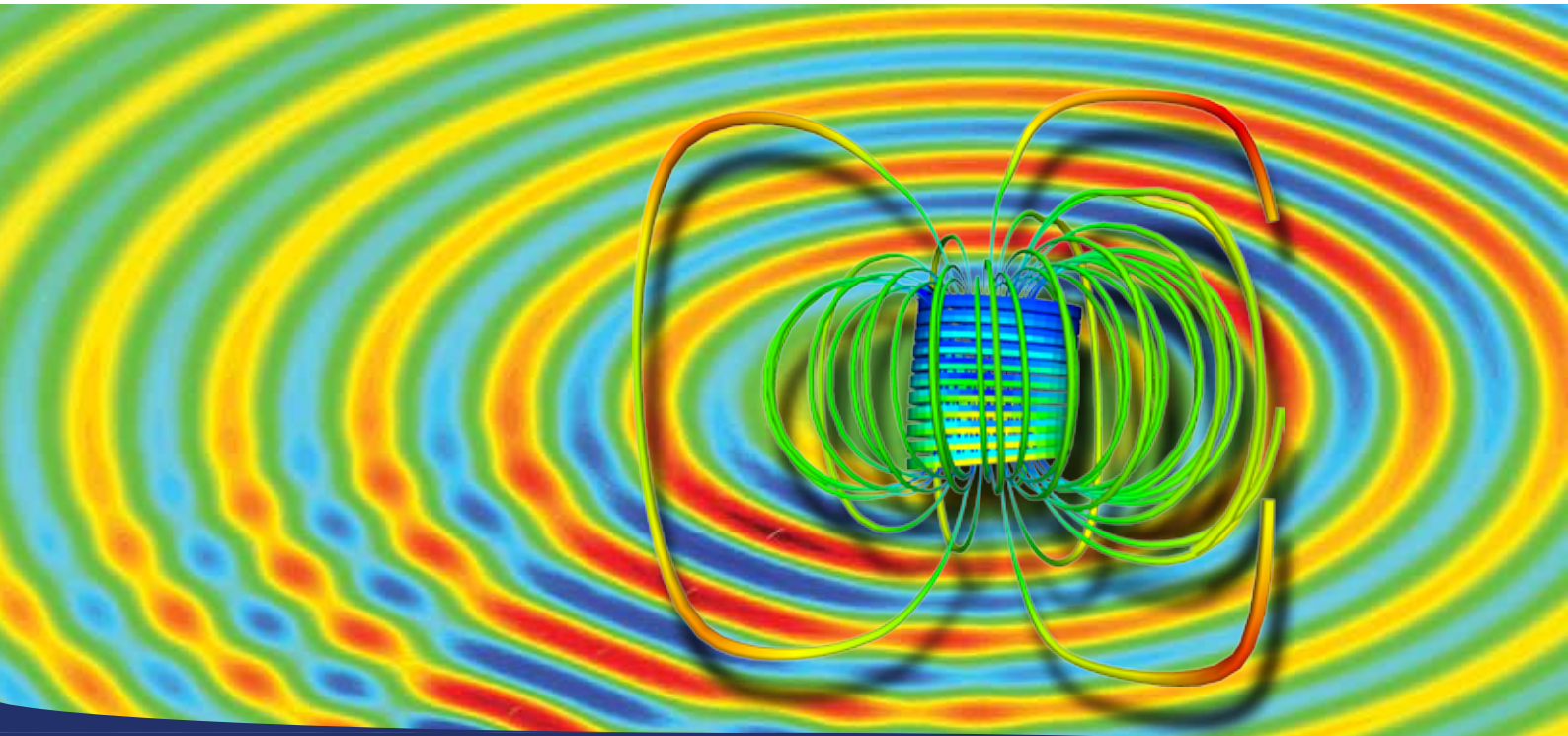
SIMetris

Company Profile



About SIMetris

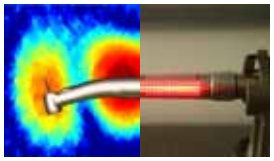
Since its foundation in 2006 SIMetris has been providing services and tools to support the product development process. Using both measurement methods as well as numerical simulations we develop taylored solutions for our customers.

Today SIMetris is working with small and medium size companies as well as large global players in several countries worldwide.

Our Services

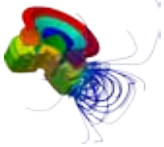
Causal Research

Analyze products during the development process or in case of damage



Virtual Product Development

Save time and money and investigate a large number of virtual prototypes prior the real prototype setup.



Simulation Model Validation

Compare simulation model with real world behavior by measurements.

Measurement Validation

Compare measurement data with numerical models to answer open issues.

Optimization

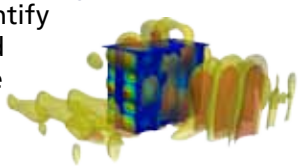
Find optimium shape, material, dimensions for a specific development goal of a prototype.

