

## An Enjoyable yet Controversial Acoustics Conference in Odense Denmark

On 18th-20th June, the Danish Acoustical Society hosted the Baltic-Nordic Acoustics Meeting 2012, On Tuesday a critical paper on the acoustics of DR's concert hall ensured a full house.

By Signe Bjerre



Niels Vilhelm Jordan's lecture 'What went wrong in Copenhagen' drew a full house at BNAM2012

Wham – bam – thank you mam! The criticism echoes around the lecture hall as the internationally renowned acoustician, Niels Wilhelm Jordan, presents his verdict of the acoustics of DR's new concert hall.

"I don't understand how the Board of the Danish Royal Theatre and Denmark's Radio can refuse to listen to and cooperate with the acoustic expertise we have here in Denmark," says Niels Wilhelm Jordan who, among other things, is known for his assistance to Vilhelm Lassen Jordan, the man behind the acoustic design of the Sydney Opera House. The result is, according to Niels William

Jordan, that DR's concert hall far from meets its design goals.

Provoked by the secrecy surrounding measurements of its acoustics, he took the initiative, along with three others, to measure the reverberation time at four different positions in the hall.

The measurements were made during a concert performance of Beethoven's Coriolan overture in the autumn of 2011. And the results showed that the levels did not reach 2.6 seconds in the bass region nor an average value of 2.3 seconds as required.

### Far from the goal

"The terraces have been raised too high. Therefore, there is far from enough reflection and reverberation. And therefore we are not even close to the acoustics which were aimed at," he explains.

Niels William Jordan also identified major problems with the acoustics in the Danish National Opera which forces singers and the orchestra to use electronic aids to hear themselves and to communicate with each other.

But his indignation is rooted primarily in the lack of openness that has been maintained in relation to public.

"As tax payers we have all helped to finance these new cultural centers. Therefore, it is beyond contempt that there have been no published measurements of reverberation time, so we can openly discuss what works and what does not, and what could possibly rectify the situation."

### Lively debate

Researchers in acoustics and representatives from consulting firms in Scandinavia, UK and the Baltic countries found their way to the Baltic-Nordic Acoustics Meeting 2012, this year organized by the Danish Acoustical Society and held at the University of Southern Denmark in Odense.

### **BNAM2012**

**Date:** 18th-20th June 2012

**Place:** University of Southern Denmark, Odense, Denmark

**Hosts:** Danish Acoustical Society and University of Southern Denmark

**Responsible:** Nordic Acoustic Association (NAA)

**Participants:** 120 from Denmark, Norway, Sweden, Finland, Iceland, Estonia and other countries such as UK, Spain, France, Germany

**Sponsors:** 4

**Exhibitors:** 10

**Keynotes:** 5

**Papers:** 76

[www.bnam2012.com](http://www.bnam2012.com)



Participants at the Baltic-Nordic Acoustics Meeting 2012 in deep concentration listening to one of the many lectures to be held at the University of Southern Denmark

The 120 participants could, during the three days the Congress lasted, freely zig-zag between the two lecture rooms where there are presentations on everything from environmental noise through electroacoustics to building and room acoustics. And judging by the many who turned up to hear Niels Wilhelm Jordan, was great interest in concert hall acoustics, and many shared his criticism of those responsible for the new concert halls.

"I think the criticism is highly relevant. It has been seen many times before that consultants do not discuss and talk about the errors made. But what is it that developers are so afraid of? When billions have been spent building a concert hall, it must be in everyone's interest to bring things to light," a Finnish participant in the audience commented.

### **A Happy Man**

The discussion continued over lunch, where the main man behind the conference, Professor Peter Møller Juhl enjoyed a much needed break. He has in recent months spent about 300 hours preparing



Networking and eating among this year's participants - both with great appetite

for the conference, and he welcomed the first morning's presenters and the good atmosphere.

"So far things have gone really, really well. We are on schedule and the papers live up to expectation. I was a happy man when I went to bed yesterday," said Peter Møller Juhl.



**A participant writes careful notes during a lecture**

He has personally been looking forward to hearing both Niels Wilhelm Jordan, one of that day's earlier presenters, and Anders Christian Gade, who has been associated as an advisor to the client in connection with the construction of DR's concert hall, and who is one of the world's most renowned scientists in concert hall acoustics.

"To me it seems quite wrong that you have concert halls that are publicly funded, and then are not public about results. I think most acousticians here feel the same way. The responsibility for this lack

of openness rests with the customer. It is the customer who decides whether the consultant may speak in public. That's life. It's just a little easier to accept when it is a private customer, rather than when it is a public customer," said Peter Møller Juhl, who himself is an expert in acoustics, and among the main forces in the education of acoustic engineers at the University of Southern Denmark.

He is supplemented by Anders Christian Gade, who believes that we should rejoice that DR concert hall is a success, being used a lot for a wider range of events than had been imagined in advance. At the same time, however, he understands the frustration among his peers:

"We know each other really well and usually have a very open relationship with each other. Therefore, there is a great reluctance to accept poor acoustics and the secrecy around it," he says.

### **Hoping for good tips**

It has been ten years since Denmark last hosted BNAM, and 26-year-old Sorrel Hoale, who came all the way from York in UK, is greatly satisfied with the program and the Danish organizers. "This is the first time I have participated, and so far it has lived up to my expectations. It's nice to be here, people are friendly and the presentations are interesting," says Sorrel Hoale and highlights Anders Christian Gade's paper as one of the most interesting.

On the other hand, she is surprised at how small Odense is. "I had expected that the city was much larger. But it's nice here," she smiles.



**Norwegian Arild Brekke held Tuesday lecture, 'The Norwegian high speed rail study'**

For the Norwegian Jon Hansson, this is also the first time he participated in BNAM. Jon Hansson is a consultant for the company Sinus AS which deals with traffic noise, and he has come because he has heard good things about the conference from other acousticians.

"I want to keep up with what's happening in acoustics and am interested in getting some practical tips to take home," he says.

The same applies to Kadri-Piibe Luik from Estonia, participating for the second time and this time holding a presentation. "I do not think my presentation went as well as I would have liked, but I'm really happy to be here. The advantage is that we are so many people, working in the same field, together in one place. It gives us a unique opportunity to exchange experiences and discuss, and thus find common solutions."

### The Gravitational Pull of Coffee



Exhibitors give the participants the opportunity to hear about and see the latest offers

Along with several others, Kadri-Piibe Luik chose to use the lunch break to look at some of the stands in the exhibition area. However, according to Anders Olsen, Vibratex, who mans one of the booths, there could be a little more activity. "People would rather stand and drink coffee over in the coffee area. If it had been possible to move the coffee area here, I'm sure we would have had many more visitors," he says.

He is, however, optimistic and knows from experience that a conference like BNAM can help attract customers to the business. "In principle, the consultants here are not our customers, but they are an important intermediary between our customers and us so it makes sense to be here."

The next Baltic-Nordic Acoustics Meeting takes place in 2014 in Estonia.

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