

GMDS-CEN conference, [Berlin] 2020:

Satellite Workshop

“Long-run behaviour of Bayesian procedures“

16/09/2020

08:00 - 10:00 UTC (10:00 - 12:00 CEST)

Workshop description

The session addresses the frequentist properties of Bayesian (i.e., posterior-based) decision procedures, with or without prior information (“co-data”). The following questions arise: If a certain procedure is applied to many placebo treatments, what will be the proportion of false-positives (1-specificity, error of 1st kind)? If the same procedure is applied to many treatments for which a reasonable effect (Delta) can be expected, what will be the proportion of false-negatives (1-sensitivity, error of 2nd kind)? A “reasonable” effect is e.g. a hazard ratio of 0.75 in oncology.

Methodologically speaking, specificity and sensitivity are special cases of utilities. However, not the whole posterior distribution is considered anymore, but special values such as Zero and Delta are picked.

The session proceeds in three directions: We can ask in a general manner whether this switch away from the full posterior distribution has advantages, e.g. for reproducibility. Or we can try to balance the errors of 1st and 2nd kind against each other. Or we can investigate the influence of co-data on given frequentist tests.

Chair

Reinhard Vonthein, Universität zu Lübeck

Presenters and presentation titles

Leonhard Held, Universität Zürich:

The harmonic mean chi-squared test to substantiate scientific findings

Christian Röver / Tim Friede, Universität Göttingen:

Calibration of Bayesian analyses including historical data: The perspective matters

Andy Grieve, UCB Brussels:

How well-calibrated should Bayes procedures be?

Annette Kopp-Schneider / Manuel Wiesenfarth / Silvia Calderazzo, DKFZ Heidelberg:

The effect of prior information on frequentist properties of Bayes test decisions

Abstracts

Abstracts will be available on the website of the IBS/DR Bayes working group:

<http://www.biometrische-gesellschaft.de/arbeitsgruppen/bayes-methodik.html>.

Session format

The workshop language will be English.

After a short introduction, the 4 presentations will be held in 20 minutes each. Comments are possible through a chat function. Thereafter there will be a panel discussion where questions can be asked through audio.

The whole session will be recorded and later be made publicly available on the website of the IBS/DR Bayes working group.

Further Information

Please visit the website of the GMDS-CEN conference:

<https://www.gmds-cen-2020.de/satellite-session>

and the [website](#) of the IBS/DR Bayes working group.

Registration

No registration is necessary for this workshop. Please use the following link to the videoconference which will be held through BigBlueButton: <https://meet.gwdg.de/b/chr-jd2-prc>. There is no registration fee.

Organiser

Gerhard Nehmiz, Boehringer Ingelheim Pharma GmbH & Co. KG (consultant), Biberach