

CURRICULUM VITAE

Dr. Vassilis C. Moulianitis

Mechanical Engineer - Lecturer

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GENERAL INFORMATION

I was born in Arta, Greece in December 19, 1973. I am married to Mrs. Ioanna Sampsoni.

2004-05 Military Service: Reserved 2nd Lieutenant (Technical Corps) of the Hellenic Army.

Participation in the operational training GORGO 2008 (Oct 13-17 2008).

Foreign spoken language: English.

UAS Pilot License (A, B, C) valid till 28/8/2022

EDUCATION

1991-96 **Mechanical Engineering Diploma**
Department of Mechanical Engineering and Aeronautics, University of Patras.
Diploma Thesis: «**Fuzzy logic control of robot manipulators**».
Supervisor: N. A. Aspraagathos.

1996-2004 **Ph.D. Diploma**
Department of Mechanical Engineering and Aeronautics, University of Patras.
Title: “**Modeling of the conceptual design phase based in Artificial Intelligence techniques- Application to Mechatronics Design**”.
Supervisor: N. A. Aspraagathos.

CURRENT ACADEMIC OCCUPATION

Feb. 2008- Assistant Professor in the Dept. of Product and Systems Design
Today Engineering, University of the Aegean.

WORK EXPERIENCE

2017-2019	Hellenic Open University, Teaching Staff, MSc “Quality Management and Technology”
Οκτ. 2005- Feb 2018	Adjunct Lecturer in the Dept. of Product and Systems Design Engineering, University of the Aegean.
Dec. 1999 – Feb 2018	Freelance Mechanical Engineer.
Jul. 1995- Sep. 1995	Internship in the Hydroelectric Station Pournari Arta.
Aug. 1992	Data supply in the data center of the Municipality of Arta.

TEACHING EXPERIENCE IN POST-SECONDARY EDUCATION.

1997-2003	Teaching in public Institutions of Professional Training in Patra and Arta, and in Hellenic Mathematic Society (Patras branch).
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TEACHING EXPERIENCE

TEACHING

1st Sem 2019- Today	Physics for Engineers. Dept. of Product and Systems Design Engineering, University of the Aegean.
1st Sem 2018- Today	Mechatronics, Dept. of Product and Systems Design Engineering, University of the Aegean.
1st Sem 2019- Today	Design and Manufacturing Systems Dept. of Product and Systems Design Engineering, University of the Aegean
1st Sem 2019- Today	Studio 7b-Detail Product Design, Dept. of Product and Systems Design Engineering, University of the Aegean..
1st Sem 2019- Today	Vehicle Design and driver support technologies. Dept. of Product and Systems Design Engineering, University of the Aegean
2nd Sem 2018- Today	Computer Aided Design and Manufacturing of Products. Dept. of Product and Systems Design Engineering, University of the Aegean.
2nd Sem 2018- Today	Σχεδίαση και Τεχνολογίες Παραγωγής (Θ+Ε), Πανεπιστήμιο Αιγαίου, Τμήμα Μηχανικών Σχεδίασης προϊόντων και Συστημάτων.
2nd Sem 2018	Analysis and Design of Mechanisms, Dept. of Product and Systems Design Engineering, University of the Aegean.
1st Sem 2019- Today	MSc “Integrated Product Design and Innovation”: Computer aided product analysis.
2nd Sem 2018- Today	MSc “Integrated Product Design and Innovation”: Detail Design
2nd Sem 2018- Today	MSc “Integrated Product Design and Innovation”: Materials and Manufacturing Technologies
1 st Sem 2016- 18	Teaching in post-graduate (MSc) study program “Integrated Product Design and Innovation”
2nd Sem 2015- 16	Teaching in post-graduate (MSc) study program “Design of Interactive and Industrial Products and Systems”
Summer 2013, 2014	Summer School «Advanced technologies in Product Design, Engineering and Manufacturing» ACADEM 2013, 2014.

