

Please join the Biometric Colloquium

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PREDICTION MODELS IN HEALTHCARE: QUANTIFYING RISKS OF UNCERTAINTY USING VALUE-OF-INFORMATION MEASURES

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Seminarraum Center for Medical Data Science (previously CeMSIIS),
Spitalgasse 23, Room 88.03.513
Medical University of Vienna, 1090 Wien
Host: Georg Heinze

Abstract:

Prediction models (statistical or AI models) can support diagnosis and prognosis, thereby optimizing patient care. Whether this succeeds depends on the reliability of the model. Often, models are tested on small datasets, and it turns out that they are not equally suitable for all locations and populations. Uncertainty can be quantified using value-of-information (VOI) measures. These reflect the risks of uncertainty, expressed as the expected number of incorrect diagnoses. With this information, clinicians and policymakers can decide for each model: is it ready for use, or is further research needed? In this presentation, Laure Wynants introduces the concept of VOI for prediction model validation, the current state of the art, and ongoing research of her team.