

Projet 4

Systèmes d'équations non-linéaires / Méthode de Newton-Raphson

Groupe 4 - Equipe 3

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The goal of this project is to program algorithms dedicated to the research of roots of systems of non-linear equations. The method promoted here is the Newton-Raphson algorithm, and the goal is to evaluate the assets and liabilities of such a solution. This shall be done by testing the method in different settings. In the following, you will be proposed a list of applications where this algorithm is necessary. You must program at least two of these applications, and then write a summary of your experiments as a conclusion. More applications are not synonyms of better work.

1 Newton-Raphson solver

2 Applications

2.1 Computation of the Lagrangian points

2.2 Electrostatic equilibrium