

PERSONAL INFORMATION

Neagu Maria



 „Dunărea de Jos” University of Galați
 Manufacturing Engineering Department
 Domnească Street, Nb. 111
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 România
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 Maria.Neagu@ugal.ro

Sex Female | Nationality Romanian

WORKING PLACE

Associate Professor/ Mechanical Engineering

PROFESSIONAL EXPERIENCE

2005 - Prezent

Associate Professor

Dunărea de Jos” University of Galați, 111 Domnească Street, Galați 800201, România,
<http://www.ugal.ro>; <http://www.ing.ugal.ro>

- Co-ordinating courses/seminars/laboratories, Co-ordinating diploma/masters thesis
Type or sector of activity Heat Transfer in Manufacturing, Concurrent Engineering, Benchmarking, Management of Research and Development

2000 - 2005

Lecturer

Dunărea de Jos” University of Galați, 111 Domnească Street, Galați 800201, România,
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- Co-ordinating courses/seminars/laboratories, Co-ordinating diploma/masters thesis
Type or sector of activity Heat Transfer in Manufacturing, Numerical Modeling of Thermal Phenomena in Manufacturing and Technology, Basics of Materials Manufacturing, Concurrent Engineering, Benchmarking, Management of Research and Development

1994 - 2000

Assistant Professor

Dunărea de Jos” University of Galați, 111 Domnească Street, Galați 800201, România,
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- Co-ordinating courses/seminars/laboratories/proiects, Co-ordinating diploma/masters thesis
Type or sector of activity Basics of Cutting and Surfaces Generation, Cutting Tools Profiling, Materials Deformation Technology, Computers Programming

1990 - 1994

“Preparator”

Dunărea de Jos” University of Galați, 111 Domnească Street, Galați 800201, România,
<http://www.ugal.ro>; <http://www.ing.ugal.ro>

- Co-ordinating seminars/laboratories/proiects
Type or sector of activity Basics of Cutting and Surfaces Generation, Cutting Tools Profiling, Materials Deformation Technology, Computers Programming

EDUCATION

1995-1999

PhD

Duke University, Durham, North Carolina, S.U.A.

- Abilities: scientific research activity development

1995-1990

Engineer

Galați University, Mechanical Engineering Faculty, “Hydro-Pneumatic Machines” section, România

- Courses. Ex.: Algebra, Mathematical Analysis, Physics, Chemistry, Thermodynamics, Mechanics, Fluid Mechanics, Basics of Cutting and Surfaces Generation, Machines Building Technology, Hydro-Pneumatic Machines, Cold Deformation Technology, Cutting Tools, e.a.
- Abilities. Ex.: The ability to accumulate knowledge in the field, to develop projects based on these knowledge, to analyse the experimental data, to develop research activities that combine the technical knowledge with the modern calculation technology.

PERSONAL COMPETENCES

Native language	Romanian
Communication competences	<ul style="list-style-type: none">▪ A good communication capacity obtained during the professional activity
Managerial competences	<ul style="list-style-type: none">▪ Leadership and management of a research team, abilities manifested during the teaching and the research activities.
Competences gained at the working place	<ul style="list-style-type: none">▪ I can work and develop laboratories on machine-tools: turning, drilling, milling, cutting machines, e.a..▪ I can develop laboratories on set-ups with theoretical purposes that aim the measurement of the cutting forces, the analysis of the cutting and the turning chips formation, the measurement of the drilling forces and momentum , the analysis of the broching, honning, e.a.▪ I can develop laboratories that analyse the heat transfer in a material, the thermal properties of the material, the heat transer process during the electroerosion process, the turning process, e.a.
Programming competences	<ul style="list-style-type: none">▪ Advanced knowledge of programming in C++, Fortran, Basic software.▪ Easy programming using the commercial softwares.
Other competences	<ul style="list-style-type: none">▪ The competence to rapidly understand a new research domain by gathering the data and by sintetizing them.▪ The capacity to present the obtained synthesis as courses, presentations.▪ The capacity to develop research activities having as a starting point the accumulated knowledge .

SUPPLEMENTARY INFORMATION

Publications	<ul style="list-style-type: none">▪ Author/co-author of more than 70 research articles and 8 books.
Annex	<ul style="list-style-type: none">▪ The list of the research papers and the books.

