

## TEZA DE DOCTORAT

Teză de doctorat în domeniul Știința și Ingineria Materialelor – 2007 – Universitatea Tehnică “Gh. Asachi” Iași - “Cercetări privind utilizarea materialelor de brazare pe bază de aliaje de aluminiu în vederea realizării de structuri cu pereți subțiri”.

## CĂRȚI PUBLICATE

1. Ghenadi Adrian Stelian, **Olaru Ionel** – Mecanisme, vol 1 si 2, Alma Mater, Bacau, ISBN 978-606-527-610-9, 2018.
2. Ghenadi Adrian Stelian, **Olaru Ionel** – Procesele ciclului de viață al produsului: implicații în dezvoltarea noilor produse industriale, Alma Mater, ISBN 978-606-527-497-6, Bacau, 2015.
3. **Olaru Ionel**, Căliman Radu, Avram Vasile – Schimbătoare de căldură, Editura Alma Mater, 2008, ISBN 978-973-1833-91-0.
4. Căliman Radu, **Olaru Ionel** – Termotehnică și Mașini Termice, Note de curs, Editura Alma Mater, 2007.
5. Macarie Florin, **Olaru Ionel** – Desen tehnic, Note de curs și aplicații practice, Editura Alma Mater, 2007.
6. Florescu Iulian, Florescu Daniela, **Olaru Ionel** – Mecanica Fluidelor și Mașini Hidraulice, Îndrumar de laborator, Editura Tehnica-Info, Chișinău, 2003, ISBN 9975-63-222-X.

## LUCRĂRI ȘTIINȚIFICE

publicate în volumele unor manifestări științifice naționale recunoscute din țară și din străinătate:

1. Gheorghe Stan, **Ionel Olaru**, - Externally controled pressure regulator, Buletinul Institutului Politehnic din Iași, publicat de: Universitatea Tehnică “Gh. Asachi” Iași, tomul XLVI (L), supliment Mecanica Fluidelor, secția Construcției de Mașini. 2000.
2. Daniela Florescu, Iulian Florescu, **Ionel Olaru**, - Theoretical study about shoe nip calendering - Modelling and optimization in the machines building field, MOCM-6, Romanian Academy, pag.235 – 236, 2000.
3. Iulian Florescu, Daniela Florescu, **Ionel Olaru**, - Optical brighteners for high white papers - Modelling and optimization in the machines building field, MOCM-6, Romanian Academy, pag.237 – 240, 2000.
4. Radu Căliman, Daniela Florescu, **Ionel Olaru**, - Hiperbolic heat-conduction equation a solution for the semi-infinite body problem, OPROTEH 2001, Bacau, 22-23 noiembrie, pg.157-162.
5. Radu Căliman, Daniela Florescu, **Ionel Olaru**, - Temperature distributions in solid cylinders due to a moving circumferential ring heat source, OPROTEH 2001, Bacau, 22-23 noiembrie, pg.152-157.
6. Radu Căliman, Daniela Florescu, **Ionel Olaru**, - Temperature in cylindrical bodies subjected to moving heat sources and surface cooling, OPROTEH 2001, Bacau, 22-23 noiembrie, pg.147-152.
7. **Ionel Olaru**, Radu Căliman, - A method for the determination of the local turbulent friction factor and heat transfer coefficient in generalized geometries, OPROTEH 2001, Bacau, 22-23 noiembrie, pg.188-193.
8. **Ionel Olaru**, Radu Căliman, Florin Macarie, – Laminar wavy-film flow: part I, hydrodynamics analysis, MOCM 8, vol.1, Romanian Academy 2002, Branch office, Iași, pp. 193-198.
9. **Ionel Olaru**, Radu Căliman, Florin Macarie, – Laminar wavy-film flow: part II, condensation and evaporation, MOCM 8, vol.1, Romanian Academy 2002, Branch office, Iași, pp. 199-204.
10. **Ionel Olaru**, Florin Macarie, Cătălin Drob, – Natural convection from a horizontal cylinder-laminar

