

Paraskevas Papanikos

Associate Professor (Engineering Mechanics)

Department of Product and Systems Design Engineering, University of the Aegean

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RESEARCH AREAS

Finite element modelling of structures and processes, strength and fatigue of metals and composites, analytical and experimental fracture mechanics, mechanical behavior of nano-structures.

EDUCATION

- 1989 Diploma in Mechanical Engineering, National Technical University of Athens.
- 1992 M.A.Sc. in Applied Mechanics, Dept. of Mechanical Engineering, University of Toronto.
- 1997 Ph.D. in Applied Mechanics, Dept. of Mechanical Engineering, University of Toronto.

PROFESSIONAL EXPERIENCE

- 1999-2004 Research coordinator
Institute of Structures and Advanced Materials (ISTRAM), Patras, Greece
- 2004-2012 Assistant Professor
Dept. of Product and Systems Design Engineering, University of the Aegean
- 2012- Associate Professor
Dept. of Product and Systems Design Engineering, University of the Aegean

EDUCATIONAL EXPERIENCE

Teaching (University of the Aegean, 2004-)

Undergraduate courses: Engineering Mechanics (Statics & Mechanics of Materials), Physics for Engineers, Computational Product Analysis and Manufacturing.

Graduate courses: Computational Design and Analysis of Structures

Supervision of Ph.D. theses

1. Industrial production of small or medium-scale products using rapid prototyping, parametric design and analytical methods, K. Bailas (since 6/2016).
2. Design of a modular platform for an ultra-light electric motorbike for urban commuting and recreation, E. Scourboutis (since 5/2018).
3. Development of materials in the context of the circular economy, based on plant and marine biology and the recycling and utilization of existing materials, N. Boukouvala (since 11/2020).

Participation in Ph.D. supervising committees

1. Investigation of the effect of non-perfect interfaces on the overall mechanical and thermal behavior of nanocomposites, N. Karalis, N.T.U.A., completed 3/2015.
2. An Approach to identify the appropriate design requirements and specifications to define the target percept of an in-car interface: Case of non-visual senses, I. Malliaros, EDAM MIT-Portugal, completed 4/2015.
3. Elastic interaction of inhomogeneities with inclusions in composite materials, E. Gouti, N.T.U.A., completed 5/2018.
4. Construction of a 3D human foot biomodel and study of the effect of diabetes and osteoporosis on its mechanical behavior during gait, Z. Koutkalaki, completed 12/2020.
5. Development of models to model the structural integrity of existing structures, N. Mitsopoulou, N.T.U.A., since 2/2015.
6. Development of models for the analysis of the mechanical behavior of masonry constructions, V. Tsitsos, N.T.U.A., since 12/2015.

7. Analysis of the mechanical behavior of welded joints using micro-mechanical characteristics, T. Examilioti, Department of Financial and Management Engineering, University of the Aegean, since 9/2016.
8. Investigation of corrosion-induced mechanical properties degradation of advanced aluminum – lithium alloys, Ch. Charalampidou, Department of Financial and Management Engineering, University of the Aegean, since 9/2016.
9. Innovative cementitious nanocomposites with optimized piezoresistive behavior for strain-sensing and damage-monitoring, A. Dimou, Department of Financial and Management Engineering, University of the Aegean, since 1/2019.

Participation in Ph.D. examination committees

1. Analysis of the mechanical behaviour of concrete structural elements reinforced with FRP bars, V. Karatzaferis, N.T.U.A., 1/2010.
2. Computational prediction of mechanical behavior and failure of nano-structures, S. Georgatzinos, University of Patras, 9/2010.
3. Development of methodologies for the non-linear analysis of large structures, S. Belesis, University of Patras, 11/2010.
4. Development of fuzzy vector quantization methods for the efficient compression of digital image, D. Tsolakis, University of the Aegean, 5/2012.
5. The unified method of two-phase potentials in studying the interaction of singularities and cracked bi-materials interfaces, G. Mavroyiannis, N.T.U.A., 3/2013.
6. Fatigue crack growth prediction under mode I-loading in aluminium alloy friction stir weld, A. Tzamtzis, University of Thessaly, 3/2015.
7. Multi-scale numerical methodology for the parametric estimation of the mechanical properties of carbon nanotubes reinforced polymers and composites, A. Chanteli, University of Patras, 7/2016.
8. Efficient analysis methodology for laminated anisotropic structures under quasi-static and impact loading, K. Fotopoulos, University of Patras, 7/2020.
9. Synthesis and experimental characterization of biological base adhesive for structural applications - reinforcement of the adhesive with carbon nanotubes, B. Tzatzadakis, University of Patras, 2/2021.

