Professor Xin Chen, Biometrics
Assignment: Design and Evaluate an Iris Recognition System

Objective: The student will design and evaluate an iris recognition system using the data provided and an open source iris recognition software.

Data

1. Three iris datasets collected by LG2200 and LG4000 on different dates.
2. Images taken from same subject's both eyes are stored in the same subfolder.
3. A text file in each subfolder specifies attributes of each image in this folder. *Sequenceid*: the image's filename. Note right/left eye indications.

Tasks

1. Familiarize yourself with the data. Design an iris biometrics system by using LG2200 2008 data as gallery and (1) use LG4000 as probes; (2) use LG2200 2010 data as probes. Feel free to choose multiple iris images per subject as probes/galleries. ALL possible subjects in the three datasets should be used.
2. Use the open source iris matching code to generate genuine and imposter distributions.
3. Draw ROC curves for (1) and (2) and report your findings.
4. Draw CMC curves for (1) and (2) and report your findings.

Submission

1. Clear description of how you design the iris recognition system e.g. what is the probe, what is the gallery.
2. All source code you developed (e.g. MATLAB scripts to run experiments and perform analysis, **NO** datasets).
3. A report including the genuine and impostor distribution plots, ROC curves, CMC curves and your findings.

Iris recognition/verification code

You are encouraged to have a working MATLAB environment to use the open source iris recognition software - Libor Masek's open source iris matching code. The two key functions you will need to call are **createiristemplate.m** and **gethammingdistance.m** Alternatively, feel free to use other available software you have for iris recognition.