2nd Sem 2014-	Computer Aided Design and Manufacturing of Products. Dept. of
2nd Sem 2015	Product and Systems Design Engineering, University of the Aegean.
1 st Sem 2010-	Physics for Engineers. Dept. of Product and Systems Design
30 June 2012	Engineering, University of the Aegean.
1 st Sem 2009-	Robotics, Dept. of Product and Systems Design Engineering,
30 June 2012	University of the Aegean.
2nd Sem 2006-	Analysis and Design of Mechanisms, Dept. of Product and Systems
June 2016	Design Engineering, University of the Aegean.
2nd Sem 2005-	Systems Design, Dept. of Product and Systems Design Engineering,
June 2014	University of the Aegean.
2nd Sem 2014-	Design and Manufacturing Systems Dept. of Product and Systems
2nd Sem 2015	Design Engineering, University of the Aegean
2nd Sem 2005-	Vehicle Design, Dept. of Product and Systems Design Engineering,
2006	University of the Aegean.
2nd Sem 2010-	
June 2012	
1 st Sem 2012-	
June 2017	
1 st Sem 2005-	Production Design, Dept. of Product and Systems Design
1 st Sem 2008	Engineering, University of the Aegean.
1 st Sem 2013-	
June 2014	
1 st Sem 2005-	Mechatronics, Dept. of Product and Systems Design Engineering,
June 2017	University of the Aegean.
1 st Sem 2002-	Expert Systems, Dept of Communications, Informatics &
1 st Sem 2003	Management (Formerly known as Dept. Of Teleinformation and
	Management) TEI of Epirus
1 st Sem 1998	Laboratory Exercises in AutoCAD, Mechanical Engineering and
	Aeronautics Dept. University of Patras.
1 st Sem 1999-	Laboratory Exercises in Industrial Automation. Mechanical
1 st Sem 2002.	Engineering and Aeronautics Dept. University of Patras.
and	
1 st Sem 2005-	
1 st Sem 2010	
2nd Sem.	Laboratory Exercises in Robotics. Mechanical Engineering and
1997-2nd Sem	Aeronautics Dept. University of Patras.
2002.	
2nd Sem 1995-	Laboratory Exercises in Electrical Machines. Mechanical
2nd Sem 2002	Engineering and Aeronautics Dept. University of Patras.

THESIS SUPERVISING

Dept. of Product and
Systems Design

Undergraduate:
Supervisor in 18 Diploma Theses

Engineering, University of the Aegean. (2018-2020)	Member of the examination committee in 38 Diploma Theses. Postgraduate Supervisor in 6 Diploma Theses Member of the examination committee in 10 Diploma Theses.
Hellenic Open University 2017-2019	Postgraduate Supervisor in 5 Diploma Theses Member of the examination committee in 5 Diploma Theses.
Dept. of Product and Systems Design Engineering, University of the Aegean. (2005-2016)	<u>Completed</u> Supervisor in 18 Diploma Theses (2005-2011). Assistant Supervisor in 5 Diploma Theses (2011 -2016) Member of the supervising committee of 2 MSc Diploma Theses. Member of the examination committee in 54 Diploma Theses. Member of the examination committee in 1 MSc Diploma Thesis. <u>Running</u> Assistant Supervisor in 4 Diploma Theses. Assistant Supervisor in 1 MSc Diploma Thesis
Mechanical Engineering and Aeronautics Dept. University of Patras (2005-2016)	<u>Completed</u> Assistant Supervisor in 13 Fourth year and Diploma Theses. <u>Running</u> Assistant Supervisor in 13 Fourth year and Diploma Theses.
Mathematics Dept, University of Patras (2014-2016)	<u>Completed</u> Member of the supervising committee of 1 MSc Diploma Thesis. Member of the examination committee of 1 MSc Diploma Thesis.

