Nikolaos Tapoglou, PhD

Assistant Professor

ntapoglou@meng.auth.gr meng.auth.gr
Faculty of Mechanical Engineering, Aristotle University of Thessaloniki (+30) 2310-996008

Dr Nikolaos Tapoglou is an Assistant Professor in the School of Mechanical Engineering of the Aristotle University of Thessaloniki. He received his Diploma, and M.Sc. with a specialisation in manufacturing processes and a PhD with a specialisation in gear manufacturing processes from the School of Production Engineering and Management of the Technical University of Crete.

Before joining the Aristotle University of Thessaloniki, he served as a tenured Assistant Professor in the International Hellenic University (2021-2025). Prior to his appointment in IHU, he led the Emerging machining technology team in the Advanced Manufacturing Research Centre (AMRC) of The University of Sheffield as a Technical Fellow (2016-2021). Between 2013 and 2016 he worked as a Post-Doctoral Research Fellow at Cranfield University.

His research focuses on gear manufacturing processes, CAD/CAM/CAE systems, additive manufacturing, Cloud and IoT technologies, sustainable manufacturing technologies (Cryogenic and MQL machining), emerging machining technologies. He has led several projects focused on supporting manufacturing SMEs in implementing emerging technologies. He has co-authored over 45 journal and conference publications and has worked on more than 40 research projects. He is currently the PI of 1 EU-funded project.

Experience

Assistant Professor, Faculty of Mechanical Engineering, Aristotle University of Thessaloniki, Thessaloniki, Greece — 9/2025–Today

Research on gears and machine elements. Member of the Machine element and engineering design laboratory. Development of research collaborations with SME's and other institutions. Lecturing on engineering and manufacturing science subjects (see Teaching below).

Assistant Professor (tenured), Department of Industrial Engineering and Management, International Hellenic University, Thessaloniki, Greece — 2021–2025

Research on manufacturing science, emerging machining technologies and cloud manufacturing. Development of research collaborations with SME's and other institutions. Lecturing on engineering and manufacturing science subjects (see Teaching below). Supervision of students in the context of Diploma and Master thesis (see Supervision below). PI of the EU funded research project SCORE.

Technical Fellow, in Emerging Machining Technologies, Advanced Manufacturing Research Center (AMRC with Boeing), The University of Sheffield, UK. — 2019–2021

Research in publicly, industrially and Board funded projects in emerging machining technologies such as cryogenic, ultrasonic and hybrid machining. Leading the work in the machining of Ceramic Matrix Composites. Responsible for the technical leadership of projects with a total financial value in excess of £1M per annum (see Projects below). Coordinating the collaboration with SMEs, OEMs and RTOs. Line management of a team of 6 research engineers. Coaching of junior engineers. Supervision of students in the context of PhD thesis (see Supervision below).

Technical Lead, in Emerging Machining Technologies, Advanced Manufacturing Research Center (AMRC with Boeing), The University of Sheffield, UK. — 2016–2019

Research in publicly, industrially and Board funded projects in emerging machining technologies such as cryogenic, ultrasonic and hybrid machining (see Projects below). Coordinating the collaboration with research institutions. Line management of a team of 3 research engineers. Coaching of junior engineers.

Research Fellow, Through-Life Data Analysis and Visualisation, School of Aerospace, Transport and Manufacturing, Cranfield University, UK. — 2015–2016

Project manager and workpackage leader on EU and Industrially funded projects "LegInt" – Advancing Legacy Machine Tools into the Digital Manufacturing Century with University of Patras (Greece) and Formtec GmbH (Germany) and "Mind Palace" – Visualization and Data Analytics for Through-life Engineering with Rolls-Royce.