RESEARCH

A. Scientific papers published in international reviews

- M. Neagu**, "The stability analysis of a linearly mass stratified fluid near a vertical impermeable wall of constant temperature and mass flux", Journal of Multidisciplinary Engineering Science and Technology (JMEST) ISSN: 2458-9403 Vol. 10, Issue 2, February – 2023, JMEST42354158, pag. 15804-15811, 2023.
- M. Neagu**, "The Succession of Heat and Mass Driven Natural Convection Regimes Along a Vertical Impermeable Wall", European Journal of Natural Sciences and Medicine, Vol. 5, Issue 1, pag. 9-26, 2022.
- M. Neagu**, "Heat/Mass driven natural convection of air near a boundary of constant mass flux and temperature ", Journal of Multidisciplinary Engineering Science and Technology (JMEST) ISSN: 2458-9403 Vol. 8, Issue 11, November – 2021, pag. 14724-14735, 2021.
- M. Neagu**, "Natural Convection Near a Vertical Wall of Constant Mass Flux and Temperature Situated in a Mass Stratified Fluid", The 8th International Conference on Advanced Concepts in Mechanical Engineering, IOP Conference Series: Materials Science and Engineering, 444 (2018) 082020 doi: 10.1088/1757-899X/444/8/082020, pag. 1-14, 2018.

- M. Neagu**, "Free Convection in a Darcy Thermally Stratified Porous Medium That Embeds a Vertical Wall of Constant Heat Flux and Concentration", World Academy of Science and Technology, International Science Index 109, International Journal of Mechanical, Aerospace, Industrial, Mechatronic and Manufacturing Engineering, 10(1), 2016, pag. 65-74., scholar.waset.org/1999.8/10003370; ICHTA 2016 : 18th International Conference on Heat Transfer and Applications, London, United Kingdom, 2016.
- M. Neagu**, "Free Convective Heat and Mass Transfer Induced by a Constant Heat and Mass Fluxes Vertical Wavy Wall in a non-Darcy Double Stratified Porous Medium", International Journal of Heat and Mass Transfer, 54, 2011, 2310-2318.
- L.A. Rocha, **M. Neagu**, A. Bejan, R.S.Cherry, "Convection with Phase Change During gas Formation From Methane Hydrates via Depressurization of Porous Layers", Journal of Porous Media, 4(4), 2001, 283-295.
- M. Neagu**, A. Bejan, "Constructal Placement of High-Conductivity Inserts in a Slab: Optimal Design of "Roughness", Transactions of the ASME, 123(4), 2001, 1184-1189.
- M. Neagu**, A. Bejan, "Constructal Theory Three Networks of Constant Thermal Resistance", Journal of Applied Physics, 86(12), 1999, 1136-1144.
- M. Neagu**, A. Bejan, "Three Dimensional Tree Constructs of "Constant" Thermal Resistance", Journal of Applied Physics, 86(2), 1999, 7107-7115.
- G. Chen, **M. Neagu**, "Thermal Conductivity and Heat Transfer in Superlattices", Applied Physics Letters, 71(19), 1997, 2761-2763.
- N. Oancea, **M. Neagu**, "The Profile Designing of Disc Tools Processing Ruled Helical Surfaces", Tehnica Italiana, Revista di Ingegneria (2), 1992, 95-103.

