

# REPORT ON XXIII BIENNIAL SYMPOSIUM OF THE INTERNATIONAL EVOKED RESPONSE AUDIOMETRY STUDY GROUP (IERASG), NEW ORLEANS, 9–13 JUNE, 2013

Lech Sliwa, W. Wiktor Jedrzejczak, Krzysztof Kochanek

World Hearing Center, Institute of Physiology and Pathology of Hearing, Warsaw/Kajetany, Poland

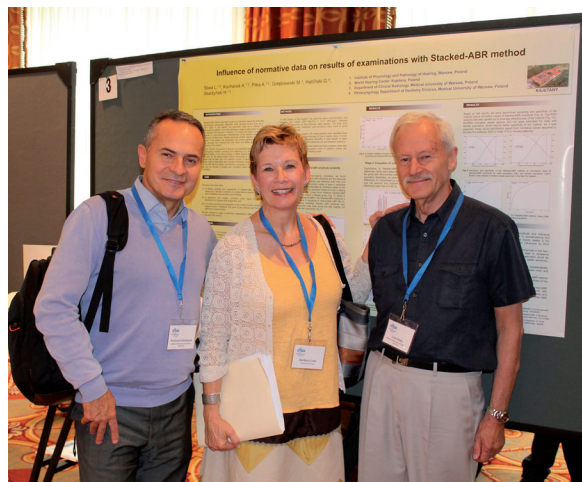
After 16 years, the International Evoked Response Audiometry Study Group (IERASG) meeting has returned to its roots on US soil. This year's 23<sup>rd</sup> IERASG symposium took place in New Orleans on 9–13 June. The meeting was co-organized by the University of Wisconsin-Madison and the University of Arizona, with help from other US universities and the University of the Basque Country, Bilbao, Spain. Most of the organizational work was done by Dr Cynthia Flower and Dr Barbara Cone, who jointly presided over the symposium. We also mention the contributions of Dr Robert Burkard and So Eun Park who helped with logistics and in preparing an excellent scientific program. The venue was the Astor Crowne Plaza Hotel, located in the heart of the historical district of New Orleans, at the intersection of the legendary Canal Street and Bourbon Street.

The number of participants in this year's IERASG meeting was slightly lower than in previous symposia, but, as usual, the scientific level was high. These rather exclusive meetings maintain their importance for advancing modern audiology and hearing science; they are unique forums for exchanging experience and opinions, and for discussing confronting ideas and hypotheses. The international scientific community from 17 countries and five continents was represented at this year's symposium. Not surprisingly, the program was dominated by American participants, representatives of the USA and Canada, who gave over 30 papers out of a total of 79 presentations. Europe was represented by researchers from UK, Belgium, Germany, Poland, Netherlands, Norway, Slovenia, Spain, and Russia. From Poland, there were four researchers from the Institute of Physiology and Pathology of Hearing and the Institute of Sensory Organs, who delivered five oral and poster presentations. There were no other representatives or presented works from elsewhere in Poland or other parts of Central Europe.

The four-day program traditionally comprises a cycle of invited lectures presented by outstanding scientists, free-paper and poster sessions, and satellite symposia. The key event at the opening of all symposia is the Hallowell Davis lecture, commemorating the most distinguished creator of IERASG and one of the pioneers of electrophysiological audiology. The lecture gives a comprehensive review of a selected area of hearing research, and this year the lecture was entrusted to Professor James Jerger, from the School of Behavioral and Brain Sciences, University of Texas at Dallas, USA. The lecture was devoted to auditory event-related potentials (AERPs) and their implications for speech audiometry, and its main conclusions were that one can objectively measure listening effort by examining AERPs, and that a measure of waveform negativity can be used as



Surroundings of the congress venue: Canal Street, French Quarter, New Orleans



Poster session: Krzysztof Kochanek, Barbara Cone (President of the Symposium), Lech Sliwa

an assay of some top-down strategies involved in listening to speech. Professor Jerger also showed that research in this field can be translated into important methods and targets for rehabilitation.