- regime, MOCM 9, vol.1, Romanian Academy 2003, Branch office, Iași, pp. 154-157.
11. Cătălin Drob, Florin Macarie, **Ionel Olaru**, - Project management in machine tools design and construction, Optimum Technologies, Technologic Systems and Materials in the Machines Building Field, Technical Sciences Academy of Romania and University of Bacau 2003, TSTM-9, pag. 187-190, ISSN 1224-7499.
  12. Radu Căliman, **Ionel Olaru** – Heat Transfer to Evaporating Liquid Films, MOCM 10, vol.1, Romanian Academy 2004, Branch office, Iași, pp. 185-190.
  13. Radu Căliman, **Ionel Olaru** – A theoretical investigation into thermally governed transient flow surges in two-phase condensing flow, MOCM 10, vol.1, Romanian Academy 2004, Branch office, Iași, pp. 191-195.
  14. Radu Caliman, **Ionel Olaru**. - A Method for the Solution of Heat Transfer Problems of a Change of Phase, MOCM 11, vol.2, Romanian Tehnical Science Academy 2005, Branch office, Iași, pp. 191-195, pp. 241-246.
  15. Radu Caliman, **Ionel Olaru**. – A Theory of Rotating Condensation, MOCM 11, vol.2, Romanian Tehnical Science Academy 2005, Branch office, Iași, pp. 247-252.
  16. **Ionel Olaru**, Radu Caliman. - Practical Interests of Rotating Condensation, MOCM 11, vol.2, Romanian Tehnical Science Academy 2005, Branch office, Iași, pp. 253-258.
  17. Florescu Iulian, Florescu Daniela, **Olaru Ionel**. – The Demand/Request of Energy and Economy of Energy Sources, MOCM 11, vol. 4, Romanian Tehnical Science Academy 2005, Branch office, Iași, ISSN 1224 – 7480.
  18. Radu Caliman, **Ionel Olaru** - An Abrasive Wear Model for Composite Materials, MOCM 12, vol.1, Romanian Academy 2006, Branch office, Iași, pp. 29-34.
  19. Radu Caliman, **Ionel Olaru** - An Aluminum Matrix Ni-Ti Fiber-Reinforced Smart Composite, MOCM 12, vol.1, Romanian Academy 2006, Branch office, Iași, pp. 35-38.
  20. **Ionel Olaru**, Radu Caliman - A Cross Flow Micro Heat Exchanger Design, MOCM 12, vol.1, Romanian Academy 2006, Branch office, Iași, pp. 126-129.
  21. **Ionel Olaru**, Radu Caliman - A Theoretical Study About Micro Heat Exchangers, MOCM 12, vol.1, Romanian Academy 2006, Branch office, Iași, pp. 130-133.
  22. Catalin Drob, **Ionel Olaru** – Consideration about Brazed Plate Heat Exchanger, MOCM 12, vol.1, Romanian Academy 2006, Branch office, Iași, pp. 59-60.
  23. **Olaru Ionel** - *Study About Torch Brazing Technology*, Buletinul Institutului Politehnic Iași, Universitatea Tehnică „Gh. Asachi” Iași, Tomul LIII (LVII), Fasc. 4, Știința și Ingineria Materialelor, pp. 195-200, 2007.
  24. **Olaru Ionel**, Cobrea Codrin - *Study About Weld and Braze Defects and Non Destructive Testing Methods*, Buletinul Institutului Politehnic Iași, Universitatea Tehnică „Gh. Asachi” Iași, Tomul LIII (LVII), Fasc. 4, Știința și Ingineria Materialelor, pp. 201-206, 2007.
  25. **Olaru Ionel**, Cobrea Codrin - *Research Concerning Design Of High Efficiency Brazed Plate Heat Exchangers*. 11<sup>th</sup> International Research/Expert Conference”Trends in the Development of Machinery and Associated Technology” TMT 2007, Hammamet, Tunisia, 5-9 September, 2007.
  26. **Olaru Ionel**, Căliman Radu - Materials Selection in Brazing and Soldering Processes, MOCM 13, Romanian Academy, Branch office 2007, Iași, vol. 3, pp. 109-115.
  27. **Olaru Ionel**, Caliman Radu, Avram Vasile - Torch Brazing for Brazed Heat Exchangers, MOCM, Number 14, volume II, Romanian Academy, Branch office, Iași, 2008.
  28. **Olaru Ionel**, Caliman Radu, Avram Vasile - Research Concerning Design of Brazed Plate Heat Exchangers, MOCM, Number 14, Romanian Academy, Branch office, Iași, 2008.
  29. Caliman Radu, **Olaru Ionel** - Latent Heat-Of-Fusion Energy Storage: Experiments on Heat Transfer From Cylinders During Melting, MOCM, Number 14, 2008.