Development Process Consulting

Benefit from the ability and expertise of our staff members to understand, analyze and find improvements within your development process.

Noise and Vibration Analysis

Reduce noise emission, identify critical vibration modes and frequencies, or increase the perceived sound quality of consumer products.



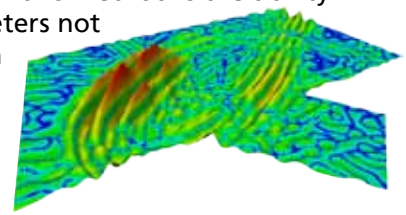
LabVIEW Consulting

Implement measurement programs using NI LabVIEW according to customer needs and requirements.

Our Tools

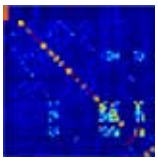
Finite Element Analysis

We apply finite element simulations to analyze, improve, or design our customers products. A great advantage of this method is the ability to analyze parameters not accessible through measurements.



Vibration Mode Matching

Correlate measured vibration signals and FEA modal analysis results and identify corresponding modes. Also allows comparison of different simulation models with respect to eigenfrequencies.

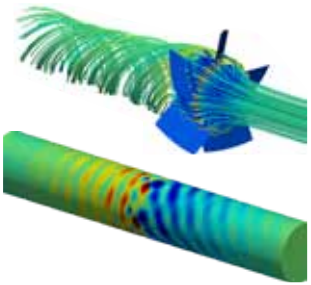


Acoustic Measurements

Sound power, sound intensity and sound pressure measurements are carried out on site or in our anechoic chamber.

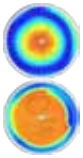
Computational Aeroacoustics Analysis

Analysis of CFD simulation results regarding usability in aeroacoustic simulations based on methods like Lighthill's analogy or the acoustic perturbation equations.



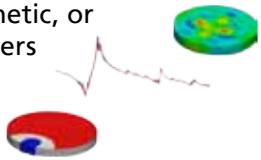
Vibration Measurements

We provide contact-free optical methods like laser doppler vibrometry as well as accelerometer measurements to identify vibration modes of your product.



Material Parameter Identification

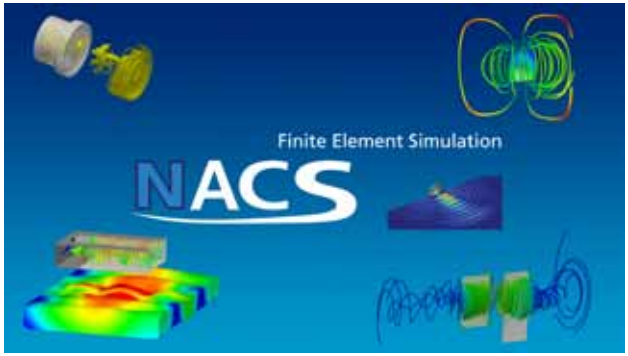
Determination of elastic, magnetic, or piezoelectric material parameters using a combination of measurement data and finite element simulations.

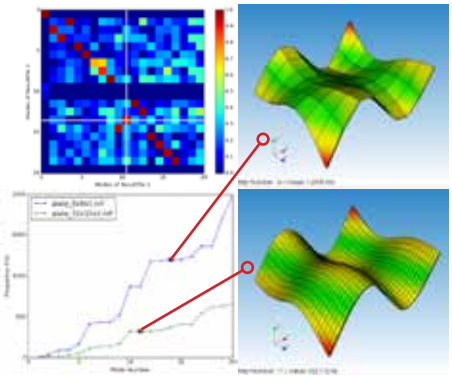


Our Products

NACS Finite Element Analysis

NACS provides mechanical, vibroacoustic, piezoelectric, and magnetic finite element simulations. It comes with an easy-to-use graphical user interface as well as powerful scripting facilities. An integrated postprocessing tool provides a fast visualization of simulation results.



