11th Conference on Dynamical Systems Applied to Biology and Natural Sciences DSABNS 2020 Trento, Italy, February 4-7, 2020

ADDITIVE MODELS - AN APPLICATION IN AGRICULTURE

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We estimate cumulants and derive prediction intervals in additive models.

We apply our results to real data in a grapevine experiment. We consider a model with two crossed factors: Clone, a random factor with two levels and Location, a fixed effects factor with three levels.

Acknowledgements

This work was partially supported by national founds of Foundation for Science and Technology under UID/MAT/00212/2019 and UID/MAT/00297/2019.

References

- Fonseca, M., Mexia, J. T. and Zmyślony, R.(2003). Estimating and Testing of Variance Components: An Application to a Grapevine Experiment, Biometrical Letters, 40, 1, 1–7.
- [2] R Core Team (2013). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL http://www.R-project.org/.
- [3] Searle, S. R., Casella, G., McCulloch, C. E. . Variance Components, John Wiley & Sons, Inc, 1992.
- [4] Stuart, A. and Ord, J.. Kendalls Advanced Theory of Statistics, 6th Ed., Halsted Press, New York, 1994.