Research Fellow, Implementation of Sustainable Manufacturing, School of Aerospace, Transport and Manufacturing, Cranfield University, UK. — 2013–2015

Project manager and work package leader the FP7 EU project CAPP-4-SMEs "Collaborative and Adaptive Process Planning for Sustainable Manufacturing Environments" with KTH University (Stockholm, Sweden, lead), Coventry University (UK), University of Patras (Greece), and 7 industry partners (6 SMEs and 1 OEM) (£5M)

Research Associate and **Teaching Assistant,** Dep. Production Engineering and Management, Technical University of Crete, Greece. — 2009–2012

Research on publicly funded projects. Managing daily operation of the Micromachining and Manufacturing Modeling laboratory, Lecturing on engineering and manufacturing science subjects.

Education

Doctor of Philosophy (Ph.D.), Dep. of Production Engineering and Management, Technical University of Crete, Greece 2012
Subject of the dissertation: Gear hobbing simulation and investigation of the technological parameters involved

Master of Science (M.Sc.), Dep. of Production Engineering and Management, Technical University of Crete, Greece 2008
Subject of the dissertation: CAD-based simulation of Face Milling

Diploma in Engineering (Dipl. Eng), Dep. of Production Engineering and Management, Technical University of Crete, Greece 2006
General curriculum in mechanical engineering. 5-year curriculum with an integrated master. Subject of the dissertation: Design and execution of machining processes, in three-axis milling machines, using Pro/Engineer

Teaching

Assistant Professor, Aristotle University of Thessaloniki (Autonomous teaching) 2025-Today
Undergraduate curriculum (2025-2026)
Machine Elements I (5th Semester, Compulsory course)
Machine Elements II (6st Semester, Compulsory course)
Engineering design and product development (7th Semester, Elective course)

Visiting Professor, Aristotle University of Thessaloniki (Autonomous teaching) 2024-2025
Undergraduate curriculum (2024)
Machine Elements II (6st Semester, Compulsory course)

Assistant Professor, International Hellenic University (Autonomous teaching) 2021-2025
Undergraduate curriculum (2021-2025)
Engineering Drawing (1st Semester, Compulsory course),
CAD, CAM, CAE (6th Semester, Compulsory course)
Health and Safety (3rd Semester, Elective course, Academic year 2023-24),
Hydraulic and Pneumatic systems (5th Semester, Elective course),
Aerodynamics (5th Semester, Elective course, Academic year 2023-24),
MSc program: Applied automation systems (2021-today)
Applied Manufacturing systems
Reverse Engineering (2021-2022)
MSc program: Robotics, STEAM and New Technologies in Education (2021-2022)
3D Scanning, 3D printing

Lecturer, School of Aerospace, Transport and Manufacturing Cranfield University, UK. 2016–2017
M.Sc. Course: Servitization and Service Operations Short Course ¦¦ *Module*: Internet of Things
M.Sc. Course: Ultra-Precision Machining Technologies Short Course ¦¦ *Module*: Metal Cutting Principles

Lecturer, School of Aerospace, Transport and Manufacturing Cranfield University, UK. 2015–2017
M.Sc. Course: Operations Excellence (Industry M.Sc.) ¦¦ *Module*: Introduction to Manufacturing Processes

Lecturer, School of Aerospace, Transport and Manufacturing Cranfield University, UK. 2014–2017
M.Sc. Course: Knowledge Management for Innovation ¦¦ *Module*: Cloud Manufacturing
M.Sc. Course: Through-life System Sustainment (Industry M.Sc.) ¦¦ *Module*: Cloud Manufacturing

Lecturer, School of Aerospace, Transport and Manufacturing Cranfield University, UK. 2013–2017
M.Sc. Course: Machining, Molding and Metrology ¦¦ *Module*: Computer Numerical Control and Computer Aided Design

Teaching Assistant, Technical University of Crete, Chania, Greece 2007–2010
Undergraduate curriculum
Course: Metrology (Spring 2010, Spring 2009)
Course: Machine Elements (Fall 2010)
Course: Production Networks (Spring 2009)
Course: Product Design and Development (Fall 2008, 2007)
Course: Computer-Aided Design (Spring 2008)