PHD SUPERVISION

Dept. of Product and Systems Design Engineering, University of the Aegean. (2018-Today)	Supervisor of 4 PhD Candidates Member of supervising committee of 5 PhD Candidates
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ADMINISTRATIVE WORK

2020-21	Member of 4 Committees (Dept Assembly Decisions 3 ^{ns} /11.11.2020)
2018-20	Member of 3 Committees (Dept Assembly Decisions: 3 ^{ns} /24.10.2018, 17 ^{ns} /21.06.2018, 1 ^{ns} /26.09.2019, 2 ^{ns} /06.11.2019)

RESEARCH ACTIVITY

RESEARCH INTERESTS

My research interests are focused in the field of Mechatronics design with applications in robotics, and in control systems with soft computing techniques. More specific:

- Design of Mechatronic products and systems, with focus in the conceptual mechatronics design modeling.
- Robot controller design and mechatronic system design for lower limb correction systems.
- Mechatronic design of medical systems
- Design of robotic workcell and metamorphic manipulators
- Mechatronics design of grippers
- Metamorphic robots
- Kinematics of robot manipulators.
- Human-Robot Interaction

In the above problems, knowledge-Based System, multiobjective optimization using soft computing techniques such as Fuzzy Logic, Neural networks, Genetic Algorithms and heuristic search methods are used.

RESEARCH PAPERS

- 27 papers in international journals. (3 submitted for publication).
- 3 editions of a special issue in Mechatronics, JoMaC and Robotica. Editorial in proceedings of RAAD 2018 Conference (2 Special Issue in preparation).
- 19 chapter books (1 submitted for publication).
- 44 papers in international and national conferences. (1 accepted for presentation)

CITATIONS-AWARDS (FEBRUARY 2021)

	Google Scholar (Total)	Scopus (Citations excluding self-citations)	Web of Science (Citations excluding self- citations)
ID	scholar.google.gr/citations?user=4wywV-8AAAAJ&hl=en	6506258012	AAI-9286-2020
Citations	474	211	130
H-Index	11	8	7

The paper «**Suboptimal Anatomy of Metamorphic Manipulators Based on the High Rotational Dexterity**» achieved the «**Best Paper Award on Application of Metamorphic Mechanisms**» in the 3rd IEEE/IFToMM International Conference on Reconfigurable Mechanisms and Robots 2015 (ReMAR2015).

The paper «**Cuspidality Investigation of a Metamorphic Serial Manipulator**» selected as a finalist in the «**Robotics and Mechatronics**» category in the 15th IFToMM World Congress on Mechanism and Machine Science (2019).

REVIEWER IN INTERNATIONAL JOURNALS AND CONFERENCES

- Journals: Mechatronics, ASME Journal of Mechanical Design, Journal of Systems and Control Engineering, Journal of Engineering Design, IPSI BgD Transactions on Internet Research, Information Sciences, Information

Sciences, WSEAS Information sciences and applications, Journal of Mechanical Engineering Science, JJMIE, IJAAC, IJHIS, Journal of Robotics, The Open Automation and Control Systems Journal, Scientia Iranica, IEEE Transactions on Neural Networks and Learning Systems, Journal of Robotics, Mechanism and Machine Theory, Paladyn Journal of Behavioral Robotics, JoMAC, Cogent Engineering, Journal of Computational Methods in Sciences and Engineering, International Journal of Robotic Engineering, Robotica, ASME Journal of Mechanisms and Robotics, MDPI (Multimodal Technologies and Interaction, Mathematics, Sustainability, Actuators, Applied Sciences, Robotics, Sensors, Electronics) , Manufacturing Review.

- Conferences: European Control Conference '07, 1st and 2nd Hellenic Robotics Conference, CGI 2013, MED 2013, GDSPM2015, ICINCO '15 and '16, ICTAI 15, World Congress '15, ISRM '15, ReMAR 2015, SYROCO '15, EUCOMES '16, MSM '16, RAAD '18, ReMAR '18,, MEDER '18, ICINCO '18, IFToMM World Congress '19, ICINCO '19, RAAD '20, ICINCO '20, IFIT '20, CoDIT '20, MSM '20.

