Identifiant de la contribution : **191** Type : **non spécifié**

”COMO2#6 - Temporal companding for the evaluation of a rotor rotation speed during strong transients”

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This paper presents a new autonomous vibration monitoring system for monitoring the mechanical health of aircraft engines. The first section of the paper describes the new global monitoring system. The constraints of the embedded part of the system are detailed. One of the most important constraints is the need to estimate the rotation speed of a rotor, from a vibratory signal, even when the rotation speed varies strongly. The second section of the paper presents a solution to facilitate the estimation of the rotational speed when the speed varies strongly. The solution is based on a temporal companding (compressing and expanding) algorithm, which is described in detail. In the last section, the performance and limitations of the algorithm are evaluated on some data acquired on an aircraft engine in flight.

Presenter(s) : GRIFFATON JULIEN

Classification par session : Survishno 9 / Condition monitoring 2