# On universal optimality of circular repeated measurements designs

## Katarzyna Filipiak

Poznań University of Life Sciences, Poland

#### Abstract

Our aim is to characterize the universally optimal design among the class of circular repeated measurements designs. We show, that some circular weakly neighbor balanced designs defined by Filipiak and Markiewicz [1] for an interference model, which are uniform on periods, are universally optimal under the model of repeated measurements design. Our results correspond to the work of Magda [3] and Kunert [2].

## **Keywords**

Repeated measurements designs, Uniform design, Circular balanced design, Universal optimality.

## References

- [1] Filipiak, K. and A. Markiewicz, A. (2012). On universal optimality of circular weakly neighbor balanced designs under an interference model. *Comm. Statist. Theory Methods* 41, 2356–2366.
- [2] Kunert, J. (1984). Designs balanced for circular residual effects. Comm. Statist. Theory Methods 13(21), 2665–2671.
- [3] Magda, C.G. (1980). Circular balanced repeated measurements designs. Comm. Statist. Theory Methods 9, 1901–1918.