



**Şcoala Doctorală Interdisciplinară  
(SDI)**

**Domeniul de doctorat:**

**Inginerie industrială**

**Conducător doctorat:**

**Prof. dr. ing. Gheorghe OANCEA**

## **TEME (TEMATICĂ) PENTRU CONCURS**

**TEMA 1:** *Refabricarea produselor industriale în contextul economiei circulare utilizând tehnologii inovative*

### **Bibliografie recomandată:**

1. Matsumoto, M., et al. (2016) Trends and research challenges in remanufacturing, Int. J. of Precis. Eng. and Manuf.-Green Tech. 3: 129. doi:10.1007/s40684-016-0016-4
2. Bagci, E., (2009) Reverse engineering applications for recovery of broken or worn parts and re-manufacturing: Three case studies. Advances in Engineering Software, Vol. 40, pp. 407–418.
3. Buican G. R., Oancea G., Manolescu A., Remanufacturing of Damaged Parts Using Selective Laser Melting Technology, Applied Mechanics and Materials, Vol. 693, pp. 285-290, 2014, doi:10.4028/www.scientific.net/AMM.693.285 .
4. Manolescu, A., Oancea, G., Pescaru, R., Udriou, R. & Bădan I., (2011). Redesigning and Manufacturing of Damaged Gears Using Innovative Technologies, Proceedings of 5th International Conference on Manufacturing Science and Education, pp. 317-321, Sibiu, Romania.
5. Oancea, G.; Manolescu, A.; Bădan, I. & Pescaru, R. (2013). Customized Software Tools Integrated in Reverse Engineering Process of Rectangular Parts with Holes. Journal of Applied Mechanics and Materials, Vol. 371, pp. 473-477.
6. Vinesh, R. & Kiran F.J. (2008). Reverse Engineering – An Industrial Perspective, Springer-Verlag, ISBN 978-1-84628-855-5, London, UK.
7. Gebhardt, A (2012). Understanding Additive Manufacturing, Carl Hanser Verlag, Munich, ISBN 978-3-446-42552-1, Munich, Germany.

**TEMA 2:** *Cercetări privind fabricarea produselor din tabla prin procedeul de tăiere cu jet de apă și abraziv*

**Bibliografie recomandată:**

1. Kovacevic, R., ș.a, State of the art of research and development in abrasive waterjet machining. J Manuf Sci Eng 119, 776-785 (1997)
2. Momber, AW, Kovacevic, R., Principles of Abrasive Waterjet Machining. Springer London Limited (1998)
3. Wang, J., Abrasive Waterjet Machining of Engineering Materials, Trans Tech Publications, (2003)
4. Olsen J, Zeng J (2006) The state-of-the-art of precision abrasive waterjet cutting. Proceedings of the 8th Pacific Rim International Conference on Water Jet Technology.
5. Folkes J (2009) Waterjet – An innovative tool for manufacturing. Journal of Materials Processing Technology, 209(20), pp. 6181-6189, DOI: 10.1016/j.jmatprotec.2009.05.025.
6. Kong M.C, Axinte D.A (2012) Capability of Advanced Abrasive Waterjet Machining and its Applications. Applied Mechanics and Materials, 110-116, pp. 1674-1682.
7. Korat, M.M., Acharya, G.D., A Review on Current Research and Development in Abrasive Waterjet Machining, Int. Journal of Engineering Research and Applications, Vol. 4, Issue 1(Version 2), January 2014, pp.423-432
8. .Supriya, S., Srinivas, S., Machinability Studies on Stainless steel by abrasive water jet – Review, Volume 5, Issue 1, Part 3, 2018, Pages 2871-2876, Elsevier
9. Natarajan, Y., ș.a. Abrasive Water Jet Machining process: A state of art of review, Journal of manufacturing processes, Volume 49, January 2020, Pages 271-322, Elsevier

Conducător doctorat:



