Acoustical News

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European Soundscape Award recipients, Brigitte Schulte-Fortkamp, second from left.

2012 European Soundscape Award

A consortium led by Prof. Dr. Brigitte Schulte-Fortkamp, Technische Universität Berlin, won the European Soundscape Award 2012 for the remodelling of Nauener Platz, a city park in Berlin. The prize, presented at a ceremony in London by the European Environment Agency (EEA) and the Noise Abatement Society (NAS), is intended to raise awareness of the health impacts of noise and recognize initiatives that help create more tranquil environments.

The winning project had a highly participatory approach, involving residents and people working in the area. Ideas for creating a new attractive park were collected through public discussions and workshops. The people behind the project also organized 'sound walks' to be sure local people's expertise was considered in the reconstruction of the park's soundscape. One of their contributions was to identify the areas they felt were most noisy. Although traffic can still be heard in Nauener Platz, users feel that the park has a much more safe and pleasant atmosphere.

Brigitte Schulte-Fortkamp is a Fellow of the Acoustical Society of America and served as its Vice President (2011-12) and chair of the ASA Technical Committee on Noise (2006-09).

Gerhard Sessler awarded the 2012 IEEE/RSE Wolfson James Clerk Maxwell Award

Gerhard M. Sessler has been awarded the 2012 IEEE/RSE Wolfson James Clerk Maxwell Award "For pioneering contributions to electroacoustic transducers, the development of silicon microphone technology, and seminal work on electroactive materials."

Gerhard Sessler has helped revolutionize the modern microphone market not once but twice during his career. Dr. Sessler and co-worker James West at Bell Labs invented the first polymer electret condenser microphone in 1962, which provided high performance at a smaller size and lower cost. The technology was commercialized in 1968 and soon became the world's dominant microphone, replacing the carbon-button microphone that was used in telephones for 100 years and finding applications wherever microphones are being used.

Working with Dietmar Hohm at University the Darmstadt Technology, Dr. Sessler designed the first microelectromechanical systems (MEMS) condenser microphone based on silicon micromachining in 1983 (the first all-silicon and first one-chip microphone). His lab developed refined micromachining techniques, enabling creation of miniaturized microphones with superior electroacoustics. These microphones were introduced to the market in 2002 and are used mostly in mobile phones but



HRH Prince Phillip (l) presents award to Gerhard M. Sessler (r)



Timothy Leighton

also in laptops, PDA's, MP-3 players, and hearing aids.

At Darmstadt, Dr. Sessler also developed the laser-induced pressure-pulse method for investigating charge and polarization distributions in thin polymer films with micrometer resolution. This has become a leading method for mapping electroactive polymers and polymers used for cable insulation, leading to improved properties of power cables.

Sessler was born in Rosenfeld, Germany and studied physics at the Universities of Freiburg, Munich, and Goettingen. After receiving his Ph.D. from Goettingen in 1959, Sessler moved to the United States to work at Bell Labs. He stayed at Bell Labs until 1975, when he returned to Germany where is currently professor of electroacoustics at the Darmstadt University of Technology.

He is Fellow of the Acoustical Society of America and a Life Fellow of the Institute of Eletrical and Electronics Engineers. Sessler, who holds over 100 U.S. and foreign patents is the recipient of many awards, including AT&T's George R. Stibitz Trophy, the Helmholtz Medal–the highest award of the German Acoustical Society, The Franklin Institute Benjamin Franklin Medal in Electrical Engineering (with James E. West), and the Helmholtz-Rayleigh Interdisciplinary Silver Medal of the Acoustical Society of America. He was inducted into the National Inventors Hall of Fame in 1999.

Timothy Leighton elected Fellow of Royal Academy of Engineering

Timothy Leighton has been elected to Fellowship of the Royal Academy of Engineering, the UK National Academy of Engineering, which brings together the UK's most distinguished and prestigious engineers, interfacing with and advising Government, industry, and academia.

He is Associate Dean (with responsibility for Research) of the Faculty of Engineering and the Environment at the University of Southampton, UK. He is responsible for research policy and its implementation for the Faculty's ~200

academic staff in four academic units (one of which is the Institute of Sound and Vibration Research), and for research in the four Enterprise Units (one of which is the South of England Cochlear Implant Centre).

Leighton recently shared the Royal Society's 2011 Brian Mercer Award for Innovation with Dr. Peter Birkin for their work in sonochemistry. Other honors he has received include: the 2012 Institute of Chemical Engineering Award for Water Management and Supply (with Peter Birkin and Doug Offin), the A. B. Wood Medal (1994), the Tyndall Medal (2001), Paterson Medal (2005), and the RWB Stephens Medal (2009) of the Institute of Acoustics. Twice he has been the first recipient of a new international award: the inaugural Early Career Medal and Award of the **International Commission for Acoustics** in 2004; and in 2001 he was the inaugural recipient of the Medwin Prize in Acoustical Oceanography, awarded by the Acoustical Society of America. He is a Chartered Physicist, a Chartered Engineer, and has Fellowships of the Acoustical Society of America, the Institute of Acoustics, and the Institute of Physics.

