

H20

## QUESTION AND ANSWER SHEET

Examination, 3 February 2009

### 1. Methods

(10 points)

- 1) The purpose of a methods section is:
  - a. To explain your results
  - b. To introduce the background to your study
  - c. To show how you conducted your study
  - d. To explain what your results mean.
- 2) Which of the following would **not** usually be discussed in a methods section?
  - a. Mathematical models
  - b. Experimental equipment
  - c. Research findings
  - d. Special criteria
- 3) Would you expect the passive voice (受身) to be more or less common in methods sections than in other sections?
  - a. More common
  - b. A little less common
  - c. Much less common
  - d. About the same
- 4) How would you describe the following sentence?

*The "compression ratio" is (compressed size)/(original\_size)\*100 [%].*

  - a. Aim
  - b. Assumption
  - c. Definition
  - d. Theory
- 5) How would you describe the following sentence?

*The purpose of the application is to reduce the number of polygons by removing smaller features.*

  - a. Aim
  - b. Assumption
  - c. Definition
  - d. Theory

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- 6) How would you describe the following sentence?  
*Our design requires that the communication devices should be equipped with GPS systems.*
- Aim
  - Assumption
  - Definition
  - Theory
- 7) How would you describe the following sentence?  
*We begin by reviewing the principles of database design.*
- Aim
  - Assumption
  - Definition
  - Theory
- 8) Which word would you use to complete the following sentence?  
*The volume can be adjusted \_\_\_\_\_ a small dial on the side of the device.*
- by
  - with
  - by means of
  - through
- 9) Which word would you use to complete the following sentence?  
*We recommend cleaning the screen \_\_\_\_\_ a fine cloth.*
- by
  - with
  - by means of
  - through
- 10) Which word would you use to complete the following sentence?  
*The two locations are connected \_\_\_\_\_ satellite.*
- by
  - with
  - by means of
  - through

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In questions 2–5, please refer to the provided paper, “Face Recognition with One Sample Image per Class”.

### 2. Ordering sentences in a conclusion section (10 points)

*The following sentences and clauses of the conclusion have been mixed up in the wrong order. Number them in the correct order.*

\_\_\_ since we only rotate the eigen space in the direction that best represents the within-class covariance.

\_\_\_ A future task will be to search the eigen space and find the best eigen features suitable for face recognition.

\_\_\_ There are only as few as two variable parameters during the optimization compared to other methods for high-dimensionality problems.

\_\_\_ A shortcoming of the algorithm is that we cannot guarantee that the weights achieved are the best for recognition,

\_\_\_ but also perform well for the combination of both changes with only one sample image per class.

\_\_\_ After affine transformation, features are assigned with different weights for recognition which in fact enlarge the between-class covariance while minimizing within-class covariance.

\_\_\_ Experiments show that APCA is more robust to change in illumination and expression and has better generalization capacity compared to the FLD method.

\_\_\_ We have described an easy-to-calculate and efficient face recognition algorithm by warping the face subspace constructed from PCA.

\_\_\_ The affine procedure contains three steps: rotating the eigen space, whitening transformation, and then filtering the eigenfaces.

\_\_\_ This method can not only deal with variations in illumination and expression separately

### 3. Connectors (10 points)

*Write suitable connectors (e.g., therefore, however, in addition, on the other hand, etc.) for the numbered spaces in the introduction.*

- ① \_\_\_\_\_
- ② \_\_\_\_\_
- ③ \_\_\_\_\_
- ④ \_\_\_\_\_
- ⑤ \_\_\_\_\_

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- ⑥ \_\_\_\_\_
- ⑦ \_\_\_\_\_
- ⑧ \_\_\_\_\_
- ⑨ \_\_\_\_\_
- ⑩ \_\_\_\_\_

**4. Identifying “moves” in an introduction section (10 points)**

*Draw lines to divide the introduction into “moves” (i.e., parts), and write a label for each move.*

**5. Writing an abstract for a complete paper (50 points)**

*Write an abstract for the paper in the space below in 90-110 words. You may also write on the back of the paper if necessary.*