

Title (en)
STABLE ADAPTIVE FILTER AND METHOD

Title (de)
STABILES ADAPTIVES FILTER UND HERSTELLUNGSVERFAHREN

Title (fr)
PROCEDE ET FILTRE ADAPTATIF STABLE

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Abstract (en)
[origin: WO0038319A1] Stable adaptive filter and method are disclosed. The invention solves a problem of instability associated with Fast Affine Projection adaptive filters caused by error accumulation in an inversion process of an auto-correlation matrix. The Stable FAP provides updating of the adaptive filter coefficients by solving at least one system of linear equations, whose coefficients are the auto-correlation matrix coefficients, by using one of the descending iterative methods having an inherent stability of operation due to intrinsic feedback adjustment. The results of the solution are used to update the filter coefficients. The above approach is applicable for any value of a normalized step size ranging from zero to unity. It allows either direct determining of an updating part of the filter coefficients without determining an inverse auto-correlation matrix, or determining the inverse auto-correlation matrix by descending iterative methods.

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