B. Scientific papers presented at international conferences

- M. Neagu**, "Natural Convection Heat Transfer from a Horizontal Circular Cylinder with Constant Surface Heat Flux", HT2009: Proceedings of the ASME Summer Heat Transfer Conference, San Francisco, U.S.A., Vol. 2, 2009, 627-632.
- M. Neagu**, "The Control of Natural Convective Heat Transfer from a Horizontal Circular Cylinder", Colloque Francophone sur L'energie-Environment-Economie & Thermodynamique (Cofret), Nantes, France, 2008.
- M. Neagu**, "The Design of Wires and Fibers Extrusion Systems", The 2nd International Conference "Computing and Solutions in Manufacturing Engineering", COSME 2008, Brasov, published in Academic Journal of Manufacturing Engineering, No. 2, 2008, 76-82.
- M. Neagu**, **M. Nedelcu**, "Numerical Modeling of Wires and Fibers Extrusion", Journal of Proceedings of the International Conference on Manufacturing Systems, ICMAS 2008, Bucharest, Romania, Vol.3, 2008, 287-290.
- M. Neagu**, "Two-Dimensional Numerical Modeling of a Packed Porous Layer During Sintering", Proceedings of the Int. Conference on Manufacturing Systems, ICMAS 2004, Bucharest, Romania, 2004, 525-529.
- M. Neagu**, "The Dimensions of a Packed Porous Layer During Sintering", Romanian non-Conventional Technologies Review, No.2, 2003, 75-79, The XI-th International Conference on non-Conventional Technologies, Sibiu, Romania, 2003.
- M. Neagu**, Al. Epureanu, "Mathematical Model for the Study of Thermal Loads on Discs During Grinding Process", The Scientific Session "Modern Technologies, Quality, Re-structuring", Chişinău, Moldavia, 2001, 284-287.
- N. Oancea, **M. Neagu**, C. Fetecau, "A New Method for Tools Profiling for Helical Surface Generation", Xth International Cutting Tools Conference, October, Miskolc, Hungary, 2000, 89-98.
- G. Chen, **M. Neagu**, "Thermal Conductivity and Heat Transfer in Superlattices", Thermo-Electric

Materials – New Directions and Approaches, M.R.S. Proceedings, Pittsburgh, Pennsylvania, U.S.A., Vol. 478, 1997, 85-90.

- N. Oancea, **M. Neagu**, J. Miron, "Algorithm for Profiling of the Tools which Manufacture Cylindrical Helical Surfaces", VIIIth International Conference on Tools, Miskolc, Hungary, 1993, 444-449.
- N. Oancea, **M. Neagu**, "Algorithm for Profiling of the Tools which Work by Rolling", VIIIth International Conference on Tools, Miskolc, Hungary, 1993, 450-455.
- N. Oancea, M. Jora, **M. Neagu**, "A New Method in Profiling of the Tools which Work by Wrapping Up", The 24th Israel Conference on Mechanical Engineering, Technion City, Haifa, Israel, 1992.

C. Scientific papers published in national reviews

- M. Neagu**, "A product development using the robust design concept and the Taguchi method", The Annals of "Dunarea de Jos" University of Galati, Fascicle V, Technologies in Mechanical Engineering, ISSN 1221-4566 (accepted for publication in 2020), 2023
- M. Neagu**, "A product development process and its management. An engineering student laboratory", The Annals of "Dunarea de Jos" University of Galati, Fascicle V, Technologies in Mechanical Engineering, ISSN 1221-4566 (accepted for publication in 2020), 2023
- M. Neagu**, "The Re-Design of an Industrial Product Using the Modern Technology", Annals of "Dunarea de Jos" University of Galati, Fascicle I. Economics and Applied Informatics, no. 3/2019, 2019, 60-71.
- M. Neagu**, "Experimental Data Analysis Using "Minitab" Software. The Turning Force Analysis", Annals of „Dunarea de Jos” University of Galati. Fascicle V, Technologies in Mechanical Engineering, ISSN 1221-4566, 2019, 25-30.
- V. Nestian, S. Istrate, M. Neagu**, "A Company Improvement Analysis using the AHP/ANP Methods and the Modern Technology", Annals of "Dunarea de Jos" University of Galati, Fascicle I. Economics and Applied Informatics, no. 1/2019, 2019, 62-77.
- M. Neagu**, "The Thermal Analysis of the Electroerosion Process", The Annals of "Dunarea de Jos" University of Galati, Fascicle V, Technologies in Mechanical Engineering, ISSN 1221-4566, 2018, 5-8.
- M. Neagu**, "The Measurement of the Thermal Diffusivity of Solids", The Annals of "Dunarea de Jos" University of Galati, Fascicle V, Technologies in Mechanical Engineering, ISSN 1221-4566, 2018, 69-71.
- S. Istrate, V. Nestian, M. Neagu**, "A Company Improvement Analysis using the AHP and the ANP Methods", Annals of "Dunarea de Jos" University of Galati, Fascicle I. Economics and Applied Informatics, no. 2/2018, 2018, 47-58.
- M. Neagu**, "Natural Convection in the Boundary Layer of A Constant Temperature and Concentration Vertical Wall Embedded in a Darcy Doubly Stratified Porous Medium ", The Annals of "Dunarea de Jos" University of Galati, Fascicle V, Technologies in Mechanical Engineering, ISSN 1221-4566, 2017, 5-12.
- M. Neagu**, "Natural Convection Near a Vertical Wall of Constant Heat Flux and Concentration Embedded in a Darcy Mass Stratified Porous Medium", The Annals of "Dunarea de Jos" University of Galati, Fascicle V, Technologies in Mechanical Engineering, ISSN 1221-4566, 2017, 13-20.
- M. Neagu, A. A. Cristea**, "Forced Convection Heat Transfer Around a Constant Surface Heat Flux Horizontal Cylinder with Baffles. Reynolds number $Re < 40$ case", Annals of "Dunarea de Jos" University of Galati, Fascicle V, 2014, 23-28.
- M. Neagu, V. Marin**, "The analysis of the customer request processing in a financial institution", Annals of "Dunarea de Jos" University of Galati, Fascicle I. Economics and Applied Informatics, No1/2013, ISSN 1584-0409, page 5-12, 2013.