A substantial part of this year's program was devoted to technical issues. These included, for example, new concepts in Bayesian averaging and more efficient methods of ASSR detection. Chirps and tone-bursts, and their application to ASSRs and OAEs, were also a frequent subject of discussion, and it appears that these methods can be used to improve screening and identification. One can also mention work on new methods of signal processing. As was shown by A. Dimitrijevic and O. Ozdamar, application of these "fancy" signal processing methods can help us to better understand brain mechanisms.

Traditionally, investigations of various auditory evoked potentials are leading topics at the symposia, and a lot of attention has been devoted to the techniques and applications of ASSRs and frequency following responses (FFRs). This is still quite an active area, and many new concepts and methods have been appearing in recent years. Applying these techniques to the evaluation of mechanisms underlying localisation and phonological processing seems promising. Methods based on ASSRs and FFRs may also be helpful in studying auditory system development.

Another important topic was long- and middle-latency responses and their audiological applications. Presentations addressed, among other things, speech in quiet and in noise, high and low context and laterality (ear differences), and temporal processing over the entire human lifespan, from newborn to the elderly.

A relatively new and developing area is electrically-evoked response audiometry (E<sup>2</sup>RA). One of the fundamental E<sup>2</sup>RA applications, presented at the symposium, was for evaluation and understanding of “electrical” hearing in auditory implant users. New and more sophisticated methods and techniques for improving E<sup>2</sup>RA methods were described.

As at the previous symposium, several papers were devoted to vestibular responses – the vestibular evoked myogenic potentials, or VEMPs. Application of these techniques continues to widen, as they begin to find clinical use, e.g. in diagnosis of Meniere’s disease.

Part of the meeting was a sponsored session devoted to innovations in instrumentation and technology. Representatives of leading producers presented, among other things, advanced auditory evoked potential research tools (e.g., ‘SmartEP’ by Intelligent Hearing Systems), new possibilities of wide-band impedance audiometry (such as the wide-band reflectance measurement system by Interacoustics), advances in OAE clinical technology and use (Otodynamics Audiology Systems), as well as new hearing and balance instruments (Otometrics).

At the closing ceremony, Dr Cone presented an interesting and witty summary of events. She recalled a wide range of important scientific topics and discussions, and in commenting on them she didn’t hesitate to quote the strong arguments that had been voiced. Among the favourites, one might mention the statement by J. Bohorquez, who confessed that “my mission here is to create confusion...”.

As usual on such occasions, representatives of the IERASG Council, John D. Durrant and Barbara Cone, gave a summary of group’s activities over the last two years. It was noted that generational change takes place in all organizations, and so too in IERASG as the “founding fathers” approach retirement age. A special tribute was paid to the distinguished scientists who retired in the past year, among them Manuel Don, Terry Picton, Yvonne S. Sininger, and Einar Laukli. Optimistically, however, a second and third generation of researchers continues the work initiated by their mentors. At this point the activity of dynamic groups of young researchers from Germany, Belgium, Canada, Australia, Korea, and Poland was mentioned. The Council made an effort to recognise these changes, and decided to invite several young scientists to join them, among them Andrew Dmitrievic (USA), Mridula Sharma (Australia), and Steven Bell (UK).

Finally, it was officially announced that organization of the next XXIV IERASG Symposium in 2015 was to be entrusted to Korea. The Chair of the Organizing and Scientific Committee, Prof. Lee-Suk Kim, announced that the Symposium would take place in the city of Busan on May 24–28, 2015 (more details can be found on the IERASG web page at [www.ierasg.ifps.org.pl](http://www.ierasg.ifps.org.pl)). We had the pleasure to take in an impressive presentation of the city, of the congress facilities, and learn of attractions that await participants. At the same time, the Polish delegation put forward the candidacy of their country for organization of the jubilee XXV IERASG Symposium in 2017. The presentation was favourably received by participants and by Council, and there was no other proposal; however, according to IERASG rules, the final decision will have to wait until the next meeting in 2015.