Sessions

Physical Acoustics

1.1 Acoustic and Elastic Metamaterials

1.2 Airborne Surface and Edge Waves

1.3 Multiscale Porous Materials

Advanced Measurement Methods

2.1 Advanced Measurement Methods: Aeroacoustics

2.2 Advanced Methods for Physical Sound Field Characterisation

2.3 Electric Motor Noise

2.4 Materials Characterisation

2.5 Wind Turbines: Measurement and Assessment

2.6 Advanced Measurement Methods: Sound Power and Intensity

Modelling and Simulation

3.1 Performance Spaces

3.2 Computer Simulation and Room Acoustics

3.3 Computational Acoustics

3.4 Numerical Simulations for Flow-induced noise

Flow-induced Noise and Vibration

4.1 Flow-induced Noise and Vibration – General

4.2 Cabin Noise due to Turbulent Boundary Layer Pressure Fluctuations

4.3 Flow and Noise Control of Bluff Bodies

4.4 Flow-induced Noise and Vibration: Experiments

4.5 Flow-induced Noise and Vibration - Computational Methods

4.6 Fan and Turbomachinery Noise

4.7 Jet Noise

Vibro-acoustics and Structure-borne Noise

5.1 Machine Learning Approaches in Vibration and Acoustics

5.2 Acoustic Black Holes

5.3 Vibro-acoustics of Composite Structures

5.4 Numerical Methods in Vibro-acoustics

5.5 Vibro-acoustic Experiments

5.6 Vibro-acoustics of Composite Panels

5.7 Aircraft Interior Noise

5.8 Uncertainty Quantification in Aircraft Cabin Noise

5.9 Non-linear Vibro-acoustics

5.10 Vibro-acoustics: Industrial Applications and Case Studies

5.11 Vibro-acoustics or Meta-materials

5.12 Vibro-acoustics and Structure-borne Noise – General

Signal Processing, Reproduction and Diagnostics

6.1 General

6.2 Spatial Audio

6.3 Sound Reinforcement

6.4 Audio transducers and Transducer Arrays

Thermo- and Aero-acoustics

7.1 Aero- and Thermo-Acoustics of Annular and Can-Annular Systems

7.2 Data-Driven Methods

7.3 Experiments in Thermo-Acoustics

7.4 Flow-Acoustic Interaction in Ducts

7.5 Indirect Noise in Combustors

7.6 Network Models for Predicting and Damping of Thermoacoustic Instabilities

7.7 Noise Control in Flow Duct

7.8 Nonlinear Thermoacoustics

7.9 Research in Thermoacoustics and Aeroacoustics by the Marie Curie Network POLKA

7.10 Thermoacoustic Instabilities in Gas Turbine Engines

Aircraft Noise

8.1 Aircraft Interior Noise

8.2 Airframe Cabin Noise

8.3 Airport Community Noise

8.4 Psychoacoustic Optimisation of Aircraft Noise

8.5 Supersonic Aircraft Noise, Landing & Take off

8.6 Supersonic Aircraft Noise, Sonic Boom

8.7 Urban Air Mobility Community Noise

Environmental Noise

9.1 Advances in Environmental Noise

9.2 Construction Noise

9.3 Electric Vehicle Recharging - Noise Issues and their Assessment

9.4 Environmental Noise Legislation and Policy

9.5 Exposure-response Functions for Environmental Noise Annoyance and the Effect of Non-acoustic Factors

9.6 Green and Natural Methods for Noise Control

9.7 Low and High Frequency Sound

9.8 New and Recent Developments in Environmental Noise Assessment Standards and Guides

9.9 Noise Barriers

9.10 Noise Mapping

9.11 Outdoor Noise Propagation

9.12 Recreation Noise and Activities

9.13 Smart Cities and Noise Monitoring

9.14 Urban Sound Propagation

9.15 Wind Turbines and Other Renewable Energy Noise

Industrial Noise

10.1 General

Building Noise Control and Architectural Acoustics

11.1 The Future of Requirements, Classification Schemes and Standards in Building Acoustics

11.2 Acoustics of Workspaces

11.3 Impact Sound Insulation and Structure-borne Sound

11.4 Acoustics of Education Spaces

11.5 Test Methods for Structure-borne Sound Sources

11.6 Sound Insulation Performance of Wooden Constructions for Multi-storey Housing