- M. Neagu, G. Duda**, "Analysis of Transport Processes management for a Romanian Food Market", Annals of Dunarea de Jos University of Galati, Fascicle I. Economics and Applied Informatics, ISN 1584-0409, 2012, 21-30.
- Neagu, M.**, "The Design of Wires and Fibers Extrusion Systems", The Annals of "Dunarea de Jos" University of Galati, Fascicle V, Technologies in Mechanical Engineering, ISSN 1221-4566, 2008, 38-42.
- M. Neagu**, "The Control of Natural Convection Heat Transfer from a Horizontal Circular Cylinder", The Annals of "Dunarea de Jos" University of Galati, Fascicle V, Technologies in Mechanical Engineering, 2008, 55-60.
- M. Neagu**, "The Design of Wires and Fibers Extrusion Systems", The 2nd International Conference "Computing and Solutions in Manufacturing Engineering", Academic Journal of Manufacturing Engineering, No. 2, 2008, 76-82.
- M. Neagu**, "Hydrodynamic Lubrication of Linear Hydraulic Engines", The Annals of "Dunarea de Jos" University of Galati, Fascicle V, Technologies in Mechanical Engineering, 2007, 25-31.
- M. Neagu**, "Study of Temperature Influence on Hydrodynamic Lubrication at Linear Hydraulic Engines", Academic Journal of Manufacturing Engineering, No. 3, 2007, 90-94.
- M. Neagu**, "Cutting Tool Temperature in Cylindrical Turning", The Annals of "Dunarea de Jos" University of Galati, Fascicle V, Technologies in Mechanical Engineering, 2006, 25-31.
- M. Neagu, M. Dodu**, "Study on the Transient Conjugated Heat Transfer in Developing Laminar Pipe Flow", The Annals of "Dunarea de Jos" University of Galati, Fascicle V, Technologies in Mechanical Engineering, 2005, 11-15.
- M. Neagu**, "Active Control of Convection in a Melted Material Layer. I. Convection in an Infinite Fluid Layer", The Annals of "Dunarea de Jos" University of Galati, Fascicle V, Technologies in Mechanical Engineering, 2005, 39-43.
- M. Neagu**, "Active Control of Convection in a Melted Material Layer. II. Convection with a Finite Lower Boundary", The Annals of "Dunarea de Jos" University of Galati, Fascicle V, Technologies in Mechanical Engineering, 2005, 43-49.
- M. Neagu, A. Dinicuta, E. Banea**, "Study of Remelting Process During the Droplet-Based Solid Freeform Fabrication", The Annals of "Dunarea de Jos" University of Galati, Fascicle V, Technologies in Mechanical Engineering, 2004, 35-40.
- M. Neagu**, "Numerical Modeling of the Sintering Process", The Annals of "Dunarea de Jos" University of Galati, Fascicle V, Technologies in Mechanical Engineering, 2004, 67-72.
- M. Neagu, E. Banea**, "Study of Droplet-Base Solid Freeform Fabrication", "Iasi Polytechnic Institute Bulletin", L(LIV), Fascicle V, 2004, 347-350.
- M. Neagu**, "Heat Transfer Stability in Materials Processing. Finite Difference/Galerkin Method", The Annals of "Dunarea de Jos" University of Galati, XX(XXVI), Fascicle V, 2003, 5-12.
- M. Neagu**, "The Dimensions of a Packed Porous Layer During Sintering", The Annals of "Dunarea de Jos" University of Galati XX(XXVI), Fascicle V, 2003, 38-43.
- M. Neagu**, "The Dimensions of a Packed Porous Layer During Sintering", "Non-Conventional Technologies Review" No. 2, 2003, 75-78.
- M. Neagu**, "On the Surface Layer Thickness of Plane Grinded Workpieces", The Annals of "Dunarea de Jos" University of Galati XX(XXV), Fascicle V, 2002, 16-20.
- M. Neagu**, "Thermal Field of Grinded Plane Workpieces", "Iasi Polytechnic Institute Bulletin", Vol. XLVIII(LII), Section V, 2002, 157-160.
- M. Neagu, G. Frumușanu**, "Finite Difference/Galerkin Solution for a Melted Material Layer Temperature Field", The Annals of "Dunarea de Jos" University of Galati XIX(XIV), 2001, 61-65.
- N. Oancea, M. Neagu, C. Fetecau**, "The Trajectories Method, a new Method of Tools Profiling that Work by Wrapping up. I. Surfaces Associated with Axoids in Rolling", "Constructia de masini", București, (52), 2000, 29-34.

