

Dear Z43 Partners, Friends, and Followers

After record-breaking heat waves over the summer – Europe’s hottest on record – we look forward to some cooler temperatures. At Z43, we are accelerating our efforts to reduce CO₂ emissions by replacing the oil heating system in our buildings at Kräuelgasse with district heating from waste, and we are installing solar panels on the roof! We can only hope that these small changes will help make the world a little more climate friendly. Enjoy reading the rest of our news updates!

INTERNATIONAL PROJECTS

SEAWave Kickoff



In mid-July, the IT'IS Foundation and its project partners met in Thessaloniki, Greece, to kick off the recently approved Horizon Europe SEAWave Project. The aims of project SEAWave – short for *Scientific-based Exposure and risk Assessment of radiofrequency and mm-Wave systems from children to elderly (5G and Beyond)* – are to contribute to the scientific basis for assessing the health risk of exposure to 5G waves, offer the means for effective communication of the risk, and disseminate the findings to stakeholders. The next consortium meeting will be hosted at Z43 at the beginning of 2023, where progress, potential obstacles, and the next steps to be taken will be discussed.

MEASUREMENT

DASY8^{3D}: cSAR3D-A Redesigned



SPEAG has released DASY8^{3D}, a system based on DASY8 that includes cSAR3D for automated high-throughput testing as required in R&D and surveillance

testing. This solves many complex testing issues, such as devices with combined time-average, proximity and motion features. In the coming months, SPEAG will add many new features and focus on smart and smooth integration of various base station simulators. Watch the introduction movie [here](#).

EXHIBITION

Z43 at ICCN 2022

ZMT, IT'IS, and TI Solutions co-presented at the ZMT booth at the 32nd International Congress of Clinical Neurophysiology (ICCN), September 5–8, 2022, at the Palexpo in Geneva, Switzerland, where we demonstrated Sim4Life and the open online computational o²S²PARC platform. This was an excellent opportunity for us to introduce the brand-new TIBS-R device of TI Solutions for advanced temporal interference (TI) research to the clinical neuroscience community. Discussions that started during the scientific and educational courses could be continued at the booth, providing great feedback for further optimization of the TIBS-R device.



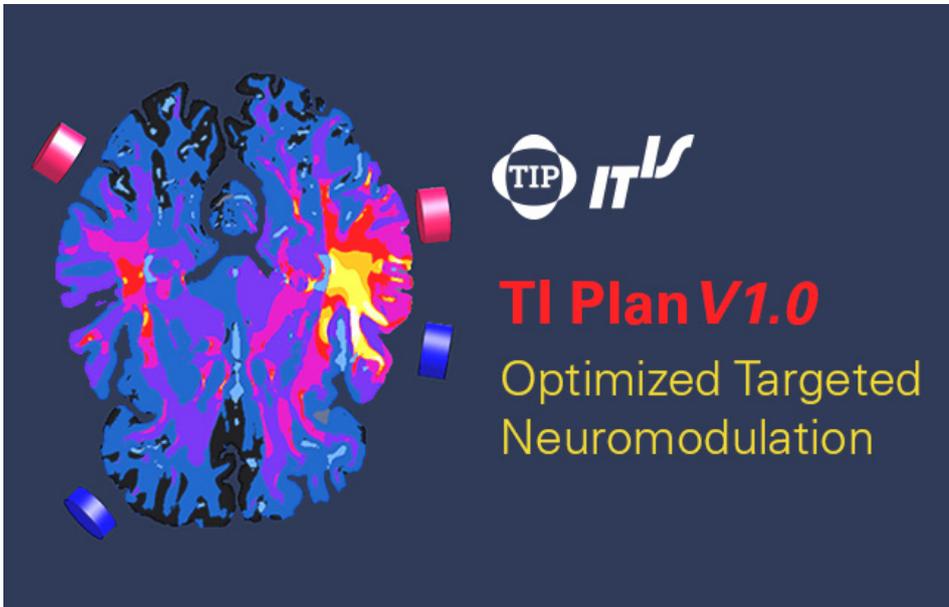
MEASUREMENT

Release of DASY8/6 Module SAR V16.2

To deliver additional features requested by testing laboratories and to further streamline and extend specific absorption rate (SAR) testing, SPEAG has released DASY8/6 Module SAR V16.2. SPEAG also released a verification/validation antenna that operates at 6.5 GHz in parallel to be used to verify the system for WiFi 6E band testing.

TEMPORAL INTERFERENCE

TI Planning Tool V1.0



IT'IS is proud to introduce Version 1.0 of our novel Temporal Interference Planning Tool (TIP). TIP V1.0 is an online tool powered by σ^2S^2PARC technology and developed for neuroscientists and brain stimulation experts to determine optimized electrode placement and stimulation conditions for targeting deep brain regions. The team has worked hard to develop a solution that is both sophisticated and easy to use, even for modeling non-experts. Optimization of targeted neurostimulation is achieved in three simple steps – as shown in this user [video](#). Request a login to TIP V1.0 from our [website](#).

AWARD

IT'IS Receives σ^2S^2PARC Year 6 Award



IT'IS has received the year 6 award to continue development of the σ^2S^2PARC platform under the NIH SPARC program. Over the next 12 months, we will continue to harden and increase stability and scalability to meet the steadily increasing usage, improve integration with SPARC data, maps, and knowledge management, and increase the attractiveness of σ^2S^2PARC and other SPARC resources to application developers. We look forward to another busy but exciting 12 months!

Z43 SOCIAL

Summer Night Party

Our traditional Z43 summer night party took place at the end of August! The weather played along, the rain stayed away, and current and former Z43 members and their families enjoyed a fun and relaxed evening with drinks, salads, sausages, ice cream, and a delicious selection of crepes.



Ice Cream Summer

A lot of our summer food memories in the last three months are made of: ice cream! We would like to take this opportunity to thank all the generous donors at Z43 who, with continuous perseverance, helped us survive the boiling temperatures in the offices and labs with delicious gelato, frozen yoghurt, and icy sorbets.



RESEARCH

PUBLICATIONS

Noninvasive Stimulation of Peripheral Nerves using Temporally-Interfering Electrical Fields B. Botzanowski *et al.* 2022, *Advanced Healthcare Materials*, Volume 11, Issue 17, Article No. 2200075, doi: 10.1002/adhm.202200075 (online: 07 July 2022)

Multi-Objective Optimisation of Human Exposure for Various 5G Network Topologies in Switzerland G. Castellanos, *et al.* 2022, *Computer Networks*, Volume 216, Article No. 109255, doi: 10.1016/j.comnet.2022.109255 (online: 08 August 2022)

Benchmark Problems for Transcranial Ultrasound Simulation: Intercomparison of Compressional Wave Models J.-F. Aubry, *et al.* 2022, *The Journal of the Acoustical Society of America*, Volume 152, Issue 2, Article No. 1003, doi: 10.1121/10.0013426 (online: 16 August 2022)

Focal Non-invasive Deep-brain Stimulation with Temporal Interference for the Suppression of Epileptic Biomarkers E. Acerbo, *et al.* 2022, *Frontiers in Neuroscience*, Sec. Neural Technology, Volume 16, Article No.945221, doi: 10.3389/fnins.2022.945221 (online: 17 August 2022)