"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**

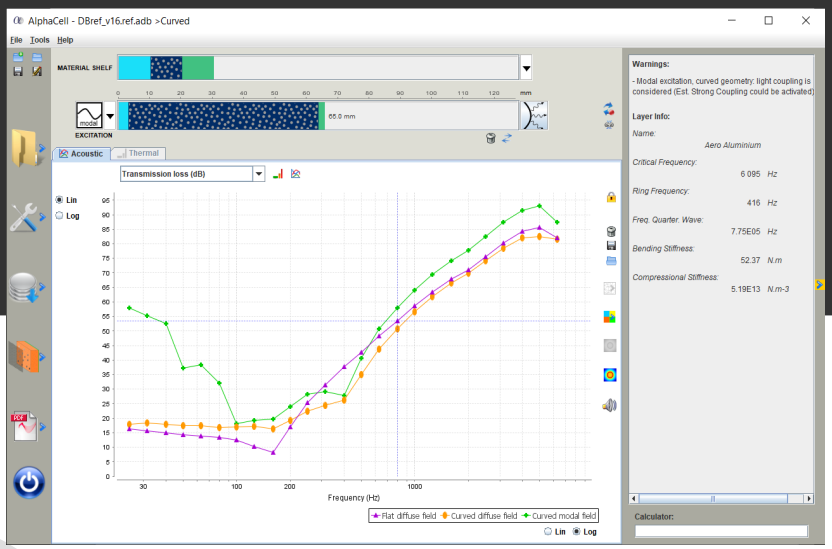
Save your time and energy to focus on your **core activities !**

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

Available in Germany via :
Gesellschaft für Akustikforschung Dresden mbH
Blumenstraße 80
01307 Dresden
Germany

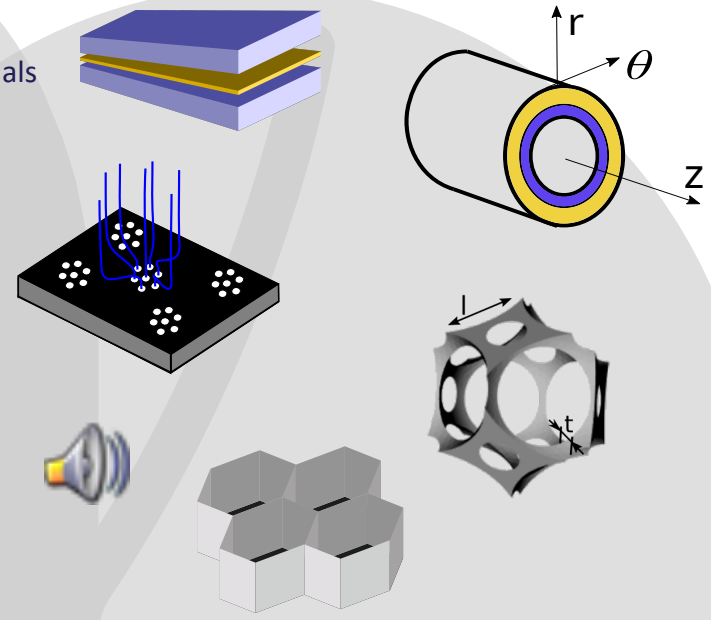
Phone: +49 (0) 351 811 309-42
Fax: +49 (0) 351 811 309-50
E-mail: info@akustikforschung.de
Web: www.akustikforschung.de

AED Acoustic Engineering Dresden



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
- **XML** file explorer (simulations' history)
- fully **scriptable** (Matlab, Python)

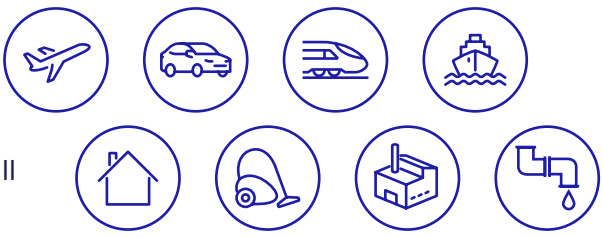


MATERIAL MODELS

- **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 (WLF, ISO,...) , thin plate
- **orthotropic solid materials**
  3D, thin plate, composite laminates, honeycomb
- **meta-materials & heterogeneous materials**
  inclusions, acoustic & elastic 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**



*Alpha*Cell runs under MS-Windows 7,8,10,11 ; Linux ; Unix ; Mac

MATELYS Research Lab

AlphaCell is a software product designed, developed, distributed and supported by MATELYS-Research Lab
https://alphacell.matelys.com
alphacell@matelys.com

MATELYS - Research Lab
7 rue des Maraîchers, Bât B
F-69120 Vaulx-en-Velin
FRANCE

Phone: +33 972 50 93 16
Email: contact@matelys.com
Web: https://www.matelys.com