EVALUATOR OF RESEARCH PROPOSALS

- Graduate Updating Knowledge Program (ΠΕΓΑ) of Ministry of Education, Lifelong Learning and Religious Affairs, Greece (2012).
- Two proposals evaluation for Croatian Science Foundation (HRZZ) (2015-2016).
- Proposal evaluation for HFRI (2020)
- Proposal evaluation for GSRK (2020)

SUMMER SCHOOL ORGANIZATION

- Member of the organizing committee of the summer school entitled “Advanced technologies in Product Design, Engineering and Manufacturing”, University of the Aegean, held in Syros 1 - 11 July, 2013.

ORGANIZING COMMITTEES

- Member of the organizing committee of the 1st Hellenic Robotics Conference.
- Member of the organizing committee of the 2nd Hellenic Robotics Conference.
- Member of the organizing committee of the summer school “Advanced technologies in Product Design, Engineering and Manufacturing”. Dept. of Product and Systems Design Engineering, University of the Aegean (2013).
- Member of the organizing committee of the invited session “MDE of mechatronic products, processes and resources for intelligent evolving CPPS” in IFAC World Congress 2017
- Member of the organizing committee of RAAD 2018 conference

CONFERENCE CHAIRS

- RAAD 2018: “SS: Applications of UAV on Aerial Inspection and Environmental Monitoring” (Co-Chair).

- World Congress 2017: «MDE of mechatronic products, processes and resources for intelligent evolving CPPS» (Co-chair).
- World Congress 2017: «Mechatronics, Robotics and Components - Robotics - Interactive 1»» (Co-chair).

PARTICIPATION IN RESEARCH PROJECTS

I am participating in the research projects and proposal preparation in International and National funded research projects since 1997. I was the major researcher in two national and two international project:

- INCO-COPERNICUS 96/4438. "HOMER-Handling of non-rigid materials with robots." 1997-2000.
- Pythagoras II. "Development of a methodology for the systematic mechatronic design. Application in an intelligent system for the design of robot grippers." 2005-2007.
- Regional Operational Programme of Western Greece. "Computation Intelligent methods development for the rehabilitation of lower limbs." 2006-2008.
- Conceptual Design of a motion capture system. July-October 2016.
- HFRI: "Design and Development of a Reconfigurable Metamorphic Manipulator System" (2018-2021). Coordinator.
- GSRK: "Development of an innovative integrated system for estimating the potential of methane biochemical production (BMP) from different biomass sources.", (2018-2021)., Vice Coordinator/Researcher
- Interreg Balkan-MED (2017-2020) "Forest Monitoring System for Early Fire Detection and Assessment in the Balkan-Med Area". Researcher.

MEMBERSHIPS

- Technical Chamber of Greece (TEE).
- Hellenic Association of Mechanical and Electrical Engineers (ΠΣΔΜ-Η).
- Member of the Technical Committee for Robotics and Mechatronics (IFTOMM).

