



Math Modeler

Quallion, LLC, LLC has the broadest and deepest understanding of lithium ion chemistry and has a long history as a primary and rechargeable cell battery manufacturer for use in the medical, military and aerospace industries. Quallion, LLC is where science and engineering are advancing battery technologies, broadening design options and delivering power solutions that enable unique and challenging applications.

Summary:

Quallion, LLC and a partner have successfully developed a lithium-ion battery model which can be efficiently used to simulate the charge and discharge performance of a battery built with a large number of cells connected in a mixed series and parallel configuration. The proof of concept model which is capable of approximating battery behavior during cycle life by showing how individual cells, or various capacities in various series and parallel battery configurations and react to an imposed charge/discharge cycle.

Quallion, LLC is continues to modify this model by incorporating new parameters uniquely tied to our proprietary lithium-ion chemistry. Quallion LLC seeks an individual with a strong mathematics understanding (for example differential equations with 20-30 variables) to work with the existing partner's equations and update them with new parameters and flow them back to our partner.

Responsibilities:

- Working with the partner, while preserving our proprietary knowledge, the Modeler will perform calculations and analysis internally and then give math model back to the partner.
- Interact with the sales and marketing department to run and analyze the model to help customers on mission critical requirements.
- Help define/develop a graphical user interface "GUI" of the battery model
- Create/Modify equations, using our "recipe" (chemistry), input the 20-30 variables, and use the parameters, which will have a direct impact on our battery.

Qualifications:

- Bachelors Degree in Mathematics or equivalent in related field.
- Software programming/background preferred
- Strong mastery of specific areas of math used in scientific calculations including calculus, probability theory, statistics, partial differential equations and numerical analysis.

- Ph.D. in pure or applied mathematics, physics, statistics, engineering or computer science is preferred.
- Must have demonstrated excellence in mathematics, programming, statistics and must have a background which would enable them to develop models that would analyze and predict how batteries would perform in the future (e.g, how long would a cell phone battery perform 5 years from now).
- Industry experience in aerospace/military is highly desired.
- Strong presentation and writing skills
- Green Card or US citizenship is required.
- Results driven modeling rather than ground up.
- Must have strong knowledge of chemistry at the electron level. (Space Math gurus are highly desired).

To apply for this position:

Qualified candidates should send resume to Quallion, LLC, attention Human Resources, hr@Quallion.com and include **“Math Modeler”** in subject line of the e-mail to be considered.

Quallion, LLC LLC offers competitive salaries, outstanding benefits packages and professional growth opportunity. For further information, please visit our website at <http://www.Quallion.com/>

Quallion, LLC is an Equal Opportunity Employer