

Aims and Scope

The Journal "ANNALS OF THE UNIVERSITY OF ORADEA. Fascicle of Management and Technological Engineering", ISSN 1583 - 0691, is dedicated to scientific progress in the field of mechanical engineering, mechanics and machining processes applied in the broad areas, from engineering and manufacturing metal parts processing and continuing with the ceramic, composite or other structural materials different functional industry best products and services. Not be excluded from the promotion and popularization theories applied in natural and organic materials, biotechnology and bioengineering process. Thus, the journal "ANNALS OF THE UNIVERSITY OF ORADEA. Fascicle of Management and Technological Engineering" aims to cover some basic areas of mechanical engineering, primary being:

- The fundamental technological processes (mechanical, thermal, electrical, chemical, electrochemical, thermochemical, biochemical) that includes: developing materials and semi-finished products, removal of materials (cutting); the deposition of materials; deformation of materials in solid state, semi-solid state, powdered metallic or non-metallic; assembly and installation technologies; processes and surface coatings; heat treatment; evolution of mechanical characteristics of materials during processing and heat treatment processes;
- The performance characteristics of machine tools and flexible manufacturing systems;
- Consecrated systems design and industrial design;
- Special scientific developments and approaches to conventional processes, or new ones;
- Value added by new technologies and new approaches to scientific class of geometric precision/ micromachining (machining technologies of ultra machine tools);
- Design and functional behavior of equipment and machine tools;

Above list is not an exhaustive one, since, for instance, manufacturing engineering scroll through major transformations, because of the challenges of the current trends of the miniaturization, the emergence of new materials and the development of interface technologies, such as those arising from the cooperation between biologists and engineers, for example .

Traditionally in the manufacturing successful approach was the type of "top-down", however, recently, this approach turned into those of "bottom-up". This approach is supported by the increase in production quality, namely by increasing efficiency. In this context, the journal "ANNALS OF THE UNIVERSITY OF ORADEA. Fascicle of Management and Technological Engineering" will have incorporated in the editorial policy of the areas of interest, following domains:

- Micro and nanofabrication, including those of lithography type, volume micromachining (selective chemical corrosion), surface micromachining (e.g. planar structure of polycrystalline silicon surface, or multi-layer coating processes), photolithography, electron lithography, roentgen lithography, ion lithography, lift-off technique;
- Rapid prototyping (Fused Deposition Modeling (FDM), Laminated Object Manufacturing (LOM), Selective Laser Sintering (SLS), Stereolithography (SL));
- Rapid manufacturing and repair;
- Other techniques that use optical projection technology;
- Modeling and simulation process of continuum material;
- Tribology and wear phenomena relevant to the manufacturing and increasing effectiveness.

The Journal "ANNALS OF THE UNIVERSITY OF ORADEA. Fascicle of Management and Technological Engineering" encourages the scholarly articles in the field of manufacturing systems to collaborate intensively by sending a paper with the incidence in the field for the promotion and advancement of this branch of engineering. Based on the definition established for manufacturing systems: "Manufacturing systems is comprised of products, equipment, people, information, control and support functions for the Economical and competitive development, production, delivery and total life cycle of products to market and societal Satisfy Needs", Editorial Board of the journal considers that the papers, on manufacturing systems area, is a direct benefit obtained by the Journal by opening offered to emerge areas of engineering. Thus are

deemed to be value added scientifically to the prestige of Journal, following areas of manufacturing systems, whether papers submitted for publication are scientific approached:

- Manufacturing strategies and paradigms;
- Design of manufacturing systems, including their modeling and simulation;
- Sustainable manufacturing;
- Control systems, automation and human-machine interaction;
- Quality management;
- Production development;
- Supply management and logistics;
- Manufacturing Information Systems, including enterprises modeling and ERP (enterprise resource planning)
- Micromanufacturing technologies, conventional also unconventional;

In the field of robotics and mechatronics, the Journal “ANNALS OF THE UNIVERSITY OF ORADEA. Fascicle of Management and Technological Engineering”, encourages and promotes scientific interest especially in the area of process engineering, emphasizing welcomes those articles that emphasizes relationship between the precision mechanical engineering, control systems and artificial intelligence, generally accepted definition. This relationship aims to achieve, in fact, a balance between the design and construction, mechanical functioning respectively, most often, a system and an electronic control system, in particular the operation of the system. This philosophy covers a broad spectrum of applications and theories from very large areas, including consumer production design, manufacturing techniques, computerized integration processes and control equipment. So are concerned the following subdomains:

- Flexible automation;
- Micromechanical systems;
- Manufacturing of "biotech" type;
- Concurrent engineering;
- IT Integration in manufacturing;
- Mechatronics design philosophy;
- The design of equipment, machines and manufacturing systems with a high degree of artificial intelligence incorporated.

In mechanical engineering field, papers accepted for publication are aimed to be:

- Analytical and computational modeling (FEA, FEM, mesh-free method);
- Rigid- solid mechanics (dynamics, vibrations, stability);
- Structural mechanics;
- Elastic deformation, plastic deformation, viscoplastic deformation, viscoelastic material deformation;
- Behavior and applications of advanced materials (composites, shape memory);
- Mechanical impact (elastic collision, plastic collisions);
- Behaviour of materials with nonlinear mechanical properties;
- Fluid mechanics and thermodynamics.

The Journal “ANNALS OF THE UNIVERSITY OF ORADEA. Fascicle of Management and Technological Engineering”, acknowledges and encourages the publication of original scientific papers containing, in most cases, the comparisons between theory and practical applications in the field of engineering.