



# Vibrations

*Powering Sound Ideas*

## Sound Solutions 21-22 Sept. 2016: Ames, Iowa

The 2016 Sound Solutions will be held at Iowa State University on Wednesday, 21 September – Thursday, 22 September.

This 8 hour focused session on Ultrasonic Non-Destructive Evaluation and Food Processing is cosponsored by Center for Industrial Research and Service, Iowa State University and is chaired by David Grewell, Professor, Director, NSF Industry & University Cooperative Research Center for Bioplastics and Biocomposites, Agricultural and Biosystems Engineering, Iowa State University.

This mid-year meeting on a focused subject provides an additional opportunity for UIA members and other individuals interested in ultrasonics to meet with their colleagues to focus on in-depth exploration of specific ultrasonic topics.

Registration is \$199 for UIA members and \$249 for non-members. [Registration](#) is now open!

### Schedule

Visit the [new UIA website](#) for schedule details and updates in the coming weeks.

The complete schedule is on Page 2.

**To register, go to <http://tinyurl.com/UIASI6>**

### Hotels

**Best Western Plus University Park Inn & Suites**  
2500 University Boulevard  
Ames, IA 50010  
(515) 296-2500

**Gateway Hotel**  
2100 Green Hills Drive  
Ames, IA 50014  
(515) 292-8600

**Holiday Inn Ames**  
2609 University Boulevard  
Ames, IA 50010  
(515) 268-8808

**Hilton Garden Inn Ames**  
1325 Dickinson Ave  
Ames, IA 50014  
(515) 233-8000

### Travel Information

**Des Moines International Airport (DSM)**  
42 miles from meeting location

### Special Points of Interest

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## UIA46: Dresden, Germany 24 – 26 April 2017

### **Call for Proposals**

Want to submit a paper for presentation at UIA46? Please see Page 4 for the link and instructions of how to submit your proposal electronically.

“With the Fraunhofer Institute and several other companies doing exciting things in Dresden, we are looking forward to a broad-ranging program of presentations and ultrasonic tours during UIA46,” says Tony Crandall, UIA President.

The Dresden Hilton Hotel will be the headquarters for UIA46.

Guestrooms are available for 127€/ single and 152€ double, which includes breakfast. Reservations need to be made **prior to 24 February 2017**.

Symposium chairs will include: Rasmus Lou-Moeller, Meggitt Aerospace, Denmark and Leo Klinstein, Dukane, USA. Medical: Klaus Vitold Jenderka, University of Applied Sciences; Workshop: Dominick DeAngelis, Kulicke & Soffa Ind., Philadelphia and Thomas Daue, Smart Material .

More information and earlybird registration will be available in October.

Check [www.ultrasonics.org](http://www.ultrasonics.org) for updated information.

Dresden Cathedral  
[www.thousandwonders.net](http://www.thousandwonders.net)

Dresden by day  
© <http://static.panoramio.com/>



## Sound Solutions 2016 Schedule

### Wednesday Sept 21

#### Center for Non Destructive Evaluation, Applied Sciences Complex Buildings II & III, Iowa State University, Ames, IA

12:00 noon **Registration**

12:45 pm **Welcome** - Dr. Leonard Bond, Professor of Aerospace Engineering and Director of Center for Nondestructive Evaluation, Iowa State University

1:00 pm **Fundamentals of Lower Power Ultrasonics** - Timothy Bigelow, Associate Professor of Electrical and Computer Engineering; Associate Professor of Mechanical Engineering, Iowa State University *What do you measure – amplitudes/arrival time, velocity and attenuations basic measurement systems, including transduction – how do you relate ultrasound measurements to food properties .*

2:00 pm **Ultrasonic Characterization of Process Streams** - *Fluid flow properties, density, viscosity, multi-phase, composition, foreign material detection*

3:00 pm **Break**

3:15 pm **Meat Grading and Tissue Characterization** - Timothy Bigelow, Associate Professor of Electrical and Computer Engineering; Associate Professor of Mechanical Engineering, Iowa State University *Imaging and backscatter - marbling and meat structure (tissue characterization)*

4:15 pm **Process Measurements and Other Food Industry Examples** - *Liquid level, fouling, blade beaks (cutters) degree of ripeness, blanching, etc.*

5:00 pm **Tour of NDE Labs:** Conventional NDT | Bio applications / imaging| Scattering - backscatter | Stress Measurement

7:00 pm **Dinner at the Center for Non Destructive Evaluation**

### Thursday Sept 22

#### CCUR, 1951 Food Sciences Building, Iowa State University, Ames, IA

7:00 am **Breakfast**

7:45 am **Welcome** by Dr. Kevin Keener and David J. Freeman, Iowa State University

8:00 am **Fundamentals of High Power Ultrasonics, Principles, Equipment, and Parameters** - Dr. David Grewel, Director, Agricultural & Biosystems Engineering, Iowa State University

9:00 am **Ultrasonic Sealing in Packaging: Theory & Principles, Equipment & Solutions-** Hans Neisser, Packaging Product Manager, Branson Ultrasonics Corporation

10:00 am **Break**

10:15 am **Ultrasonic Food Processing** - Hans Neisser, Branson Ultrasonics Corporation

11:00 am **Ultrasonics and Milk Processing** - Dr. Stephanie Clark, Associate Professor of Food Science and Human Nutrition,

12:00 noon **Box lunch**

1:00 pm **Tour of Food Science Labs**

3:00 pm **Meeting concludes**

## From the President...



Tony Crandall, new UIA President

As we move from summer to fall there's a lot going on in our UIA.

