# Abstract EFAS/DGA 2007

## The fitting process of complex hearing aids

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The fitting of modern hearing aids is becoming increasingly complex, because the hearing aid is expected to adapt to different acoustical environments, either under user control or automatically. This requires more refined and elaborate fitting techniques. Non-linear prescription rules provide a good starting point but in many cases a well-structured fine tuning process is required to improve the “first-fit” parameters based on user experiences in daily life. This presentation will focus on four approaches that can be used here:

- Interactive fitting strategies using multi-directional pattern search techniques allow a multi-dimensional approach in which the user can optimise a number of signal-processing parameters interactively for specific listening conditions.

- Well-structured sets of background noises, recorded on CD or DVD to simulate specific sound environments that allow a better tailoring of the hearing aid settings towards specific background noises and listening situations.

- Data-logging techniques to receive detailed feedback about the use of different settings in daily use during a trial period.

- Trainable hearing aids that may facilitate a more direct approach if the subject will be allowed to control the most important fitting parameters in his/her own acoustical environment.

Each approach has specific advantages and disadvantages as well as limitations with respect to the practical use (e.g. with respect to the time available for fine-tuning). However, it will be argued that fine-tuning is worthwhile and generic tools should become available to optimise the use of high-level technology in modern hearing aids.