1. Record Nr. UNINA9910595069003321

Autore	Bertsch Lothar
Titolo	Aircraft Noise
Pubbl/distr/stampa	Basel, : MDPI Books, 2022
Descrizione fisica	1 electronic resource (296 p.)
Soggetti	Technology: general issues History of engineering & technology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	Noise generated by aircraft continues to be a pressing issue for society, as an increasing number of people residing in close proximity to airports make noise complaints on a regular basis. The reduction in aircraft noise is therefore a very important engineering task that would require the careful identification of different acoustic sources around the airplane, the understanding of noise source behavior and ranking along flight trajectories, sophisticated measurement techniques, and robust and accurate numerical tools aimed at predicting the generation of noise, the propagation through the atmosphere, and the resulting noise impact along approach and departure flights. For an overall assessment of the situation, it has to be assessed along entire flight trajectories rather than assessing limited operating conditions only. Furthermore, it is highly recommended to apply multiple acoustic metrics and account for different and widespread observer locations along the flight. Only then can the overall situation be adequately captured. Obviously, this is a highly multidisciplinary effort and no single discipline can address this problem. This reprint includes selected research studies with that multidisciplinary context that deal with numerical or experimental investigations that range from the investigation of specific noise sources to the assessment of noise generated by the overall aircraft in operation. Both basic and applied research studies involving the modelling and simulation of aircraft

noise are included.