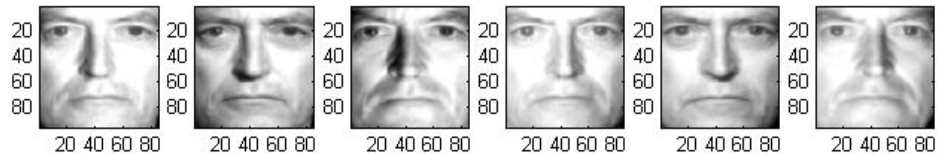


## Final Project (Option 2)

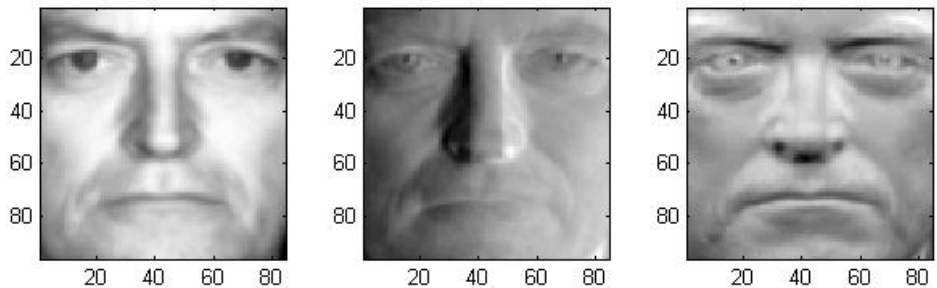
1. Implement the *illumination cone* algorithm.
2. Use your code to find the illumination cone of a set of (frontal illuminated) images of a convex object. You can use the image set provided in the course webpage or construct your own.
3. Generate a set of images showing the above (learned) object with previously unseen illuminations.
4. *Optional*: Create a movie (.mpeg, or .avi) showing the images with a rotating light source.

+ Here is an example obtained with the images you will find in the course webpage.

- Original face images (6 images):



- These are the eigenvectors obtained with the method presented in class:



- Now we have the illumination cone. We can thus generate new images by drawing sample vectors from within it. A few examples follow:



Write a short summary describing what you did and what you learned. The summary should not exceed three pages (12 point font). You may include 2 additional pages to show your results. Do **not** exceed these limits.

**Deadline:** Email your summary and code to the instructor by noon on **Tues, March 11, 2008**.