Supervision

Active students

PhD Candidates (PhD): 1
Undergraduate thesis: 4

Completed thesis

Engineering Doctorate researchers (EngD): 3

PhD viva examiner: 3

MSc by Research Students (MRes): 2

MSc Students (MSc): 8
Undergraduate thesis

Supervision of 17 undergraduate thesis projects at the International Hellenic University.	2022–2025
In excess of 30 student final year thesis projects co-supervised at the Technical University of Crete (Greece)	2007–2012

Membership of Organizations

Reviewer in the State Scholarships Foundation (IKY).	2025-Today
Reviewer in the Hellenic foundation for Research and Innovation (HFRI).	2022- Today
Assessor in the Hellenic National Academic Recognition and Information Centre (DOATAP).	2022– Today
Chartered Engineer and Member of the Institution of Mechanical Engineers (IMechE).	2016–2022
Member of the UKRI Talent Peer Review College	2022- Today
Member of the Future Leaders Fellowship Peer Review College	2019-2022
Research Affiliate of the International Academy of Production Engineers (CIRP).	2015–2021
Member of the American Society of Mechanical Engineers (ASME).	2015– Today
Associate Fellow of the Higher Education Academy (HEA).	2015– Today
Charted Engineer and Member of the Technical Chamber of Greece.	2007– Today

International recognition

Editorial positions

Editorial Board Member in the Scientific Reports journal (Springer Nature).
Topic Editor in the Metals journal (MDPI).
Topic Editor in the Micromachines journal (MDPI).
Review Editor in the Frontiers in Manufacturing Technology - Precision Engineering.
Guest Editor of Special Issue “Emerging Micro Manufacturing Technologies and Applications III” in the Micromachines (MDPI).
Guest Editor of Special Issue “Emerging Micro Manufacturing Technologies and Applications II” in the Micromachines (MDPI).
Guest Editor of Special Issue “Emerging Micro Manufacturing Technologies and Applications” in the Micromachines (MDPI).
Guest Editor of Special Issue “Human-Centred Smart Manufacturing - Industry 5.0” in the Sensors journal (MDPI).

Reviewer in International Journals

Applied Soft Computing (Elsevier) Journal of Manufacturing Systems (Elsevier), Journal of Cleaner Production (Elsevier), Journal of Manufacturing Science and Engineering (ASME), CIRP Journal of Manufacturing Science and Technology (Elsevier), Procedia CIRP (Elsevier), Journal of the Mechanical Behavior of Biomedical Materials (Elsevier), Metals (MDPI), Energies (MDPI), Sustainability (MDPI), Applied Sciences (MDPI), Mathematics (MDPI), Micromachines (MDPI), Materials (MDPI), Crystals (MDPI), ASTM Smart and Sustainable Manufacturing Systems, IEEE Open Journal of Systems Engineering, IEEE Access, Journal of Computational Design and Engineering, Multiscale and Multidisciplinary Modeling, Experiments and Design (Springer), Simulation Modelling Practice and Theory (Elsevier), Proceedings of the IMechE, Part B: Journal of Engineering Manufacture, Technologies (MDPI), Manufacturing Letters (Elsevier), Journal of Manufacturing and Materials Processing (MDPI).

Languages

Mother tongue: Greek

Other languages	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Interaction	Production	
English	C2	C2	C2	C2	C2
Italian	B2	B2	B2	B2	B2

National and International industrial/research collaborations

Rolls-Royce (UK), DMG / Mori Seki (UK, USA, Germany, Japan), eQ Technologic (UK, USA, India), Formtec (Germany), InConTec (Germany), PowerKut Ltd (UK), Prodintec (Spain), Sandvik (Sweden, UK), Coventry University (UK), University of Patras (Greece), KTH Stockholm (Sweden), Technical University of Crete (Greece), University of West Macedonia (Greece), Cranfield University (UK), University of Strathclyde (UK), Collins Aerospace (UK), Craftsman Tools (UK), Seco tools (UK, Sweden), National Composite Centre (UK), The Manufacturing Technology Centre (UK), XpertRule (UK), Christos Kosmas LTD (Greece), Advanced Manufacturing Limited (UK), Aristotle University of Thessaloniki (Greece), University of Tours (France), Advanced Assisted Manufacturing Solutions (France).

