



USING SPEECH PROCESSING METHODS TO MODEL BLOOD FLOW (MonAmOR11)

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★ **Abstract :** This paper shows how the multipulse method from digital speech processing can be used to accurately model signals obtained from blood pressure and flow velocity sensors. This model produces very good modelling of the signals on a resolution that allows analysis between heartbeats. The AR coefficients can be transformed to reflection coefficients and tube radii associated with digital wave guides, as well as pole-zero representation. These parameters permit additional insight and interpretation that will produce deeper insight into the biological control mechanisms.