PAPERS

INTERNATIONAL JOURNALS

- 1.1. **V.C. Moulianitis**, A. J. Dentsoras and N. A. Aspragathos (1999). A knowledge-based system for the conceptual design of grippers for handling fabrics. *Artificial Intelligence in Engineering, Design, Analysis and Manufacturing*, 13, 13-25.
- 1.2. **V.C. Moulianitis**, N. A. Aspragathos and A. J. Dentsoras . A model for concept evaluation in design- An application to mechatronics design of robot grippers. *Mechatronics* 14 (2004) 599–622.
- 1.3. P. Azariadis, **V. Moulianitis**, S. Alemany, J. C. González, P. de Jong, M. van der Zande and D. Brands. Virtual Shoe Test Bed: A Computer-Aided Engineering Tool for Supporting Shoe Design, *Computer Aided Design And Applications*, 2007, 4(6), 741-750.
- 1.4. Philip Azariadis, **Vassilis Moulianitis**, Jose Olasso, Sandra Alemany, Juan Carlos González Pamela de Jong, Par Dunias, Marc van der Zande and Dave Brands. An innovative virtual-engineering system for supporting integrated footwear design. *Int. J. Intelligent Engineering Informatics*, Vol. 1, No. 1, 2010.
- 1.5. R. F. Hamade, **V.C. Moulianitis**, D. D’Addonna, G. Beydoun. A dimensional tolerancing knowledge management system using Nested Ripple Down Rules (NRDR). *Engineering Applications of Artificial Intelligence* 23 (7), pp. 1140-1148, 2010.
- 1.6. Dimitris Oikonomou; **Vassilis Moulianitis**; Dimitris Lekkas, Panayiotis Koutsabasis. DSS for Health Emergency Response: A Contextual, User-Centred Approach. *International Journal of User-Driven Healthcare (IJUDH)*, 1, 2, pp. 39-56, 2011. Also, appeared in *Clinical Solutions and Medical Progress through User-Driven Healthcare*. IGI Global, 2013. 51-69
- 1.7. Charalampos Valsamos, **Vassilis Moulianitis**, Nikos Aspragathos. Index based optimal anatomy of a metamorphic manipulator for a given task. *Robotics and Computer-Integrated Manufacturing* 28 (4), pp. 517-529, 2012
- 1.8. Nikos Giannopoulos, **Vasilis C. Moulianitis** and Andreas C. Nearchou, Multi-objective optimization with fuzzy measures and its application to flow-shop scheduling, *Engineering Applications of Artificial Intelligence* 25(7), pp. 1381-1394, 2012.
- 1.9. Fotios Dimeas, Dhionis V Sako, **Vassilis C Moulianitis** and Nikos A Aspragathos. Design and fuzzy control of a robotic gripper for efficient strawberry harvesting. *Robotica FirstView*:1–14, May 2014.
- 1.10. C Valsamos, **V Moulianitis** and N Aspragathos. Kinematic Synthesis and Evaluation of Structure Topologies for Metamorphic Serial Manipulators. *Journal of Mechanisms and Robotics* 6(4), 2014.
- 1.11. Konstantopoulos, N., Syrimpeis, V., Moulianitis, V., Panaretou, I., Aspragathos, N., & Panagiotopoulos, E. (2014). A Smart Card Based Software System for Surgery Specialties. *International Journal of User-Driven Healthcare (IJUDH)*, 4(1), 48-63. Also appeared, in *Healthcare Ethics and Training: Concepts, Methodologies, Tools, and Applications* IGI Global , 2017, 394-409.

