

Newsletter's Summary

Agenda [page 2](#)



Get a reminder on upcoming events and deadlines.
Feel free to contribute if you become aware of any change!

News [page 4](#)



This month we interview Karolina Jaruszewska, Project Manager of the Acoucou platform.

Job announcements [page 7](#)



Find your dream job in this fresh list of opportunities!
If you wish to announce a position, please contact the YAN.

Publications [page 8](#)



This month discover a publication from the Laboratory of Therapeutic Applications of Ultrasounds - INSERM, University of Lyon.

Board's Highlights



NEWS

Get to know the Acoucou project, an online platform for education on Acoustics.

Page 4



PUBLI

This month read a publication on nonspherical modes nondegeneracy of a tethered bubble.

Page 10

Upcoming Events



November 2020

3rd - 5th — ISNVH 2020 — International Styrian Noise, Vibration and Harshness Congress. Graz, Austria.



16th - 18th — Noise-Con 2020 — Noise Control Conference. New Orleans, LA, USA.



19th — The acoustics of buildings. Bari, Italy.



23rd - 25th — A&V 2020 — 1st Biennial International Conference on Acoustics and Vibration. Denpasar, Indonesia.



December 2020

2nd - 4th — ICVPB 2020 — International Conference on Voice Physiology and Biomechanics. Grenoble, France.



7th - 11th — FA 2020 — Forum Acusticum. Online.



Upcoming Deadlines



November 2020

8th — A&V 2020 — 1st Biennial International Conference on Acoustics and Vibration. Denpasar, Indonesia. [Paper submission](#)



14th — BNAM 2021 — Baltinc-Nordic Acoustics Meeting 2021. Oslo, Norway. [Abstract submission](#)



December 2020

1st — ICSV 2020 — International Congress on Sound and Vibration. Prague, Czech Republic. [Abstract submission](#)



15th — CSNDD 2021 — Conference on Structural Nonlinear Dynamics and Diagnosis. Casablanca, Morocco. [Abstract submission](#)



January 2021

10th — ISTU 2020 — 20th Annual International Symposium for Therapeutic Ultrasound. Gyeongju, Korea. [Abstract submission](#)



Did we miss a date ?

Behind the YAN there are humans. You can help!

The agenda listing is all gathered by hand: if you think we missed something relevant, don't hesitate to tell us!

yan@euracoustics.org

News



Acoucou - Acoustic Courseware

This month we interview Karolina Jaruszewska, Project Manager of the Acoucou project. Get to know this interesting platform to learn about Acoustics.

What is Acoucou? How did the idea of this project come about?

Acoucou is an online platform, where professionals, educators, students and other people interested in acoustics can find free, educational materials regarding various branches of acoustics. It is designed to serve as modern self-development tool for engineers as well as comprehensive solution for professional education in work environment. Acoucou addresses the challenge of the lack of experts in the field of acoustics. At the same time, one of the Acoucou goals is educating the general population about acoustics, the importance of sound and risks associated with noise.



The main concept of Acoucou is to describe and visualize acoustic phenomena and to present acoustic knowledge in a practical way. Specification of the platform allows the user to go beyond the framework of a typical online course. Currently developed course "ACE" (Acoustic Courseware for Engineers) – uses gamification methods as well as simulations based on real measurements (perfect method for problem-based teaching and learning). The second developed course "ACI" (Acoustic Courseware for Industry) presents a broadened range of materials with case studies and 360 videos (they can be watched on a computer or using the VR headset). The ArAc Multibook is a free interactive acoustics book for architects. It contains a variety of examples that are useful guides and inspirations in conceptual design works related to Architectural Acoustics. The selected e-learning technology presents a new approach to remote education.

A few years ago, during project meetings, KFB Acoustics has observed the need to educate their clients and co-workers. Those people came from different industries and were very curious about topics related to sounds. Growing awareness of the whole team about the role of acoustics allowed for constant search for better and better solutions. That was the beginning of creating the scientific and business partnership, which has been developing educational materials for Acoucou platform for a few years now. The second call for action was our need to

News



present technical knowledge in a visually appealing and useful way. In our opinion, this element is still overlooked in a scientific and engineering world, yet the visual message, especially when it's related to difficult, complex content, is extremely important.

Who is the target group?

The courses are dedicated for the professionals in fields, where acoustics is not a main topic, but acoustic knowledge can and should be incorporated. Recently it focuses mainly on engineers, architects and health and safety experts in noise industry. Education in this field also helps in communication between the experts in other fields and acousticians. Potentially, this can also encourage already educated engineers to explore the field of acoustics, include it as their future field of expertise and deal with acoustical problems from a technical, ethical or even legal standpoint.

Target groups of this platform are also university teachers, company researchers mainly in the specialisation of acoustics or related specialisations. These courses constitute a multi-disciplinary source of expertise and examples for them.



