

FORM 2 – Research Planning Meeting – (First Month)

Name: Roy Schestowitz
Taylor

Supervisor: Chris

Date of meeting: December 15th 2003

RESEARCH AIMS & OBJECTIVES – (to be completed by the Student following discussion with Supervisor prior to the meeting and should be made available to the Supervisor and Advisor prior to the meeting.)

Synopsis of Research Project and overall aims:

- Fully automate obtaining a set of dense correspondences across a set of 3D medical images as a basis for building statistical models of shape and appearance.
- Develop a new approach with a rigorous theoretical basis and compare its performance with existing approaches to the problem.
- Apply the method(s) developed to demonstrate changes in morphology due to disease (or other causes) in a large dataset (eg brain, knee etc).

Objectives of research project for first year (full- time Students) or first two years (part- time Students), including literature searching:

- Establish benchmark results for correspondences obtained using existing non- rigid registration algorithms.
- Develop an in- depth understanding of the literature on: non- rigid registration, active shape/appearance models, and minimum description length methods (generally and as applied to shape correspondence).
- Develop a general understanding of current methods and problems in computer vision, with particular emphasis on medical image analysis.
- Carry out initial experiments using synthetic data to gain an insight into the problem of automatic image correspondence and an understanding of the key problem areas.
- Obtain and analyse initial results using both synthetic and real data (possibly only 2D).
- Develop a plan for future work, based on the experience of the first year.

Key objectives for first 3 months:

- Complete machine learning module successfully.
- Establish a pattern of background reading.
- Undertake a detailed review of the literature in non-rigid registration, active shape/appearance models, and minimum description length methods (generally and as applied to shape correspondence).
- Gain good familiarity with using Matlab to run computer vision experiments and to analyse results.
- Establish simple 1D model building framework using Matlab software from Kate Smith.
- Plan presentation for student seminar.

Key objectives for first year:

See objectives for first year above.

Faculty of Medicine, Dentistry, Nursing and Pharmacy
MEDICINE GRADUATE PROGRAMME

FIRST MONTH

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Name: Roy Schestowitz
Chris Taylor

Supervisor:

Course/Seminar Title	Dates (if known)
Introductory Course	22/09/03 – 26/09/03
Library Visits	ISBE Research Library: perpetual
Regulatory Core Courses	1/10/03 – 1/06/03
Computing Skills and Statistics	N/A
1 st Year Workshop	N/A
Health and Safety Training (Compulsory)	N/A

Declarations of Student (please initial each statement and sign where indicated below)

I have read and agree with the requirements of:

The University Code of Practice on Admission, Supervision and Examination for Research Degrees
The University Code of Practice for Dealing with Allegations of Misconduct in Research
The University and Local Codes of Practice for Ownership of Intellectual Property Rights Arising from the Work of Students
The University Statement on Plagiarism
The University Student Complaints Procedure
... **(Initial)**

I have read the Safety Code and have been advised of any particular hazards and precautions associated with my programme of work. **(Initial)**

I will not be working with Genetically Modified Organisms (GMOs)
..... **(Initial)**

Signature of Student.....

Date.....

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Ethical Approval

If you are working with human tissues or human subjects, then:

I have ethical approval for the experiments proposed

Signature of Student.....
Date.....

Declaration by Supervisor and Advisor

We have met with the above named Student, discussed with him/her the roles of Supervisor and Advisor and made recommendations (above) for formal course work. The Student is familiar with the requirements of the School Safety Code and has been advised of the particular hazards and precautions associated with their programme of work. The student has completed and returned a Health and Safety Surveillance form.

Signature of Supervisor.....
Date.....

Signature of Advisor.....
Date.....

Fix date of Literature Meeting:

Don't forget to send a copy of this form to the Graduate Tutor/Education Office straight after the meeting! _