TATA71 Ordinary Differential Equations and Dynamical Systems Take-home examination 2021-01-14, 8.00–13.00

Rules, short version.

• Aids are permitted, but no collaboration with other persons is allowed.

Rules, long version.

- This is an individual examination, so you are required to answer the questions on your own.
- You may ask the teacher for clarifications (email **hans.lundmark@liu.se**). Except for that, it is not allowed to communicate in any way with other persons regarding the solutions of the problems during the exam. So you may not get help from others, and it is also not allowed to *give* help to other students who are taking this exam, for example by letting them look at your solutions.
- You can use any aids (books, computers, etc.), but you are expected to present your solutions with as much detail as if calculating by hand (like on a usual exam without aids). Consulting old information from online forums is allowed, but you may not make use of any questions or answers posted during the exam. Cite your sources whenever appropriate, and avoid quoting text verbatim; it is much preferred if you use your own formulations.
- The solutions should be handwritten (unless you have a special permit from LiU's disability coordinator to write on a computer). Writing by hand on a tablet is fine, but please use dark text on a white background.
- You may write your answers in English or in Swedish (or some mixture thereof).

You will find the problems **on the next page**.

Each problem will be marked *pass* (3 or 2 points) or *fail* (1 or 0 points). For grade $n \in \{3, 4, 5\}$ you need at least n passed problems and at least 3n - 1 points. Solutions will be posted on the course webpage afterwards. Good luck!