Young Acousticians Network Newsletter #93 October 2020

Newsletter's Summary

Board's Highlights

News

Do you know all the products the EAA provides? Read about Acta Acustica, Nuntius and many more in our news section!

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Read about a publication on a parametric approach to virtual miking for sources of arbitrary directivity.

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Upcoming Events

October 2020

14th - 15th — Acusti.cat 2020 — 3rd Catalan Congress of Acoustics. Sant Cugat del Vallès, Catalonia, Spain.

21st - 21st — Quiet Drones — A Symposium on Noise from UASs/UAVs. Paris, France

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

October 2020

31th — FA 2020 — Forum Acusticum. Lyon, France. **Extended abstract**

November 2020

2nd — SAPEM 2020 — Symposium on the Acoustics of Poro-Elastic Materials. West Lafayette, Indiana, USA. **Abstract submission**

8th — A&V 2020 — 1st Biennial International Conference on Acoustics and Vibration. Denpasar, Indonesia. **Paper submission**

Did we miss a date ?

Behind the YAN there're 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

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Forum Acusticum 2020 becomes an e-Congresss this year

Due to the instability of the health situation, the organizers of the conference Forum Acusticum 2020 have decided to switch FA2020 to a e-Forum, with dates unchanged (December 7-11, 2020). Still, the organization is done by fostering fruitful interactions between participants. A virtual exhibition hall will also offer you the best experience and products information from the sponsors.

The new registration fees have been updated to this new organization, so you are still able to register as attendees to the conference and enjoy the online presentations.

If you want to find updated information about what's going on in this topic, we encourage you to visit the website of the conference:

https://fa2020.universite-lyon.fr

e-Forum Acusticum 2020
Dec 7-11, 2020

EAA Products

This month, we offer an overview of the EAA products.

Acoustics in Practice

What is Acoustics in Practice about?

Acoustics in Practice (AiP) is the electronic journal of the European Acoustic Association (EAA). It covers the practical aspects of all areas of acoustics, as: Room Acoustics, Building Acoustics, Noise Mapping, Environmental Noise, Transportation Noise, Aeroacoustics, Audio / Perception, Educational Acoustics, Musical Instruments, Psychoacoustics, Metrology, Audio Technology and so on.

The ambition of the journal is to publish papers on the widest spectrum of topics and to engage members of all societies in the EAA.

The journal serves the practitioners members of the EAA's member societies who work in the many areas of applied acoustics including researching, consultancy, policy making, regulation and manufacturing.

What work is behind?

The idea is to publish original work and also provide a permanent web presence for papers presented at local and national conferences and congresses which may otherwise not be readily available to practitioners working in other countries.

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What is Acoustics in Practice aiming for?

One of our journal's objectives is to disseminate knowledge and experience gained in our member countries across the entire European membership. All too often authors present their findings at local and national conferences and these papers are not accessible to members in other countries. We encourage these authors to publish their work in Acoustics in Practice to gain a Europe-wide and permanent web presence for their work. The publishing team, the authors and the entire Editorial Board encourages you to publish your works in order to broadcast it among all the Acoustic Societies of Europe and gain greater visibility.

How to get access to Acoustics in Practice?

Acoustics in Practice can be found in *https://euracoustics.org/activities/acoustics-in-practice*.

Schola

What is schola?

Schola is an online study guide to acoustics that has been derived from an online teaching guide of the German Acoustical Society (DEGA) in 2006. On the web page (*https://euracoustics.org/activities/schola*) a map of institutions where courses on acoustics are taught is shown as well as a dropdown menu of countries and a search box. After selection information about the course is given including docents, chair, ECTS and a link to further information. The entries can be administered by Schola Editors at each institution via a web interface.

What work is behind?

Schola is a web application that is embedded in the current EAA web page using a bunch of custom scripts (SQL, html, dtml page templates) in the CMS Plone, and a MySQL database for storage of the data. An upgrade of the implementation to a more modern CMS or dedicated scripts is planned. The product manager Malte Kob coordinates the development and maintenance of the Schola system with the help of student workers. Current work includes communication with the docents and Schola Editors, bug fixing and expansion of the web interface and SQL database.

What is the goal?

Schola was created to offer an easy access to all teaching offers in acoustics. Students shall be able to use the information to plan their studies and exchange options (Erasmus+, DAAD). Further development shall offer features such as inclusion of and search for competences and qualifications communicated by the courses as well as visualisation of existing cooperation of institutions or chairs in teaching and research. The active collaboration with YAN members is most welcome. In a current project of DEGA two students currently update the Schola database based on survey data and would be glad to have support with update of the database structure and web interface. If you

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would like to support us, please send an email to *schola@dega-akustik.de*.

Documenta Acustica

What is Documenta Acustica?

Documenta Acustica is the literature distribution system of the European Acoustics Association: a collection of materials regarding acoustics, sound and noise, based on a dynamic browsing system and on subject search criteria among a database. Here you may find references, books, PhD theses, research projects reports, etc. It helps to distribute information that is otherwise confined to European acoustical societies, laboratories or companies. To contribute to share information and materials among experts in theoretical and applied acoustics.

Is there an Acoustics society that manages Documenta Acustica?

From January 1999 to January 2008, Documenta Acustica was handled by the French Acoustical Society (SFA). From January 2008 the Acoustical Society of Italy (AIA) handles the product. The Product Manager since September 2020 is Chiara Bartalucci.

How to get access to Documenta Acustica?

Documenta Acustica product is available at *http://euracoustics.org/documenta/*.

What are the future perspectives?

