



TECHNISCHE
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IAP-SEMINAR

EINLADUNG

Termin: **Dienstag, 28.1.2014 um 16:00 Uhr**
Ort: **Technische Universität Wien,
Institut für Angewandte Physik,
Seminarraum 134A, Turm B (gelbe Leitfarbe), 5. OG
1040 Wien, Wiedner Hauptstraße 8-10**

Vortragender: **Dipl.-Ing. Dr. Dieter Hohenwarter**
TGM Wien

Thema: **Outdoor sound propagation with respect to
ground and meteorological effects**

Kurzfassung

Outdoor sound propagation influences our life because the noise of cars or railway carriages disturbs a lot of people. Since approximately 30 years, different models have been in use to describe the ground effects in a scientifically correct way. In contrast to this, in Germany and Austria the calculation of noise maps is based on an older sound propagation model (ISO 9613-2). According to other guidelines, sound level should be measured assuming downwind sound propagation, at which the acoustic contribution of the meteorological effects is small. However, in reality the sound from, e.g., a railway spreads in various ways in relation to the wind direction. Sound propagation up to a distance of 200 m south and north of a railway line was measured along with the meteorological situation with a tethered balloon up to a height of 100 m. In the case of upwind sound propagation, differences of the sound level in the range of 10 dB (A-weighted) between stable and unstable meteorological situations were found during one night. The influence of different meteorological parameters on sound propagation is discussed based on the paper of Ref. 1.

¹⁾ Dieter Hohenwarter, Erich Mursch-Radlgruber: *Nocturnal boundary layer profiles and measured frequency dependent influence on sound propagation*, Applied Acoustics **76** (2014) 416-430

*Alle interessierten Kolleginnen und Kollegen sind zu diesem Seminar
(45 min mit anschließender gemeinsamer Diskussion) herzlich eingeladen.*

*M. Gröschl e.h.
(Seminar-Chairperson)*

*H. Störi e.h.
(LVA-Leiter)*