Committees

Programme committee	
4th International Through-life Engineering Services Conference.	2015
5th International Through-life Engineering Services Conference.	2016
Organizing committee	
SDM'2016 International Conference on Sustainable Design and Manufacturing.	2016
17th CIRP Conference on Modeling of Machining Operations.	2019
CIRP General Assembly 2019	2019
9th CIRP Conference on High Performance Cutting.	2020
CIRP General Assembly 2024	2024
Scientific committee	
13th International Conference on High-Speed Machining (HSM Conference).	2016
8th CIRP Global Web Conference.	2020
9th CIRP Global Web Conference.	2021
International Conference on Management of Educational Units (ICOMEU)	2022
9th International Conference of the Hellenic Metallurgical Society	2025
3rd International Electronic Conference on Machines and Applications	2025

Invited Lectures

[1] Quality Challenges in Post-processing
6th ASTM AM CoE Snapshot Workshop, ASTM International Additive Manufacturing Center of Excellence, Online, 10 Sep 2021

[2] Machining of advanced engineering materials using CO2-based lubri-cooling techniques
Cryogenic machining seminar 2021, Nuclear Advanced Manufacturing Research Centre, The University of Sheffield, Online, 10 May 2021

[3] Interrupted hybrid additive and subtractive machining
CIRP UK Meeting, Online, 30 Apr 2021

[4] Development of hybrid additive and subtractive machining
3rd DMG Mori Lasertec hybrid User Event, Online, 3 Dec 2020

[5] Machining materials for the medical industry using CO2 assisted machining
Cryogenic machining seminar 2020, Nuclear Advanced Manufacturing Research Centre, The University of Sheffield, Sheffield, UK, Jan 2020

[6] Interupted Hybrid manufacturing for the aerospace industry
2nd DMG Mori Lasertec hybrid User Event, Frankfurt, Germany, 18 Nov 2019

[7] Milling of aerospace grade titanium using scCO2 assisted cooling
Cryogenic machining seminar 2019, Nuclear Advanced Manufacturing Research Centre, The University of Sheffield, Sheffield, UK, Jan 2019

[8] Interupted Hybrid manufacturing using Direct Energy Deposition
1st DMG Mori Lasertec hybrid User Event, Frankfurt, Germany, 12 Nov 2018

[9] Hybrid Manufacturing
CGTech Vericut User Exchange, NICe - Nikken Innovation Centre Europe, Sheffield, UK, 4 Oct 2018

[10] Milling titanium alloy with CO2 based lubricant
Cryogenic machining seminar 2018, Nuclear Advanced Manufacturing Research Centre, The University of Sheffield, Sheffield, UK, 15 Jan 2018

[11] CO2 cryogenic machining of titanium alloy
Cryogenic machining seminar 2016, Nuclear Advanced Manufacturing Research Centre, The University of Sheffield, Sheffield, UK, 1 Dec 2016

[12] Remote Monitoring of Machine Tools

Through-Life Engineering Services Summer School 2016, Cranfield University, Cranfield, UK, 6-10 Jun 2016

[13] Gear Hobbing Simulation
CIRP Research Affiliate Workshop 2015, Advanced Manufacturing Research Centre, Sheffield, UK, 6-7 Jul 2015

[14] The Principles of Sustainable Manufacturing
Tools and Methods in Competitive Engineering (TMCE 2014), Budapest, Hungary, 19-23 May 2014

Publications

Thesis

[M.1] **Tapoglou, N.**, (2012). Προσομοίωση της κατεργασίας οδοντώσεων με φραιζάρισμα με κύλιση και διερεύνηση των τεχνολογικών της παραμέτρων, Διδακτορική Διατριβή, Σχολή Μηχανικών Παραγωγής και Διοίκησης, Πολυτεχνείο Κρήτης.

