



EUROPEAN UNION EUROPEAN SOCIAL FUND



The project is co-founded by European Union from financial resources of European Social Fund

Institute of Engineering Materials and Biomaterials Faculty of Mechanical Engineering SILESIAN UNIVERSITY OF TECHNOLOGY

# PROJECT Dificition

### **Priority courses**

- Nanotechnology and Technologies of Materials Processes
- Applied Computer Science with Computational Materials Science
- Materials Engineering with 4 education profiles:
  - Dental Engineering
  - Surface Engineering
  - Management Engineering
  - Processes Automation



## of Achievements in Materials

and Manufacturing Engineering

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#### Scope

#### Materials

Metallic Alloys, Tool Materials, Superplastic Materials, Ceramics and Glasses, Composites, Amorphous Materials, Nanomaterials, Biomaterials, Multifunctional and Smart Materials, Engineering Polymers

#### Manufacturing and Processing:

Casting, Powder Metallurgy, Welding, Sintering, Heat Treatment, Thermo-Chemical Treatment, Thin & Thick Coatings, Surface Treatment, Machining, Plastic Forming, Quality Assessment, Automation Engineering Processes, Robotics and Mechatronics, Technological Devices and Equipment

#### **Properties**

Ductility and Crack Resistance, Fatigue, Creep-resistance, Fracture Mechanics, Mechanical, Electrical, and Magnetic Properties, Corrosion and Erosion, Wear Resistance, Non-Destructive Testing, Reliability Assessment, Toxicity, Working Properties of Materials and Products

Methodology of Research

Electron Microscopy, X-ray Phase Analysis, Metallography and Quantitative Metallography, Image Analysis, Computer Assistance

in the Engineering Tasks and Scientific Research

#### Cleaner Production and Biotechnology

Theoretical Fundamentals of Cleaner Production, Industrial Application of Cleaner Production, Biotechnology

#### Industrial Management and Organisation

Production and Operations Management, Production Planning and Control, Manufacturing Technology Management, Quality Management, Environmental Management, Safety and Health Management, Project Management, Physical Distribution and Logistics Management, Supply Chain Management, Productivity and Performance Management

### Analysis and Modelling

Numerical Techniques, Statistic Methods, Residual Life Analysis, Process Systems Design, Mould Flow Analysis, Rapid Prototyping, CAD/CAM, CAMS, CAQ, Engineering Design, Constructional Design, Technological Design, Materials Design, Applied Mechanics, Computational Material Science and Mechanics, Materials and Engineering Databases, Expert Systems, Artificial Intelligence Methods

#### **Education and Research Trends**

Development of New Curricula for BSc and MSc Studies in the field of Materials Science, Manufacturing and Mechanical Engineering, Challenges of the Widening Labour Market, Complementary Roles of Developed and Developing Nations in Promoting a Global Industrial and Economical Infrastructure and Requirements on Common International Research and Teaching Development in the field of Materials, Manufacturing and Mechanical Engineering, Computer Aided Teaching, E-learning

Only papers positively pre-reviewed by at least two reviewers are published in the Journal



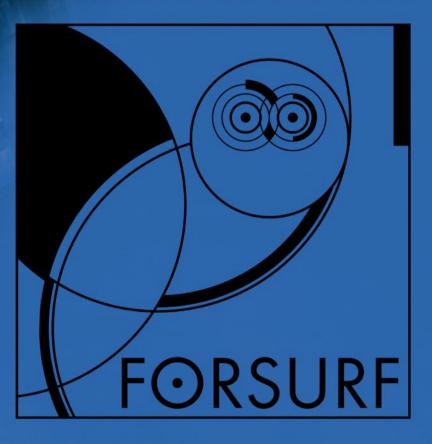




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INSTITUTE OF ENGINEERING MATERIALS AND BIOMATERIALS SILESIAN UNIVERSITY OF TECHNOLOGY

> Foresight of surface properties formation leading technologies of engineering materials and biomaterials



Contractors of the FORSURF Project would like to invite a wide group of experts to participate in the Delphi method researches concerning the Project scope The World Academy of Materials and Manufacturing Engineering in the cooperation with Institute of Engineering Materials and Biomaterials of the Silesian University of Technology

would like to invite to the 16<sup>th</sup> International Scientific Conference on Contemporary Achievements in Mechanics, Manufacturing and Materials Science

### CAM3S'10

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SSN 1734-8412

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THUITIONS OF MATERIALS SCIENCE

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on the occasion of 65 years of traditions of materials science and engineering in Silesia

which will be organised in Gliwice on 22<sup>nd</sup>-24<sup>th</sup> November 2010



During the Conference the unveiling a commemorative plaque of Late Prof. Jan Adamczyk, the leader of School of Physical Metallurgy and Electron Miroscopy on the occasion of the 75° anniversary of his birthday is foreseen

The publication of the conference proceedings is foreseen