### UIA46: Dresden

Plans are taking shape for the 2017 Annual Symposium next spring in Dresden, Germany. Leo Klinstein will co-chair the meeting. Rasmus Lou-Moeller and he will co-chair the Industrial Session. Klaus-Vitold Jenderka and Jay Sheehan will be co-chairs for the Medical Session. There are many companies and research facilities specializing in ultrasonics in Germany and Dresden should be a great venue.

### Sound Solutions

Our midyear meeting, Sound Solutions, is all set and registration has begun. We'll be meeting at Iowa State University in Ames, Iowa on September 21 and 22 for a workshop on the use of ultrasonics in the food industry. Dave Grewell and the Center of Industrial Research and Service have put together a great program, which can be seen in detail in this issue. The program looks very

interesting. In following the intent and format of last year's Sound Solutions, which was held at the Edison Welding Institute, the meeting is more topical than our annual symposium typically is. The intent is to do a "deeper dive" into a subject than can be done at a broader meeting. That does not mean that the meeting is only worthwhile for those currently working in the food industry. I encourage UIA members to attend, even if the topic might be a little afield of your main interest or expertise. I find that when I'm exposed to the use of ultrasonics in areas that I'm not familiar with I learn things applicable to my field that I had never considered. So, please review the program and join us at the meeting.

The Board of Directors has been busy. Following several initiatives started by Dan Cotter meetings are being held to ensure that membership, finances, board structure and growth are all headed in a positive direction. Our website has been streamlined and one can easily find information about ultrasonics, review publications or register for upcoming meetings. So please check it out. As always, if you have any questions or suggestions, feel free to contact me or another board member.

## UIA Board

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Tony Crandall  
Biosonix  
Salt Lake City UT,  
USA

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University of Glasgow  
Glasgow, Scotland, UK

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Cincinnati, OH, USA

Alan Winder  
J&W Medical LLC  
Westport, CT, USA

# UIA46: Call for Proposals

Submission of abstracts for consideration for UIA46 presentations or posters is now electronic.

Please follow the instructions below to complete your submission(s). Should you have any questions, please email [uia@ultrasonics.org](mailto:uia@ultrasonics.org) or call +1.937+586.3725.

Go to

<http://tinyurl.com/UIA46Paper>

to submit your abstract

Use the link at the right to go to the UIA46 Symposium Presentation Submission site.



You must create a new profile, even if you submitted an abstract last year.

## Step 2

First Name \*

Last Name \*

E-mail address \*

cc email

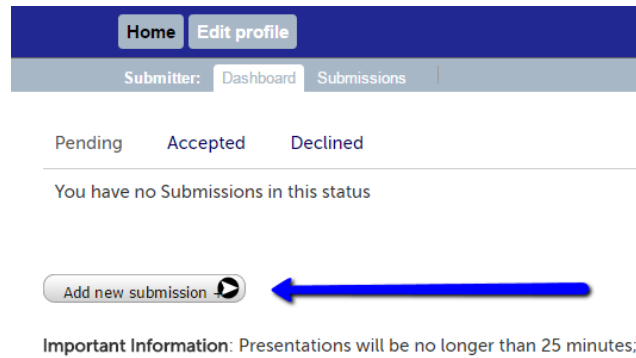
Password \*

Confirm Password \*

Phone \*

Country \*

## Step 3



## Step 4

Submission Group \*

Applicant type \*

Type of application presentation \*  Industrial  Medical  Workshop

Preferred Presentation Method \*  Paper (no longer than 25 minutes)  Poster (displayed during symposium with opportunity to discuss)  Workshop (at least 60 minutes on technical aspect of ultrasound)

I intend to submit a written paper for the proceedings \*  Yes  No  Uncertain at this time

Presenter Name \*

Presentation Title \*

Authors of Paper \*

Institution(s) of Author(s) \*

Abstract \*

You may upload your abstract here

Once you have completed your submission, you may cancel, save to continue later or submit. Once you have created your profile, just go to Step 3 to add another submission.

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uia@ultrasonics.org



VISIT US AT  
[ULTRASONICS.ORG](http://ULTRASONICS.ORG)

## How can ultrasonics enhance the value of your business?

UIA is the international business forum for users, manufacturers, and researchers of ultrasonics. Our members use acoustic vibrations to improve materials, industrial processes, and medical technology. We call this *powering sound ideas*.

Let's work together to power your sound ideas. Contact a member consultant or company through our online Referral Network, learn about ultrasonics with our online primer, or meet industry leaders at our next symposium.

## Important Dates

21-22 September: 2016 Sound Solutions in Ames, Iowa **Registration now open!**

14 October: Abstracts due for UIA46 <http://tinyurl.com/UIA46Paper>

31 December: Earlybird registration deadline for UIA46

24 February 2017: Deadline for reservations at the Dresden Hilton

24-26 April 2017: UIA46 in Dresden, Germany

## Sound Solutions

21—22 September 2016  
Iowa State University  
Ames, Iowa



Ultrasonic Industry Association and the Iowa State University Center for Industrial Research and Service are offering this workshop, focusing on ultrasonics in food manufacturing and non destructive evaluation.

Our program begins at 1:00 pm on Wednesday and concludes after lunch on Thursday.