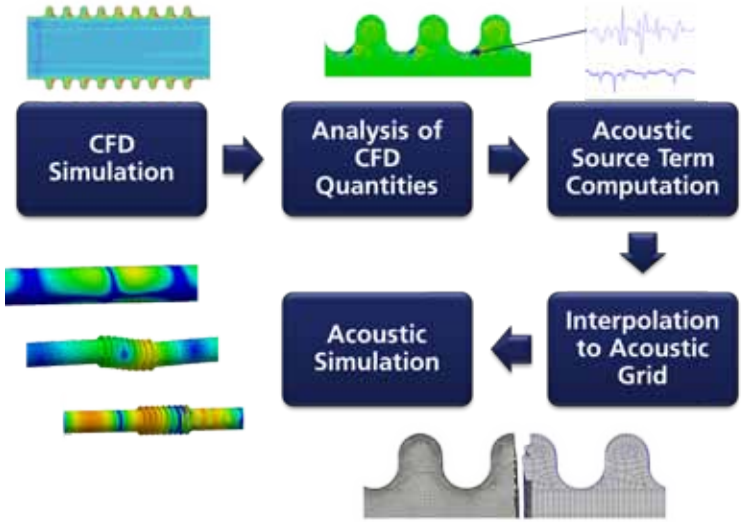


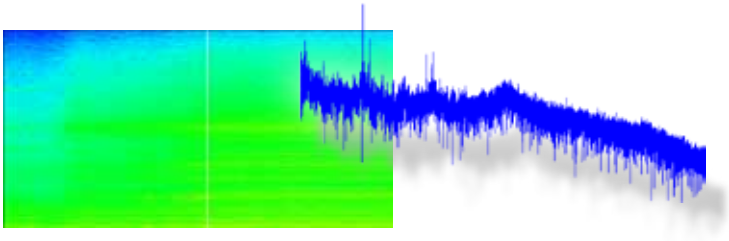
Vibration Mode Matching

This tool can be applied to identify vibration modes from measurements or to easily compare different mesh sizes in finite element simulations. It is available for our customers to increase the productivity and efficiency of their development teams.

Computational Aeroacoustics Tool

This tool enables an analysis of CFD simulation results wrt. applicability in aeroacoustic calculations. This analysis can be performed even in case of currently running CFD simulations. In case of unsteady CFD simulations valuable information can be obtained before steady-state has been reached. Spatial as well as spectral information of acoustic sources can be obtained.



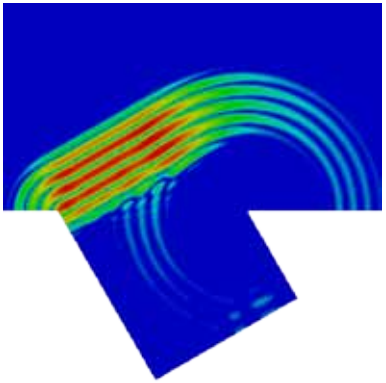


SIMetris - your measurement service provider

- NI LabVIEW support
  - on-site implementation of measurement setups
- Sound and Vibration
  - sound measurements (pressure, intensity, spectrum)
  - vibration measurements (mode shapes, accelerations)
- Data Visualization Tools
  - load, process, analyze, and visualize measurement data
  - easy-to-use graphical user interface
  - designed and implemented to meet your needs

SIMetris - your finite element analysis service provider

- far-reaching expertise of FEA
  - with different tools
- establish complete FEA workflows enabling
  - reproducible processes
  - optimization tasks
  - non-experts to carry out complex simulations
- analyze potential improvements
  - identification of eventual limitations of applied tool
  - propose workflow or method enhancements
- customer support and consultancy
  - increase and transfer know-how
  - improve productivity

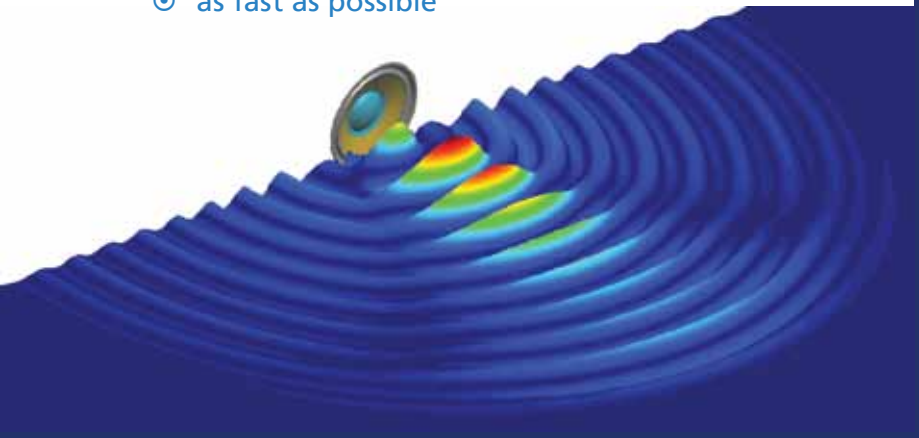


SIMetris

Simulation Measurement Software

SIMetris - your software provider

- tool development to support your business with
  - virtual product development using finite element simulations
  - methods to match simulation and measurement results
  - methods that speed up aeroacoustic problem solutions
- workflow adaption and customization to
  - your needs and requirements
  - the skill level of the potential users
  - your development environment
- implementation of customer specific features
  - on demand service
  - as fast as possible



NACS

Am Weichselgarten 7
D-91058 Erlangen
Germany

Phone +49-(0)9131-691-280
Fax +49-(0)9131-691-285

Email info@simetris.de
Web www.simetris.de

Information info@simetris.de