ASA members elected fellows of the IEEE

The following ASA members have been elected Fellows of the Institute of Electrical and Electronics Engineers:

Mostafa Fatemi, Mayo Clinic College of Medicine: "For contribution to ultrasound radiation force imaging and tissue characterization"

Michael Insana, University of Illinois at Urbana-Champaign: "For contributions to ultrasound imaging methods, especially elastography"

Reinhard Lerch, University of Erlangen-Nuremberg: "For contributions to ultrasonic transducer technology and computer modeling of sensors and actuators"

Hugh McDermott, Bionic Ear Institute, University of Melbourne: "For contributions to improved soundprocessing techniques for cochlear implants and hearing aids"

Roy Streit, Metron, Inc: "For contributions to multi-target tracking classifications, and sonar signal processing"

Scantek, Inc. appoints a new president

On October 16, the Board of Directors for Scantek, Inc. appointed Steve Marshall to the position of company President. Steve has over 30 years of engineering experience in sound and vibration control and a business background that includes management positions in both the aerospace and HVAC&R industries. He is a Fellow of the Institute of Noise Control Engineering and served for ten years as its Treasurer.

The previous President, Rich Peppin, founded the company in 1985 and has resided at the helm for most years since. He is a Fellow of the Acoustical Society of America and the Institute of Noise Control Engineering and is widely recognized for his contribution within the sound and vibration technical community. Rich will remain engaged in the company as well as with professional societies and standardization committees.

Scantek, Inc. is a distributor for multiple sound and vibration lines, including Norsonic, RION, CESVA, Castle Group Acoustical Instrumentation, Metra Vibration Transducers, Data-Kustik, Pemard, Causal Systems, Delta Labs and Sound on Numbers software, BSWA Transducers, and Extech Sound and Vibration Instruments. In addition, it has a NVLAP/NIST accredited Calibration Laboratory meeting ISO 17025: 2005.

INTEL International Science and Engineering Fair

Mathew Poese, Frederick Poese, and I [Dick Stern] had the honor and pleasure of representing the Acoustical Society of America (ASA) at the Intel International Science and Engineering Fair (ISEF) held in Pittsburgh, Pennsylvania at the David L. Lawrence Convention Center from 13-18 May 2012.

The Intel ISEF is the world's largest pre-college science competition, and included 1,549 high school finalists from 68 countries, regions and territories. The students showcased their independent research as they competed for more than \$3 million in awards. There were 247 teams of presenters and exhibits of which about two dozen con-

cerned acoustics. This year the ISEF encouraged millions of students world-wide to explore their passion for innovation and develop solutions for global challenges.

All the students competed as finalists in the ISEF after winning a top prize from one of the 446 affiliate fairs. In addition to presenting their research on a global stage, finalists were judged by and interacted with doctoral level scientists as they competed for prizes. This year, more than 400 of the 1,549 finalists received awards and prizes for their groundbreaking research.

Society for Science and the Public, a nonprofit organization dedicated to public engagement in scientific research and education, owns and has administered the ISEF since its inception in 1950. In 1958, the competition became international for the first time when Japan, Canada and Germany joined. This year's first time participating countries and regions include Azerbaijan, Finland, Northern Mariana Islands, Poland, Spain, Panama, United Arab Emirates, Tunisia and Kuwait.

The 2012 ISEF was funded jointly by Intel and the Intel Foundation with additional awards and support from dozens of corporate, academic, governmental, and science-focused organizations such as the Acoustical Society of America.

As a member of the Special Awards

Organization, a subset of ISEF, ASA awarded prizes to four teams of students whose research involved the study of acoustics. The First Award of \$1000 went to Savanah O. Frisk from Kilauea, Hawaii for her research entitled "Who Do You Listen To? An Exploration on the Effects of Age and Gender on Listening Comprehension." In addition, her high school received \$500 and her mentor received \$250. A Second Award of \$500 went to Hawraa Fawzi ALQallaf from Kuwait for his research entitled "A Bracelet Alarm System for Hearing-impaired Parents." His high school received \$200 and his mentor, \$100. A Certificate of Honorable Mention went to a team of students from France-Nofoume Ben Ahmed Aly, Alban Teytaud, and Paul Chassagne for their research on "Setting Up a Measuring Protocol of the Reverberation Time of a Room to Improve Its Soundscape Quality." A second Certificate of Honorable Mention went to Bridget M. Oei from Hebron, Connecticut whose research was on a "Polyvinylidene Fluoride (PVDF) Piezoelectric Generator: A Novel Approach to Harvesting Vibrations from Human Respiration to Power Biological Implant Devices."