[M.2] **Tapoglou, N.**, (2008). Μοντελοποίηση μετωπικού φραιζαρίσματος με τη βοήθεια συστήματος CAD, Μεταπτυχιακή Εργασία, Σχολή Μηχανικών Παραγωγής και Διοίκησης, Πολυτεχνείο Κρήτης.

[M.3] **Tapoglou, N.**, (2006). Σχεδιασμός και εκτέλεση κατεργασιών για φρέζες τριών αξόνων με το PRO/ENGINEER, Διπλωματική Εργασία, Σχολή Μηχανικών Παραγωγής και Διοίκησης, Πολυτεχνείο Κρήτης.

Books and edited proceedings

[B.1] **Tapoglou, N.**, (Eds.), (2025). Emerging Micro Manufacturing Technologies and Applications 2nd Edition, Micromachines, MDPI, ISBN: 978-3-7258-5187-4

[B.2] **Tapoglou, N.**, (Eds.), (2023). Emerging Micro Manufacturing Technologies and Applications, Micromachines, MDPI, ISBN: 978-3-0365-8213-9

[B.3] Roy, R., Tomiyama, T., Tiwari, A., Tracht, K., Shehab, E., Mehnen, J., Erkoyuncu, J. A., **Tapoglou, N.**, (Eds.), (2017). Proceedings of the 5th International Conference in Through-life Engineering Services Cranfield University, 1st and 2nd November 2016, CIRP Procedia vol. 59, Elsevier, ISBN: 978-1-5108-3732-4

[B.4] Roy, R., Tiwari, A., Tracht, K., Shehab, E., Mehnen, J., Erkoyuncu, J. A., **Tapoglou, N.**, Tomiyama, T. (Eds.), (2015). Proceedings of the 4th International Conference on Through-life Engineering Services, CIRP Procedia vol. 38, Elsevier, ISBN: 978-1-5108-1522-3

Journal Articles

[A.1] Efstathiou, C., Tsormpatzoglou, I., **Tapoglou, N.**, (2023). Parametric Modeling of Curvic Couplings and Analysis of the Effect of Coupling Geometry on Contact Stresses in High-Speed Rotation Applications, Machines, 11 (8), DOI: 10.3390/machines11080822, (IF:2.600)

[A.2] Proud, L., **Tapoglou N.**, Wika, K. K., Taylor, C. M., Slatter, T., (2023). Role of CO2 cooling strategies in managing tool wear during the shoulder milling of grade 2 commercially pure titanium, Wear, p. 204798, DOI: 10.1016/j.wear.2023.204798, (IF:5.3)

[A.3] Tzotzis, A., Tsagaris, A., **Tapoglou, N.**, Kyratsis, P., (2023). High-precision CAD-based simulation for turning considering tool microgeometry, International Journal of Mechatronics and Manufacturing Systems, 16 (1), pp. 83–95, DOI: 10.1504/IJMMS.2023.132023, (IF:1.000)

[A.4] Efstathiou, C., **Tapoglou, N.**, (2022). Simulation of spiral bevel gear manufacturing by face hobbing and prediction of the cutting forces using a novel CAD-based model, The International Journal of Advanced Manufacturing Technology, 122, pp. 3789–3813, DOI: 10.1007/s00170-022-10065-x, (IF:3.471)

[A.5] Proud, L., **Tapoglou, N.**, Slatter, T., (2022). A Review of CO2 Coolants for Sustainable Machining, Metals, 12 (2), DOI: 10.3390/met12020283, (IF:2.351)

[A.6] **Tapoglou, N.**, Clulow, J., Patterson, A., Curtis, D., (2022). Characterisation of mechanical properties of 15-5PH stainless steel manufactured through direct energy deposition, CIRP Journal of Manufacturing Science and Technology, 38, pp. 172–185, DOI: 10.1016/j.cirpj.2022.04.004, (IF:3.602)

