A Thin Film Phantom for Blood Flow Simulation and Doppler Test

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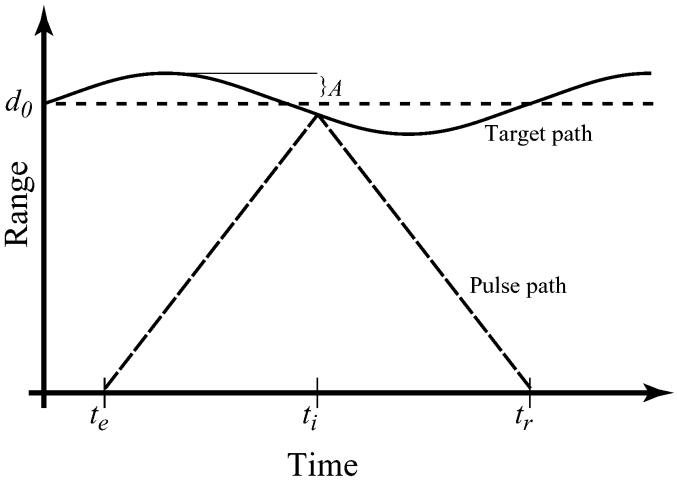
Abstract



9 $ % *

is the vibration amplitude and $_0$ is the vibration fre-

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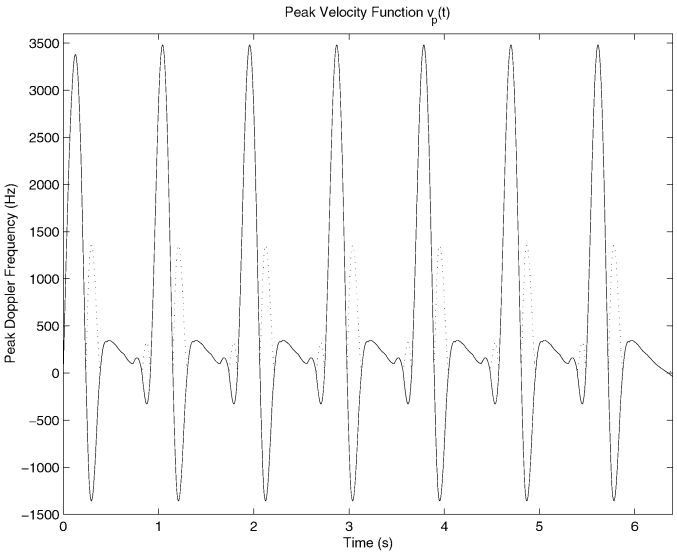

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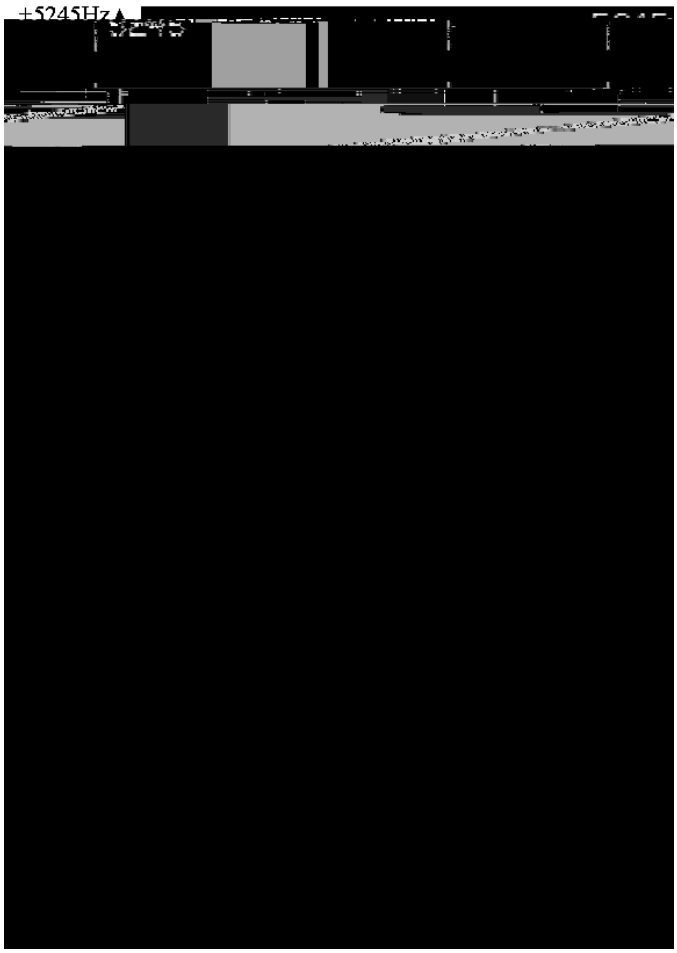
experiments. We constructed the drive signal (



9 :> + * ? ? +%
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is essentially constant within any given FFT. As a result, there are only signal components at the base drive frequency ( ), as predicted by the theory. In Fig. 4(b), the Bessel band phenomenon discussed in [9] is illustrated, where the same frequency sweep signal, as in Fig. 4(a), is used, but the amplitude has been increased by a factor of 5. The Doppler signal is clearly visible at multiples of the vibration frequency .

A synthesized arterial signal is shown in Fig. 5. The distribution of velocities up to the maximum velocity is visible. The peak velocity function (