- N. Oancea, C. Fetecau, **M. Neagu**, "The Trajectories Method, a new Method of Tools Profiling that Work by Wrapping up. II. The Generation of Helical Surfaces with Tools – Axy-Symmetric Surfaces", "Constructia de masini", București, (52), 2000, 35-40.
- N. Oancea, **M. Neagu**, C. Fetecau, "Modeling of Helical Surface Generation at Axy-Symmetric Tools Profiling", "Iasi Polytechnic Institute Bulletin ", Vol. XLVI(L), 2000, 81-86.
- M. Neagu**, "Thermal Field and Structural State Evolution of the Band in Continue Casting", The Annals of "Dunărea de Jos" University of Galati XVII(XXII), Fascicle V, 1999, 5-9.
- N. Oancea, **M. Neagu**, "Cutting Scheme at Generation with Rack-Tools", The Annals of "Dunarea de Jos" University of Galati XI(XVI), Fascicle V, 1993, 5-13.
- N. Oancea, M. Dima, **M. Neagu**, "Cutting Scheme - Criterion for Rolling Radius Determination", The Annals of "Dunărea de Jos" University of Galati XII (XVII), Fascicle V, 1994, 1-10.
- N. Oancea, **M. Neagu**, "Reverse Generation at Processing with Tools Associated with Axoids in Rolling. II Applications", The Annals of "Dunarea de Jos" University of Galati IX(XIV), Fascicle V, 1991, 37-43.