[A.7] **Tapoglou, N.**, Clulow, J., Curtis, D., (2022). Increased shielding of a Direct Energy Deposition process to enable Deposition of reactive materials; an investigation into Deposition of 15-5 PH Stainless Steel, Inconel 718 and Ti-6Al-4V, CIRP Journal of Manufacturing Science and Technology, 36, pp. 227–235, DOI: 10.1016/j.cirpj.2020.11.013, (IF:3.602)

[A.8] Tzotzis, A., **Tapoglou, N.**, Verma, R. K., Kyratsis, P., (2022). 3D-FEM Approach of AISI-52100 Hard Turning: Modelling of Cutting Forces and Cutting Condition Optimization, Machines, 10 (2), DOI: 10.3390 /machines10020074, (IF:2.428)

[A.9] Childerhouse, T., Hernández-Nava, E., **Tapoglou, N.**, M'Saoubi, R., Franca, L., Leahy, W., Jackson, M., (2021). The influence of finish machining depth and hot isostatic pressing on defect distribution and fatigue behaviour of selective electron beam melted Ti-6Al-4V, International Journal of Fatigue, 147, p. 106169, DOI: 10.1016/j.ijfatigue.2021.106169, (IF:5.186)

[A.10] Efstathiou, C., **Tapoglou, N.**, (2021). A novel CAD-based simulation model for manufacturing of spiral bevel gears by face milling, CIRP Journal of Manufacturing Science and Technology, 33, pp. 277–292, DOI: 10.1016/j.cirpj.2021.04.004, (IF:3.602)

[A.11] Kyratsis, P., Tzotzis, A., Markopoulos, A., **Tapoglou, N.**, (2021). CAD-Based 3D-FE Modelling of AISI-D3 Turning with Ceramic Tooling, Machines, 9 (1), DOI: 10.3390/machines9010004, (IF:2.428)

[A.12] **Tapoglou, N.**, (2021). Development of Cutting Force Model and Process Maps for Power Skiving Using CAD-Based Modelling, Machines, 9 (5), DOI: 10.3390/machines9050095, (IF:2.428)

[A.13] **Tapoglou, N.**, Clulow, J., (2021). Investigation of hybrid manufacturing of stainless steel 316L components using direct energy deposition, Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 235 (10), pp. 1633–1643, DOI: 10.1177/0954405420949360, (IF:2.610)

[A.14] Mourtzis, D., Vlachou, E., Milas, N., **Tapoglou, N.**, Mehnen, J., (2019). A cloud-based, knowledge-enriched framework for increasing machining efficiency based on machine tool monitoring, Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 233 (1), pp. 278–292, DOI:10.1177/0954405417716727, (IF:2.610)

[A.15] **Tapoglou, N.**, (2019). Calculation of non-deformed chip and gear geometry in power skiving using a CAD based simulation, The International Journal of Advanced Manufacturing Technology, 100 (5-8), pp. 1779–1785, DOI: 10.1007/s00170-018-2790-3, (IF:3.226)

[A.16] **Tapoglou, N.**, Mehnen, J., Vlachou, A., Doukas, M., Milas, N., Mourtzis, D., (2015). Cloud-Based Platform for Optimal Machining Parameter Selection Based on Function Blocks and Real-Time Monitoring, Journal of Manufacturing Science and Engineering, 137 (4), DOI: 10.1115/1.4029806, (IF:3.033)

[A.17] **Tapoglou, N.**, Mammas, A., Antoniadis, A., (2013). Influence of machining data on developed cutting forces in gear hobbing, International Journal of Machining and Machinability of Materials, 14 (1), p. 66, DOI: 10.1504/IJMMM.2013.055121, (SJR:0.467)

[A.18] **Tapoglou, N.**, Antoniadis, A., (2012). 3-Dimensional kinematics simulation of face milling, Measurement, 45 (6), pp. 1396–1405, DOI: 10.1016/j.measurement.2012.03.026, (IF:3.927)

