

## Staff Engineer, CAE Simulation and Analysis US Operations

**Location:** Blackhawk Rd. Rockford, IL

**Department:** Engineering

**Reporting To:** Yevgeniy Beygel

**Hours:** Monday through Friday, 7:30am – 4:00pm

### JOB DESCRIPTION:

The Staff Engineer is responsible for delivering CAE, simulation and analysis – including thermal conduction/heat transfer, CFD (aerodynamics/thermal-fluid), and FEA (structural/durability) – to support the design and optimization of Thermal Management products, components, and integrated systems across a variety of platforms for global applications. The CAE Simulation and Analysis Engineer validate the performance against defined targets and customer requirements and drives optimization to maximize customer value in system performance, efficiency, and robustness. The role also leads the simulation tool selection and governance, establishes and standardizes analysis methods/workflows, documentation, and validation practices, and trains/mentors' engineers to build scalable CAE capability and consistent, high-quality analysis across the organization.

### ESSENTIAL FUNCTIONS:

- Perform simulations to ensure the aerodynamic convergence of the different HVAC systems designed by Bergstrom
- Help in the design of styling and structures by analyzing and understanding the flow phenomena
- Consider environmental aspects during the design process
- Model preparation, meshing, CFD and FEA analysis, and post processing of the results
- Provide support to the engineering teams, including but not limited to design, testing, durability, performance recommendations
- Work with a global team of engineers on common HVAC system concerns and design challenges
- Thermal-hydraulic analysis utilizing corporate CFD tools, such as ANSYS Fluent, Mechanical, Discover, and others as needed
  - CFD & FEA methodology qualification, and documentation
  - CFD & FEA analysis conceptualization and proposal preparation
- Participation and Support in engineering testing
  - Provide guidance for testing to be used for CFD and FEA validation
  - Use CFD & FEA analysis to help guide testing configurations
- Work closely with the customers and actively interact with them on projects
- Technical global simulation consulting
- Mentor the engineers to empower early simulation activities during the design process
- Coordinate the CAE analysis activities globally
- Identify the required training and tools to support the global engineering teams

### REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

- Capability to interpret the CFD & FEA results and communicate key messages to the design community
- Strong understanding of the product development process, various vehicle systems and interplay between them

- Good presentation skills and problem-solving abilities
- Good knowledge of the fundamental physics and engineering principles
- Excellent organizational, communication and teamwork skills
- Experience leading teams and solving complex issues

#### **EDUCATION AND/OR EXPERIENCE:**

- Bachelor's degree in Engineering, Physics, or other related technical discipline.
- Master's degree is preferred
- 5 years of related work experience in CFD and FEA analysis in mobile thermal management technology or similar experience
- Strong knowledge and understanding of CFD and FEA methodology related to fluid flow, thermal transfer, structural analysis

#### **PAY AND BENEFITS:**

- The budgeted range for this role is \$3,076.93 USD to \$4,615.39 USD per biweekly pay period. The range provided is a good faith estimate representative of the desired level of experience for the position. Bergstrom Inc. considers several factors when extending an offer, including but not limited to, the role, function and associated responsibilities, a candidate's work experience, education/training, and key skills.
- Hired applicants may be eligible for benefits, including but not limited to Bergstrom's discretionary incentive, medical, dental, vision, life insurance, short-term disability, long-term disability, 401(k) match, flexible spending accounts, employee assistance program, tuition reimbursement, paid time off and holidays.

#### **TO APPLY:**

If you would like to be considered and meet all the position requirements, please [email](#) your resume and cover letter to Andrew Hall in Human Resources.

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