

Questions for next lecture

While reading *Chapter 4.1–4.2* of [G], ask yourself:

- Which possibilities do you have to sample the same path of a Brownian motion with different accuracy/resolution?
- What is important for sample paths vs. distribution?
- How is the heat equation coupled to Brownian motion? In which sense?
- What is the naive idea of a filtration? How is it related to our daily life?
- Why can't we use “usual” integration for Brownian motion but have to define the Itô integral?
- What are the basic steps for the definition of the Itô integral? What do they tell us?
- In which sense of “uniqueness” should the Itô integral be interpreted?
- What are important properties of the Itô integral?