

ACOUSTICS2008/448
**Changing seating arrangements of the orchestras - a challenge for
the concert hall design**

Jürgen Meyer
Bergiusstr. 2a, D-38116 Braunschweig, Germany

For the future of concert hall design, two aspects will play an increasing role: the search for new shapes created by the architects and changing seating arrangements preferred by the conductors. Whereas in the last decades, acoustic consultants could assume that e.g. celli and double basses were positioned on the right side of the stage, they will have to consider now that more and more conductors - particularly those of high international reputation - go back to the classic seating arrangement (celli in the center, 2nd violins on the right side). Among others, this distinct tendency leads to the following questions:

Which are the tonal (acoustic) advantages of the German seating arrangement and by which roomacoustical means can they be supported? In which directions - seen from the player - exist important reflection areas for timbre, clarity and spaciousness? How should risers on the stage be designed for improving the listeners' sound impression and supporting the musicians' mutual hearing? Do celli and basses need podium areas capable of vibrating? Furthermore, where are critical areas and delay times for generating echos or erroneous localization of French horns or other winds? These questions shall be discussed from physical and psychoacoustic aspects.