## Correction to Equations 6 and 11, and Theorem 2

The remarks about the splitting $Z(\omega) = A(\omega)/B(\omega)$ make only sense if the interim quantities

$$\frac{1}{2\pi}\int_{-\infty}^{\infty} b(t-\tau)p(0,\tau)\,\mathrm{d}\tau, \quad \frac{1}{2\pi}\int_{-\infty}^{\infty} a(t-\tau)v(0,\tau)\,\mathrm{d}\tau$$

are physical and inherently causal. See Equations 6 and 11, and Theorem 2.

## Correction to Section 4

It is possible [1] to interpret $\sqrt{\omega}$ in a way that it obeys the conditions of causailty and reality. Replace

$$\tfrac{1}{2}\sqrt{2}(1+\mathrm{i})\sqrt{\omega}$$

by

$$\sqrt{\mathrm{i}\omega},$$

where the square root is defined by its principal value. This is analytic in the lower half plane (a branch cut in the $\omega$-plane along the positive imaginary axis), and $(\sqrt{\mathrm{i}\omega})^* = \sqrt{-\mathrm{i}\omega} = \sqrt{\mathrm{i}\cdot(-\omega)}$ for $\omega \in \mathbb{R}$.

[1] F. Monteghetti, D. Matignon, E. Piot, and L. Pascal. Design of broadband time-domain impedance boundary conditions using the oscillatory-diffusive representation of acoustical models. *Journal of the Acoustical Society of America*, 140:1663–1674, 2016.