

Job Number	2601449
Posted Position Title	Control Systems Engineer
Role Summary/Purpose	As a Control Systems Engineer you will develop dynamic model-based controls and optimization technologies. You will have to work independently as well as with the team to develop controls technology solutions for a variety of GE product applications including turbo-machinery, renewable energy systems, locomotives, water and healthcare.
Essential Responsibilities	<p>Responsibilities will include working closely with project leaders to meet project deliverables. Will need to work independently as well as in a team to develop and deliver solutions in controls technologies including modeling, estimation, advanced controls and real-time optimization to develop technology differentiation for GE products and services.</p> <p>As a Controls Systems Engineer, you will:</p> <ul style="list-style-type: none"> • Work independently as well as with a diverse team to develop advanced technology solution including modeling, estimation, advanced linear/nonlinear controls and real-time optimization, and its application to GE products and services • Validate performance of developed solution through simulations and application on target product to mature technology to be transferred to the GE business. • Document technology and results through patent applications, technical reports, and publications • Stay current with advances in control system technologies to seek out new ideas and applications • Work in a team environment with colleagues in the RTOC and MBC Labs, other labs within and outside CESP in GE Global Research, and GE business units
Qualifications/Requirements	<ul style="list-style-type: none"> • Doctorate Degree in an Engineering field with a specialization in control system engineering OR Master's Degree in an Engineering field with a minimum of 3 years of experience in controls design • Knowledge and application of advanced model-based control methodologies, including optimization-based control algorithms • Expertise in at least one of the following: modeling of dynamic systems (first principles and identification), model-based control design, model-based estimation, real-time optimization and model predictive control • Proficiency in Matlab/Simulink, C, C++ • Willingness to travel at a minimum of 2 weeks per year • Demonstrated experience (algorithm development and software implementation) in developing optimization-based control solutions for complex physical systems (e.g. mechanical systems, chemical plants, power systems, transportation) • Legal authorization to work in the U.S. is required; we will not sponsor individuals at the Masters level for employment visas, now or in the future, for this job opening • Must be willing to work out of an office located in Niskayuna, NY • Must be willing to take a drug test and submit to a background investigation as part of the selection process • Must be 18 years or older • You must submit your application for employment on the careers page at www.gecareers.com to be considered
Desired Characteristics	<ul style="list-style-type: none"> • Experience with real-time implementation of control system solutions in a variety of hardware platforms.

- Knowledge of model-based estimation and system identification.
- Knowledge of other dynamic system simulation packages, such as Easy5, Hysys, NPSS
- Experience developing controls solutions for energy-management applications e.g. "generation, transmission, distribution and load management", "power plants", "wind farms", "energy storage".
- Strong analytical skills.
- Strong interpersonal skills.
- Self-motivated and ability to work independently and as part of a team.
- Ability to communicate effectively both orally and in writing to establish and transfer control concepts from research to product.