



University of
Western Sydney

Bringing knowledge to life

MARCS Auditory Laboratories





MARCS Auditory Laboratories is involved in basic and applied research on auditory perception and cognition, particularly the significant domains of speech, music, emotion and hearing.

The eight labs that comprise MARCS house state-of-the-art equipment for conducting behavioural experiments and simulations. The 48 MARCS staff and student researchers excel at devising methods for studying behavioural issues in:

- Auditory perception and cognition
- Speech and language perception and development
- Music, communication and emotion

MARCS collaborates with researchers from various disciplines including linguistics, music, education, computer science, human factors and engineering, has numerous active international research collaborations, and is involved in a broad range of stimulating and rewarding industry partnerships.

For example, one MARCS project focuses on speech perception by babies, adults, and musicians. Newborn babies 'soak up' the sights and sounds of their new world, especially the speech they hear around them. In their early days, infants process all speech sounds equivalently but around 9 months become attuned to their native language, ignoring sounds not used in that language. This has been established for consonants and vowels; but tones, those variations in pitch which signal meaning in Chinese, Thai and various other languages, are only just now being studied.

The results of this research will have practical spin-offs: understanding normal language development and how language disorders arise; the development of education programs - for deaf and hearing impaired children and adults; musical training for children and adults; and second language learning programs, especially in tonal languages.

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