11.7 Ventilation Noise Limits for Dwellings, Test Methods and User Satisfaction

11.8 Prediction Models in Building Acoustics

11.9 Machine Learning in Building Acoustics

11.10 Noise and Vibration in Gymnasiums

11.11 Acoustics of Performance Spaces

11.12 Low-frequency Measurement and Analysis for Building and Architectural Noise Control

Transportation Noise and Vibration

12.1 Audible Warning Sounds

12.2 Exposure-response Functions for Transportation Noise

12.3 Noise Barriers

12.4 Railway Vehicle Acoustics

12.5 Railway Noise - Progress in Modelling and Research

12.6 Railway Noise Abatement and Monitoring

12.7 Railway Noise - Recent Developments in Standards, Policies and Legal Aspects

12.8 Railway Vibrations -Predictions, Measurements and Mitigation Measures

12.9 Road and Rail Noise Barriers and other Mitigation Techniques

12.10 Tyre/Road Noise

12.11 Transportation Auralisation Part 1 – Methods & Techniques

12.12 Road Traffic Noise Calculation Methods

Underwater, Ship and Offshore Acoustics

13.1 General

Active Control

14.1 Active and Passive Noise Control

14.2 Advanced and Intelligent Active Noise Control

14.3 Automotive Applications of Active Control

14.4 Smart Structures

Materials

15.1 Microperforated Panels

15.2 Aeroacoustic Material Design

Community Noise and Planning

16.1 Identification and Protection of Quiet Urban Areas

16.2 Effects of the COVID-19 Lockdown on the Acoustic Environment

16.3 Biodiversity Responses to a Quieter Environment During Lockdown

16.4 WHO 2018 Noise Guidelines: Policy Implications and Community Expectations

16.5 Wind Turbine Noise Assessment

16.6 Planning and Building for Quality of Life

16.7 Noise in the Era of Covid-19

16.8 Community Noise Complaints

16.9 Transportation Auralisation Part 2 – Engagement Project Examples

16.10 UAV and UAM Noise

16.11 Healthy Green Spaces and Recreation Areas

16.12 Quiet Zoning and Soundscape Planning

16.13 Community Engagement and Behaviour Change

16.14 Tranquillity and Restorative Environments

16.15 Soundscapes for Nature Restoration and Biodiversity

16.16 The Effects of Facemasks on Speech Intelligibility

Human Perception, Response and Health Impacts

17.1 Biomedical Acoustics

17.2 Burden of Disease of Noise

17.3 Psychoacoustic indices for Noise Evaluation.

17.4 Aural Diversity: Impacts on Sound Perception and Response

17.5 Noise and Health in Children

17.6 Standardization of Noise Effect Assessment

17.7 Occupational Noise and Health

17.8 Physiological and Emotional Responses to Environment Sound

17.9 Community Response to Noise and Health in a Sustainable Context

17.10 Long-term Health Effects of Noise in Adults

Soundscapes and Acoustic Quality

18.1 Indoor Soundscapes

18.2 Restorative Soundscapes - Measurement, Analysis, Design

18.3 Industrial and Rural Soundscapes

18.4 Soundscape and Health

18.5 Artificial Intelligence (AI)

Profession, Training, Education and Outreach

19.1 The Future of Acoustics and Noise Control Expert Panel Discussion *(by invitation only)*

19.2 Educational Techniques and Approaches in Acoustics and Noise Control Education

19.3 Tutorial Sessions on Measurements and Methods *(by invitation only)*

19.4 Future of Education and Training in Acoustics and Noise Control

19.5 Broadening Participation in Acoustics and Noise Control

Theme-related: Noise Control in a more Sustainable Future

20.1 Modern Construction Methods and Embodied Carbon

20.2 Sell & Buy Quiet

20.3 Acoustics and Educating the Next Generations

20.4 Acoustics Supporting Sustainable Economies

20.5 Acoustics & UN Sustainability Goals