

Questions for the mid-term evaluation
Panel: advanced computational methods

1. Discuss the application of triangular decompositions of matrices to solve the systems of linear equations.
2. Discuss the application of similarity transformations to solve the eigenproblem of a matrix.
3. Discuss the use of matrix pseudoinverse to find the minimum solution of a system of linear equations.
4. Give and discuss briefly examples of a single-step and a multi-step method used to integrate ordinary differential equations.
5. Compare two classes of methods used in optimization: gradient-based and not evaluating gradients.