

SHORT CURRICULUM VITAE

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Mechanical Engineer

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GENERAL

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.

EDUCATION

1991-96 **Mechanical Engineering Diploma**
Department of Mechanical Engineering and Aeronautics, University of Patras.

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**”.

CURRENT ACADEMIC OCCUPATION

Oct. 2005- Today Adjunct Lecturer in the Dept. of Product and Systems Design Engineering, University of the Aegean.

WORK EXPERIENCE

Aug. 1992 Data supply in the data center of the Municipality of Arta.

Jul. 1995- Sep. 1995 Internship in the Hydroelectric Station Pournari Artas.

Dec. 1999 – Today Freelance Mechanical Engineer.

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).

TEACHING EXPERIENCE

1997-2002. Laboratory Exercises in Robotics. Mechanical Engineering and Aeronautics Dept. University of Patras.

1995-2002 Laboratory Exercises in Electrical Machines. Mechanical Engineering and Aeronautics Dept. University of Patras.

1999- 2002. Laboratory Exercises in Industrial Automation. Mechanical
And Engineering and Aeronautics Dept. University of Patras.
2005-Today

1998 Laboratory Exercises in AutoCAD, Mechanical Engineering and Aeronautics Dept. University of Patras.

2002- 2003 Expert Systems, Dept of Communications, Informatics & Management (Formerly known as Dept. Of Teleinformation and Management) TEI of Epirus

2005- Today Mechatronics, Dept. of Product and Systems Design Engineering, University of the Aegean.

2005- 2008 Production Design, Dept. of Product and Systems Design Engineering, University of the Aegean.

2005-2006 Vehicle Design, Dept. of Product and Systems Design Engineering,
and University of the Aegean.
2010- Today

- 2005- Today Systems Design, Dept. of Product and Systems Design Engineering, University of the Aegean.
- 2006- Today Analysis and Design of Mechanisms, Dept. of Product and Systems Design Engineering, University of the Aegean.
- 2009- Today Robotics, Dept. of Product and Systems Design Engineering, University of the Aegean.

RESEARCH ACTIVITY

RESEARCH INTERESTS

My research interests are focused in the Theory and Methodologies of Design using Artificial Intelligence techniques with applications in Mechatronics and Robotics, and in the computational intelligent control methods.

PAPERS

- 7 papers in international journals. 3 submitted for publication.
- 2 Chapter Books.
- 1 Special issue Editorial in Mechatronics.
- 30 conference papers in National and International Conferences and Workshops. 1 accepted for presentation.

CITATION

30 citations. (Data Bases: Web of Science – SCI, SCOPUS, scholar.google.com/April 2011).

REVIEWER

- ASME Journal of Mechanical Design.
- Mechatronics
- IPSI BgD Transactions on Internet Research
- Information Sciences
- European Control Conference '07
- 1st and 2nd Hellenic Robotics Conference.
- WSEAS Information sciences and applications.

CONFERENCE ORGANIZATION COMMITTEES

- Member of the organization committee of the 1st and 2nd Hellenic Robotics Conference.

RESEARCH PROJECTS

I am participating in the submission and working in International and National funded research projects since 1997. I was the major researcher in two national and one 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.

The international proposal "Intelligent Robotic Laser Welding and Hardening Cell" has been accepted for funding by the MANUNET Consortium (www.manUNET.net).

The Robot Assisted Fruit Harvesting (RAFH) project has been submitted for funding in the ICT-AGRI 2nd Call for Transnational Research & Technological Development and Demonstration Projects.

MEMBERSHIPS

- Member of Technical Chamber of Greece
- Member of Hellenic Society of Mechanical-Electrical Engineers.

