fingers. Such a suggestion may apply to transmission to even more far district, due to the fact that blood vessels can work as a waveguide for pressure, because they are designed to be so.

**Methodology** Can be summarised as following. Effects of vibrations on the hearing function will be assessed by stimulated otoacoustic emission method. Vibration elicitation will be strictly controlled (shaker and 6 DOF vibrating plate). Overall vibration will be measured by accelerometers on joints and head. Blood vessel vibration propagation will be measured by high resolution, dual frequency echography on main vessels (coronary) and small vessels. The frequency spectrum of hearing loss and blood vessels vibrations, deducted by the heart pumping effects, will be compared to look for coincidence.

**References**


5. Self-assessment of the jugular venous pulse from space and special environments – Paolo Zamboni, EUBS 43rd annual scientific meeting, Ravenna, Italy, 12–16 September 2017.

**Abstracts**

### 1433 EFFECTIVENESS OF ‘HEARING CONSERVATION PROGRAM’ IN THE LNG INDUSTRY – A QATAR PERSPECTIVE

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**Background** Noise, or unwanted sound, is one of the most pervasive occupational health problems. Ras Gas hearing conservation program aims to prevent hearing deterioration of its employees working in Ras Gas Company Ltd (RG) owned or operated properties that have potential exposure to high levels of noise and is based on the hearing conservation guidelines from OSHA.

**Methods** This Prospective study analysed the accumulated hearing evaluation data of the employees working with Ras Gas for a minimum of 10 years in the ‘Similar exposure group’ (SEG) within the operations group to test the effectiveness of the hearing conservation program (HCP) which was implemented in 2009. The data was extracted from the Medical Director (MD) Software of the Medical Services Department and includes the original audiograms of the 70 selected employees belonging to the operations group. This study planned to analyse:

- Pre – employment audiograms
- Audiograms taken at the start of the hearing conservation program (2009) and
- The audiograms done in 2014 (i.e; the hearing assessment of these employees from the day they started working with Ras Gas to the time the Hearing Conservation program was started and up to the 2014 hearing status) of the selected employees.

**Results** A total of 210 audiograms (3 × 70) were reviewed. The analysis of the audiograms displayed an improvement in employees hearing in line with the introduction of a hearing conservation program when the age correction factor was applied.

**Discussion** This study showed that, if properly executed, a hearing conservation program can prevent, reduce and even improve noise induced hearing deterioration. The study is particularly important in industries like mining, quarrying and oil and gas extraction which has the highest prevalence estimates of hearing loss.