Z43 NEWSQUARTER
No.18 / 2021

Dear Z43 Partners, Friends, and Followers

It is with pleasure that I pass on to you the last quarterly update of another busy year.

Yet, before you catch up on the latest news below, this greeting goes out to all colleagues who work hard every day at Z43 and contribute to our many successes, and to all our customers and partners who inspire us to do our best.

Enjoy this holiday season with your family and happy New Year!

Z43 SOCIAL

Z43 Distributor Week

After a nearly 2-year interruption due to the COVID-19 pandemic, SPEAG and ZMT organized the first on-site distributor week at our headquarters in Zurich, 11–13 October 2021. Fifteen representatives of our global distributor network gathered at our premises for a 3-day exchange on our latest products and solutions. It was an intense but enjoyable few days, with a very productive exchange of ideas and knowledge.

MEASUREMENT

Release of DASY8/6 Module HAC V1.0

It was worth the wait: SPEAG released Module HAC2019 for hearing aid compatibility testing that complies with the most recent revision of the ANSI C63.19 (2019) and the latest requirements of the US Federal Communication Commission.

This new stand-alone software module, based on SPEAG's latest graphical user interface technology, guides users through the complex compliance workflow illustrated in the training video. It is also compatible with previous HAC hardware, saving resources and lowering costs for our customers.

SIMULATION

Completion of EMPIR MIMAS Project

The EMPIR MIMAS (Medical Implant Manufacturers' Safety procedures) project has come to an end. At the final meeting on 22 September 2021, the participants looked back on the achievements, discoveries, and impact of the 3-year project. The work led to publication of several open-access articles by our project partners and, for ZMT, in the qualification by the US Food and Drug Administration of the Medical Device Development Tool, IMAnalytics with MRIxViP and BCLib. Participation in the MIMAS project has been a challenging, exciting, and rewarding experience. We thank our project partners for the great collaboration and look forward future collaborative projects!

MIMAS

SUCCESSFUL PHD DEFENSE

He did it! Congratulations to Redi Poni for successfully defending his PhD thesis entitled "Precision Hyperthermia: The Role of Modular Radio Frequency".

STIMULATION

TI Solutions Early Adopter Program

Z43 is committed to advancing the science of exploring the potential of temporal interference stimulation. IT'IS, together with TI Solutions AG, has announced the Early Adopter Program, which allows leading research groups to lease a 4- or 8-dual-channel device at cost. Please contact eap@temporalinterference.com or visit our webpage for more information.

MEASUREMENT

cSAR3D: Always in High Demand

cSAR3D has become a trusted instrument for fast specific absorption rate (SAR) evaluation for many companies and organizations around the globe. This month, we have reached a major milestone: more than 400 cSAR3D units have shipped worldwide.

RESEARCH

PUBLICATIONS

ESHO Benchmarks for Computational Modeling and Optimization in Hyperthermia Therapy
M. M. Paulides, et al. 2021, International Journal of Hyperthermia 2021, Volume 38, Issue 1, p.1425–1442, doi:10.1080/02656736.2021.1979254 (online 28.09.2021)

On the Dielectric Measurement of Thin Layers Using Open-Ended Coaxial Probes
A. Fallahi, et al. 2021, IEEE Transactions on Instrumentation and Measurement, doi: 10.1109/TIM.2021.3123257 (online: 26.10.2021)

Radio-Frequency Exposure of the Yellow Fever Mosquito (A. aegypti) from 2 to 240 GHz
E. De Borre, et al., 2021, PLOS Computational Biology (online 28.10.2021)

Estimated All-Day and Evening Whole-Brain Radiofrequency Electromagnetic Fields Doses, and Sleep in Preadolescents
A. Cabré-Riera, et al. 2021, Environmental Research, doi: 10.1016/j.envres.2021.112291 (online 29.10.2021)

Intercomparison of Calculated Incident Power Density and Temperature Rise for Exposure from Different Antennas at 10–90 GHz
K. Li, et al. 2021, IEEE Access, doi: 10.1109/ACCESS.2021.3126738 (online 08.11.2021)

Immediate Recovery of Trunk and Leg Motor Functions after Complete Paralysis
A. Rowald, et al. 2021, Nature Medicine (accepted for publication)

OBITUARY

We are all deeply saddened by the loss of Katja Poković. Katja passed away early in the morning on December 15. She endured her illness bravely, expressing until the end her ambitious plans for the future. It is so hard to say goodbye to someone who should have had so much more of her life to live and work. Katja was always needed everywhere at Z43, and would have continued to be needed for a long time to come – she will be deeply missed every day.

Katja was born on February 18, 1968, in Dubrovnik, Croatia. She spent a happy youth in Dubrovnik before studying electrical engineering from 1987 to 1993 at the University of Zagreb, where her studies were interrupted by the war of independence. From 1993 to 1995, Katja helped manage the first COST Action 244 on "Biomedical Effects of Electromagnetic Fields."

In July 1996, Katja enrolled as a PhD student at the ETH Zurich, where, from the very beginning, she was a driving force in experimental near-field measurements. Many fundamentals of today's methodologies – such as calibration, boundary compensation, and pseudo-vector probe techniques – currently being the basis for exposure evaluations of transmitters operating above 6 GHz, were established as part of her PhD research.

After completing her PhD, Katja joined the young spin-off company SPEAG, where she became the second largest shareholder, a Director, and head of the DASY product line and the Calibration Laboratory. She was a dedicated supporter of the IT'IS Foundation and one of the founders of ZMT Zurich MedTech AG.

Katja will be greatly missed – without her, Z43 could never have been so successful! There are no words to express the depth of our loss.

If you would like to make a donation in Katja's name, please consider Médecins Sans Frontières ("Doctors Without Borders", add note/remark: Katja Poković).