Strict submission deadline: 19 May 2025 at 08:00 am

Exercise #3

Task 3.1

Solve Task 2.2.6 of the "Exercises 2025 V3" provided on the course page.

Hint for part a: Lookup in the script how to calculate the ACR at 0 from the PSD.
Hint for part b: Use the fact that $x(\zeta, t)$ and $s(\zeta, t)$ are statistically independent when calculating the ACR of $y(\zeta, t)$
Submit the calculation path and the solution.

Task 3.2

Solve Task 4.7 of the "Exercises 2025 V3" provided on the course page.

Submit the solutions (Matlab source code, all plots, and written answers)