30. **Olaru Ionel**, Caliman Radu - Linearized Stability Analysis of Film Condensation, MOCM, Number 14, Romanian Academy, Branch office, Iași, 2008.
31. **Olaru Ionel** - Diffusion Brazing of a Micro-Heat-Exchangers, al VI-lea Simpozion cu participare internațională „Mecatronică, microtehnologii și materiale noi”, Universitatea “Valahia”, Târgoviște, pp.154-157, 2008.
32. **Olaru Ionel** - Diffusion Brazing of A Stainless Steel With Pure Copper Using a Pure Dry Hydrogen Atmosphere, Technical Sciences Academy of Romania and University of Bacau 2008, TSTM-14, pag. 187-190, ISSN 1224-7499.
33. Albuț Aurelian, Ciobotariu Vlad, Radu Crina, **Olaru Ionel** - Optimization of the Blank Holder Force Using the Neural Network Algorithm, 8TH International Conference And Workshop On Numerical Simulation Of 3d Sheet Metal Forming Processes, Numisheet, AIP Conference Proceedings, Volume1383, pp. 1004-1009, 2011.
34. Aurelian Albuț, Vlad A. Ciobotariu, Crina Radu, **Ionel Olaru** - “Optimization of the forming process in the case of a square shaped part made from tailor welded blanks” Proceedings of Modern Technologies, Quality and Innovation (Modtech), vol.16, no.2, 2012, ISSN 2069-6736.
35. **Olaru Ionel**, Albuț Aurelian, Ciobotariu Vlad - Consideration About Deformability Of Bimetal Brazing Joints, Journal of Engineering Studies and Research – Volume 18 No. 2, pp. 84-87, 2012.
36. **Olaru Ionel** - Considerations on the development of brazed joints using two materials with different properties, Journal of Engineering Studies and Research – Volume 18 No. 4, pp. 65-69, 2012.
37. **Olaru Ionel** - Study of Fluid Flow into the Jet along a Plane Wall, Proceedings of the 3rd International Conference on Design and Product Development, Montreux, Switzerland, December 29-31, Mathematical Methods for Information Science and Economics, ISBN: 978-1-61804-148-7, pp. 245-248, 2012.
38. **Olaru Ionel**, Nedelcu Dragos-Iulian - Study of Cooling Lubrification in Grinding Process Simulation, Proceedings of the 13th International Conference on Robotics, Control and Manufacturing Technology (ROCOM '13), Latest Trends in Circuits, Control and Signal Processing, Kuala Lumpur, Malaysia, April 2-4, 2013, ISBN: 978-1-61804-173-9, pp. 50-54, 2013.
39. Nedelcu Dragoș-Iulian, **Olaru Ionel** - Study of Cooling Parameters Using Fluid Jet in Milling Process Simulation, Applied Mechanics and Materials Vol. 371 Trans Tech Publications, Switzerland, doi:10.4028/www.scientific.net/AMM.371.524, pp. 524-528, 2013.
40. **Olaru Ionel** - Drawing Study of Sheet Bimetallic Brazed Parts, Applied Mechanics and Materials Vol. 371 Trans Tech Publications, Switzerland, doi:10.4028/www.scientific.net/AMM.371.173, pp. 173-177, 2013.
41. **Olaru Ionel** - The fluid flow simulation through to a venturi nozzle, Journal of Engineering Studies and Research – Volume 19 No. 1, pp. 42 - 46, 2013.
42. **Olaru Ionel** - Brazing of Aluminum Bimetallic Sheets in the Design of Heat Exchangers, Applied Mechanics and Materials Vol. 814 Trans Tech Publications, Switzerland, doi:10.4028/www.scientific.net/AMM.814.19, pp. 19-24, 2013.
43. **Olaru Ionel** - Metode didactice moderne implementate cu ajutorul aplicațiilor de tip cloud computer, Romania, Conferința anuală de didactică, Universitatea "1 Decembrie 1918" din Alba Iulia, 5-7 august, pp. 1-7, 2013.
44. **Olaru Ionel** - The Fluid Flow Simulation through to a Convergent Nozzle, Journal of Engineering Studies and Research – Volume 19 No. 2, pp. 76 - 80, 2013.
45. **Olaru Ionel** - A Study on Drawing Bimetallic Brazed Sheet Parts, Journal of Engineering Studies and Research – Volume 20 No. 1, pp. 71 - 75, 2014.
46. Olaru Ciprian, Nedeff Valentin, Panaite-Lehadus Mirela, **Olaru Ionel**, Losses Analysis of Materials Resulted From Shredding of Food Materials With Soft Texture by Means of Metal Wire Cutting, Applied Mechanics and Materials Vol. 659, pp 533-538, 2014.
47. Olaru Ciprian, Nedeff Valentin, Panainte-Lehăduș Mirela, **Olaru Ionel**, Ciobanu Elena, The shredding of soft-textured food materials by means V. of unheated metal wire cutting, 3<sup>rd</sup> International Conference on Thermal Equipment, Renewable Energy and Rural Development, TE-