1. 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 Olaso, 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. Decision Support System Design for the Hellenic Centre of Health Emergency Response. *International Journal of User-Driven Healthcare (IJUDH)*, 1, 2, pp. 39-56, 2011.
- 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

SUBMITTED

- 1.8. Nikos Giannopoulos, **Vasilis C Moulianitis**, Andreas C. Nearchou. Using the Choquet integral method within genetic algorithms as a means for aggregating interacting criteria in multi-objective scheduling problems, submitted for publication to *Optimization*.
- 1.9. **V.C. Moulianitis**, V.N. Syrimpeis, N.A. Aspragathos, E.C. Panagiotopoulos. A method for the selection of muscles for gait phase detection using EMGs- Application to the development of a knowledge based system. Submitted for publication.
- 1.10. Nikos Giannopoulos, **Vasilis C. Moulianitis** and Andreas C. Nearchou, Multi-objective optimization with fuzzy measures and its application to flow-shop scheduling, submitted for publication to *Engineering Applications of Artificial Intelligence*

SPECIAL ISSUES EDITORIALS – CHAPTER BOOKS

- 2.1. **V.C. Moulianitis**, N. A. Aspragathos and A. J. Dentsoras. Fuzzy Concept Generation in Engineering Design. Lecture Notes in Artificial Intelligence 5138, 160-172, 2008.
- 2.2. H. Valsamos, **V. Moulianitis**, N. Aspragathos, 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, 2010.
- 2.3. **Moulianitis, V.C.**, Aspragathos, N.A., Introduction to the special issue on Theories and Methodologies for mechatronics design, Mechatronics 20 (8), pp. 825-826, 2010

CONFERENCES WITH FULL PAPERS

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).
- 3.1.5. P.N. Politis, **V. C. Moulianitis**, N. A. Aspragathos (2001). Robot control based on coriolis and centrifugal terms fuzzification. ASME International Mechanical Engineering Congress and Exposition, Proceedings v 2 2001. Also in American Society of Mechanical Engineers, Dynamic Systems and Control Division (Publication) DSC v 70 2002. p 1041-1048
- 3.1.6. S. G. Papageorgiou, **V. C. Moulianitis**, N. A. Aspragathos (2003). Transfer VM concepts to cloth design and manufacturing, Eurasia-Tex Conference on 3D Body Scanning and Virtual Try-On Systems, Athens, pp 41-49, Nov 2003.
- 3.1.7. **Moulianitis V. C.** and Aspragathos N. A. Design Evaluation with Mechatronics index using the Discrete Choquet Integral. Mechatronics 2006, 4th IFAC-Symposium on Mechatronic Systems, Heidelberg, Germany, September 12th-14th, 2006.
- 3.1.8. **V. Moulianitis**, K. Saridakis, S. Papageorgiou, V. Syrimpeis, A. Dentsoras, N. Aspragathos, Application of soft computing techniques in the design of robot grippers, International Conference on Engineering Design, ICED'07, 28 - 31 August 2007, Cite Des Sciences Et De L'Industrie, Paris, France, 2007.
- 3.1.9. V.N. Syrimpeis, L.L. Chiou, **V.C. Moulianitis**, N.A. Aspragathos, E.C Panagiotopoulos. On the development of an implantable μ -biomechatronic

system for the rehabilitation of lower limb neuro-muscular disabilities. Third international conference on Multi-Material Micro Manufacturing, Borovets Bulgaria, 359-362, 2007.

