

QUANSCIENT ALLSOLVE

Fast, scalable, and flexible multiphysics simulations

Get the full benefits of cloud computing with a comprehensive multiphysics simulation software in your browser



Why Quanscient Allsolve?

Limitless computational power and RAM on any device

Runtime from days to coffee breaks with unlimited parallel simulations.

FEM simulations with unprecedented scale and complexity

Ability to solve with more degrees of freedoms, more accurate meshes - and as many simulations in parallel as needed.

Unlimited number of users with every plan

No license restrictions. No hardware requirements. Real-time collaboration easy as sharing a link.

Automatically generated Python scripts

Python scripting interface in the GUI for full control. Extensive multiphysics script

Example use cases

SUPERCONDUCTORS Stellarator simulation

A comprehensive 3D magnetostatic simulation of non-planar coils in a fullscale stellarator. A fully validated benchmark. 317M unkowns, with a solve time of 17 minutes using 500 cores in the cloud.

H-PHI FORMULATION AC loss calculation in superconducting filaments

Five filaments embedded in a copper matrix. This simulation with 1.4M DoF took 8 days on a 96-core HPC using a leading desktop multiphysics solver. Quanscient Allsolve completed the same simulation in just 1 hour and 45 minutes with 640 cores.

ULTRASOUND TRANSDUSERS Monte Carlo analysis for PMUT



MICROSPEAKER DESIGN

Microspeaker simulation with harmonic balance

75 simulations ran in parallel enabling efficient exploration of the MEMS design space, providing a comprehensive response surface for design of experiments within the runtime of a single simulation



LARGE SCALE ACOUSTIC & EM WAVES

Room scale 3D acoustic simulation

3D acoustic wave simulation with 90m³ of air. Solve time for 5 kHz acoustic waves with 360M unknowns is 20 minutes with 1 000 cores.



libraries.

Support directly from our experts one click away

Support sessions, custom script writing. Tutorial videos; user guides; documentation. 1000 random variations of a singleelement PMUT stack run in parallel to understand the design's stability and improve manufacturing yield.





Learn more and find all the resources here!

quanscient.com

Quanscient Quantum Labs research quantum algorithms for multiphysics simulation applications

Quantum computing offers the potential for unparalleled accuracy and speed for multiphysics simulations

Why quantum?

Our research and development on quantum-native algorithms show tremendous potential for simulating systems larger and more complex than ever imaginable with great precision.

What we offer?

By working with us as a pilot customer, you have the opportunity to be among the first to gain from the benefits brought by quantum computing in multiphysics simulations.





Our team is the world-leading research team in the quantum lattice Boltzmann method (QLBM), specializing in computational fluid dynamics (CFD)

We offer custom algorithm development and licensing options for our pilot customers

What have we done?

In the fall of 2022, we achieved a significant milestone in Quantum Native[™] multiphysics simulations by running a 1D advection-diffusion simulation using our Quantum Lattice-Boltzmann Method (QLBM) algorithm on a real quantum computer with accurate results.

CEO
Juha Riippi
+358 40 838 8006
juha.riippi@quanscient.com

Nikola Strah +491735390777

CRO

nikola.strah@quanscient.com



and many others in both industry and academia.