



## Understanding and Simulating wind-induced vibrations of iced vertical cables

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The main focus of thesis is to understanding and simulating wind-induced vibrations of iced vertical cables. This has been approach by the development of a new 3 degree-of-freedom instability model, which can predict instability and estimate the needed damping to avoid instability. The instability model has been validated through wind tunnel experiments, which consist of three experimental series. One experimental series concentrating on ice formation on cables, the second and third looking at static force coefficients and dynamic responses of selected ice shapes.

Finally, the static force coefficients and dynamic responses have been used in a comparison to the predicted values from the instability model.

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