Lehrstuhl für STEUERUNGS- UND REGELUNGSTECHNIK Technische Universität München Prof. Dongheui Lee	**MACHINE LEARNING IN ROBOTICS** Assignment2 Instructions

- **Submission**.
  Each student must work independently. Please upload a file called $Assignment1\_Surname\_ID.zip$ (where $Surname$ is the surname of the student that submits the file and ID is the enrollment number) on moodle.

  This file should contain:

  - $Assignment2\_Surname.pdf$, a pdf file containing the solution to all the exercises (see below for further informations)
  - The Matlab code in a subfolder called $Code$. Students can create any functions that they consider necessary to solve the problems.

  The submission deadline is on the 15th August, 2016 at 11:59pm.

  In case of questions, please contact

  - matteo.saveriano@tum.de (Exercises 1 and 2)
  - affan.pervez@tum.de (Exercise 3)

  Assignment2_Surname.pdf.

  - Students need to provide a pdf file containing the solution to all the exercises. Students must clearly indicate in this file to which exercises and to which question the solutions refer to.
  - For $Exercise1$ include the learned GMM parameters.
  - For $Exercise2$ include classification results, i.e. the numbers of $train$ and the number of $test$ sequences.
  - For $Exercise3$ attach the outputs of $WalkQLearning(s)$ and $WalkPolicyIteration(s)$ for the asked initial states.
  - For $Exercise3$ include the answer of questions regarding Policy Iteration and Q-learning.

  Subfolder Code.

  - For $Exercise1$ provide the matlab code for the E-M algorithm.
  - For $Exercise2$ provide the matlab code used for classification.
  - For $Exercise3$ provide the matlab functions $WalkPolicyIteration$,$SimulateRobot$ and $WalkQLearning$.