit of United Technologies Corp., a leading provider to the aerospace and building systems industries worldwide.

Carrier is the world's leader in high-technology heating, air-conditioning and refrigeration solutions. Carrier is a part of UTC Climate, Controls & Security, a unit of United Technologies Corp., a leading provider to the aerospace and building systems industries worldwide.

The candidate will be a key member of Carrier's Heat Transfer Group, which provides advanced heat exchanger technologies to Carrier's global HVAC&R product portfolio. The candidate's primary responsibility will be to lead the development of advanced heat exchanger technologies and modeling tools for residential and commercial gas-fired heating products. He/she will collaborate with other technology experts, product design groups, the United Technologies Research Center, supply chain partners, and research universities to develop new opportunities to improve the performance, cost, and reliability of Carrier products.

### **Responsibilities**

Lead the development and integration of low NO<sub>x</sub> combustion systems in residential and commercial furnaces

Develop primary and secondary condensing heat exchangers for next generation furnace designs

Develop and apply state-of-the-art simulation tools to optimize furnace heat exchanger performance

Apply Finite Element Analysis (FEA) methods to ensure reliability of gas-fired heat exchangers

Drive continuous improvement in the methods and computational tools used to design and apply furnace heat exchangers

Provide support to cross-functional product development teams to ensure successful insertion of new burner and heat exchanger technologies in Carrier products

Coordinate laboratory testing to develop and verify new technology

Manage project activities and deliver on-time solutions to internal customers

Position is located in Indianapolis, IN. Relocation assistance will be considered.

### **Requirements**

Bachelor's degree with 6–10+ years relative experience

Master's degree with 4–7+ years relative experience

PhD degree with 2–4+ years relative experience

Fundamental knowledge of combustion and thermal-fluid sciences

## Combustion Job Opportunity

Proficient in the use of CFD and FEA to manage difficult thermal issues  
Experience in the development of gas-fired products and combustion systems  
Familiarity with modern experimental methods, instrumentation, and measurement systems  
Familiarity with HVAC&R equipment and system design  
Effective communication, organization, and proactive problem-solving skills  
Capacity to self-direct and manage both short and long term project goals

### **How to Apply**

All applications must be submitted online at <https://jobs.utc.com/job/indianapolis/research-and-development-heat-transfer-staff-engineer/1566/6018710>.

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