



Progress Report Submission for C. J. Taylor

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Despite the latency of last week's meeting, this document will focus on the development made in the past few days.

Agreed Upon

As the previous meeting took place on Friday (March 5th), not much of what had been discussed could yet be implemented. However, the following points were raised:

Organisational

- Look for automatic MATLAB documentation in the Division (if existent).
- Get included in the internal MATLAB mailing list.

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Electronic version: <http://www.danielsorogon.com/Webmaster/Research/Progress>

- Share all code in the MATLAB CVS repository.
- Presentation to be scheduled by Angela.
- The weekly meeting on Monday has been shifted to 5pm.

Technical

- Implement visualisation of perfect¹warps to assess objective functions more properly.
- Perturb the perfect warps, e.g. using CPS warps or Gaussian distribution of offsets, for analysis of different objective functions near convergence.
- In the model-based case, use one data instance as a reference to prevent the optimisation from drifting away to bad solutions. This reference could possibly be the mean of the data.
- Make use of error bars in various plots.

*P*rogress Made

Organisational

- Figures will take a new layout and still be located at:

<http://www.danielsorogon.com/Webmaster/Research/Figures>

- Mathematical Methods course notes were collected and reading began shortly afterwards.
- Presentation was given on Tuesday. A session with CJT will be scheduled soon.
- All filestores have been backed up on Friday. This will now become a frequent routine since I acquired my own crossover wire and it no longer needs to be borrowed from Colin Ashcroft.
- All contents of my research workspace should soon be shifted to a new domain. *schestowitz.com* is being acquired for a long period of time (until 2014).

¹In practice these will be nearly perfect.

Technical

- Experiments performed with varying number of knot-points which are now incorporated into AART as a slider. A large number of knot-points results in better registration, just as expected.
- Closing and quitting MATLAB at the end of registration is now possible. It is an advanced option in AART which allows experiments to be performed with less human intervention.
- Implementation of registration target warp has begun.

Next Stage

- Seminars on Thesis writing.
- Reading of Mathematical Methods course material will continue.
- An E-mail needs to be sent to Surrey to hopefully confirm EPSRC status. This is important since an invoice that has been issued needs to be balanced down.
- Discussion of results and ways to proceed depending on the developments made throughout the weekend and on Monday.