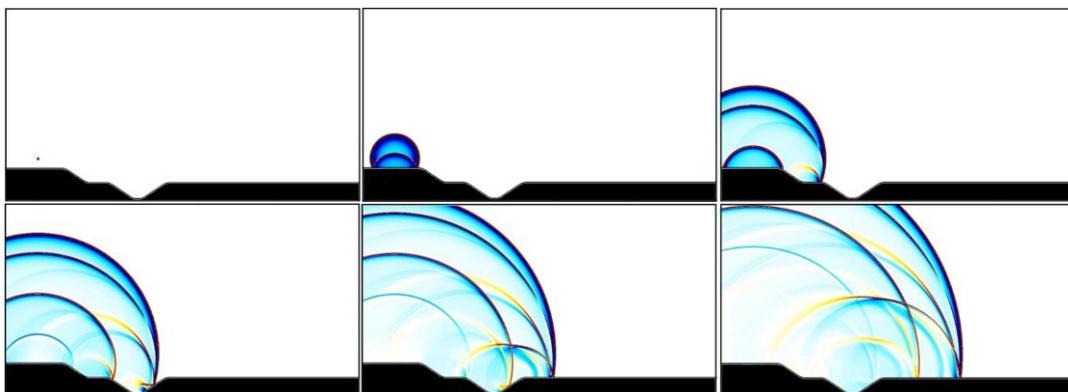
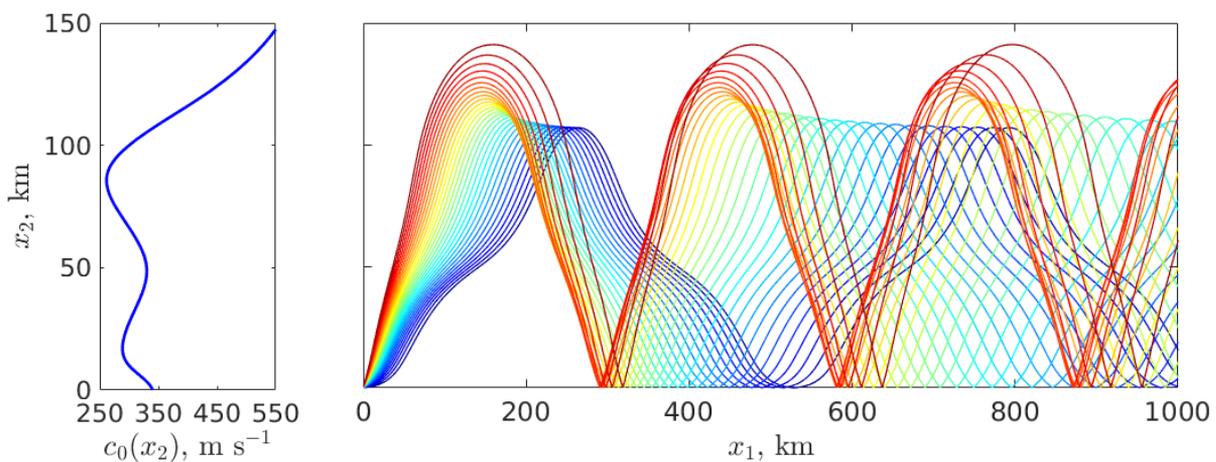




# Atmospheric sound propagation

*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 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 - 09:50 Welcome coffee	09:00 - 09:30 Welcome coffee	08:30 - 09:00 Welcome coffee
09:50 - 10:00 Introduction	09:30 - 10:30 Numerical methods: time-domain approaches D. Dragna (LMFA-ECL)	09:00 - 10:30 Source localization S. Cheinet (ISL)
10:00 - 12:00 Atmospheric sound propagation: fundamentals K. Attenborough (Open University)	Coffee break	Coffee break
	11:00 - 12:00 Field measurements B. Gauvreau (UMRAE-IFSTTAR)	11:00 - 12:00 Wind turbine noise B. Cotté (IMSIA-ENSTA)
12:00 - 13:30 Lunch break	12:00 - 13:30 Lunch break	12:00 - 13:30 Lunch break
13:30 - 15:00 Perception and annoyance: application to transportation noise C. Marquis-Favre (LGCB-ENTPE)	13:30 - 14:30 Uncertainties and variability D. Ecotière (UMRAE-CEREMA)	13:30 - 14:30 Infrasound propagation A. Le Pichon (CEA)
15:00 - 16:00 Numerical methods: rays, BEM, parabolic equation D. Juvé (LMFA-ECL)	14:30 - 15:30 Engineering models: noise maps J. Defrance (CSTB)	14:30 - 15:30 Sonic boom F. Coulouvrat (d'Alembert-SU)
Coffee break + poster session	Coffee break + poster session	Coffee break + poster session
16:30 - 18:00 Atmospheric tomography V.E. Ostashev (ERDC-US Army)	16:00 - 17:00 Engineering models: application to aircraft noise P. Malbéqui (ONERA)	16:00 - 17:00 Bioacoustics: bird vocalization in the Alpine environment F. Sèbe (ENES-CNPS)
	17:30 Technical tour of the aeroacoustics facility at Ecole Centrale de Lyon	
BBQ Party	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 5<sup>th</sup> (the number of participants is limited) to:

[carine.zambardi@ec-lyon.fr](mailto:carine.zambardi@ec-lyon.fr)