

Sorin NEAGU-VENTZEL

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Objective

A challenging position in one of the following fields: manufacturing processes R&D and/or design, robotics R&D and/or design.

Education

- **Ph.D.**, Manufacturing Engineering, The University of Toledo, Jan. 1998 – degree expected in August 2001 (GPA: 4.0/4.0)
Dissertation: "A Theoretical and Experimental Study of Single Roll Burnishing Process as Applied to Yokes"
Coursework: Intelligent Monitoring of Abrasive Processes, Advanced Machining of Brittle Materials, CAD-Finite Element Methods, Tribology of Manufacturing Processes, Superficial Plastic Deformation Processes, ELID Grinding.
- **Ph.D.**, Theoretical Mechanics and Vibrations, Technical University of Iasi-Romania, Sep 1995 - Jan 1998 (GPA: 4.0/4.0) - interrupted.
Reports: - "Algebraic models of finite rotations and some dynamic consequences" – Dec., 1995;
- "Original contributions to the study of robot displacements and some connected gyroscopic effects" – Nov., 1996.
- **B.S.**, Mathematics, University "A.I.Cuza" Iasi-Romania, Sep. 1987 - June 1992 (GPA: 3.0/4.0).
- **M.S.**, Manufacturing Engineering, Technical University of Iasi-Romania, July 1985 - June 1986 (GPA: 4.0/4.0).
- **B.S.**, Mechanical Engineering, Technical University of Iasi-Romania, Sep. 1980 - June 1985 (3.5/4.0).
Coursework: Manufacturing Engineering, Non-Traditional Machining Processes, Machine-Tools, Design of Fixtures and Jigs, Tool Design, Material Science, Heat Treatment, Material Testing, Design for Manufacturability, Advanced Kinematics, Advanced Dynamics.
Awards: First Prize at Romanian National Students Scientific Symposium "Gh. Asachi", 1985;
-Special Prize at Romanian National Mathematical Contest, 1981;
Patent: Lathe Cutter for the Processing of Rolling Mill Cylinders with Pulley Crust, May 1985.
- **Visiting professor** at University of Strathclyde (Glasgow, Scotland) in the field of theoretical mechanics; Jan. 1997 – April 1997

Professional Experience

Research/Teaching Assistant - *Mechanical, Industrial & Manufacturing Engineering Department, The University of Toledo, Ohio;*

Research Associate – *Precision Micro-Machining Center, Jan. 1998 – present*

- Grant proposals submitted to: National Science Foundation, US Army Research Office, Office of Naval Research, Ohio State Government, Ohio Board of Regents, UT-College of Engineering, on the following topics: Acoustic Emission Investigation of Abrasive Processes, Chemo-Mechanical Grinding of Ceramics, Acquisition of Equipment for a Metrology and Material Testing Laboratory, Tribological Investigation of Lapping using Diamond Powders, Development of Abrasive Nano-machining Techniques for Brittle Materials;
- Technical co-operation and consulting with: Dana Co. (Spicer Driveshaft Division), Universal Superabrasives, American Boarts Crushing Co., Chrysler Co., Warren Diamond Co., Master Chemical Co, Diamond Abrasive Co., Wendt Aircraft Inc., Oliver Instruments. ACME Co.;
- Supervising M.Sc. projects: Modeling of the Contact Tool-Workpiece in Burnishing Process, Study of the Influences of Roller's Topography on the Burnished Surface;
- 4 papers published in journals and conference proceedings and 2 presentations;
- Attended and presented 3 papers at the international conference organized by Industrial Diamond Association in Vancouver (2000);
- SME-Toledo chapter scholarship award – Feb. 2001.

Assistant Professor - *Department of Theoretical Mechanics, Technical University of Iasi-Romania, Feb. 1990 –Jan. 1998*

- teaching and laboratory duties in: advanced statics, advanced kinematics and advanced dynamics (seminar '91-'97, course '95-'97 – English section);
- development of high efficiency algebraic models for robot and manipulator arm kinematics and dynamics;
- grants awarded: -"Mathematical Models of some Structures in the Field of Mechanical Engineering" (Romanian Ministry of Science and Technology, 1993);
- "A Study of the Robot Dynamic Modeling by some Algebraic Methods and Applications" (Romanian Ministry of Science and Technology, 1996);
- published papers: 2 (Romanian refereed technical journals).

Design Engineer - *Research and Technological Engineering Center, Division of Metallurgical Equipment and Presses, Iasi – Romania, Sep. 1987 – Feb. 1990*

- modernization and new design of equipment specific to the metallurgical industry;
- development of an innovative manipulator by using an original conceptual approach.

Supervisor of Manufacturing Processes and Product Design Engineer - *Mechanical Plant of Vaslui, Romania, Section of Speed Reducing Gears, Sep. 1985 – Sep. 1987*

- installation, maintenance and reconditioning of manufacturing equipment;
- design and supervising of manufacturing processes;
- design of jigs and fixtures.

Software Proficiency: MARC 2000 (certified user), I-DEAS, Autocad, Mathematica, MathLab, Mathcad, Fortran, Windows, Excel, Word, PowerPoint.

Character and Skills

Hard working and extremely flexible; in depth knowledge in all fundamental engineering fields: mathematics, physics, chemistry, hence able to solve various complex engineering problems; extremely imaginative; highly motivated to read and apply the newest technical achievements; best results achieved in team work; good interpersonal communication skills; strong analytical abilities; good skills for preparing and giving presentations; Romanian and French (speaking, writing).