

ACOUSTICS2008/243
**The contribution of temporal fine structure information to the
intelligibility of speech in noise**

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Temporal fine structure (TFS) information in speech may be particularly useful when listening to a target in a background that contains temporal 'dips'. A change in TFS may allow identification of signal portions where the target-to-background ratio is high. This hypothesis was tested. Speech reception thresholds were measured with steady and an 8-Hz amplitude-modulated noise background for signals processed to contain variable amounts of TFS information. Signals were filtered into channels and channel signals for channel numbers above a 'cut off channel' (CO) were tone-vocoded to remove TFS information, while channel signals with channel numbers of CO and below were left unprocessed. Signals from all channels were combined. Five values of CO were tested for each noise type, with ten normal-hearing subjects. Subjects benefited more from TFS information when listening in the modulated masker than the steady masker. For steady noise, addition of TFS information above 548 Hz did not improve performance, whereas for modulated noise, addition of TFS at high frequencies did improve performance. The greater benefit from TFS information when listening in modulated noise is consistent with the idea that TFS information is important for listening in the dips of a fluctuating masker.