



MACSI-Working Group WG1



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WG1-Past Events, OKT 2001- SEPT 2002

- **Kickoff Meeting Vienna:**

Erwin Schrödinger Institute for Mathematical Physics, November 18th-20th, 2001

Scientific Meeting:

- Evolutionary Algorithms
- Fast Optimization Techniques
- Multi-Objective Optimization
- Shape Optimization
- Application Areas: Aerospace, Car Industry, Energy

WG1-Past Events, OKT 2001- SEPT 2002

- Optimization Techniques in **Medical Imaging**

Innsbruck, April 22-23, 2002.

- Integration of data for multi-modal systems
- Segmentation
- Computational anatomy
- Inverse problems:
 1. Electrical Impedance Tomography
 2. Cardiac Electric Excitation

WG1-Past Events, OKT 2002- SEPT 2003 (next reporting period)

- **Parameter Identification** in Structural and Material Engineering

Milan, November 21-22, 2002

- Calibration in plasticity, viscoplasticity, damage and fracture mechanics
- Design of laboratory tests
- Identification of defects in structural components
- Health monitoring

WG1-Scheduled Events, OKT 2002-SEPT 2003

- Open industrial Days, February 27-28, Paris
 - Gradient Methods
 - Shape Optimization
 - Global Optimization – Genetic Algorithms
 - Industrial Applications:
 - Airplane, automobile, ship design
 - Material Processes
- Topology Optimization Days, September 18-19, Bayreuth, Germany
 - Topology Optimization
 - Shape Optimization

New Members

- Gullikson (Sweden)
- Anita
- Potthast (Germany)
- Eriksson (Sweden)
- Old Members: Engl, Maier, Capasso, Schrefler
Odorizzi, Neittaanmaki,
Desideri, Pironneau, Poloni, Periaux, Ruffo, Estola,
Karvinen, Stavroulakis, Burger, Hamalainen,
Pierret, Heikkola, Loch.

Strategic Plans (as posted in the Kickoff Meeting)

- Specific topic of data basis and test examples
- Industry should report about successful solutions. They should be integrated in data basis
- Work within MACSI should be demand-driven – stimulated from industry – presented at workshops.
- Aim of the workshops: Stimulate research cooperations.