



Ringseminar

„Methoden der Epidemiologie, Biometrie und Versorgungsforschung“

Einladung

Sehr geehrte Kolleginnen und Kollegen,

hiermit möchten wir Sie ganz herzlich einladen zu unserem Ringseminar, das sich der Vorstellung und Diskussion statistischer Methoden und Prinzipien in verschiedenen Bereichen der medizinischen Forschung widmet.

Am **11. Juni 2018** wird **Prof. Dr. Hans Kestler** (Universität Ulm) sprechen über

Semantic integration for interpretable molecular classification

Das Ringseminar findet statt von **16.00 – 17.00 Uhr in M24/Hörsaal 10**. Alle Interessierten sind herzlich willkommen, eine Anmeldung ist nicht erforderlich.

Abstract:

The interpretability of a classification model is one of its most essential characteristics. It allows for the generation of new hypotheses on the molecular background of a disease. However, it is questionable if more complex molecular regulations can be reconstructed from such limited sets of data. To bridge the gap between complexity and interpretability, we replace the de novo reconstruction of these processes by a hybrid classification approach partially based on existing domain knowledge. Using semantic building blocks that reflect real biological processes these models were able to construct hypotheses on the underlying genetic configuration of the analysed phenotypes. As in the building process, also these hypotheses are composed of high-level biology-based terms. The semantic information we utilize from gene ontology is a vocabulary which comprises the essential processes or components of a biological system. The constructed semantic multi-classifier system consists of expert base classifiers which each select the most suitable term for characterizing their assigned problems.

Mit freundlichen Grüßen

Prof. Dr. med. Dietrich Rothenbacher und PD Dr. Benjamin Mayer
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Prof. Dr. Jan Beyersmann
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