There is a project which promotes the idea to transform Documenta Acustica into a digital repository that will cover all publications on acoustics in Europe, including all journals, conference proceedings and grey literature (reports, PhDs, Masters…). The goal is to have a single search portal, referenced by search tools that will open access to all acoustics archives in Europe, in all European languages. Transforming Documenta Acustica into "Documenta Acustica Electronica" will increase the International visibility of the EAA and will valorise the common scientific and cultural heritage on acoustics.

Nuntius

What is Nuntius about?

Nuntius Acusticus (Nuntius in short) started as an EAA product in 2001 as the "acoustic messenger". It is the EAA newsletter, published electronically since 2011 and sent by e-mail to all EAA member societies which are distributing it to all its individual members. At the moment, it is published bimonthly.

Its main goals are:

- To support the communication amongst the European Acoustical Societies through providing with various kinds of news
- To offer all societies to send their information to all colleagues in Europe, and therefore it is some kind of guarantee to reach many people at the same time.
- To distribute society news, to inform society members about education in acoustics and institutes of acoustics in Europe, to share

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materials and further information, for example concerning workshops and congresses, news or publications from the Technical Committees of EAA, as well as announcements of further events.

• To provide news about acoustic products, instruments or materials, information about EU activities, noise control policy or other political topics and research guides.

What work is behind?

The driving motor of Nuntius is "from societies to societies", meaning that EAA members societies and its individual members can use this product to inform acousticians around Europe about important information on acoustics. The support and active participation of all member societies is key to its success and its growth in quality and contents.

We encourage all societies to send information on activities organized by them or anything that will contribute to the communication between acousticians in Europe.

What is Nuntius aiming for?

Nuntius is aiming to provide news on acoustics, such as information on EU activities, noise control policy or on other political topics, education in acoustics, research guides and news, publications from the Technical Committees, new products, instrumentation or materials, events on acoustics and various society news. Nuntius has a broad audience of over 9000 European acousticians, individual members of EAA members societies that receive the newsletter, and potentially many more who can read it online on the EAA webpage. Please send your comments and suggestions to *nuntius@euracoustics.org*.

How to get access to Nuntius?

Nuntius is available at the following website: *https://euracoustics.org/activities/nuntius-acusticus*.

Fenestra

Fenestra is the website of the European Acoustics Association and its principal communication channel. The website contains information on the association, its structures, member states and governance as well as a description of the different Technical Committees (thematic groups) and of the different products of the EAA.

How to access Fenestra?

Fenestra is available online at *https://euracoustics.org*

What's new for Fenestra?

A new version of Fenestra is under development with a completely redesigned interface and easier tools for the different actors to contribute.

Acta Acustica

Acta Acustica is the scientific journal of the European Acoustic Association, edited by EDP Sciences. It changed name, editor and editor-in-chief in 2020 and was previously

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named Acta Acustica united with Acustica. The new editor-in-chief of the journal is Prof. Manfred Kaltenbacher.

How to access Acta Acustica?

The new journal is accessible at:
https://acta-acustica.edpsciences.org

The archives of the previous journal at:
https://www.ingentaconnect.com/content/dav/aaua

What is new about Acta Acustica?

The new version of the journal is full open access with rather low Article Processing Charges (APC), in addition more and more states are providing financial support for open access papers and the European Acoustics Association can support papers from authors that need it. More info about the special rates :
https://acta-acustica.edpsciences.org/author-information/are-you-entitled-to-a-special-rate

Do you want to join the effort?

The different products are managed by senior researchers (except the YAN) and they are looking for junior co-managers.

If you are interested, you can contact us at *yan@euracoustics.org*.

Job Announcements

Sound Engineering – Intern. Zylia. Poznań, Poland.

Developer Electro-Acoustic. WSAudilogy. Erlangen, Germany.
Starting date: As soon as possible.

Development Engineer – MEMS loudspeaker (info in German). Arioso Systems.
Cottbus, Germany.

Signal Processing Specialist. WSAudilogy. Copenhagen, Denmark.

Audio Engineer. GN Group. Ballerup, Denmark.

Acoustic Technician. Biamp. Antwerp, Belgium.

Noise and Vibrations Engineer. VeroTech. Antwerp, Belgium.

Scientist position on Acoustic Virtual Reality for Environmental Noise. Empa.
Dübendorf, Switzerland.

Acoustic Consultant & Assistant Acoustic Consultant/Technician. Adnitt Acoustics.
United Kingdom.

Assistant Professor on Acoustics of complex engineering systems. Department of Mechanical Engineering, Eindhoven University of Technology. Eindhoven, Netherlands.

Publications

A parametric approach to virtual miking for sources of arbitrary directivity

In this manuscript we propose a methodology for the reconstruction of sound fields in arbitrary locations based on the signals acquired by a spatial distribution of compact microphone arrays (virtual miking). The proposed method is suitable for operating in reverberant environments, thanks to a two-stage analysis process, the former of which aims at separating the direct and the diffuse components of the sound field. The method that we propose is inherently parametric, as the sources of the acoustic scene are characterized by parameters describing location and directivity (spherical harmonics expansion), which are extracted from the exterior model of the direct component of the sound field. Once the parameters of the sources are extracted, the direct sound field at an arbitrary location is reconstructed. The diffuse component is reconstructed from the joint knowledge of the diffuse component at the locations of the distributed microphone arrays, under the assumption of isotropic behavior. Results show that the proposed technique is able to analyze the sound field and reconstruct the parameters of the sources that are active in the scene. In addition, the synthesis of the signals at the virtual microphone locations turns out to accurately match (in terms of spatial cues) the actual sound field, as measured by a microphone places in the desired location.

About the author

Mirco Pezzoli received the M.S. degree (cum laude), in 2017, in computer engineering from the Politecnico di Milano, Italy, where he is currently pursuing the Ph.D. degree in information engineering with the Dipartimento di Elettronica, Informazione and Bioingegneria. His main research interests are space-time audio signal processing and musical acoustics.

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