KUTAISI INTERNATIONAL UNIVERSITY

Numerical Programming

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CP#2

Computational Project, 12 points

Problem 2.1

- Determine the velocity, mass, and drag coefficient of a ball by analyzing its motion in a video from point A to point B.
- Develop suitable tests.
- Use ball motion ODEs and numerical methods.

Tasks

- Formulate algorithm, explain your approach in written.
- Describe properties of numerical methods in written.
- Select or generate video for which your approach works fine.
- Select or generate video for which your method produces incorrect results.
- Understanding limitations of the methods and its application domain is an import skill. Explain why your method works in one case and why it does not work in another case.

Computational Project

Important Notice

- CP assigned 0 points if:
  - a model problem (video) provided twice by students. Make sure, your model is different from models given by others.
  - submitted results are not reproducible.
  - student cannot apply his own code for the input data provided by TA or instructor.
- Submission deadline: 10 days after the date of CP's publication.