

Supplementary Materials: Sound scattering from the Gothic piers and columns of the Cathédrale Notre-Dame de Paris

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1. Wave field simulation videos

The videos have been recorded from the hybrid finite-volume finite-difference time-domain method simulations. Only a rectilinear sub-sampling of the hexagonal spatial grid, resulting in more than 14 points per meter in the horizontal and vertical directions. This causes visible spatial-aliasing, yet still allows good visualization of the scattering. The field in very close proximity to the cylindrical obstacles, *i.e.* in the finite volume mesh, is not recorded. They are included as MPEG4 files.

2. Impulse responses

The impulse responses have been obtained from the simulations. They correspond to receiver positions at 3 m from the center of the cylinders, for the back ($\theta_s = 180^\circ$) and transverse ($\theta_s = 90^\circ$) scattering. They have been equalized with a minimum phase inverse filter constructed from the free-field impulse responses to avoid coloration from the Ricker pulse used as a source signal. This provides a flat magnitude spectrum up to 5 kHz. They all have been resampled to 48 kHz and normalized to their maximum absolute value. They are included as WAV files.