- 1.12. Synodinos, A. I., **Moulianitis, V. C.**, & Aspragathos, N. A. (2015). A fuzzy approximation to dexterity measures of mobile manipulators. *Advanced Robotics*, 29(12), 753-769.
- 1.13. C Valsamos, **V C Moulianitis**, A I Synodinos and N A Aspragathos (2015). Introduction of the high performance area measure for the evaluation of metamorphic manipulator anatomies. *Mechanism and Machine Theory* 86:88 - 107.
- 1.14. Moulianitis, V. C., Synodinos, A. I., Valsamos, C. D., & Aspragathos, N. A. (2016). Task-based optimal design of metamorphic service manipulators. *Journal of Mechanisms and Robotics*, 8(6).
- 1.15. V.N. Syrimpeis, **V.C. Moulianitis**, N.A. Aspragathos & E.C. Panagiotopoulos. A (2017) knowledge based system for the selection of muscles for gait phase detection using EMGs, *International Journal of Healthcare Information Systems and Informatics* 12(2), pp. 18-45.
- 1.16. **Moulianitis, V. C.**, Zachiotis, G. A., & Aspragathos, N. A. (2018). A new index based on mechatronics abilities for the conceptual design evaluation. *Mechatronics*, 49, 67-76.
- 1.17. Dimeas, F., **Moulianitis, V. C.**, & Aspragathos, N. (2018). Manipulator performance constraints in human-robot cooperation. *Robotics and computer-integrated manufacturing*, 50, 222-233.
- 1.18. C. Valsamos, A. Wolniakowski, K.Miatliuk and **V.C. Moulianitis** (2019), Optimal Placement of a Kinematic Robotic Task for the Minimization of Required joint velocities. *International Journal of Mechanics and Control*, 20, 1, 3-14.
- 1.19. Kritikou, G., Aspragathos, N., & **Moulianitis, V.** (2019). Algorithms for the Motion of Randomly Positioned Hexagonal and Square Microparts on a "Smart Platform" with Electrostatic Forces and a New Method for Their Simultaneous Centralization and Alignment. *Micromachines*, 10(12), 874.
- 1.20. Sharkawy, A. N., Papakonstantinou, C., Papakostopoulos, V., **Moulianitis, V. C.**, & Aspragathos, N. (2020). Task Location for High Performance Human-Robot Collaboration. *Journal of Intelligent & Robotic Systems*, 1-20.
- 1.21. Koukos-Papagiannis, C., **Moulianitis, V.**, & Aspragathos, N. (2020). Classification of All Non-Isomorphic Regular and Cuspidal Arm Anatomies in an Orthogonal Metamorphic Manipulator. *Robotics*, 9(2), 20.
- 1.22. Miatliuk, K, Nawrocka, A., Holewa, K., **Moulianitis, V.** (2020). Conceptual Design of BCI for Mobile Robot Control, *Applied Sciences*, 10 (7), 2557.
- 1.23. Xidias, E., **Moulianitis, V.**, & Azariadis, P. (2020). Optimal robot task scheduling based on adaptive neuro-fuzzy system and genetic algorithms. *The International Journal of Advanced Manufacturing Technology*, 1-13.
- 1.24. Stravopodis, N. A., and **V. C. Moulianitis** (2021). "Rectilinear tasks optimization of a modular serial metamorphic manipulator." *Journal of Mechanisms and Robotics* 13, no. 1
- 1.25. Katsanis, Ilias A.; **Moulianitis, Vassilis C.** (2021). An Architecture for Safe Child–Robot Interactions in Autism Interventions. *Robotics* 10, no. 1: 20
- 1.26. Wolniakowski A, Valsamos C, Miatliuk K, **Moulianitis V**, Aspragathos N. (2021) Optimization of Dynamic Task Location within a Manipulator’s Workspace for the Utilization of the Minimum Required Joint Torques. *Electronics*; 10(3):288.

- 1.27. Antonio Jimeno-Morenilla, Philip Azariadis, Rafael Molina-Carmona, Sofia Kyratzi, Vassilis Moulitanitis (2021), Technology enablers for the implementation of Industry 4.0 to traditional manufacturing sectors: A review, Accepted for publication in Computers in Industry.

Under review

- 1.28. C. Valsamos, A. Wolniakowski, K.Miatliuk, V. C. Moulitanitis, N. Aspragathos (2020). Optimal kinematic task position determination. Application and experimental verification for the UR-5 manipulator. Submitted for publication in Robotica (Under Major revision).
- 1.29. C. Valsamos, N. Stravopodis, V. C. Moulitanitis (2020) MECHATRONIC DESIGN AND CONSTRUCTION OF A NOVEL 1 DOF LINK FOR THE STRUCTURING OF SERIAL SELF-METAMORPHIC MANIPULATORS. Submitted for publication in JoMac.
- 1.30. C. Papakonstantinou, I. Daramouskas, V. J.Lappas, V. Kostopoulos, V. C. Moulitanitis (2020), A Machine Learning Approach for Global Steering Control Moment Gyroscope Clusters, Submitted for publication in IEEE Transactions on Aerospace and Electronic Systems.

