

Session Program

8–12 Sept 2026

Forum Acusticum 2026

***A14.07 Computational and model-based approaches to
hearing science***

Tuesday 8 September

13:20

A14.07 Computational and model-based approaches to hearing science: S104

Session | Location: Messe Congress Graz, Saal 10 | Conveners: Vaclav Vencovsky, Helia Relación-Iborra

13:20–13:40 Computational Models of the Sub-Cortical Auditory System with Efferent Pathways

Speaker

Laurel H. Carney

13:40–14:00

A computational framework for the simulation and interpretation of auditory evoked potentials in healthy and pathological human ears

Speaker

Miguel Temboury-Gutierrez

14:00–14:20

Approaching the Hopf bifurcation largely increases the cochlear response

Speaker

Renata Sisto

14:20–14:40

(Non)Linear Growth and Self-Oscillation in Auditory Biophysics

Speaker

Christopher Bergevin

14:40

15:00

A14.07 Computational and model-based approaches to hearing science: S248

Session | Location: Messe Congress Graz, Saal 10 | Conveners: Vaclav Vencovsky, Helia Relación-Iborra

15:00–15:20

Perceptual Sensitivity is Explained by Optimization for Ecological Tasks

Speaker

Mark Saddler

15:20–15:40

Temporal Modulation Detection in a Model of Auditory Neuropathy Spectrum Disorder

Speaker

Paul Mitchell

15:40–16:00

Low and High Frequency Sounds Are Processed Differently in the Cochlea

Speaker

Karl Grosh

16:00–16:20

Viva la Transmission Line!

Speaker

Alessandro Altoe

16:20–16:40

An End-To-End Tunable Cochlear Model With Instantaneous Nonlinearity For Simulating Otoacoustic Emissions

Speaker

Yong-Yue Xu

16:40

Thursday 10 September

15:00

A14.07 Computational and model-based approaches to hearing science: P488

Session | Location: Messe Congress Graz, Messehalle (Poster+Exhibition) | Conveners: Vaclav Vencovsky, Helia Relaño-Iborra

15:00–18:00

From Transmission Line Models to Stuart–Landau Oscillators: A Hopf-Based Description of Cochlear Dynamics

Speaker

Sebastian Handel

15:00–18:00

Towards a Biophysical Dipole Model for Auditory Brainstem Response Wave I Generators

Speaker

Sarah Vandepitte

15:00–18:00

A hearing-impaired version of the short-time objective intelligibility (STOI) metric

Speaker

Helia Relaño-Iborra

18:00