

# Adjusting dynamic model with physics informed neural networks.

Modeling the dynamic behavior of systems comprising viscoelastic components, damping or frequency or temperature dependent parameters requires paying attention to the variation of the dynamic behavior in function of the operating conditions. In early design stages, parameters that define the dynamic behavior of the component are conventionally determined through established physical formulations derived from the equations of motion. Even though the parameters are assumed to be constant at these stages, further investigation of temperature and frequency dependencies is crucial, in order to understand the variations under actual operating conditions. Machine learning, or simply neural network, is a powerful tool in order to identify and complete the conventional models. The presentation attempt to be a first step in this direction.



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**13 horas**

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# Seminário

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