

SIMULATION

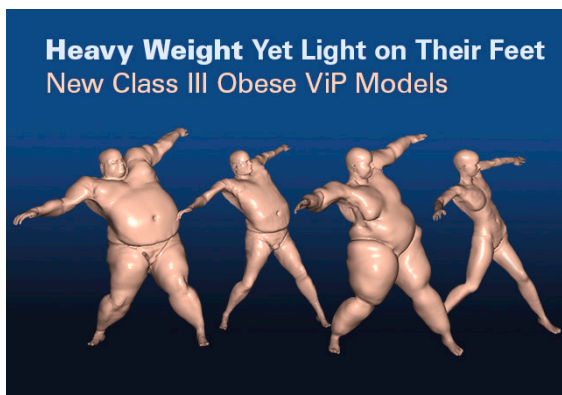
S4L^{lite} – One Step Ahead into the Future



This is a game changer: get ready for S4L! Get ready to perform the most complex modeling and simulation tasks directly in your web browser with the same performance and responsiveness as the Sim4Life desktop installation. Because we care about good tools for teaching and learning, we are releasing a web version for students – called S4L^{lite} – first. S4L^{lite} offers the same features as Sim4Life, where only the size of the project is limited. S4L^{lite} allows students to share projects with classmates and teachers, easily facilitating collaboration and team learning. S4L^{lite} is powered by o²S²PARC, the interactive online platform developed by IT'IS as part of the NIH SPARC Program.

VIRTUAL POPULATION

New Class III Virtual Population Models



IT'IS has created three new class III obese Virtual Population models with body mass indices (BMI) of 63, 66, and 70 kg/m². The new models, which represent the upper end of the population in terms of BMI, support the development and safety assessment of ultra-wide-bore magnetic resonance imaging scanners and other medical applications. The Sim4Life poser tool can be used to pose all of these models.

INTERNATIONAL PROJECTS



TI SOLUTIONS



Release of TIBS-R V1.02

After exactly 3 years of intense collaboration with Z43 partners, TI Solutions has completed development of its 8-channel, high-precision, broadband (0 – >100 kHz) Temporal Interference Brain Stimulator for Research (TIBS-R) device. TIBS-R is controlled via a flexible application programming interface in Python and MatLab and includes various safety features. For a glimpse of TIBS-R's potential, watch this [video](#). The device is available to the research groups enrolled in the [Early Adopter Program](#).

Second SEAWave Consortium Meeting

It was a full house at both of our buildings for the second SEAWave partner consortium meeting! Nearly 40 members gathered at our headquarters in Zurich January 30–31, 2023, to discuss project updates and coordinate the next steps of each work package, and we are happy to report that the project is on a successful trajectory.

SIMULATION

MAGPy2 Released



MAGPy customers can rejoice: SPEAG has released MAGPy2, which includes a redesigned probe and extended software. MAGPy2 guarantees very accurate extrapolation of incident fields to the probe surface, support of pulsed and multifrequency signals, and estimates of all basic restriction quantities required by regulators. MAGPy2 is fully compatible with IEC/IEEE 63184:2023 and meets all the latest FCC and ISED requirements. If you have any questions, please contact us at info@speag.swiss.

RESEARCH FELLOWSHIPS

2023 Call for Applications: Katja Poković Research Fellowship



IT'IS announced the first call for our new fellowship program to support **female** scientists in the field of electromagnetics and information technology. The application deadline is **April 30, 2023, 23:59h Swiss local time** (kpresearchfund@itis.swiss).

RESEARCH

PUBLICATIONS

Thalamic Control of Sensory Processing and Spindles in a Biophysical Somatosensory Thalamic Circuit Model of Wakefulness and Sleep

E. Iavarone, *et al.* 2023, Cell Reports, Volume 42, Issue 3, Article No. 112200, doi: 10.1016/j.celrep. 2023.112200 (online: 24 February 2023)

The Effect of Body Position Change on Noninvasively Acquired Intracranial Pulse Waves

A. Boraschi, *et al.* 2023, Physiological Measurement, Volume 44, Issue 3, Article No. 035014, doi: 10.1088/1361-6579/acc3d6 (online: 13 March 2023)

Remote Focused Encoding and Decoding of Electric Fields through Acoustoelectric Heterodyning

J. L. Rintoul, *et al.* 2023, accepted for publication in Communications Physics (online: 1 March 2022)

MEASUREMENT

DASY8/6 Module R&D V1.0: Flexible & Programmable

Do you need a flexible scanning platform for high-precision electromagnetic near-field measurements? Check out the newly released DASY8/6 Module R&D V1.0, which allows power users to perform measurements on any grid shape using SPEAG or 3rd-party probes on an extensive application programming interface. For further information, check our [website](#).



Z43 SOCIAL

Z43 Retreat 2023: Energy Demystified

From January 23–24, 2023, Z43 participants gathered at Huus Gstaad, nestled between the snowy peaks of the Bernese Alps, for the 2023 retreat on the topic “Energy Demystified - Science & Technology, Economics & Scalability, & Behaviorism.” The goal was to review the latest technology of renewable electrical energy generation, storage, distribution, and production of synthetic fuels and to assess how Z43 can further reduce its carbon footprint. Z43 is committed to further refining and implementing these findings in the short term to become more sustainable.

