Electrical Research Engineer – Power Systems *Job#: 201607_EREPRS_T*

Cornerstone Research Group Inc. (CRG) is seeking electrical engineering professionals to work closely with a team of mechanical, aerospace, electrical, and materials research engineers and technical project leaders in state-of-the-art research and development at CRG's R&D Center in Dayton Ohio. Electrical Research Engineers will provide technical leadership and have the following responsibilities:

- Perform design, simulation, analysis, and optimization of power systems in the 1 to 10 kW size scale
- Implement commercial off-the-shelf (COTS) and custom electric motor and generator controls and control strategies
- Implement COTS and custom electronic controls for small engines
- Execute hybrid powertrain integration and testing activities
- Design power converter and inverter circuits for motors and generators
- Integrate energy storage devices and energy management hardware into electric and hybrid electric power systems
- Implement electronic data acquisition in test environments
- Collaborate with R&D team to conceptualize and optimize innovative electronics systems for various applied R&D projects
- Manage technical tasks and objectives to meet customers' schedules and budgets
- Coordinate fabrication and assembly of components and systems
- Communicate technical results, plans, and issues with internal and external customers, including presenting and writing reports and proposals
- Develop and maintain relationships with new and existing customer base to support program area growth
- Identify and pursue new opportunities that fit within the corporate objectives and strategic direction

Qualifications & requirements:

- Exclusive US citizenship required
- Ability to obtain and maintain a SECRET security clearance required
- Minimum B.S. in electrical engineering or equivalent required
- Experience with power systems-related work experience preferred
- Experience with COTS and custom high power density electric motors, generators, inverters, and controllers preferred
- Experience with hybrid and/or electric powertrain integration and testing preferred
- Strong written and verbal communication skills preferred
- Work experience in applied R&D preferred; work experience in a team-oriented environment a plus
- Experience with development and simulation tools such as, LabVIEW, MATLAB, Python, C++ a plus

Ideal candidates exhibit the following qualities:

- Ability to perform in the fast-paced environment of a rapidly growing small business
- Ability to balance multiple projects and deadlines
- Ability to quickly understand new technology areas and manage and adapt to rapidly changing customer needs
- Excellent proactive and reactive problem-solving skills
- Excellent communication, interpersonal, and organizational skills
- Self-motivation, initiative, attention to detail, creativity, and enthusiasm with a team-oriented mentality

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to individuals with disabilities to perform the essential functions. While performing the duties of this job, the employee is frequently required to stand, walk, sit, climb stairs, balance and stoop, kneel, crouch or crawl, talk or hear. The employee may be required to lift, carry, push or pull up to 50 lbs. Specific vision abilities required by the job include close vision, distance vision, peripheral vision, depth perception, and the ability to adjust focus.

WORK ENVIRONMENT

Work environment characteristics described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to individuals with disabilities to perform the essential functions. While performing the duties of this job, the employee may periodically need to be exposed to a R&D laboratory environment. The use of appropriate safety equipment such as safety glasses and shoes or wearing a respirator may be required. The employee should have basic awareness of hazardous materials, and be able to read SDS reports and follow appropriate precautions. The noise level in the work environment is usually low to moderate.