αCell

"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 :

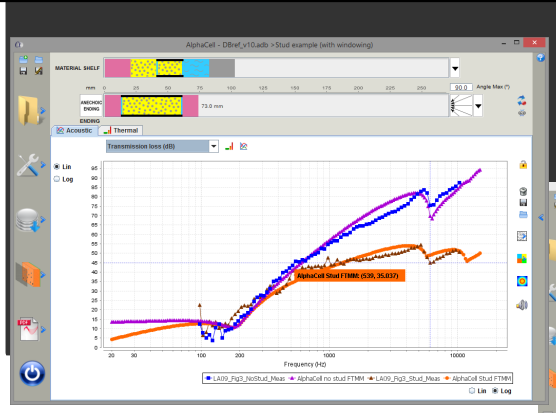
- ↪ **easy & fast** simulations
- ↪ **listen** to sound package efficiency
- ↪ broad application material **library**
- ↪ **complete set** of material models
- ↪ various **imports / exports**
- ↪ **reactive** and **skilled support**

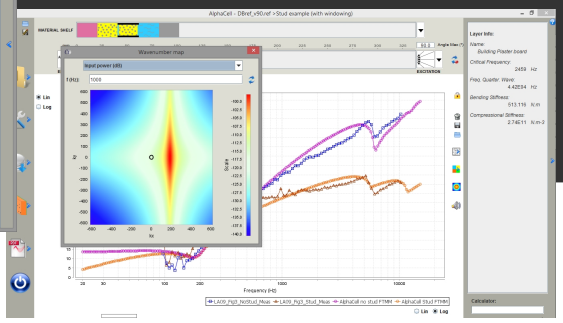
Save your time and energy to focus on your **core activities !**

Prepare to be **MATELYS** *approved !*

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

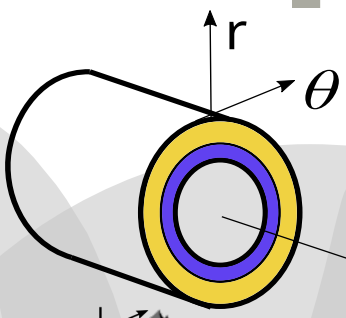
AlphaCell

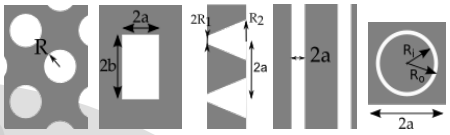


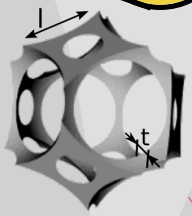


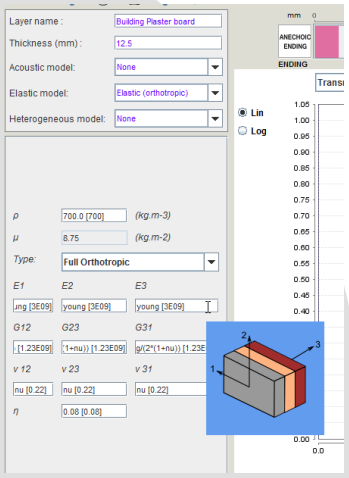
KEY FEATURES

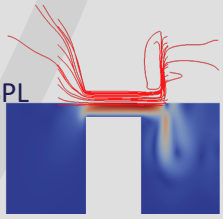
- **intuitive** interface
- **listening** of solution efficiency
- plane and **curved geometries**
- **thermal** properties including bridges
- multiple **studs** in series
- generalised **equivalent plate & porous** models
- **imperfect** interfaces
- **corrugated** & **ribbed** plates
- multiple **fluids** including **water**
- **compressed** fibrous model
- extended material **library**
- fully **scriptable**
- export of material **cards** and **FE model**











MATERIAL MODELS

↪ **porous materials**

fibrous, foams, granulars, compressed, orthotropic

↪ **perforated plates**

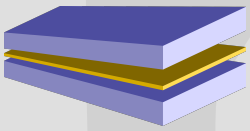
circ., square, conical, slit perf., non-woven, annular pores, high SPL

↪ **solid materials**

isotropic, visco-elastic, orthotropic

↪ **orthotropic solid materials**

3D, thin plate, transverse isotropic

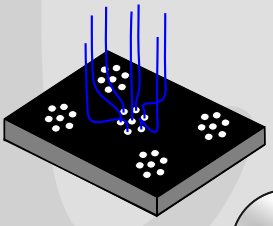


↪ **equivalent plate models**

condensed, corrugated, stiffened/ribbed plates

↪ **heterogeneous materials**

elastic / solid / porous inclusions, resonators, sorption



VIBRO-ACOUSTIC EXCITATIONS

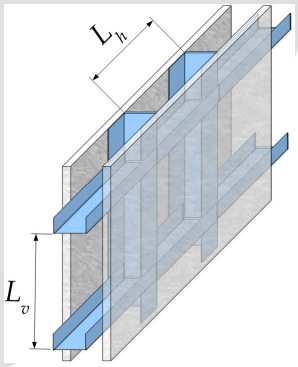
↪ **air borne sounds**

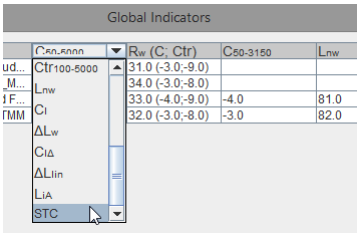
plane waves, diffuse field, modal sound field

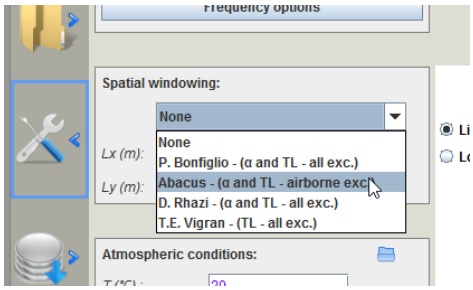
↪ **structure borne excitations**

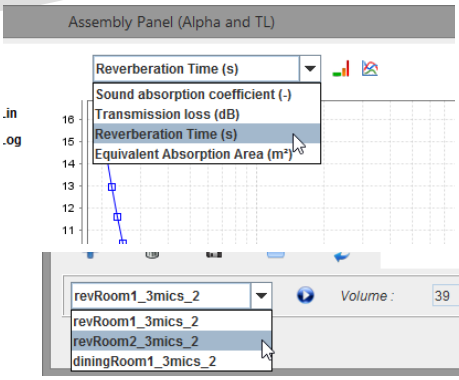
dynamic force, moving wall, tapping/rolling machine, rain fall

↪ **turbulent boundary layer**









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

MATELYS Research Lab

AlphaCell is a software product designed, developed, distributed and supported by MATELYS-Research Lab
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