Prof. dr. ing. Gheorghe OANCEA



Transilvania  
University  
of Brasov

## ADMISSION TO DOCTORAL STUDIES

2020-2021

Session September 2020

Interdisciplinary Doctoral School  
(SDI)

Field of doctoral studies:

Industrial Engineering

PhD supervisor:

Prof. Gheorghe OANCEA, PhD

### TOPICS FOR THE ADMISSION TO DOCTORAL STUDIES

**TOPIC 1:** *Remanufacturing of industrial products in context of circular economy using innovative technologies*

**Recommended bibliography:**

1. Matsumoto, M., et al. (2016) Trends and research challenges in remanufacturing, Int. J. of Precis. Eng. and Manuf.-Green Tech. 3: 129. doi:10.1007/s40684-016-0016-4
2. Bagci, E., (2009) Reverse engineering applications for recovery of broken or worn parts and re-manufacturing: Three case studies. Advances in Engineering Software, Vol. 40, pp. 407–418.
3. Buican G. R., Oancea G., Manolescu A., Remanufacturing of Damaged Parts Using Selective Laser Melting Technology, Applied Mechanics and Materials, Vol. 693, pp. 285-290, 2014, doi:10.4028/www.scientific.net/AMM.693.285 .
4. Manolescu, A., Oancea, G., Pescaru, R., Udriou, R. & Bădan I., (2011). Redesigning and Manufacturing of Damaged Gears Using Innovative Technologies, Proceedings of 5th International Conference on Manufacturing Science and Education, pp. 317-321, Sibiu, Romania.
5. Oancea, G.; Manolescu, A.; Bădan, I. & Pescaru, R. (2013). Customized Software Tools Integrated in Reverse Engineering Process of Rectangular Parts with Holes. Journal of Applied Mechanics and Materials, Vol. 371, pp. 473-477.
6. Vinesh, R. & Kiran F.J. (2008). Reverse Engineering – An Industrial Perspective, Springer-Verlag, ISBN 978-1-84628-855-5, London, UK.
7. Gebhardt, A (2012). Understanding Additive Manufacturing, Carl Hanser Verlag, Munich, ISBN 978-3-446-42552-1, Munich, Germany.

**TOPIC 2:** *Research on manufacturing of sheet products using water jet cutting process*

**Recommended bibliography:**

1. Kovacevic, R., ş.a, State of the art of research and development in abrasive waterjet machining. J Manuf Sci Eng 119, 776-785 (1997)
2. Momber, AW, Kovacevic, R., Principles of Abrasive Waterjet Machining. Springer London Limited (1998)
3. Wang, J., Abrasive Waterjet Machining of Engineering Materials, Trans Tech Publications,

(2003)

4. Olsen J, Zeng J (2006) The state-of-the-art of precision abrasive waterjet cutting. Proceedings of the 8th Pacific Rim International Conference on Water Jet Technology.
5. Folkes J (2009) Waterjet – An innovative tool for manufacturing. Journal of Materials Processing Technology, 209(20), pp. 6181-6189, DOI: 10.1016/j.jmatprotec.2009.05.025.
6. Kong M.C, Axinte D.A (2012) Capability of Advanced Abrasive Waterjet Machining and its Applications. Applied Mechanics and Materials, 110-116, pp. 1674-1682.
7. Korat, M.M., Acharya, G.D., A Review on Current Research and Development in Abrasive Waterjet Machining, Int. Journal of Engineering Research and Applications, Vol. 4, Issue 1(Version 2), January 2014, pp.423-432
8. .Supriya, S., Srinivas, S., Machinability Studies on Stainless steel by abrasive water jet – Review, Volume 5, Issue 1, Part 3, 2018, Pages 2871-2876, Elsevier
9. Natarajan, Y., ş.a.Abrasive Water Jet Machining process: A state of art of review, Journal of manufacturing processes, Volume 49, January 2020, Pages 271-322, Elsevier

PhD supervisor:



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