



## Seminar Series in Statistics and Data Science

12.03.2019, 14:15 @ Erling Sverdrups plass, Niels H. Abels hus, 8th floor

### **Douglas Wiens:** Robustness of Design: A Survey

**Abstract:** When an experiment is conducted for purposes which include fitting a particular model to the data, then the 'optimal' experimental design is highly dependent upon the model assumptions - linearity of the response function, independence and homoscedasticity of the errors, etc. When these assumptions are violated the design can be far from optimal, and so a more robust approach is called for. We should seek a design which behaves reasonably well over a large class of plausible models. I will review the progress which has been made on such problems, in a variety of experimental and modelling scenarios - prediction, extrapolation, discrimination, survey sampling, dose-response, machine learning, etc.



**Douglas Wiens**  
University of Alberta (CAN)

Douglas Wiens is Professor Emeritus at the University of Alberta (CAN). He obtained his Ph.D. in 1982 at the University of Calgary. His main research interest are Robust regression design, general robustness, applied probability, applied statistics and mathematical logic.

#### Next seminar

15.03.2019 @ 14:15 **Steve Marron**  
University of North Carolina (USA)

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