[A.19] **Tapoglou, N.**, Aristomenis, A., (2012). CAD-Based Calculation of Cutting Force Components in Gear Hobbing, Journal of Manufacturing Science and Engineering, 134 (3), DOI: 10.1115/1.4006553, (IF:3.033)

[A.20] Kyratsis, P., **Tapoglou, N.**, Bilalis, N., Antoniadis, A., (2011). Thrust force prediction of twist drill tools using a 3D CAD system application programming interface, International Journal of Machining and Machinability of Materials, 10 (1/2), p. 18, DOI: 10.1504/IJMMM.2011.040852, (SJR:0.467)

Book chapters

[K.1] **Tapoglou, N.**, Tzotzis, A., (2025). A CAD Framework for 3D Design and Optimization of Solid End Mill Geometry, Digital Product Design and Manufacturing, pp. 161–166, CRC press, DOI: 10.1201/9781003518198-9

[K.2] **Tapoglou, N.**, Efstathiou, C., Tzotzis, A., Kyratsis, P., (2023). Study of the Topography of Face Milled Surfaces Using CAD-Based Simulation, Computational Design and Digital Manufacturing, pp. 159–166, Springer Nature Singapore, DOI: 10.1007/978-3-031-21167-6_8

[K.3] **Tapoglou, N.**, Tzotzis, A., Kyratsis, P., Efstathiou, C., (2023). Evaluation of Gear Flanks Using Gear Topography Data, Computer-Aided Design: Advances in Research and Applications, pp. 161–166, Nova Science Publishers, DOI: 10.52305/IMIY7382

[K.4] **Tapoglou, N.**, Kyratsis, P., (2022). Investigation of Gear Profile Deviations in Gear Planning Process Through CAD-Based Simulation, Recent Advances in Manufacturing Modelling and Optimization, pp. 89–94, Springer Nature Singapore, DOI: 10.1007/978-981-16-9952-8_9

[K.5] **Tapoglou, N.**, Mehnen, J., Butans, J., (2021). Energy Efficient Machining Through Evolutionary Real-Time Optimization of Cutting Conditions on CNC-Milling Controllers, Experiments and Simulations in Advanced Manufacturing, pp. 1–18, Springer International Publishing, DOI: 10.1007/978-3-030-69472-2_1

[K.6] Mehnen, J., He, H., Tedeschi, S., **Tapoglou, N.**, (2017). Practical Security Aspects of the Internet of Things, Cybersecurity for Industry 4.0: Analysis for Design and Manufacturing, pp. 225–242, Springer International Publishing, DOI: 10.1007/978-3-319-50660-9_9

Conference Proceedings

[Π.1] **Tapoglou, N.**, (2021). Investigation of Gear Surface Topography and Deviations in Gear Power Skiving Through Advanced CAD Modeling Based Simulation, American Gear Manufacturer's Association Fall Technical Meeting, AGMA.

[Π.2] **Tapoglou, N.**, Taylor, C., Makris, C., (2021). Milling of aerospace alloys using supercritical CO2 assisted machining, 9th CIRP Conference on High Performance Cutting, Procedia CIRP, vol. 101, pp. 370–373, DOI: 10.1016/j.procir.2020.06.008

[Π.3] Childerhouse, T., Hernandez-Nava, E., M'Saoubi, R., **Tapoglou, N.**, Jackson, M., (2020). Surface and subsurface integrity of Ti-6Al-4V components produced by selective electron beam melting with post-build finish machining, 5th CIRP Conference on Surface Integrity (CSI 2020), Procedia CIRP, vol. 87, pp. 309–314, DOI: 10.1016/j.procir.2020.02.018

[Π.4] **Tapoglou, N.**, Makris, C., (2020). CO2-assisted machining of biocompatible polymer materials, 30th International Conference on Flexible Automation and Intelligent Manufacturing (FAIM2021), Procedia Manufacturing, vol. 51, pp. 801–805, DOI: 10.1016/j.promfg.2020.10.112

