



*"AlphaCell is probably the most advanced
TMM/FTMM suite for NVH simulations"*



AlphaCell predicts the **vibro-acoustic** response
of **multi-layer systems** to various sound excitations :

- **super easy & super fast** simulations
- **listen** to sound package efficiency
- broad application material **library**
- **complete set** of material models
- various **imports / exports**
- **reactive** and **skilled support**

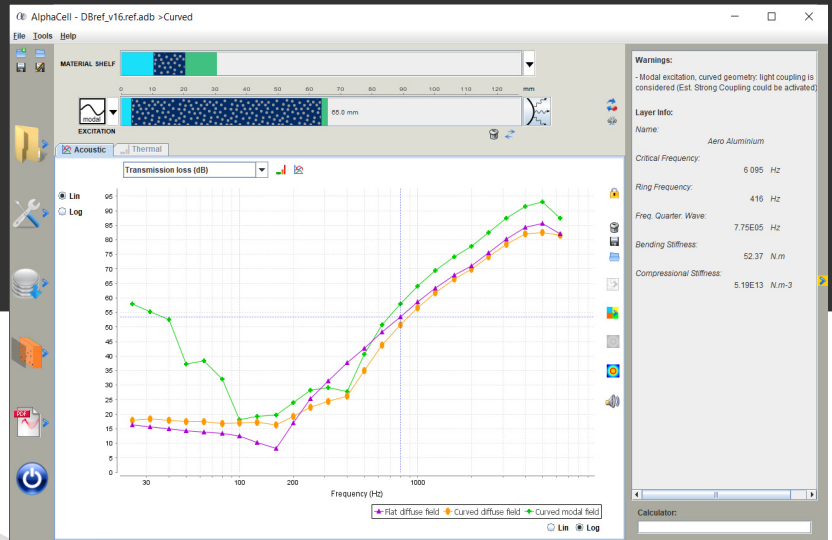
Save your time and energy to focus on
your **core activities** !

AlphaCell is a software product by MATELYS-Research Lab > <https://alphacell.matelys.com/>

Available in Germany via :
Gesellschaft für Akustikforschung Dresden mbH
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01307 Dresden
Germany

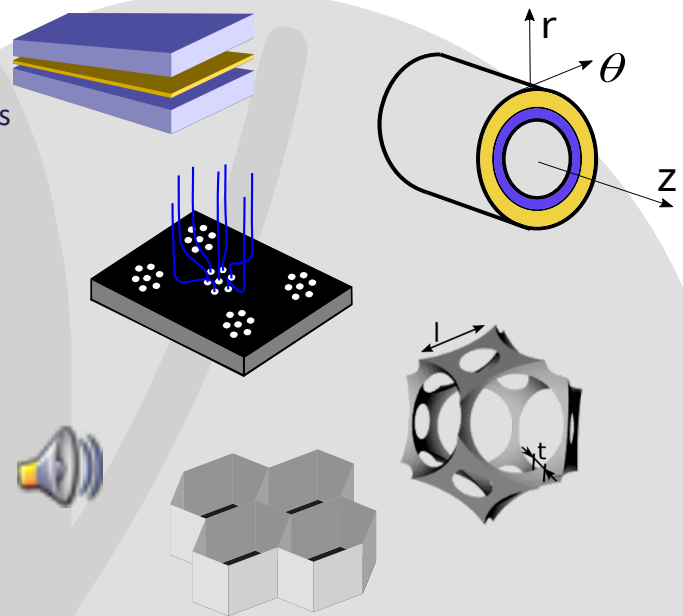
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KEY FEATURES

- **plane** and **curved** geometries
- fluid, gas, solid, poro-elastic, orthotropic materials
- non-conventional phenomena & **meta-materials**
- **air-borne** & **structure-borne** sources
- **turbulent** boundary layer excitation
- **listening** to the solution efficiency
- coupled **acoustic** & **thermal** computations
- **mechanical links** in multi-layer systems
- **imperfect** interfaces
- extended material **library**
- fully **scriptable** (Matlab, Python)



MATERIAL MODELS

- **porous materials**
fibrous, foams, granulars, orthotropic
- **perforated plates**
circ., square, conical, slits, annular pores
- **screen, scrim, fabrics, textile**
woven, non-woven, high SPL
- **solid materials**
isotropic, visco-elastic, thin plate
- **orthotropic solid materials**
3D, thin plate, composite laminates, NIDA
- **meta-materials & heterogeneous materials**
elastic / solid / porous inclusions, resonators, sorption
- **multiple fluid saturated systems**
different fluids for different layers, including water
- **compressed porous material**
acoustic & elastic parameters
- **equivalent plate models**
condensed, corrugated, stiffened/ribbed plates
- **micro-structural material models**
for fibrous, foams, granulars

VIBRO-ACOUSTIC EXCITATIONS

- **air borne sounds**
plane waves, diffuse field, modal sound field
- **structure borne excitations**
dynamic force, moving wall, tapping/rolling machine, rain fall
- **turbulent boundary layer**



AlphaCell runs under MS-Windows 7,8,10,11 ; Linux ; Unix ; Mac