Research Highlight: Eigenvalue Embedding of Undamped Vibroacoustic Systems with No-spillover

Work of Associate Professor CHU Delin

Prof. CHU Delin and his collaborators have studied the eigenvalue embedding problem of the undamped vibroacoustic system with no-spillover (EEP-UVA), which is to update the original system to a new undamped vibroacoustic system, such that some eigen-structures are replaced with newly measured ones, while the remaining eigen-structures are kept unchanged. They have provided a set of parametric solutions to the EEP-UVA. The freedoms in the parametric matrices can be further exploited to achieve some other desirable properties. The performance of the proposed algorithms have been illustrated by numerical examples.

Reference: