

**Note: C=Course, TD=Directed exercise, HW=Homework**

**[1] 23/01 (F.Zamponi)**

C1: General introduction and reminders on sums and extremes of random variables

TD1: Extreme Value Statistics (EVS)

HW1: Further material on EVS

**[2] 30/01 (F.Zamponi)**

C2: Introduction to disordered systems: quenched disorder, self-averaging, etc.

TD2: The Random Energy Model (REM)

HW2: Preparation to the replica method

**[3] 06/02 (F.Zamponi)**

C3: Introduction to the replica method

TD3: The p-spin glass model

HW3: Preparation to Erdős-Rényi random graphs

**[4] 13/02 (G.Schehr)**

C4: Introduction to random graph models

TD4: Erdős-Rényi random graphs

**[5] 20/02 (C F.Zamponi, TD G.Schehr)**

C5: Random optimisation problems

TD5: The random XORSAT problem

HW4: Preparation to the Langevin and Fokker-Planck equations

**[6] 06/03 (F.Zamponi)**

C6: Out of equilibrium dynamics

TD6: The trap model

HW5: Preparation to the Harris criterion

**[7] 13/03 (G.Schehr, on zoom)**

C7: The Harris and Imry-Ma criteria, interfaces in random media

TD7: Directed polymers and interfaces in random media

HW6: The Wigner surmise

**[8] 20/03 (G.Schehr)**

C8: Random Matrix Theory (RMT)

TD8: The semicircle law

**[9] 27/03 (G.Schehr)**

C9: Localization in RMT

TD9: Dyson's Brownian motion

**[10] 03/04**

Exam