Supervision of M.Sc. theses

Supervision of 30 M.Sc. theses (2006-).

Supervision of Diploma theses

Supervision of 150 Diploma theses (2007-).

Participation in M.Sc. and Diploma theses committees

Participation in 400 committees of undergraduate and postgraduate dissertations at the University of the Aegean.

ADMINISTRATIVE EXPERIENCE

- Participation in the following departmental committees: Student Affairs, Internships, Curriculum, Dissertations, Internal evaluation.
- Member of the Senate of the University of the Aegean (2006-2007, 2011-2012).
- Deputy Chairman (2006 –2009, 2011-2014) and member (2014-2017) of the Technical Board of the University of the Aegean.
- Departmental Coordinator of the Internship Program (2007-2015).
- Deputy Chairman of the Department of Product and Systems Engineering, University of the Aegean (2016-2017).
- Member of the Quality Assurance Unit (MODIP) of the University of the Aegean (2018-2022).
- Participation in 24 electoral bodies and 5 recommendatory committees for electing faculty members.
- External evaluator for 4 faculty members elections.

AWARDS - SCHOLARSHIPS

- University of Toronto Scholarship, 1991-1992 (for M.A.Sc.).
- Natural Sciences and Engineering Research Council of Canada (NSERC) Scholarship, 1992-1994 (for Ph.D.).
- University of Toronto Scholarship, 1994-1995 (for Ph.D.).

RESEARCH PROJECTS

Dept. of Mechanical Engineering, University of Toronto (1990-1997)

1. Design and Analysis of Dovetail Joints in Aeroengine Discs
2. Fatigue Behaviour of Aeroengine Compressor Assemblies
3. Three-Dimensional Finite Element Analysis of Cold Hole Expansion for Aerospace Applications
4. Fatigue Fracture Behaviour of Interacting Holes
5. Effect of Residual Stresses upon the Fatigue Behaviour of Airframe Alloys
6. Finite Element Analysis of the Shot Peening Process
7. Biomechanical Analysis of Dental and Orthopedic Implants
8. FEM in Design of Recreational Equipment

Institute of Structures and Advanced Materials (ISTRAM), Patras, Greece (1999-2006)

9. Efficient Design and Verification of Composite Structures (EDAVCOS) - Funding agent: European Union(BRITE/EURAM) - Coordinator: SAAB - Project duration: 1/2/98-31/1/01
10. Integrated Design Environment for Simulation and Numerical Analysis of Production Processes (D-SIGN) - Funding agent: European Union(BRITE/EURAM) - Coordinator: ESI - Project duration: 1/8/98-30/11/01
11. Services for Collaborative SMEs Aeronautical Technical Research (SCRATCH) - Funding agent: European Union - Coordinator: EuroInter - Project duration: 1/2/99-30/9/00
12. Bolted Joints in Composite Aircraft Structures (BOJCAS) - Funding agent: European Union(GROWTH) - Coordinator: Un. Limerick - Project duration: 1/2/00-31/5/03
13. Technology Application to the Near-Term Business Goals and Objectives of the Aerospace Industry (TANGO) - Funding agent: European Union(GROWTH) - Coordinator: AIRBUS - Project duration: 1/4/00-31/3/05
14. Services for Collaborative SMEs Aeronautical Technical Research II (SCRATCH II) - Funding agent: European Union - Coordinator: EuroInter - Project duration: 1/10/00-31/3/01
15. Advanced Design Concepts and Maintenance by Integrated Risk Evaluation for Aerostructures (ADMIRE) - Funding agent: European Union(GROWTH) - Coordinator: ALENIA - Project duration: 1/2/01-31/7/04
16. Improve and Assess Repair Capability of Aircraft Structures (IARCAS) - Funding agent: European Union(GROWTH) - Coordinator: AIRBUS - Project duration: 1/7/01-31/12/05
17. Investigation on Damage Tolerance Behavior of Aluminium Alloys (IDA) - Funding agent: European Union(GROWTH) - Coordinator: AIRBUS - Project duration: 1/1/02-31/12/04
18. Services for Collaborative SMEs Aerospace Technical Research 3 (SCRATCH 3) - Funding agent: European Union - Coordinator: EuroInter - Project duration: 1/5/02-29/2/04
19. Development of Innovative and Advanced Laminates for Future Aircraft Structure (DIALFAST) - Funding agent: European Union(STREP) - Coordinator: AIRBUS - Project duration: 1/1/04-31/12/06

