



Seminar Series in Statistics and Data Science

17.09.2019, 14:15 @ Erling Sverdrups plass, Niels H. Abels hus, 8th floor

Nicola Sartori: Mean and median bias reduction in generalized linear models

Abstract: We introduce an integrated framework for estimation and inference in generalized linear models using adjusted score equations that result in mean and median bias reduction. General expressions for the mean and median bias-reducing adjusted score functions are derived in terms of quantities that are readily available in standard software for fitting generalized linear models. Estimates can be easily obtained using an iteratively re-weighted least squares with appropriately adjusted working variates. Inference about the model parameters, including procedures for model comparison, can be performed using Wald statistics based on the resulting estimators. Apart from providing mean and median bias reduction, the methods are also found to overcome practical issues related to infinite estimates that can occur with positive probability in generalized linear models with multinomial or discrete responses. Finally, we show that the properties of the methods are maintained also in extreme settings, characterized by large dimensional parameters.

(joint with E. C. Kenne Pagui and I. Kosmidis)



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Nicola Sartori is Professor of Statistics at the University of Padova (ITA). He graduated from the University of Padova in 1997 and obtained his PhD in Statistics from the same university in 2002.

He has been Assistant Professor of Statistics at the Ca' Foscari University of Venice (2004-2010) and at the University of Padova (2010-2011). He has been Associate Professor of Statistics (2011-2018). From 2018 he is Full Professor of Statistics.

He is a member of the International Statistical Institute and the Royal Statistical Society and has held visiting positions at the University of Toronto, Northwestern University, Ecole Polytechnique Fédérale de Lausanne and University College London.

He is Associate Editor of Stat (2015-) and of Journal of Statistical Planning and Inference (2017-).

Next seminar

01.10.2019 @ 14:15 **Olli Saarela**
University of Toronto (CAN)

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