- 3.1.10. **V.C. Moulianitis**, V.N. Syrimpeis, V. Kokkinos, N.A. Aspragathos, E.C. Panagiotopoulos. A Closed-Loop Drop-Foot Correction System with Gait Event Detection using Fuzzy Logic, Mechatronics 2008, Limerick, Ireland, 2008.
- 3.1.11. A.D. Louloudi, **V.C. Moulianitis**. TherapainiS –A socially assistive robot for the elders. The 2008 I*PROMS Conference on Innovative Production Machines and Systems, Also invited to be presented in 2008 I*PROMS Researcher Symposium, Cardiff, 2008.
- 3.1.12. **V.C. Moulianitis**, V.N. Syrimpeis, N.A. Aspragathos E.C. Panagiotopoulos. An Expert System for Supporting the Conceptual Design of Controllers for Lower Limbs Rehabilitation Systems. IEEE 17th Mediterranean Conf. on Control and Automation. June 24-26, 2009, Makedonia Palace, Thessaloniki, Greece.
- 3.1.13. H. Valsamos **V. Moulianitis** N. Aspragathos, A Generalized Method for Solving the Kinematics of 3 D.O.F. Reconfigurable Manipulators, The 2009 I*PROMS Conference on Innovative Production Machines and Systems.
- 3.1.14. H. Valsamos **V. Moulianitis** N. Aspragathos. Rapid evaluation of anatomies for metamorphic robots based on dynamic manipulability using an ANFIS system. Multibody Dynamics 2011, ECCOMAS, July 4-7 2011, Brussels, Belgium, 2011.
- 3.1.15. **Vassilis C. Moulianitis**, Vasileios N. Syrimpeis, Nikolaos A. Aspragathos and Elias C. Panagiotopoulos. A Closed-Loop Drop-Foot Correction System with Gait Event Detection from the Contralateral Lower Limb using Fuzzy Logic, 10th International Workshop on Biomedical Engineering, 5-7 October 2011, Kos Island, Greece, 2011.
- 3.1.16. Charalampos Valsamos, **Vassilis C. Moulianitis** and Nikos Aspragathos, Metamorphic Structure Representation - Designing and Evaluating Anatomies of Metamorphic Manipulators, Accepted for presentation in The Second ASME/IFTOMM International Conference on Reconfigurable Mechanisms and Robots (ReMAR 2012)

NATIONAL

- 3.2.1. Χ.Δ. Βάλσαμος, **B.X. Μουλιανίτης**, N.A. Ασπράγκαθος. Δείκτης αξιολόγησης ανατομιών μεταμορφικού ρομποτικού βραχίονα και υπολογισμός αυτού μέσω συστήματος ANFIS. 2ο Πανελλήνιο Συνέδριο Ρομποτικής, 9-10 Δεκεμβρίου 2010 Πάτρα, 2010.
- 3.2.2. Χ.Δ. Βάλσαμος, **B.X. Μουλιανίτης**, N.A. Ασπράγκαθος. Διαμόρφωση ανατομίας μεταμορφικού βραχίονα – Βέλτιστη τοποθέτηση εργασίας στο χώρο εργασίας αυτού. Μια συγκριτική μελέτη. 2ο Πανελλήνιο Συνέδριο Ρομποτικής, 9-10 Δεκεμβρίου 2010 Πάτρα, 2010.

ABSTRACT BASED CONFERENCES-POSTERS

INTERNATIONAL

- 4.1.1. Repoulas F. D., **Moulianitis V. C.**, N. A. Aspragathos (1998). On-line parameter estimation of a robot controller, using fuzzy logic. IFAC LSS 1998 Rio Patras, 1120-1125.
- 4.1.2. **V. C. Moulianitis**, N. A. Aspragathos, A. J. Dentsoras (2001). An Index for the Mechatronic Design of Systems and Products. ASME, First National Conference on Recent Advances in Mechanical Engineering 2001, Patra, Greece (CD-ROM).
- 4.1.3. **V.C.Moulianitis** and N.A Aspragathos (2002). Integration of complexity in a mechatronics index. Mechatronics 2002, Twente, The Netherlands, 1494-1502.
- 4.1.4. Syrimpeis V.N., **Moulianitis V.C.**, Zerikiotis E.I., Aspragathos N.A., Panagiotopoulos E.C.(2006) An approach for the development of a fuzzy logic controller for the correction of the Drop-Foot syndrome. 5th World Congress of Biomechanics July 29 – August 4, 2006, Munich, Germany. Also in Journal of Biomechanics, Volume 39, Supplement 1, 2006, Page S31.
- 4.1.5. Syrimpeis V. N., **Moulianitis V. C.**, Zerikiotis E. I., Aspragathos N. A. and Panagiotopoulos E. C.(2006). A Drop-Foot syndrome correction system based in Fuzzy Logic. 5th European Symposium on BioMedical Engineering ESBME 2006.
- 4.1.6. Syrimpeis, Vasileios N., **Moulianitis, Vasileios C.**, Aspragathos, Nikolaos A., Panagiotopoulos, Elias C., A study of human locomotion for the design of rehabilitation systems based on Fuzzy Logic. 1st Joint ESMAC - GCMAS Meeting (JEGM06) Amsterdam, the Netherlands, September 28-30, 2006, Also in Gait & Posture, Volume 24, Supplement 2, 2006, Pages S288-S289.
- 4.1.7. **V.C. Moulianitis**, N.A. Aspragathos. Representation, Synthesis and Evaluation of Concepts in Engineering Design. 2nd I*PROMS Researcher Symposium, Ischia, Italy, 2009.
- 4.1.8. Dimitris Oikonomou, **Vassilis Moulianitis**, Dimitris Lekkas, Panayiotis Koutsabasis . Decision Support System Design for Cooperation in Emergency Situations at the Hellenic Center of Emergency Response (EKAB), 2009 Workshop on Mobile Information Technology for Emergency Response, May 10th, 2009, Göteborg, Sweden, 2009.