BOOK CHAPTERS

- 2.1. **V.C. Moulitanitis**, N. A. Aspragathos and A. J. Dentsoras (2008). Fuzzy Representation and Synthesis of Concepts in Engineering Design. Lecture Notes in Artificial Intelligence 5138, 160-172. (CP)
- 2.2. H. Valsamos, **V. Moulitanitis**, N. Aspragathos (2010), Rapid Evaluation of Reconfigurable Robots Anatomies using Computational Intelligence. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics) 6277 LNAI (PART 2), pp. 341-350. (CP)
- 2.3. Charalampos Valsamos, **Vassilis C. Moulitanitis** and Nikos Aspragathos (2012), Metamorphic Structure Representation - Designing and Evaluating Anatomies of Metamorphic Manipulators, Advances in Reconfigurable Mechanisms and Robots I, Part 1, 3-11. (CP)
- 2.4. **V C Moulitanitis** and N A Aspragathos (2014). IT and Mechatronics in Industrial Robotic Workcell Design and Operation. In Encyclopedia of Information Science and Technology. IGI Global.
- 2.5. **Vassilis C Moulitanitis**, Evgenios M Kokkinopoulos and Nikos A Aspragathos (2016). A Method for the Approximation of the Multiple IK Solutions of Regular Manipulators Based on the Uniqueness Domains and Using MLP. In Saïd Zeghloul, Med Amine Laribi and Jean-Pierre Gazeau (eds.). Robotics and Mechatronics. Mechanisms and Machine Science series, volume 37, Springer International Publishing, 273-281. (CP)
- 2.6. **V.C. Moulitanitis**, N.A. Aspragathos, C Valsamos (2016). Suboptimal anatomy of metamorphic manipulators based on the high rotational dexterity Advances in Reconfigurable Mechanisms and Robots II, 509-519. (CP)
- 2.7. **Moulitanitis, V.**, Vogiatzief, D. and Aspragathos, N., (2017). A Constructive Method for the Approximation of the Multiple Inverse Kinematics Solutions of Noncuspidal 6 DoF Manipulators. In New Trends in Mechanism and Machine Science (pp. 493-502). Springer International Publishing. (CP)