National Technical University of Athens (2004-2006)

20. Deformation measurement in FRP reinforced concrete structures using geodetic methods and fibre sensors, Programme Pythagoras, EPEAEK, 2004-2006.

University of the Aegean (2006-)

21. Structural health monitoring of glass-reinforced composites using embedded CNT fibers - Funding agent: Latsis Foundation - Coordinator: NTUA - Project duration: 1/1/10-31/12/10.
22. Experimental and theoretical investigation of mechanical properties degradation of the aeronautical Aluminum alloy 2024 due to corrosion, Archimedes III Programme, 2012-2015.

23. Development of cost-effective and accurate computer-aided design and engineering (CAD/CAE) tools for the determination and optimization of footwear comfort parameters (OPT-SHOES), ARISTEIA Programme, 2012-2015.
24. Development of an innovative integrated system for assessing the potential biochemical production of methane (BMP) from different sources of biomass (Green. BMP), Operational Program Competitiveness, Entrepreneurship and Innovation, under the call RESEARCH – CREATE – INNOVATE, co-funded by the European Union and the General Secretariat for Research and Technology (GSRT) (project code:T1EDK-03148), 2018-2021.
25. Recycling and new product development (Re_Product), Centre for Sustainable and Cyclic Bioeconomy of South Aegean (Aegean_BIOECONOMY), Regional Excellence Program (code 80459, 2020-2023).
26. 2023-2025: Σχεδιασμός πολλαπλών μεταλλικών υλικών για τρισδιάστατη εκτύπωση - MADE-3D, CL4 – Digital, Industry and Space.
27. 2023-2024: Ανακύκλωση και επαναχρησιμοποίηση αφρών από πολυμερή σε υλικά με βάση το τσιμέντο-COAST-EPS, ΠΡΑΣΙΝΟ ΤΑΜΕΙΟ-ΦΥΣΙΚΟ ΠΕΡΙΒΑΛΛΟΝ & ΚΑΙΝΟΤΟΜΕΣ ΔΡΑΣΕΙΣ
28. 2022-2025: Corrosion susceptibility, degradation and protection of advanced Al-Li aluminium alloys – CorLi, ΕΛΛΗΝΙΚΟ ΙΔΡΥΜΑ ΕΡΕΥΝΑΣ ΚΑΙ ΚΑΙΝΟΤΟΜΙΑΣ

Reviewer

Reviewer for: Advances in Computational Design, Aerospace Science and Technology, Aircraft Engineering and Aerospace Technology, Carbon, Ciência & Tecnologia dos Materiais, Composites part B: Engineering, Composite Structures, Computational Materials Science, Computer Methods & Programs in Biomedicine, Fatigue and Fracture of Engineering Materials and Structures, International Journal of Fatigue, International Journal of Solids and Structures, International Journal of Structural Integrity, Journal of Composite Materials, Journal of Materials Engineering and Performance, Journal of Materials Science, Journal of Physics and Chemistry of Solids, Materials, Materials Science and Engineering A, Mechanics of Advanced Materials and Structures, Mechanics of Materials, Physica Status Solidi B: Basic Solid State Physics.