RE-RD 2014, Mamaia – Romania, 12-14 June, pp. 291-296, 2014.

48. **Olaru Ionel**, Nedelcu Dragos-Iulian - Simulation and Mathematical Modeling on Bending of Pipe Subjected to Internal Pressure, Applied Mechanics and Materials Vol. 657, IManE 2014, May 29-30, Chisinau, Republic of Moldova, pp 639-643, 2014.
49. **Olaru Ionel** - An Optimization Study of Fluid Jet Flow in a Convergent Divergent Nozzle Geometry Used for the Cooling Systems of Machine Tools, Advanced Materials Research Vol. 1036, ModTech 2014, July 13-16, Gliwice, Poland, pp. 326-330, 2014.
50. **Olaru Ionel** - Study About the Simulation of the Energy Losses Associated with Abrupt Enlargements in Pipes, Proceedings of the Conference on Industrial Power Engineering, CIEI 2014, the 9-th edition, Alma Mater Editure, ISSN 2069-9905, Romania, pp. 191-194, 2014.
51. **Olaru Ionel**, Nedelcu Dragos-Iulian - Study on Minimum Quantity Lubrication Systems in Cooling of Machining Processes, Applied Mechanics and Materials, Trans Tech Publications, Switzerland, IManE2015, vol. 809-810, pp. 1022-1027, 2015.
52. Florescu Iulian, Nedelcu Dragoş-Iulian and **Olaru Ionel** - Studies of Flow Dynamics Parameters Analysis through Dissipaters in Pipes under the Pressure, IManE 2015 International Conference May 21-22, 2015, Iaşi, Romania.
53. **Olaru Ionel** - A Study of Fluid Flow Simulation in Convergent–Divergent Nozzles, Modern Technologies in Industrial Engineering, IOP Conf. Series: Materials Science and Engineering, <http://iopscience.iop.org>, Vol. 95, USA, UK, 2015.
54. **Olaru Ionel** - A study on fluid flow simulation in the cooling systems of machine tools, Modern Technologies in Industrial Engineering, IOP Conf. Series: Materials Science and Engineering, <http://iopscience.iop.org>, Vol. 145, USA, UK, 2016.
55. Panaite-Lehadus M, Olaru, C.; Nedeff, V.; **Olaru, I.**; Mosnegutu, E. - The study behavior of food materials with soft texture subjected to shredding by cutting, 7th International Conference on Advanced Concepts in Mechanical Engineering, IOP Conference Series-Materials Science and Engineering, Vol. 147, USA, UK, 2016.
56. **Olaru Ionel** - A study of the cooling systems and fluid flow simulation in metal cutting processing, Modern Technologies in Industrial Engineering, IOP Conf. Series: Materials Science and Engineering, <http://iopscience.iop.org>, Vol. 227, USA, UK, 2017.

## CONTRACTE DE CERCETARE

1. Contract nr. 7078/10.12.2003 – “Cercetări teoretice si experimentale privind determinarea rigidității sistemelor mecanice cu componente cilindrice”, Beneficiar: S.C. “Aeromotors” S.A. Bacău, membru.
2. Contract nr. 7077/10.12.2003 – “Cercetări teoretice si experimentale privind determinarea săgeților cilindrilor industriali”, Beneficiar: S.C. “Letea” S.A. Bacău, membru.
3. Contract nr. 17/10.08.2010 – “Studiul influenței tipului de îmbinare si a componentelor tablelor bimetalice asupra preciziei dimensionale si de forma a pieselor realizate din aceste table prin ambutisare la rece”, National/resurse umane, membru.

Șef lucr. dr. Ing. Ionel OLARU

