**CORNELIU BURLACU, Ph.D**

Associate Professor

Machine Tools Department

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**EDUCATION**

Ph.D. 2001, Industrial Engineering, Machine Tools Department, “Gheorghe Asachi” Technical University

B.Sc. 1991, Faculty of Mathematics and Computer Science, “Al. I. Cuza” University

B.Sc. 1984, Machine Tools Department, Mechanical School, “Gheorghe Asachi” Technical University

**ACADEMIC AND PROFESSIONAL APPOINTMENTS**

2001 - present Associate Professor, the “Gheorghe Asachi” Technical University

1994 - 2001 Lecturer, the “Gheorghe Asachi” Technical University

1989 - 1994 Assistant Professor, the “Gheorghe Asachi” Technical University

1985 - 1989 Design Engineer, SC. IMAMUS SA., Iassy

1984 - 1985 Engineer, Maintenance and Repair of Machine Tools Department, CUG, Iassy

**RESEARCH CONTRIBUTIONS**

**Development of mathematical models** for determining the inertial components of the reaction in crankpin bearings and strain mechanical crank presses structure.

**Development of a numerical model** for the study of the influence of some parameters on the crankpin angular speed evolution, torque and power consumption for crank presses.

**The achievement of a graph interface** for the study of the influences of some parameters on the construction and exploitation of crank presses, based on simulation models.

**Design and construction of a trnsducer** for the active power measuring.

**Conception, design, execution** of mechanical excitatory for the achievement of an excitation with a pulse type force.

**The achievement of a method** for the diagnosis of the mechanical structure of the crnk presses based on their response at the excitation with a pulse type force

**The achievement** of a timing pulse generator.

**RESEARCH INTERESTS**

* **Machine tools for machining plastic deformation**
* **Machine tools design**
* **Automated processing**
* **Micromilling process**
* **Automatic and CNC machine tools**
* **Modern manufacturing systems**
* **High performance technological equipment**
* **Micro- electro-mechanical systems**
* **Mechanical vibration**
* **Hydraulics and pneumatics drives**

**COMMITTEE MEMBERSHIPS**

**International Conferince of Manufacturing Systems - ICMS 2001/ Iassy/ Romania**

**International Conferince of Manufacturing Systems - ICMS 2003/ Iassy/ Romania**

**International Conferince of Manufacturing Systems - ICMS 2005/ Iassy/ Romania**

**International Conferince of Manufacturing Systems - ICMS 2007, 2009, 2011/ Iassy - official reviewer**

**PERSONAL SKILLS AND COMPETENCES**

**Mother language**

**Romanian**

**Other language**

**English, French (**Understanding, Speaking, Writing –very good)

**Computer skills and competences**

* **The base knowledge of PC**: Excel, Word, Outlook, Powerpoint, Auto CAD, Matlab, Mathematica.

**PUBLICATIONS**

**Books**

1. **Corneliu Burlacu,** Machine tools for machining plastic deformation, lecture notes, *“Gheorghe Asachi” Technical University Typography,* 2001.
2. **Corneliu Burlacu,** Machine tools for machining plastic deformation, guideline for laboratory works, *“Gheorghe Asachi” Technical University Typography,* 2001.
3. **Corneliu Burlacu, Dumitru Zetu, Gheorghe Pleșu,** *Automatic machine tools, Publishing Venus, ISBN 973-8174-53-8,* 2002