[Π.5] **Tapoglou, N.**, Taylor, C., (2019). Ultrasonic Vibration Assisted Milling of Aerospace Materials, ASME International Mechanical Engineering Congress and Exposition IMECHE2019, DOI: 10.1115/IMECE2019-11780

[Π.6] Busachi, A., Erkoyuncu, J., Colegrove, P., Drake, R., Watts, C., Martina, F., **Tapoglou, N.**, Lockett, H., (2018). A System Approach for Modelling Additive Manufacturing in Defence Acquisition Programs, 11th CIRP Conference on Intelligent Computation in Manufacturing Engineering, 19-21 July 2017, Gulf of Naples, Italy, Procedia CIRP, vol. 67, pp. 209–214, DOI: 10.1016/j.procir.2017.12.201

[Π.7] **Tapoglou, N.**, Lopez, M. I. A., Cook, I., Taylor, C. M., (2017). Investigation of the Influence of CO2 Cryogenic Coolant Application on Tool Wear, Manufacturing Systems 4.0 – Proceedings of the 50th CIRP Conference on Manufacturing Systems, Procedia CIRP, vol. 63, pp. 745–749, , DOI: 10.1016/j.procir.2017.03.351

[Π.8] Tedeschi, S., Mehnen, J., **Tapoglou, N.**, Roy, R., (2017). Secure IoT Devices for the Maintenance of Machine Tools, Proceedings of the 5th International Conference in Through-life Engineering Services Cranfield University, 1st and 2nd November 2016, Procedia CIRP, vol. 59, pp. 150–155, DOI: 10.1016/j.procir.2016.10.002

[Π.9] **Tapoglou, N.**, Mehnen, J., (2016). Cloud-based Job Dispatching Using Multi-criteria Decision Making, Research and Innovation in Manufacturing: Key Enabling Technologies for the Factories of the Future – Proceedings of the 48th CIRP Conference on Manufacturing Systems, Procedia CIRP, vol. 41, pp. 661–666, DOI: 10.1016/j.procir.2015.12.081

[Π.10] **Tapoglou, N.**, Mehnen, J., Butans, J., Morar, N. I., (2016). Online on-board Optimization of Cutting Parameter for Energy Efficient CNC Milling, 13th Global Conference on Sustainable Manufacturing – Decoupling Growth from Resource Use, Procedia CIRP, vol. 40, pp. 384–389, , DOI: 10.1016/j.procir.2016.01.072

[Π.11] **Tapoglou, N.**, Mehnen, J., (2015). A Framework for Cloud Manufacturing Enabled Optimisation for Machining, APMS 2015 International conference Advances in production management systems, pp. 363–370, Springer International Publishing, ISBN: 978-3-319-22759-7

[Π.12] Tedeschi, S., Mehnen, J., **Tapoglou, N.**, Rajkumar, R., (2015). Security Aspects in Cloud Based Condition Monitoring of Machine Tools, Proceedings of the 4th International Conference on Through-life Engineering Services, Procedia CIRP, vol. 38, pp. 47–52, DOI: 10.1016/j.procir.2015.07.046

[Π.13] **Tapoglou, N.**, Mehnen, J., Doukas, M., Mourtzis, D., (2014). Optimal Machining Parameter Selection Based on Real-Time Machine Monitoring Using IEC 61499 Function Blocks for Use in a Cloud Manufacturing Environment: A Case Study for Face Milling, V001T04A015, vol. ASME 2014 International Manufacturing Science and Engineering Conference collocated with the JSME 2014 International Conference on Materials and Processing and the 42nd North American Manufacturing Research Conference, DOI: 10.1115/MSEC2014-4022

[Π.14] **Tapoglou, N.**, Antoniadis, A., (2011). Hob3D A novel gear hobbing simulation software, 2011 International Conference of Mechanical Engineering ICME 2011, ISBN: 978-988-18210-6-5

[Π.15] **Tapoglou, N.**, Antoniadis, A., (2010). CAD-Based calculation of cutting force components in gear hobbing, Design, Technology and Management in Manufacturing D.T.M.M.-2010, pp. 21–30,

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