NATIONAL

- 4.2.1. Χίου Λ. Λ., Συρίμπεης Β. Ν.,**Μουλιανίτης Β. Χ.**, Ασπράγκαθος Ν. Α., Παναγιωτόπουλος Ηλ. Χ.. Σχεδιασμός Νευρο-Ασαφούς Ελεγκτή για την Αποκατάσταση της Ιπποποδίας. 2ο Συνέδριο Ελληνικής Εταιρείας Εμβιομηχανικής (ΕΛΕΜΒΙΟ), Αρχ. Ολυμπία, 4-6 Μαΐου 2007.
- 4.2.2. Συρίμπεης Β. Ν., **Μουλιανίτης Β. Χ.**, Ασπράγκαθος Ν. Α., Παναγιωτόπουλος Ηλ. Χ. (2006) Σχεδιασμός ασαφούς ελεγκτή για την αποκατάσταση της Ιπποποδίας. 1ο Συνέδριο Ελληνικής Εταιρείας Εμβιομηχανικής (ΕΛΕΜΒΙΟ) Τρίκαλα 15-16 Απριλίου 2006.
- 4.2.3. Α. Δ. Λουλούδη, **Β.Χ. Μουλιανίτης** Ρομποτικό σύστημα παροχής κοινωνικής βοήθειας. TherapainiS. Ανηρτημένη Ανακοίνωση στο 1ο Πανελλήνιο Συνέδριο Ρομποτικής. 23 - 24 Φεβρουαρίου 2009, Αθήνα, 2009.

- 4.2.4. Μ.Π. Ρουγγέρη, **B. Μουλιανίτης**. Gribot- Οικιακό ρομπότ παροχής υπηρεσιών για ανάρτηση, τοποθέτηση και μεταφορά αντικειμένων. Ανηρτημένη Ανακοίνωση στο 2ο Πανελλήνιο Συνέδριο Ρομποτικής, 9-10 Δεκεμβρίου 2010 Πάτρα, 2010.
- 4.2.5. Ιωάννου Δ., **Μουλιανίτης Β.**, Παπανίκος Π. Ρομποτικό σμήνος οικιακής εξυπηρέτησης: Μια διερευνητική προσέγγιση. Ανηρτημένη Ανακοίνωση στο 2ο Πανελλήνιο Συνέδριο Ρομποτικής, 9-10 Δεκεμβρίου 2010 Πάτρα, 2010

2. CITATIONS

The following tables are last updated in April 2011.

Databases: ISI Web of Science, SCOPUS, scholar.google.com

RESUME OF CITED PAPERS

Paper No.	Title	Citations
1.1	A knowledge-based system for the conceptual design of grippers for handling fabrics.	12
1.2	A model for concept evaluation in design- An application to mechatronics design of robot grippers.	14
1.3	Virtual Shoe Test Bed: A Computer-Aided Engineering Tool for Supporting Shoe Design	1
1.5	A dimensional tolerancing knowledge management system using Nested Ripple Down Rules (NRDR)	1
4.1.3	Integration of complexity in a mechatronics index.	2
Total:		30