PUBLICATIONS

Theses

- T1. P. Papanikos, On the structural integrity of dovetail joints in aeroengine discs, M.A.Sc. Thesis, University of Toronto, 1992.
- T2. P. Papanikos, Mechanics of mixed mode fatigue behaviour of cold worked adjacent holes, Ph.D. Thesis, University of Toronto, 1997.

Chapters in books

- B1. Sp. Pantelakis and P. Papanikos, in Problems of fracture mechanics and fatigue: A solution guide, edited by E.E. Gdoutos, C.A. Rodopoulos and J.R. Yates, Kluwer Academic Publishers, 2003.
- B2. K.I. Tserpes, P. Papanikos, G.N. Labeas and Sp. Pantelakis, Multi-scale modeling of tensile behavior of carbon nanotube-reinforced composites, in Particle and Continuum Aspects of Mesomechanics (eds G. C. Sih, M. Naït-Abdelaziz and T. Vu-Khanh), ISTE, London, UK. doi: 10.1002/9780470610794.ch33, 2007.

Monographs

- M1. K.I. Tserpes and P. Papanikos, Finite element modeling of the tensile behavior of carbon nanotubes, graphene and their composites in Modeling of carbon nanotubes, graphene and their composites, edited by K.I. Tserpes and N. Silvestre, Springer Series in Materials Science 188, pp. 303-329, 2014.

Journals

- J1. P. Papanikos and S.A. Meguid, Theoretical and experimental studies of fretting-initiated fatigue failure of aeroengine compressor discs, Fatigue and Fracture of Engineering Materials and Structures, 17(5), 539-550, 1994.

