Optimal Crossover Designs

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DEMA2006, Southampton, 8 September 2006

References

Bose, M. & Mukherjee, B. 2003 Optimal crossover designs under a general model. *Statistics and Probability Letters* **62**, 413-418.

Carrière, K. C. & Reinsel, G. C. 1993 Optimal two-period repeated measurement designs with two or more treatments. *Biometrika* **80**, 924-929.

Cheng, C.-S. & Wu, C.-F. 1980 Balanced repeated measurements designs. *Annals of Statistics* **6**, 1272-1283. Correction: 1983; 11: 349.

Donev, A. N. 1998 Crossover designs with correlated observations. *Journal of Biopharmaceutical Statistics* **8**, 249-262.

Hedayat, A. & Afsarinejad, K. 1975 Repeated measurements designs, I. In *A Survey of Statistical Design and Linear Models* (ed. J. N. Srivastava), pp. 229-242. Amsterdam: North-Holland.

Hedayat, A. & Afsarinejad, K. 1978 Repeated measurements designs, II. *Annals of Statistics* **6**, 619-628.

Hedayat, A. & Zhao, W. 1990 Optimal two-period repeated measurements designs. *Annals of Statistics* **18**, 1805-1816. Correction, 1992, 20, 619.

Hedayat, A. S. & Yang, M. 2003 universal optimality of balanced uniform crossover designs. *Annals of Statistics* **31**, 978-983.

Hedayat, A. S. & Yang, M. 2004 Universal optimality for selected crossover designs. *Journal of the American Statistical Association* **99**, 461-466.

John, J. A., Russell, K. G. & Whitaker, D. 2004 CrossOver: an algorithm for the construction of efficient cross-over designs. *Statistics in Medicine* **23**, 2645-2658.

Kiefer, J. 1975 Construction and optimality of generalized Youden designs. In *A Survey of Statistical Design and Linear Models* (ed. J. N. Strivastava), pp. 333-341. Amsterdam: North-Holland.

Kunert, J. 1983 Optimal design and refinement of the linear model with applications to repeated measurements designs. *Annals of Statistics* **11**, 247-257.

Kunert, J. 1984 Optimality of balanced uniform repeated measurements designs. *Annals of Statistics* **12**, 1006-1017.

Kunert, J. & Stufken, J. 2003 Optimal crossover designs in a model with self and mixed carryover effects. *Journal of the American Statistical Association* **97**, 898-906.

Kushner, H. B. 1997 Optimality and efficiency of two-treatment repeated measurements designs. *Biometrika* **84**, 455-468 (correction 1999, 86, 234).

Kushner, H. B. 1998 Optimal and efficient repeated measurements designs for uncorrelated observations. *Journal of the American Statistical Association* **93**, 1176-1187.

Kushner, H. B. 1998 Optimal repeated measurements designs: the linear optimality equations. *Annals of Statistics* **25**, 2328-2344.

Low, J. L., Lewis, S. M. & Prescott, P. 1999 Assessing robustness of crossover designs to subjects dropping out. *Statistics and Computing* **9**, 219-227.

Matthews, J. N. S. 1990 Optimal dual-balanced two-treatment crossover designs. *Sankhya* **B52**, 332-337.

N'Dow, J., Robson, C. N., Matthews, J. N. S., Neal, D. E. & Pearson, J. P. 2001 Reducing mucus production after urinary reconstruction: a prospective randomized trial. *Journal of Urology* **165**, 1433-1440.

Quenouille, M. H. 1953 *The Design and Analysis of Experiments*. London: Griffin.

Senn, S. J. 2002 *Cross-Over Trials in Clinical Research (second edition)*. Chichester: Wiley.

Stufken, J. 1991 Some families of optimal and efficient repeated measurements designs. *Journal of Statistical Planning and Inference* **27**, 75-83.

Stufken, J. 1996 Optimal Crossover Designs. In *Handbook of Statistics, Volume 13* (ed. S. Ghosh & C. R. Rao). Amsterdam: Elsevier.

Williams, E. J. 1949 Experimental designs balanced for the estimation of residual effects of treatments. *Australian Journal of Scientific Research* **A2**, 149-168.