Advanced Stochastic Processes II: Diffusion Processes and Stochastic Process Limits

Teaching Staff: Patricia Menéndez (coordinator), Yoni Nazarathy

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1 Part 1: Introduction

- **Meeting days (2 hours each, 6 hours total)**: 25/2, 26/2, 4/3.
- **Reference**: Whitt, Stochastic Process Limits, Springer Series in Operations Research, 2002. (Introductory chapters).
- **Assessment**: 1 HW assignment and course summary assignment.

Taught by: *Yoni Nazarathy*

2 Part 2: Martingales, Brownian Motion and other types of Diffusion Processes

- **Meeting days (2 hours each, 22 hours total)**: 5/3, 11/3, 12/3, 18/3, 19/3, 25/3, 26/3, 8/4, 9/4, 15/4, 16/4.
- **Reference**: Grimmett and Stirzaker, Probability and random processes, Oxford University Press, 2001. (Chapters 12 and 13)
- **Assessment**: 3 HW assignments, 2 quizzes and summary assignment.

Taught by: *Patricia Menéndez*

3 Part 3: Stochastic Process Limits and Queues

- **Meeting days (2 hours each, 20 hours total)**: 22/4, 23/4, 29/4, 30/4, 6/5, 7/5, 13/5, 14/5, 20/5, 21/5.
- **Reference**: Whitt, Stochastic Process Limits, Springer Series in Operations Research, 2002.
- **Assessment**: 3 HW assignments and 2 quizzes and summary assignment.

Taught by: *Yoni Nazarathy*

4 Part 4: Applications of Stochastic Processes to Statistical Inference

- **Meeting days (2 hours each, 4 hours total)**: 27/5, 28/5

- **Assessment**: Course summary assignment.

- **Reference**: Journal articles.

Taught by: *Patricia Menéndez*