

VIRTUAL POPULATION

New ViP Model ATHENA V1.0



Joining [MARTIN V1.0](#), released in 2021, is *ATHENA V1.0*, the second computational anatomical model developed by the [Athinoula A. Martinos Center for Biomedical Imaging](#) to be hosted in the IT'IS Virtual Population library. This new whole-body model of a 3.5-year-old girl, developed to address the limited representation of the pediatric anatomy of girls in existing model libraries, is intended for use in magnetic resonance imaging safety investigations, as well as in other applications. Take a closer look at *ATHENA V1.0* [here](#).

WORKSHOPS & EVENTS

ISMRM S4L User Workshop

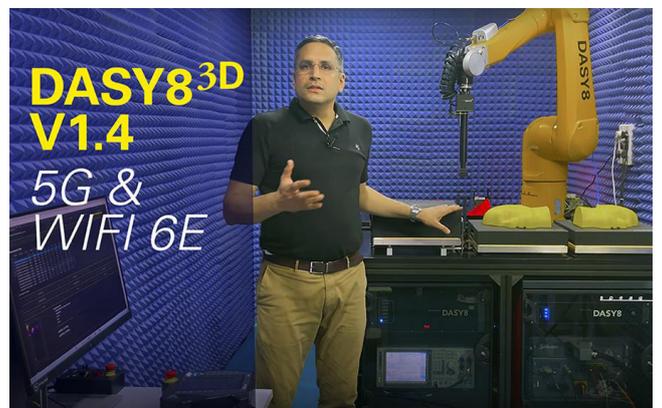


ZMT had a busy time at the 2023 ISMRM & ISMRT Annual Meeting & Exhibition in Toronto, Canada. Live demonstrations showcased the latest features of Sim4Life, and several experts at the ISMRM Sim4Life User Workshop provided insights into how critical patient safety issues, such as unintended peripheral nerve stimulation, impact the development of next-generation gradient and radiofrequency coils for magnetic resonance imaging. A big thank you to everyone for their participation, and we look forward to next time!

MEASUREMENT

DASY8^{3D} V1.4

DASY8^{3D} V1.4 has been released! This latest version includes the integration of Anritsu's MT8000A 5G base-station simulator, a frequency extension to 10 GHz, and smart features to improve precision and measurement speed. V1.4 also greatly enhances user experience and ease of use. Many regulators now regard this system as an efficient tool for market surveillance. Learn about the main new features in this short 7-minute user [video](#).



ANNUAL REPORT

IT'IS Annual Report 2022



The annual report of the IT'IS Foundation for 2022 was published in April – including an overview of current projects, key figures and infrastructure, selected publications and more! Download your digital copy [here](#).

MEASUREMENT

DASY8/6 Module WPT V2.0: Fast Total Field Evaluation

This release takes wireless power transfer (WPT) compliance testing to the next level! SPEAG's latest solution – integration of the new MAGPy Version 2 probe with the DASY8/6 system – provides 8-times faster, more accurate, and total field (magnetic and electric field) testing of sources emitting any periodic signals at frequencies <10 MHz for compliance with basic restrictions. The evaluation is compatible with all standards and all international and national regulations. Watch this [video](#) to learn more!



S4L^{lite} Student Competition 2023

Model, Simulate & Win!

SIMULATION

S4L^{lite} Student Competition 2023

We are pleased to announce ZMT's "S4L^{lite} Student Competition 2023", whereby we aim to recognize the outstanding use of S4L^{lite} for numerical simulations by university students in various research areas. Bachelor's, Master's, and PhD students are encouraged to enter the competition by submitting their original simulation projects developed with our online platform S4L^{lite}. Check our [website](#) for more information. We look forward to receiving your S4L^{lite} project!

AWARDS

Success at BioEM 2023

We are proud to have won a total of three awards at this year's BioEM2023 in Oxford, 19–23 June 2023. Lena Kranold, postdoctoral researcher for applied medical electromagnetic research, won the Arthur Pilla Young Scientist award for her presentation entitled "Development of Morbidly Obese Anatomical Phantoms for MR Safety Applications". PhD student Cindy Karina won the 1st Place in the Student Platform Award for her talk on "Dielectric Properties of Rat Tissues at <10 MHz Measured with an Advanced Instrumentation", and Javier Garcia Ordóñez the 2nd Place in the Student Poster Award for his poster "Optimizing Therapeutic Neurostimulation: A Generalized Activating Function for Metamodeling". Congratulations to our award winners and to all other IT'IS presenters, all of whom contributed outstanding presentations and posters this year!



INTERNATIONAL PROJECTS

Research Visits

Michelle Fang of Auden Techno. Corp., Taiwan, and Robin Wydaeghe of the Department of Information Technology, Ghent University, joined IT'IS for research stays of 3- and 1-months, respectively. Michelle is the recipient of a BioEM Society Short Term Mission award for her project "Personalized Head Models for Surgery and Temporal Interference Stimulation Planning". Robin has been awarded a travel grant by the Research Foundation Flanders to collaborate on his project "Bringing together the state-of-the-art in propagation and exposure modeling for advanced 5G and 6G technologies". It was great to have you with us!

RESEARCH

PUBLICATIONS

Remote Focused Encoding and Decoding of Electric Fields through Acoustoelectric Heterodyning

J. L. Rintoul, *et al.* 2023, Nature Communications Physics 2023, Volume 6, Article No. 79, doi: <https://doi.org/10.1038/s42005-023-01198-w> (online 20 April 2023)

Modulation of Visual Contrast Sensitivity with tRNS across the Visual System, Evidence from Stimulation and Simulation W. Potok, *et al.* 2023, eNeuro, Volume 10, Article No. ENEURO.0177-22.2023, doi: <https://doi.org/10.1523/ENEURO.0177-22.2023> (online 01 June 2023)

Non-Invasive Temporal Interference Electrical Stimulation of The Human Hippocampus I. R. Violante, *et al.* 2023, accepted for publication in Nature Neuroscience

Noninvasive Theta Burst Stimulation of The Human Striatum Enhances Striatal Activity and Motor Skill Learning M. J. Wessel, *et al.* 2023, accepted for publication in Nature Neuroscience

Efficient Prediction of MRI Gradient-Induced Heating for Guiding Safety Testing of Conductive Implants U. Zanovello, *et al.* 2023, accepted for publication in Magnetic Resonance in Medicine