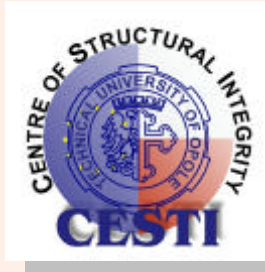




TECHNICAL UNIVERSITY OF OPOLE



CENTRE OF STRUCTURAL INTEGRITY

Structure of the CESTI

The Centre of Structural Integrity consists of four Departments of Technical University of Opole:

- ✚ **Dept of Mechanics and Machines Design**
Faculty of Mechanical Engineering
- ✚ **Dept of Physics of Materials**
Faculty of Civil Engineering
- ✚ **Dept of Building Materials Engineering**
Faculty of Civil Engineering
- ✚ **Dept of Structural Mechanics**
Faculty of Civil Engineering

Contribution of the envisaged measures to the overall aim of the proposal

The sustainable development of CESTI will correspond to the following thematic priorities of FP5:

- ✚ GROW-2001-1.1
Efficient production, including design, manufacturing and control
- ✚ GROW-2001-5.4
Expanding the limits and durability of materials
- ✚ GROW-2001-6.2
Methodologies for measurements and testing

The aim of the CESTI

The mission of CESTI is development research and dissemination of knowledge in:

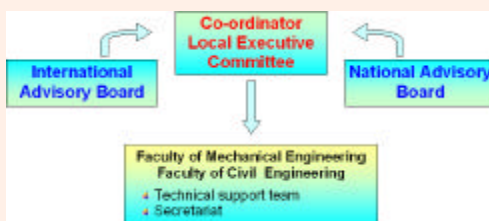
- ✚ fatigue, damage and fracture of materials, machines and civil engineering structures
- ✚ assessment, identification and rehabilitation of existing civil engineering structures such as buildings, bridges, industrial structures
- ✚ full-scale and model-scale studies of dynamic behaviour of large structures as industrial chimneys, TV-towers, bridges
- ✚ identification of dynamic characteristics of structures

The main feature of the proposal is to better concentrate a number of outstanding units in science and technology at the Technical University of Opole (TUO) in the subject of Structural Integrity and to strengthen the national and international Centre of competence in: fatigue, damage and fracture of materials, machines and civil engineering structures; assessment, identification and rehabilitation of existing civil engineering structures; full scale and model-scale studies of dynamic behaviour of large structures. The important activities of the Centre are concentrated on: education on advanced domestic and international level through creation of PhD and post-graduate studies, local seminars, summer schools and conferences; integration of the Centre with European Research Area through networking, exchange, training and twinning arrangements.

Description of the work

- ✚ **THEMATIC CONFERENCES:** Conference on Fracture Mechanics; Symposium on Fatigue of Materials and Structures; two Conferences on Research Problems in Civil Engineering
- ✚ **SEMINARS AND SUMMER SCHOOLS:** Local Seminars on Structural Integrity (every Wednesday); International Summer School of Fracture Mechanics; International Summer School on Full-scale and Model-scale Studies of Dynamical Behaviour of Large Structures; International Summer School on Dynamic Damage Assessment of Existing Structures.
- ✚ **PHD STUDIES:** New course on Multiaxial Fatigue and Fracture; three competitions for PhD students in the purpose of financing candidates to participate in conferences; adjust curriculum of PhD degree programme at the Faculty of Civil Engineering to the international level.
- ✚ **POSTGRADUATE STUDIES:** Four semester studies on Computer Aided Design and Testing of Machines; one semester studies on Dynamic Identification and Damage Assessment of Existing Civil Engineering Structures; one semester studies on Advanced Problems in Structural Dynamics.
- ✚ **PRACTICAL TRAINING AND STUDY VISITS:** Sending PhD or post-graduate students for practical training and studying for three months; sending post-doctoral researchers for three-month study visits to partner institutions; organising two-week missions to partner institutions for consultation on teaching materials; organising one-week reciprocal visits to and from leading European centres.
- ✚ **ACTIVATING PARTICIPATION IN FP6 PROJECTS:** Missions to workshops; information events on FP6; giving proposals to the competition of FP6.
- ✚ **PROMOTION AND DISSEMINATION:** Organising exhibitions on fatigue test facilities; preparing brochures on CESTI activities and the laboratory facilities.
- ✚ **DEVELOPMENT OF CESTI:** Updating software and hardware of CAD/CAM Laboratory; developing the Fatigue and Fracture Mechanics Laboratory; development of experimental facilities in the Structural Testing Laboratory.

Organigramme



www.cesti.po.opole.pl