**Conference and Journal Publications -** **Representative publications**

1. **Burlacu** C., Druţu C., Research on the influence of the constructive parameters on the dynamic behavior of mechanic eccentric presses, *Vol. “Optimum Technologies, Technologic Systems and materials in the machine building field” TSTM-4*, Bacău, *ISSN 1224-7499*, 1998.
2. **Burlacu C**., Equipment and method for measuring the dynamic characteristics of mechanic eccentric presses, *Vol. “Optimum Technologies, Technologic Systems and materials in the machine building field” TSTM-5*, Bacău, *ISSN 1224-7499*, 1999.
3. **Burlacu C**., Druţu C., Theoretical and experimental researches on the optimization of design and construction of mechanic eccentric presses by using their response to excitation with a pulse type force, *Bulletin of the Polytechnic Institute of Iassy, Tomul XLVII (LI)*, 2001 .
4. **Burlacu C**., Mircea D., Research of the influence of the constructive parameters on the dynamic behavior of mechanic eccentric presses using a mathematic model, *Rev. “Meridian Engineering”, no.3*, Chisinau, 2002 *(ISSN 1683-853x).*
5. **Burlacu C**., Zetu D., Study on the dynamic behavior of mechanic eccentric presses using their answer at a test with a pulse type force, *Vol. “Optimum technologies, technologic systems and materials in the machine building field”-TSTM 8*, Bacau, 2003 (p. 157-160).
6. Dan Mircea, **Corneliu Burlacu**, Considerations on the application of the generalized objective of the technical creation in establishing a used battery dressing method, *Bulletin of the Polytechnic Institute of Iassy*, *Tomul XLIX (LIII)*, 2003.
7. **Burlacu Corneliu**, Mircea Dan “Method for the diagnosis of mechanic eccentric presses by measuring the active power”, *Anals of Oradea University, Fascicle of management and Technological Engineering* , Oradea, *Vol. II (XII)*, 2003.
8. Mihailide M., Mircea D., **Burlacu C**., “Aspects regarding the construction of gear-shaving-cutter with assembled element” *Modern technologies, quality*, Editura Tehnica Info, Chişinău, (3), *ISBN 9975-9748-0-5. CZU 621 (082)-(063), T32, 2003*, p. 108-114.
9. **Burlacu C**., Mircea D., Mihailide M., Study on the dynamic behavior of mechanic eccentric presses using a simulation model", *TMCR 2003*, Chisinau, May 2003, p. 432-435.
10. Zetu D., Horodincă M., Carata E., **Burlacu C**., Maintenance in modern manufacturing flexible systems, *TSTM 10*, Bacau, 2004.
11. **Burlacu C**., Mircea D., The optimization of gesign, construction and exploita-tion of mechanic eccentric presses by using a simulation model, *Annals of the Oradea University, Vol. "Fascicle of Management and technological Engineering", Nr. III (XIII)*, Oradea, mai 2004, p. 103, *ISBN 1583-0691*.
12. **Burlacu C**., Mircea D., Method and equipment for the optimization of the design and construction of mechanic eccentric presses by using their response to a excitation with a pulse type force, *Annals of the Oradea Univer-sity, Vol. "Fascicle of Management and technological Engineering"*, *Nr. III (XIII),* Oradea, ,p. 104, *ISBN 1583-0691*, mai 2004
13. **C. Burlacu**, O.Iordan, Method and equipment for the mechanic eccentric presses, *ModTech International Conference –New face of TMCR-Modern Technologies, Quality and Innovation* , Slanic Moldova, *ISSN 2066-3919*, 20-22 may 2010.
14. **C. Burlacu**, I. Vicol, Optimization of the exploitation of mechanic eccentric presses on the basis of a simulation model, *ModTech International Conference –New face of TMCR-Modern Technologies, Quality and Innovation* , Slanic Moldova, *ISSN 2066-3919*, 20-22 may 2010.
15. **C. Burlacu**, O.Iordan, STUDY ON THE DYNAMIC BEHAVIOR OF MECHANIC ECCENTRIC PRESSES, *„International Virtual Journal Machine, Technologies, Materials*‖,Sofia, Bulgaria, *ISSN 1313-0226*, 2010.
16. Iordan Oana& **Burlacu Corneliu**, The main factors of influence in the micromilling field, *Academic Journal of Manuafacturing Engineering*,Timişoara, *vol.8, ISSUE 4*/2010, p.43-49.
17. Iordan Oana& **Burlacu Corneliu**, The roughness-Factor of influence in the micromilling field. First part, *Modern Technologies, Quality and Innovation*, Vadul luiVoda, Chişinău, Moldova, *ISSN 2069-6736*, p. 533-537, 2011.
18. Iordan Oana& **Burlacu Corneliu**, The roughness-Factor of influence in the micromilling field. Second part, *Modern Technologies, Quality and Innovation*, Vadul luiVoda, Chişinău, Moldova, *ISSN 2069-6736*, p. 529-533, 2011.
19. Iordan Oana, **Burlacu Corneliu**, The mathematical model of the cutting force for micromilling of the 40CrMnMo7 alloy steel, *Bulletin of the Polytechnic Institute of Iassy, Tomul LVII (LIX),* Fasc.7, 20011, p.45-52.
20. Iordan Oana, **Burlacu Corneliu**, Considerations on micromilling process, *The 15-th International Conference „Inventica 2011*, Iassy, 2011.