- J2. S.A. Meguid, M.H. Refaat and P. Papanikos, Theoretical and experimental studies of the structural integrity of dovetail joints in aeroengine discs, *Journal of Materials Processing Technology*, 56, 668-677 1996.
- J3. P. Papanikos, S.A. Meguid and Z. Stjepanovic, Three-dimensional nonlinear finite element analysis of dovetail joints in aeroengine discs, *Finite Elements in Analysis and Design*, 29(3-4), 173-186, 1998.
- J4. P. Papanikos and S.A. Meguid, Three-dimensional finite element analysis of cold expansion of adjacent holes, *International Journal of Mechanical Sciences*, 40(10), 1019-1028, 1998.
- J5. X.D. Wang, S.A. Meguid and P. Papanikos, Analysis of curved cracks emanating from adjacent holes, *Engineering Fracture Mechanics*, 64, 337-355, 1999.
- J6. P. Papanikos and S.A. Meguid, Elasto-plastic finite element analysis of cold expansion of adjacent fastener holes, *Journal of Materials Processing Technology*, 93, 424-428, 1999.
- J7. Sp.G. Pantelakis, Em.Ch. Kyriakakis and P. Papanikos, Non-destructive fatigue damage characterization of laminated thermosetting fibrous composites, *Fatigue and Fracture of Engineering Materials and Structures*, 24(10), 651-662, 2001.
- J8. K.I. Tserpes, P. Papanikos and Th. Kermanidis, A three-dimensional progressive damage model for bolted joints in composite laminates subjected to tensile loading, *Fatigue and Fracture of Engineering Materials and Structures*, 24(10), 663-676, 2001.
- J9. K.I. Tserpes, G. Labeas, P. Papanikos and Th. Kermanidis, Strength prediction of bolted joints in graphite/epoxy composite laminates, *Composites Part B: Engineering*, 33(7), 521-529, 2002.
- J10. P. Papanikos, K.I. Tserpes and Sp.G. Pantelakis, Modelling of fatigue damage progression and life of CFRP laminates, *Fatigue and Fracture of Engineering Materials and Structures*, 26, 37-47, 2003.
- J11. S.A. Tsirkas, P. Papanikos, Th. Kermanidis, Numerical simulation of the laser welding process in butt-joint specimens, *Journal of Materials Processing Technology*, 134, 59-69, 2003.
- J12. S.A. Tsirkas, P. Papanikos, K. Pericleous, N. Strusevich, F. Boitout, J.M. Bergheau, Evaluation of distortions of laser welded shipbuilding parts using local-global finite element approach, *Science and Technology of Welding and Joining*, 8(2), 79-88, 2003.
- J13. K.I. Tserpes, P. Papanikos, G. Labeas, Sp. Pantelakis, Fatigue damage accumulation and residual strength assessment of CFRP laminates, *Composite Structures*, 63(2), 219-230, 2004.
- J14. P.V. Petroyiannis, Al.Th. Kermanidis, P. Papanikos, Sp.G. Pantelakis, Corrosion-induced hydrogen embrittlement of 2024 and 6013 aluminium alloys, *Theoretical and Applied Fracture Mechanics*, 41(1-3), 173-183, 2004.
- J15. M.A. Kattis, P. Papanikos, E. Providas, Thermal Green's functions in plane anisotropic bimaterials, *Acta Mechanica*, 173 (1-4), 65-76, 2004.
- J16. P. Papanikos, K.I. Tserpes, G. Labeas, Sp. Pantelakis, Progressive damage modelling of bonded composite repairs, *Theoretical and Applied Fracture Mechanics*, 43(2), 189-198, 2005.
- J17. K.I. Tserpes and P. Papanikos, Finite element modelling of single-walled carbon nanotubes, *Composites Part B: Engineering*, 36, 468-477, 2005.
- J18. K.I. Tserpes, P. Papanikos, S.A. Tsirkas, A progressive fracture model for carbon nanotubes, *Composites Part B: Engineering*, 37, 662-669, 2006.
- J19. K.I. Tserpes and P. Papanikos, The effect of Stone-Wales defect on the tensile behavior and fracture of single-walled carbon nanotubes, *Composite Structures*, 79(4), 581-589, 2007.
- J20. P. Papanikos, K.I. Tserpes and Sp. Pantelakis, Initiation and progression of composite patch debonding in adhesively repaired cracked metallic sheets, *Composite Structures*, 81(2), 303-311, 2007.
- J21. K.I. Tserpes, P. Papanikos, G. Labeas and Sp. Pantelakis, Multi-scale modeling of tensile behaviour of carbon nanotube reinforced composites, *Theoretical and Applied Fracture Mechanics*, 49(1), 51-60, 2008.
- J22. P. Papanikos, D.D. Nikolopoulos and K.I. Tserpes, Equivalent beams for carbon nanotubes, *Computational Materials Science*, 43(2), 345-352, 2008.
- J23. A.D. Alexopoulos and P. Papanikos, Experimental and theoretical studies of corrosion-induced mechanical properties degradation of aircraft 2024 aluminium alloy, *Materials Science and Engineering A*, 498, 248-257, 2008.

