

Title (en)

Active acoustic attenuation system in which regressor filter is determined from overall system test model

Title (de)

Aktive Schalldämpfungsanordnung, in welcher der Regressionsfilter von einem Gesamtsystem-Testmodell bestimmt wird

Title (fr)

Dispositif d'atténuation sonore actif dans lequel le filtre à régression est déterminé par un modèle de test du système global

Publication

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Application

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Priority

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Abstract (en)

[origin: EP1107225A2] An active acoustic attenuation system uses an overall system test model Q to determine a model for the auxiliary path SE. In the preferred SISO embodiment, the system is operated in test mode to determine the C model for use as a regressor filter in the filtered-X LMS or the filtered-U RLMS algorithms. The overall system test model Q is an adaptive model which receives a system reference signal as model input and receives a combination of its model output signal and the output of an error sensor as error input. A first version of a test control model Atest(1) is selected which includes test values for control model A. During testing, the control model A does not adapt, however, the overall system test model Q does adapt. The system is operated in test mode to adaptively determine a first solution for the overall test model Q(1). Then, a second version of the test control model Atest(2) is selected, and the system is again operated in test mode to adaptively determine a second solution for the overall test model Q(2). The values Atest(1), Atest(2), Q(1), and Q(2) are then used to solve a set of linear equations to determine the auxiliary path SE. A copy of the calculated auxiliary path SE is used as the C model regressor filter. A multiple input, multiple output, multiple error (MIMO) embodiment of the invention is also disclosed. <IMAGE>

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Citation (search report)

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