

# Neural coding of speaker identity : methodological and ermpirical contributions

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## NEURAL CODING OF SPEAKER IDENTITY

### Methodological and Empirical Contributions

1. Information on speaker identity is contained in early as well as in higher-order auditory cortices.
2. Auditory cortical representations of speaker identity (and speech content) are modulated by task-specific demands and robust to flat-spectrum noise.
3. In an early phase, speaker identity processing relies on the optimized analysis of relevant acoustic stimulus dimensions; this may be followed by a second phase during which abstract representations are formed.
4. Single-trial decoding is applicable to EEG measurements in neuro-cognitive paradigms and helps distinguishing conditions that evoke subtle signal differences.
5. Supervised self-organizing maps help visualizing the topology of multi-voxel activation patterns.
6. Specific sets of data require specific sets of parameters. The search for optimal parameters may take an infinite amount of time.
7. “[...] to value more highly the little, unpretentious, cautious truths, arrived at by rigorous methods, than those vast, floating, veiling generalities [...]” *Friedrich Nietzsche*
8. Too-good-to-be-true and as-expected results should remind the (neuro)scientist of thorough inspection and verification, i.e. checking a lot more than twice.
9. *Wisely* but not *too well* present’d outcomes are to be the core of scientific publications. Adapted from *William Shakespeare*