

To William Demant Fonden

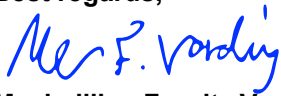
## Project description behind presentation at MLSP 2019

As a part of my PhD project in Active Deep Learning for Nano-sensor Systems in the IDUN Center of Excellence, I am going to present our research resulting in the accepted paper "A Bayesian Generative Model With Gaussian Process Priors For Thermomechanical Analysis Of Micro-Resonators" at the IEEE International Workshop On Machine Learning For Signal Processing (MLSP 2019) [ieeemlsp.cc] in Pittsburgh, US, in the period 11/10/2019-16/10/2019. This work is a part of the overall goal in developing methods for automated design, screening and detection of medicine.

Thermomechanical analysis using resonating micro-electromechanical systems shows great promise in pharmaceutical research in characterising physiochemical and mechanical properties of drugs. The paper presented at MLSP 2019 proposes a model, which can give a more precise characterisation of the material of the resonator, which is important in practical settings where the number of measurements are limited and the noise level is high. This paper applies gaussian processes to identification of patterns in the thermochemical analysis data.

Accepted papers will be published on a password-protected website that will be available during the workshop. The presented papers will be published in and indexed by [IEEE Xplore](#).

Best regards,



**Maximilian Fornitz Vording**

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