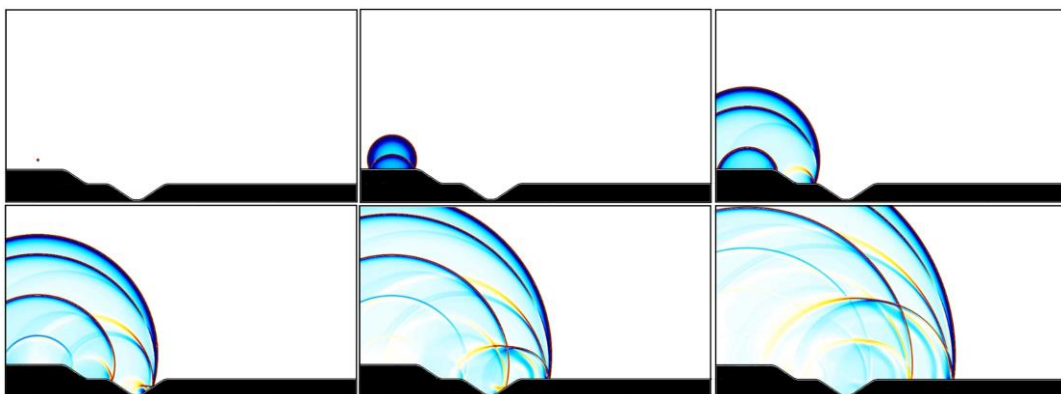
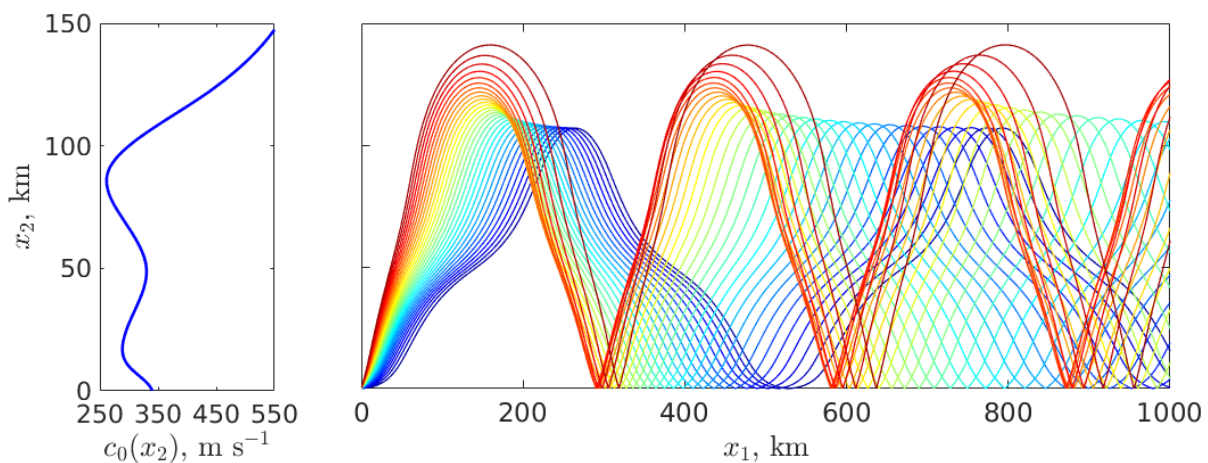




Atmospheric sound propagation

*Wednesday 13 to Friday 15 June
2018, Lyon, France*



This international Summer School aims at giving an overview of the modelling and experimental characterization of atmospheric sound propagation from hundreds of meters to hundreds of kilometers as well as presenting the state of the art in research. Numerical approaches to predict sound propagation in the atmosphere will be presented, emphasizing the importance of taking into account uncertainties and variability. Field measurements will be described, discussing the difficulties inherent to them and good practices for determining acoustic ground properties and the state of the atmosphere. Transportation noise applications (aircraft and railway noise) will be addressed, with focus on noise map generation, sound synthesis and annoyance. Inverse problems such as source localization in outdoor environments and atmospheric tomography from acoustic measurements will be considered. Finally, presentations on hot topics (infrasound, wind turbine noise, sonic boom and bioacoustics) will be given.

| Wednesday 13 June | Thursday 14 June | Friday 15 June |
|--|---|---|
| 09:00 - 10:00 Welcome coffee | 08:30 - 09:00 Welcome coffee | 08:30 - 09:00 Welcome coffee |
| 10:00 - 12:00 Atmospheric sound propagation: fundamentals K. Attenborough (Open University) | 09:00 - 10:30 Atmospheric tomography V.E. Ostashev (ERDC-US Army) Coffee break | 09:00 - 10:30 Source localization S. Cheinet (ISL) Coffee break |
| 12:00 - 13:30 Lunch break | 11:00 - 12:00 Field measurements B. Gauvreau (UMRAE-IFSTTAR) | 11:00 - 12:00 Wind turbine noise B. Cotté (IMSIA-ENSTA) |
| 13:30 - 15:30 Numerical methods: rays, BEM, PE and time-domain approaches D. Juvé (LMFA-ECL) | 12:00 - 13:30 Lunch break | 12:00 - 13:30 Lunch break |
| 16:00 - 18:00 Perception and annoyance: application to transportation noise C. Marquis-Favre (LGCB-ENTPE) | 13:30 - 14:30 Uncertainties and variability D. Ecotière (UMRAE-CEREMA) 14:30 - 15:30 Engineering models: noise maps J. Defrance (CSTB) | 13:30 - 14:30 Infrasound propagation A. Le Pichon (CEA) 14:30 - 15:30 Sonic boom F. Coulouvrat (d'Alembert-SU) |
| Coffee break + poster session | Coffee break + poster session | Coffee break + poster session |
| BBQ Party | 16:00 - 17:00 Engineering models: application to aircraft noise P. Malbéqui (ONERA) 17:00 - 18:00 Engineering models: application to railway noise To be confirmed | 16:00 - 17:00 Bioacoustics: bird vocalization in the Alpine environment F. Sèbe (ENES-CNPS) |
| | Gala Dinner | Closure |

All summer school events including the lectures given by internationally recognized experts will be hosted at Valpré conference center close to Ecole Centrale de Lyon in Ecully, and 20'-30' from downtown Lyon by public transportation. Courses, lunches, coffee breaks and dinners are **free of charge**, sponsored by Labex CeLyA Lyon University.

In order to promote the discussions, the participants will have the opportunity to present their work in a poster session. All lectures will be given in English by renowned international researchers.

A **registration form** is attached to this mail. Please send it as soon as possible and in any case before June 5th (the number of participants is limited) to:

carine.zambardi@ec-lyon.fr