CITED PAPERS

Paper 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. <i>Artificial Intelligence in Engineering, Design, Analysis and Manufacturing</i> , 13, 13-25.
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1. Susca L, Mandorli F, Rizzi C, Cugini U. Racing Car design using knowledge aided engineering. *Artificial Intelligence in Engineering, Design, Analysis and Manufacturing*, 2000;14: 235-249. (ISI Web of Science, SCOPUS)
2. Drakatou, S.P., Dentsoras, A.J., A method for the automatic deduction of priority lists of entities and tasks from the design knowledge, *Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM* 15 (3), pp. 223-232, 2001, (ISI Web of Science, SCOPUS).
3. Zhang WY, Tor SB, Britton GA, Deng Y-M. EFDEX: A knowledge-based experts system for functional design of engineering systems. *Engineering with computers*, 2001; 17:339-353. (ISI Web of Science, SCOPUS)
4. Zhang WY, Tor SB, Britton GA. A prototype knowledge-based system for conceptual synthesis of the design process. *International journal of Advanced Manufacturing Technologies*, 2001; 17:549-557. (ISI Web of Science, SCOPUS)
5. Lou, Z., Jiang, H., Ruan, X. Development of an integrated knowledge-based system for mold-base design, *Journal of Materials Processing Technology* 150 (1-2), 2004: 194-199 (SCOPUS)

6. Lou, Z., Zhang, Y., Ruan, X. Key technologies in KBE and its application *Chinese Journal of Mechanical Engineering (English Edition)* 15 (SUPPL.), 2002: 15-19 (SCOPUS)
7. Lou, Z.-L., Liu, L.-Y., Jiang, H.-F., Zhu, L.-P., Xing, Y., Ruan, X.-Y. Knowledge-based engineering in mold base design and its key technology *Shanghai Jiaotong Daxue Xuebao/Journal of Shanghai Jiaotong University* 36 (4), 2002: 487-490 (SCOPUS)
8. Mandorli, F., Rizzi, C., Susca, L., Cugini, U. , An Approach to Implement Feature-Based Applications using Knowledge Aided Engineering Technology , Feature Based Life-Cycle Modeling ,Edited by René Soenen and Gustav J. Olling, Kluwer Academic Publishers, pp. 41 - 55 , 2002 .ISBN 1-4020-7327-5. (scholar.google.com)
9. Tor SB, Britton GA, Zhang WY. Techniques in Knowledge-Based Expert Systems for the Engineering Systems. Intelligent Knowledge-Based Systems, Vol. 4: Intelligent Systems, 2004. (scholar.google.com)
10. Guo, T., Yang, H.-L., Tong, S.-G. Method for the combination of knowledge fusion and blurry inference, *Harbin Gongye Daxue Xuebao/Journal of Harbin Institute of Technology* 38 (10), pp. 1809-1812, 2006 (SCOPUS).
11. Zacharia, P., Aspragathos, N., Mariolis, I., Dermatas, E., A robotic system based on fuzzy visual servoing for handling flexible sheets lying on a table, *Industrial Robot* 36 (5), pp. 489-496, 2009. (SCOPUS).
12. Lee, J., Han, S., Knowledge-based configuration design of a train bogie, *Journal of Mechanical Science and Technology* 24 (12), pp. 2503-2510, 2010. (ISI Web of Science, SCOPUS)

Paper 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. <i>Mechatronics</i> 14 (2004) 599–622.
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1. A.M.M. Sharif Ullah A fuzzy decision model for conceptual design, *Systems Engineering*, 8 (4), 2005: 296-308 (ISI Web of Science ,SCOPUS).
2. N.A. Aspragathos. Reconfigurable Robots towards the manufacturing of the future. 1st I*PROMS Virtual International Conference,4-15 July 2005, 447-452. (scholar.google.com).
3. Marcinkevicius AH, Robotic grippers with accuracy centering fingers, *SOLID STATE PHENOMENA* 113: 307-312 2006 (ISI Web of Science).
4. Behbahani, S., de Silva, C.W.. Mechatronic design quotient as the basis of a new multicriteria mechatronic design methodology, *IEEE/ASME Transactions on Mechatronics* 12 (2), pp. 227-232, 2007, (ISI Web of Science, SCOPUS).
5. Yiping, L., Jianzhong, C. Substitution issues between mechanical and electronic realization for same function, *Proceedings of the 2nd IEEE/ASME International Conference on Mechatronic and Embedded Systems and Applications*, 2007, (SCOPUS).
6. Pham, D.T., Gourashi, N.S., Eldukhri, E.E., Automated configuration of gripper systems for assembly tasks, *Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture* 221 (11), pp. 1643-1649, 2007, (ISI Web of Science, SCOPUS).

