

THE CAMBRIDGE STATISTICS DISCUSSION GROUP

Wednesday 4th April 2007 7:15 for 7:45

The Large Seminar Room, Institute of Public Health,
University Forvie Site, Robinson Way, Cambridge

An Introduction to Mixed Model Splines

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Abstract: In recent years, smoothing splines have been introduced into the linear mixed model framework with the smoothing parameter estimated using residual (restricted) maximum likelihood (REML). This formulation enables flexible non-linear curves to be easily fitted in the presence of random effects and correlated errors. Several different forms of mixed model polynomial spline have been suggested: smoothing splines, P-splines and penalised splines. There are close connections between the three types of model. This talk reviews and compares these spline methods, shows the connections between the different models, and sets them within the mixed model framework.

Speaker: Sue Welham has worked at Rothamsted Research as a statistical consultant since 1987, except for a 3-year sabbatical to pursue PhD studies at the London School of Hygiene & Tropical Medicine. Her research interests are in REML analysis of mixed models, especially smoothing spline models and extensions to spatio-temporal data, and in developing statistical software for these methods.

Directions: : (From Central Cambridge) Turn right off Hills Road into the Addenbrooke's site then turn left at the hospital roundabout onto Robinson Way. Follow Robinson Way until you see an access road on the left signed 'Forvie Site' (but note that the sign is on your right). Turn into the access road and follow signs - first to the Institute and then to the Large Seminar Room. There is ample car parking. The front doors will be locked at 7:45. Arrivals after 7:45pm can gain admittance by contacting the secretary on 07761769436.

Provisional Next Meetings:

3rd May – Brian Tom (Biostatistics).

9th October – Matt Whiley (Amgen).

Supper: Some members eat regularly in the University Centre before each meeting at **5-30pm**. Feel free to join them.

Subscriptions: of 1 pound are now due for attending the 2006-2007 session.

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