Over seventy members of the Special Awards Organization presented their awards in a packed auditorium to all the students at a plenary session that



Hawraa Fawzi ALQallaf (l), Dick Stern (c), Savana Q. Frisk (r)

lasted over three hours. None of the students knew beforehand who was chosen. (See Fig. 1) The scene was repeated on Friday when over 400 Grand Awards of the entire ISEF were presented. Bridget Oei, one of ASA's winners, was selected as one of the Second Awards winners in the category Energy and Transportation. She received \$1,500 from ISEF.

To celebrate innovations that have the potential to solve global problems, the Intel SciArt Series featured art inspired by ISEF projects. They paired artists with high school students at the ISEF to create original pieces of art based on scientific breakthroughs. Forty-two pieces of art were selected, among them was Bridget Oei. (See Fig. 2) The artist was Jesse Kirsch, a graphic designer based in Portland, Oregon, who has been practicing professionally for eight years and who received a Bachelor of Fine Arts in graphic design from the School of Visual Arts in New York City.

Matt, Fred, and I highly recommend that, if given the opportunity to represent the ASA at ISEF, you should do so. You will not regret it. The entire Fair could only be called stellar. The staff ran a tight, well-organized program. It's hard to believe that the students were from high schools throughout the world—they were the most exciting part of the program. The Fair even included a panel of eight Nobel Laureates who addressed the students and answered their questions. The highest Grand Award went to a fifteen year old student who created a simple dip-stick sensor to test blood or urine to determine whether or not a patient has early stages of pancreatic cancer. His study resulted in over 90% accuracy and showed his patent-pending sensor to be 28 times faster, 28 times less expensive and over 100 times more sensitive than current tests. His award was \$75,000. We repeat, stellar. – *Dick Stern*.

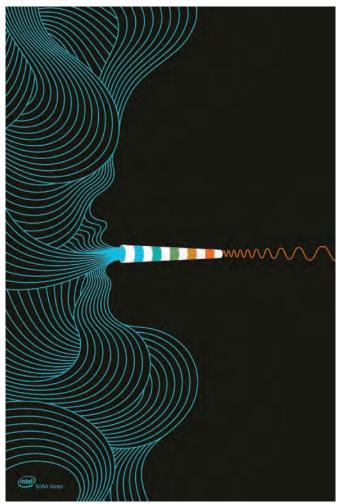


Fig. 2. Artwork inspired by the work of Bridget Oei by artist Jesse Kirsch.

Calendar of Meetings and Congresses

Compiled by the Information Service of the International Commission for Acoustics

2013			Ultrasonics (ICU 2013) concurrently organ-
16-18 Jan	Frejus, France - 12th Anglo-French Physical		ized with the 32nd International Symposium
	Acoustics Conference (AFPAC 2013)		on Acoustical Imaging (AI 2013)
	https://www.sfa.asso.fr/afpac2013.html		http://www.epc.com.sg/ICU 2010.pdf
15-17 Mar	Merano, Italy - EAA Winter School	20-23 May	Hong Kong - 2nd Symposium on Fluid-
	http://www.aia-daga.eu.html		Structure-Sound Interactions and Control
17-20 Mar	Les Arcs, France - Electroceramics for End-		http://www.fssic2013.com/
	users VII (PIEZO 2013)	26-31 May	Vancouver, Canada - 2013 IEEE International
	http://www.piezoinstitute.com		Conference on Acoustics, Speech and Signal
17-22 Mar	Les Houches, France - Winter School on		Processing (ICASSP)
	Therapeutic Ultrasound		http://www.icassp2013.com
	http://houches.ujf-grenoble.fr/	02-07 Jun	Montreal, Canada - 21st International
18-21 Mar	Merano, Italy - AIA-DAGA 2013 / EAA		Congress on Acoustics (ICA 2013), 165th
	EUROREGIO		Meeting of the Acoustical Society of America,
	http://www.aia-daga.eu		and 52th Annual Meeting of the Canadian
23-25 Apr	Marrakech, Morocco - 1st Euro-Mediterranean		Acoustical Association
	Conference on Stuctural Dynamics and		http://www.ica2013montreal.org
	Vibroacoustics (MEDYNA 2013)	04 Jun	Montreal, Canada - Sound in the Sea: Recent
	http://www.medyna2013.com	•	Discoveries and Applications
1-4 May	Singapore - 3rd International Congress on		http://www.dosits.org
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