Given that it is collaborative project, who is creating the contents? What work is behind what the users can see?

Acoucou has been developed by accomplished practitioners, scientists and creative teams. Acoucou team consists of acoustic experts with various backgrounds and specializations. This allows for the comprehensive and deepened analysis of needs on different levels and environments of education including academic and work environments, self-learning, blended learning and design.

The team creating Acoucou is an example of combining the world of science, technology and art - areas that seems to be totally different. Based on the projects we carried out together, we learned to use this interdisciplinarity to our benefit and inspire each other. Thanks to that our team, composed of designers, illustrators, film

News



makers, sound technicians, UX designers and developers, supports substantive works of scientists and engineers with their creative approach. We hope that such an approach will help us build an educational tool that is valuable, useful but also well-designed and visually appealing, also in the future.

Are there any future steps planned for this project?

In the upcoming future the platform is going to be extended and following courses are going to be included:

- Acoustic Fundamentals
- Psychoacoustics
- Acoustical Simulation and Auralization
- Electroacoustics for Audio Systems
- Room and Building Acoustics

The associated project ASKNOW is part of a strategic plan for expanding and strengthening acoustic knowledge, and for supporting the development of innovative teaching methods based on attractive and effective delivery of content. The project will

last 3 years (2020-2023). Partnership combines 22 organizations, the leader of which is Le Mans Université.

One of the most effective way of promoting our educational platform and materials seems to be social media, such as Facebook and Instagram. Acoucou's account on Facebook attracts a growing number of people. In order to use it's potential, we planned a series of posts in the form of a weekly quiz on acoustics. We aim at spreading acoustic knowledge as well as promoting our educational materials, but also building a constantly growing community around Acoucou. We hope to involve mostly young people, who already have some knowledge on acoustics, so that they want to share their knowledge and exchange experience with other members of the community. Besides quizzes, our regular publications will include some interesting news and discoveries in the field of acoustics, information on useful resources and important events in the acoustic community.

Web:
<https://acoucou.org/>

Facebook:
<https://www.facebook.com/acoucou.org/>

Twitter:
https://twitter.com/Acoucou_org

Instagram:
<https://www.instagram.com/acoucouacoustics/>



Job Announcements



Acoustic Engineer. Mott MacDonald. Bristol, England.



Project management / Processing noise pollution control (info in German).
Lärmkontor GmbH. Hamburg, Germany



Development Engineer – NVH Automotive (info in German). Ferchau.
Frankfurt, Germany.



Specialist in Building Acoustics. Holzforschung, Austria. Vienna, Austria..



Quality Manager. NL Acoustics. Helsinki, Finland.



Development Engineer in Acoustics/Noise, Vibration and Harshness. Bosch
Magyarország. Miskolc, Hungary.



Acoustic Development Engineer. Hexagon Manufacturing Intelligence.
Mont-Saint-Guibert, Belgium.



Technical Development Manager. ION. Antwerp, Belgium.



Development Engineer for Audio Signal Processing. WSAudiology.
Erlangen, Germany.



Audio DSP Engineer. 7 Sensing Software. Warsaw, Poland.



Publications



Nonspherical modes nondegeneracy of a tethered bubble

When excited at sufficiently high acoustic pressures, a wall-attached bubble may exhibit asymmetric nonspherical modes. These vibration modes can be decomposed over the set of spherical harmonics Y_{mn} for a degree n and order m . We experimentally capture the time-resolved dynamics of asymmetric bubble oscillations in a top-view configuration. A spatiotemporal modal analysis is performed and allowed recovering the set of zonal ($m=0$), tesseral ($0 < m < n$), and sectoral ($m=n$) spherical harmonics that develop at the bubble interface. The analysis of the surface instability thresholds reveals that the frequencies of asymmetric modes differ from the standard Lamb spectrum. In addition, the nondegeneracy of asymmetric modes for a given degree n is evidenced by noncompletely overlapping resonance bands. Finally, the coexistence between zonal and sectoral modes is analyzed through their modal interaction, amplitude interplay and relation of phase, as well as their geometric compatibility.

INFOS

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About the author

Maxime Fauconnier obtained his M.Sc degree in Acoustics from the University of Lyon and the Ecole Centrale de Lyon. After a Master 2 internship in Ultrasound Imaging attended at the NTNU, Maxime joined the Laboratory of Therapeutic Applications of Ultrasounds (LabTAU, INSERM) in late 2018 as a PhD student. His research focuses on the dynamics of an ultrasound-driven microbubble and its mechanical interaction with a biological cell for sonoporation enhancement in a context of localized drug delivery.

When out-of-office, Maxime is either at the University of Lyon where he teaches acoustics and signal processing, either home where he composes electroacoustic music.