# Reflection

During this semester, I have acquired a considerable amount of knowledge on the subject of solving ordinary differential equations (ODEs) and partial differential equations (PDEs). At the outset of the semester, we delved into the intricacies of error estimation of model methods, as well as the stability of methods, which form the bedrock of function establishment. We subsequently progressed to ODEs, where we learnt various analytical and numerical methods for solving them. The most fascinating aspect of this section was the application of different ODEs to real-life models.

After that, we proceeded to study stochastic processes and random walks, which have a beautiful relationship with deterministic functions. In the final phase of the semester, we covered PDEs, and the way to solve them essentially involves transforming them into ODEs using unconventional approaches.

Upon reflection, I find that the error estimation component of the course was particularly useful. It has broad applicability to constructing real-life models. Additionally, the process of constructing ODEs and PDEs from real-world problems is an invaluable skill that will be beneficial in the future. Furthermore, the opportunity to practice Matlab during the semester's assignments was particularly useful as it is a powerful language for mathematicians.