7. Behbahani, S., de Silva, C.W. Reliability tradeoffs of a complex mechatronic system in the early design stage *International Journal of Manufacturing Research*, 2(1), pp. 51-73, 2007 (scholar.google.com).
8. Behbahani, S., de Silva, C.W., System-based and concurrent design of a smart mechatronic system using the concept of mechatronic design quotient (MDQ), *IEEE/ASME Transactions on Mechatronics* 13 (1), pp. 14-21, 2008, (ISI Web of Science, SCOPUS).
9. Saridakis, K.M., Dentsoras, A.J., Soft computing in engineering design - A review, *Advanced Engineering Informatics* 22 (2), pp. 202-221, 2008, (ISI Web of Science, SCOPUS).
10. de Silva, C.W. *Mechatronic Systems: Devices, Design, Control, Operation and Monitoring*. CRC Press, 2008. (scholar.google.com)
11. Chong, Y.T., Chen, C.-H., Leong, K.F. A heuristic-based approach to conceptual design, *Research in Engineering Design* 20 (2), pp. 97-116, 2009. (ISI Web of Science, SCOPUS).
12. Kanstantsin Miatliuk, Yoon Hyuk Kim, Kyungsoo Kim and Francishek Siemieniako. Use of hierarchical system technology in mechatronic design, *Mechatronics*, Volume 20, Issue 2, March 2010, Pages 335-339, (ISI Web of Science, SCOPUS)
13. Zhang, Z., A computational selection strategy of dynamic knowledge alliance members on collaborative product design under the distributed knowledge resource environments, 2010 International Conference on Computer Design and Applications, ICCDA 2010 4, art. no. 5541210, pp. V4221-V4225, 2010 (SCOPUS).
14. Ragusila, V., Emami, M.R., A mechatronics approach to legged locomotion, *IEEE/ASME International Conference on Advanced Intelligent Mechatronics*, AIM, art. no. 5695920, pp. 824-829, 2010 (SCOPUS).

Paper 1.5	R. F. Hamade, V.C. Moulitanitis, D. D'Addonna, G. Beydoun. A dimensional tolerancing knowledge management system using Nested Ripple Down Rules (NRDR). <i>Engineering Applications of Artificial Intelligence</i> 23 (7), pp. 1140-1148, 2010.
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1. Lin, W.-T., Wang, S.-T., Li, M.-H., Huang, J.-M., Chen, W.-K. Modular fiber optic cable product architecture for application in product lifecycle management. *Information Technology Journal* 10 (1), pp. 16-28, 2011. (SCOPUS)

Paper 4.1.3	P. Azariadis, V. Moulitanitis, 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, <i>Computer Aided Design And Applications</i> , 2007, 4(6), 741-750.
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1. Jason Tak-Man Cheung, Jia Yu, Duo Wai-Chi Wong, Ming Zhang. Current methods in computer-aided engineering for footwear design, *Footwear Science*, 1(1), pp. 31 – 46, 2009 (scholar.google.com).

Paper 4.1.3	V.C.Moulitanitis and N.A Aspragathos (2002). Integration of complexity in a mechatronics index. <i>Mechatronics</i> 2002, Twente, The Netherlands, 1494-1502.
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1. Sun, J., Poo, A.N., Hong, G.S., Chew, C.M., Ang, M.H., Tan, K.K., De Silva, C.W. Mechatronic design quotient approach in beam vibration suppression design using linear dampers 2006 IEEE Conference on Robotics, Automation and Mechatronics, 2006, (SCOPUS).
2. Sun, J., Poo, A.N., Ang, M.H., Hong, G.S., De Silva, C.W., Tan, K.K. Design of vibration controllers for flexible beams using the Mechatronic Design Quotient (MDQ) approach. JVC/Journal of Vibration and Control 13 (1), pp. 65-94, 2007, (ISI Web of Science , SCOPUS).