ABB Inc., in Auburn Hills, MI is seeking an Autonomous Mobile Robot Research and Development Engineer/Technologist, to join our Discrete Automation and Motion team, the first major global industrial robotics manufacturer to produce robots in the United States. ABB is the leading supplier of industrial robots, modular manufacturing systems and service and has installed more than 250,000 robots worldwide.

A better world begins with you.

Location: Auburn Hills, Michigan, USA
Job Function: Design and Engineering
Employment Contract Type: Regular/Permanent, Full-Time
Division/Function: Discrete Automation and Motion
Business unit: Business Unit Robotics
Publication ID: US59484058_E1

Tasks
The Research and Development Engineering comprises the investigation, evaluation and potential application to product and / or process development. Responsible for the functional design and technical development of autonomous mobile robotic systems, providing expertise and design for the mechanical, controls, software, and robotics engineers. Plan, conduct or coordinate a range of complex engineering activities encompassing one or more engineering disciplines. Conduct or coordinate complex analyses and develop recommendations based on sound engineering practices and business considerations. Serve as consultant to management and customers regarding advanced technical studies, their potential application and the resolution of complex problems. Manage or coordinate major engineering projects of substantial impact to the company. Proactively develop and implement measures to improve operations and customer satisfaction.

Typical duties/responsibilities may include, but are not limited to, the following:
• Provide system-level development on the overall functionality and development of autonomous mobile robotic systems, leveraging “Best in Class” engineering design and components.
• Collaborative Robotic Assembly.
• Integrate robotics with associated peripherals, controllers, or other equipment
• Provide technical support for robotic systems
• Review or approve designs, calculations, or cost estimates
• Make system device lists or event timing charts
• Document robotic application development, maintenance, or changes
• Write algorithms or programming code for ad hoc robotic applications
• Develop robot framework programs or parameters for reuse in engineered products
• Process or interpret signals or sensor data
• Investigate mechanical failures or unexpected maintenance problems
• Install, calibrate, operate, or maintain robots
• Debug robotics programs
• Design end-of-arm tooling
• Conduct research on robotic technology to create new robotic systems or system capabilities
• Automate assays on laboratory robotics
• Conduct research into the feasibility, design, operation, or performance of robotic mechanisms, components, or systems, like collaborative, coordinated multiple robots, reconfigurable robots, or man-machine interactions
• Analyze evaluate robotic systems or prototypes
• Design automated robotic systems to increase production volume or precision in high-throughput operations, like flexible part complexity analysis or sorting, moving, or stacking production materials
• Design software to control robotic systems for applications, like robot controlled pressing, fastening or manufacturing.
• Build, configure, and test robots

Requirements
Basic Qualifications:
• High School Diploma or GED AND 9 years of experience OR
• Associate’s Degree AND 7 years of experience OR
• Bachelor’s Degree AND 5 years of experience.

Preferred Qualifications:
• Master degree in Computer Science, Computer Engineering, Electrical Engineering, and Mechanical Engineering.
• Direct experience with autonomous, mobile, “rover-type” robotics
• PLC’s (Programmable Logic Controller)
• DeviceNet, Ethernet/IP, Profinet, ProflBUS, InterBUS, AZIBUS,
• RFID (Radio Frequency ID) tags (Interface, Reading and Writing)
• VFD and Servo Motors
• Automated System Controls Design
• 5 year minimum experience in Robotics

Additional Information
Equal Employment Opportunity and Affirmative Action at ABB

ABB is an Equal Employment Opportunity (EEO) and Affirmative Action Employer encouraging diversity in the workplace.

All qualified applicants will receive consideration for employment without regard to their sex, gender identity, sexual orientation, race, color, religious creed, national origin, physical or mental disability, protected Veteran status, or any other characteristic protected by law. For more information regarding your (EEO) rights as an applicant, please visit the following websites:

ABB Inc. will not discharge or in any other manner discriminate against employees or applicants because they have inquired about, discussed, or disclosed their own pay or the pay of another employee or applicant. However, employees who have access to the compensation information of other employees or applicants as a part of their essential job functions cannot disclose the pay of other employees or applicants to individuals who do not otherwise have access to compensation information, unless the disclosure is (a) in response to a formal complaint or charge, (b) in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or (c) consistent with the contractor’s legal duty to furnish information.

As an Equal Employment Opportunity and Affirmative Action Employer, applicants may request to review the Affirmative Action Plan of a particular ABB facility between the hours of 9:00 A.M. - 5:00 P.M. EST Monday through Friday by contacting an ABB HR Representative at 1-888-694-7762.

Protected veterans and qualified individuals with a disability may request a reasonable accommodation if you are unable or limited in your ability to use or access ABB's career site as a result of your disability. You may request reasonable accommodations by calling an ABB HR Representative at 1-888-694-7762 or by sending an email to US-AskHR@abb.com. Resumes and applications will not be accepted in this manner.
ABB (www.abb.com) is a leading global technology company in power and automation that enables utility, industry, and transport & infrastructure customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in roughly 100 countries and employs about 135,000 people.