- 2.8. **Moulianitis, V.C.**, Katrantzis, E.F., Stravopodis, N.A., Aspragathos, N.A (2018). A comparative study of three manipulator performance measures Mechanisms and Machine Science, 49, pp. 19-27. (CP)
- 2.9. Valsamos, C., Wolniakowski, A., Miatliuk, K., **Moulianitis, V.C** (2019). Minimization of joint velocities during the execution of a robotic task by a 6 D.o.F. articulated manipulator. Mechanisms and Machine Science, 67, pp. 368-375. (CP)
- 2.10. **Moulianitis, V.C.**, Thanellas, G., Xanthopoulos, N., Aspragathos, N.A. (2019) Evaluation of UAV based schemes for forest fire monitoring, Mechanisms and Machine Science, 67, pp. 143-150. (CP)
- 2.11. **Moulianitis, V.C.**, Xidias, E., Azariadis, P. Optimal task placement in a metamorphic manipulator workspace in the presence of obstacles (2019) Mechanisms and Machine Science, 67, pp. 359-367. (CP)
- 2.12. Koukos-Papagiannis, C. K., Moulianitis, V. C., & Aspragathos, N. A. (2019, June). Cuspidality Investigation of a Metamorphic Serial Manipulator. Mechanisms and Machine Science 73, pp. 2491-2500. (CP)
- 2.13. Nikos Aspragathos, Eleftherios Dogkas, Pavlos Konstantinidis, Panagiotis Koutmos, Nefeli Lamprinou, Vassilis C. Moulianitis, Georgios Paterakis, Emmanouil Z. Psarakis, Evangelos Sartinis, Konstantinos Souflas, Georgios Thanellas, Georgios Tsiourlis, Nikitas Xanthopoulos and Panteleimon Xofis (2019). From Pillars to AI Technology-Based Forest Fire Protection Systems [Online First], IntechOpen, DOI: 10.5772/intechopen.86904. Available from: <https://www.intechopen.com/online-first/from-pillars-to-ai-technology-based-forest-fire-protection-systems>
- 2.14. Tzivaridis, M., **Moulianitis, V.C.**, Aspragathos, N.A. (2020) Approximation of Inverse Kinematic Solution of a Metamorphic 3R Manipulator with Multilayer Perceptron, Advances in Intelligent Systems and Computing, 980, pp. 43-50. (CP)
- 2.15. Stravopodis, N.A., Valsamos, C., **Moulianitis, V.C.** (2020), An Integrated Taxonomy and Critical Review of Module Designs for Serial Reconfigurable Manipulators Advances in Intelligent Systems and Computing, 980, pp. 3-11. (CP)
- 2.16. Katrantzis, Eleftherios, **Vassilis C. Moulianitis**, and Kanstantsin Miatliuk (2020), Conceptual Design Evaluation of Mechatronic Systems, Emerging Trends in Mechatronics. IntechOpen, 27-50.
- 2.17. Stravopodis N.A., Katrantzis L., **Moulianitis V.C.**, Valsamos C., Aspragathos N.A. (2020) Evaluation of Serial Metamorphic Manipulator Structures Considering Inertia Characteristics. In: Zeghloul S., Laribi M., Sandoval Arevalo J. (eds) Advances in Service and Industrial Robotics. RAAD 2020. Mechanisms and Machine Science, vol 84. Springer, Cham. (CP)
- 2.18. Katsanis I.A., **Moulianitis V.C.** (2020) Criteria for the Design and Application of Socially Assistive Robots in Interventions for Children with Autism. In: Zeghloul S., Laribi M., Sandoval Arevalo J. (eds) Advances in Service and Industrial Robotics. RAAD 2020. Mechanisms and Machine Science, vol 84. Springer, Cham. (CP)
- 2.19. Stravopodis, N. A., **Moulianitis, V. C.**, & Valsamos, C. (2021). Investigation of Dynamically Decoupled Anatomies for a Serial Metamorphic Manipulator. Advances in Italian Mechanism Science, Springer, Cham, 295-309. (CP)

Under review

- 2.20. Charalampos Valsamos, Nikolaos Stravopodis, Vassilis Moulianitis, Nikos A. Aspragathos (2020), *Metamorphic Manipulators*. Submitted for publication in "Robot design: from theory to service applications", Cambridge University Press

CONFERENCES (FULL PAPER)

INTERNATIONAL

- 3.1.1. **Moulianitis V. C.**, C. J. Tsaprounis, N. A. Aspragathos (1997). On-line gain adjustment of a robot controller, using fuzzy logic. Fifth IFAC Symposium on Robot Control 1997 Nantes France, 2, 385-390.
- 3.1.2. **Moulianitis V.C.**, A. J. Dentsoras & N. A. Aspragathos (1998). "A Search Method in Knowledge-Based Systems using Euclidean Space Norm - An Application to Design of Robot Grippers", AIENG '98, Galway, Ireland, 247-260.
- 3.1.3. **VC Moulianitis**, AJ Dentsoras, NA Aspragathos (1999)." The Euclidean Space Inner Product in a Heuristic Method for Knowledge-Based Conceptual Design of Robot Grippers". CACD' 99, Lancaster, UK 37-48.
- 3.1.4. **V. C. Moulianitis**, Z. Zoller, P. Zentay, N. A. Aspragathos, G. Arz, A. Toth (2000), Knowledge-Aided Conceptual Design of Grippers for Handling Polyurethane Foam Parts. UMTIK' 2000, Ankara, Turkey, (CD-ROM).
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