D. Scientific papers presented at national conferences

- M. Neagu**, "Study of Hydrodynamic Lubrication Between the Cylinder Liner and the Piston Ring at Linear Hydraulic Engines", XIV-International Conference, New Technologies and Products in Machine Manufacturing Technologies, TEHNOMUS XIV, Suceava, Romania, 2007, 147-153.
- M. Neagu**, "Study of Temperature Influence on Hydrodynamic Lubrication at Linear Hydraulic Engines", Proceedings of the 3rd International Conference on Manufacturing Science and Education- MSE 2007, Sibiu, Romania, 2007, 57-58.
- M. Neagu**, "On the in-Plane Thermal Conductivity of Si/Ge Superlattice Structures", The XIII-th Thermodynamics National Conference with International Participation, Resita, Romania, 2003, 9-14.
- M. Neagu**, "The Surface Layer Thickness of Grinded Workpieces", The 5th National Conference with International Participation OPROTEH 2003, Bacau, Romania, 2003.
- M. Neagu**, A. Bejan, "Constant Thermal Resistance Tree Networks", The XI-th National Conference on Thermodynamics, Galati, Romania, 2001, 199-206.
- M. Neagu**, "Active Control of Heat Transfer Stability in Materials Processing", The 11-th International Conference on Modeling, Simulation and System's Identification, SIMSIS-11, Galati, Romania, 2001, 315-321.
- M. Neagu**, "Numerical Modeling of the Temperature Field in a Melted Material Layer", National Conference OPROTEH-2001, Bacau, Romania, TSTM7-Romanian Academy, 2001, 291-296.
- M. Neagu**, C. Rusu, "Contributions on the Cutting Zone Modeling", National Conference TEHNOMUS X, Suceava, Romania, 1999, 197-204.
- N. Oancea, **M. Neagu**, "The Generation Process Modeling at Rack-Tool Cutting", National Conference TEHNOMUS VIII, Suceava, Romania, 1995, 38-45.
- N. Oancea, C. Fetecau, **M. Neagu**, "Numerical Modeling of Surfaces Generation by Wrapping Up", National Conference with International Participation "PRASIC BRASOV'94", The University "Transilvania" Brasov, Romania, "Mechanical Transmissions", 1994, 13-20.
- M. Neagu**, M. Teodorescu, "Computer Assisted Design of Technological Equipment for Cold Plastic Deformation", The III-rd National Conference on Technologies and Modern Design Methods in Mechanical Engineering, Vol. I, Craiova, Romania, 1994, 225-230.
- N. Oancea, C. Fetecau, **M. Neagu**, "Geometrical Errors at the Helical Surfaces Generation with Disc-Tool", The III-rd National Conference on Technologies and Modern Design Methods in Mechanical Engineering, Vol. I, Craiova, Romania, 1994, 219-224.
- M. Neagu**, J.L. Chenot, M. Teodorescu, "Aspects of Cutting-Edge Generation at Orthogonal Cutting Process", 8th National Conference on Modern Technologies of Working, Galati, Romania, 1993.

- N. Oancea, **M. Neagu**, "Reverse Generation at the Cutting Process Associated with Axoids in Rolling. II Applications", 8th National Conference on Modern Technologies of Working, Galați, Romania, October, 1993.
- M. Teodorescu, **M. Neagu**, "The Importance of Chip Minimum Thickness Determination in the Turning Process", 8th National Conference on Modern Manufacturing Technologies, Galati, România, 1993.
- N. Oancea, **M. Neagu**, "The Profile Design of Disc-Tools Processing Ruled Helical Surfaces", Modern Mechanical Design Conference, Bucharest, Romania, 1991, 18-20.
- M. Neagu**, N. Oancea, "General Calculation Method of Second Order Tools Profile for Helical Tools Manufacturing", National Conference TEHNOMUS VI, Suceava, Romania, 1991, 22-29.

Books

- M. Neagu**, "Concurrent Engineering. Laboratories" (in Romanian language), Tehnopress, Iași, România, 2017.
- M. Neagu**, "Concepts, Methods and Applications in Concurrent Engineering" (in Romanian language), Tehnopress, Iași, România, 2016.
- M. Neagu**, "Concurrent Engineering" (in Romanian language), Tehnopress, Iași, România, 2012
- M. Neagu**, "Numerical Modeling in Heat Transfer Processes", 2006, Pim Press, Iasi, Romania, ISBN 973-716-348-6, (English language).
- M. Neagu**, "Modelarea numerica a fenomenelor termice" ("Numerical Modeling in Heat Transfer Processes", in Romanian language), 2005, TehnoPress, Iasi, Romania, ISBN 973-702-278-5.
- M. Neagu**, "Heat Transfer Phenomena in Materials Processing" (in Romanian Language), 2002, Tehnica-Info Press, Chisinau, Moldavia, ISBN 9975-63-134-7.
- N. Oancea, **M. Neagu**, S. Totolici, C. Fetecau, "Cutting Processes. Laboratory Experiments" (in Romanian language), 2002, Tehnica-Info Press, Chisinau, Moldavia, ISBN 9975-63-135-5.
- N. Oancea, **M. Neagu** and C. Arbureanu, "Numerical Methods for Tools Profiling" (in Romanian language), 1992, Galati University Press, Romania.

Research contract

Research contract director, contract 470/2006, "A Study of Hydrodynamic Lubrication Between the Cylinder and the Piston Ring at Linear Hydraulic Engines", Beneficiary: MEHID S.A., Galati, Romania.

Date

12.03.2024