

Séminaire MEGA – CeLyA
Centre Lyonnais d'Acoustique

Railway noise research at the ISVR

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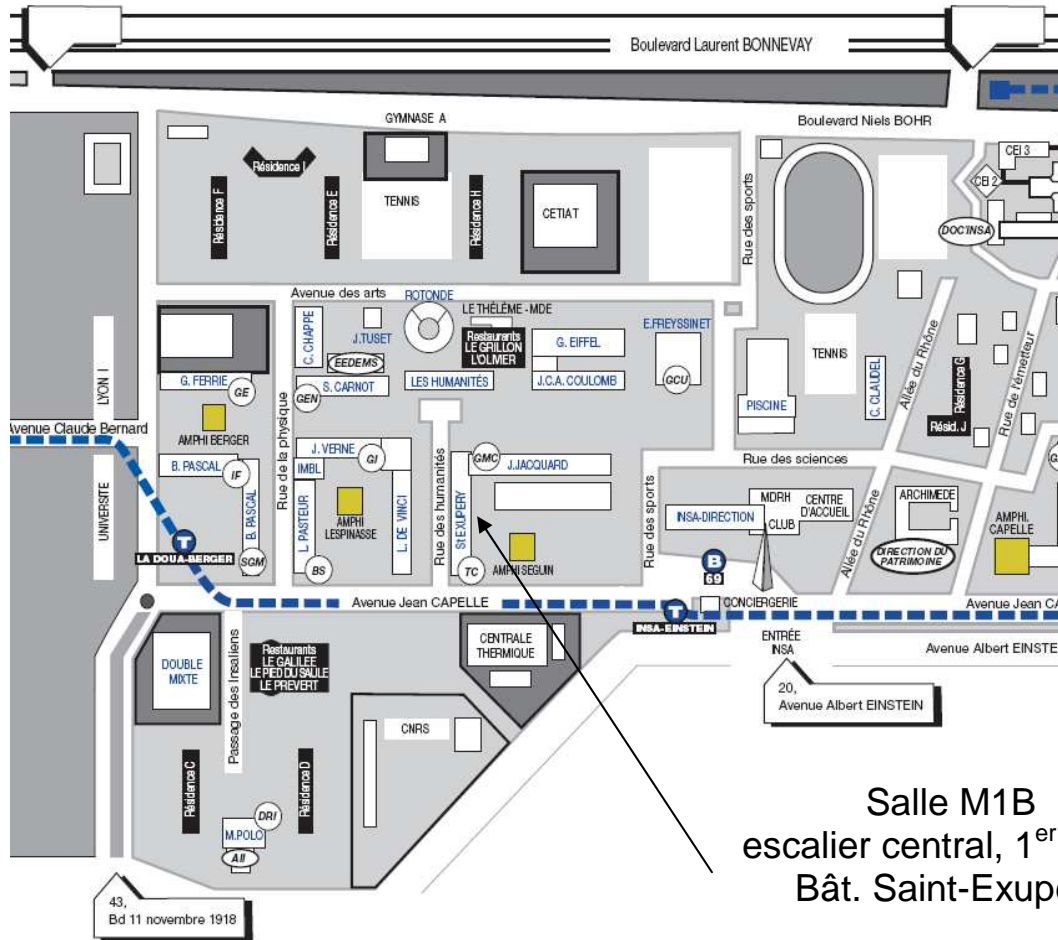
Salle M1B – Batiment Saint Exupéry - INSA de Lyon
(plan d'accès page suivante)

25 bis Avenue Jean Capelle, 69621 VILLEURBANNE

The presentation will give an overview of the various sources of noise and vibration in the railway field and the contribution of the ISVR towards understanding and controlling them.

ISVR has been active in research into railway noise and vibration over the last 15 years. This started with the Silent Freight and Silent Track EU projects in the late 1990s which led to the development and testing of various means of reducing rolling noise. A successful rail damper developed in the Silent Track project is now produced by Tata and has been installed in a number of countries. The TWINS software, previously developed mainly by the author, was also upgraded in these projects. An overview will be given of this model and its use in designing quieter wheels and tracks.

Other research projects during this period have studied curve squeal noise, impact noise, rail roughness growth, bridge noise, ground vibration and ground-borne noise. Recently work has also commenced on aerodynamic noise of trains. A consistent approach has been taken in each case involving the development of prediction models at an appropriate level of detail in order to gain understanding of the phenomena. Models that are too complex often lack the potential to give insight while those that are too simple may miss some important phenomenon. The approach taken for these different applications will be discussed briefly.



Salle M1B
 escalier central, 1^{er} étage
 Bât. Saint-Exupéry