- J24. K.I. Tserpes and P. Papanikos, Continuum modeling of carbon nanotube-based super-structures, *Composite Structures*, 91, 131-137, 2009.
- J25. Z. Koutkalaki, P. Papagiannis, P. Azariadis, P. Papanikos, S. Kyrtzi, D. Zissis, D.Lekkas and E. Xidias, Towards a foot bio-model for performing finite element analysis for footwear design optimization using a cloud infrastructure, *Computer-Aided Design and Applications*, 12(5), 507-518, 2015.
- J26. P. Papagiannis, Z. Koutkalaki, P. Azariadis and P. Papanikos, Definition and evaluation of plantar mechanical comfort for the support of footwear design, *Computer-Aided Design and Applications*, 13(2), 162-172, 2016.
- J27. D. Zissis, D. Lekkas, P. Azariadis, P. Papanikos and E. Xidias, Collaborative CAD/CAE as a cloud service, *International Journal of Systems Science: Operations & Logistics*, DOI: 10.1080/23302674.2016.1186237, 2017.
- J28. M.A. Kattis, E. Gkouti and P. Papanikos, Energy and volume changes due to the formation of a circular inhomogeneity in a residual deviatoric stress field, *Acta Mechanica*, 230(10), 3457-3475, 2019.
- J29. M.A. Kattis, P. Papanikos, M.E. Tzamali and E. Gkouti, Design equations of neutral elliptical coated inhomogeneities in longitudinal shear, *Acta Mechanica*, 231(5), 1837-1847, 2020.
- J30. M.A. Kattis, E. Gkouti and P. Papanikos, The elliptic homoeoid inclusion in plane elasticity, *Meccanica*, 55(7), 1509-1523, 2020.
- J31. Experimental and numerical investigation of laser beam-welded Al-Cu-Li joints using micro-mechanical characteristics, Examilioti, T.N., Papanikos, P., Kashaev, N., Klusemann, B., Alexopoulos, N.D., *Journal of Materials Research and Technology*, 2022, 19, pp. 2431-2446.
- J32. Degradation assessment of high-density polyethylene (HDPE) debris after long exposure to marine conditions, Lourmpas, N., Papanikos, P., Efthimiadou, E.K., ... Lekkas, D.F., Alexopoulos, N.D. *Science of the Total Environment*, 2024, 954, 176847.
- J33. Effect of filler materials on the tensile properties and fracture toughness of laser beam welded AA2198 joints under different ageing conditions, Examilioti, T.N., Karanikolas, D., Riekehr, S., Papanikos P., Kashaev, N., Alexopoulos, N.D., *Engineering Fracture Mechanics*, 2024, 295, 109811.

Conference proceedings

- C1. S.A. Meguid, P. Papanikos and M.H. Refaat, Finite element analysis of dovetail joints in aeroengine discs using interface elements, *Proceedings of the International Conference on Computational Methods in Engineering*, Singapore, November 1992.
- C2. P. Papanikos and S.A. Meguid, Fatigue failure of dovetail joints in aeroengine discs, *Proceedings of Fatigue '93*, pp. 465-470, Montreal, Canada, May 1993.
- C3. S.A. Meguid, M.H. Refaat and P. Papanikos, Theoretical and experimental studies of structural integrity of dovetail joints in aeroengine discs, *Proceedings of the International Conference on Advances in Materials and Processing Technologies*, pp. 1539-1547, Dublin, Ireland, August 1993.
- C4. S.A. Meguid and P. Papanikos, Evaluation of the structural integrity of aeroengine compressor discs using fracture mechanics, *Proceedings of the 10th International Conference on Experimental Mechanics*, pp. 443-448, Lisbon, Portugal, July 1994.
- C5. P. Papanikos and S.A. Meguid, Fatigue crack growth behaviour of interacting holes in airframe alloys, *Proceedings of Mechanics in Design*, Canadian Society for Mechanical Engineering Forum, pp. 731-739, Toronto, Canada, May 1996.
- C6. S.A. Meguid, P. Papanikos, Z. Stjepanovic and J. Najjar, Three-dimensional finite element analysis of an aeroengine compressor disc assembly, *Proceedings of the 2nd International Conference on the Application of Numerical Methods in Engineering*, pp. 62-68, Serdang, Malaysia, June 1997.
- C7. P. Papanikos and S.A. Meguid, Elasto-plastic finite element analysis of cold expansion of adjacent fastener holes, *Proceedings of the 3rd International Conference on Advances in Materials and Processing Technologies (AMPT'97)*, pp. 799-804, Guimaraes, Portugal, July 1997.
- C8. S.A. Meguid and P. Papanikos, Mechanics of the cold hole expansion of aerospace components (Invited Keynote Lecture), *International Conference on Experimental Mechanics*, Porto, Portugal, March 1998.

- C9. Sp. Pantelakis, Em.Ch. Kyriakakis and P. Papanikos, Fatigue damage of laminated fibrous composites, Proceedings of MesoMechanics 2000, pp. 1057-1066, Xi'an, China, June 2000.
- C10. Al.Th. Kermanidis, P. Papanikos and Sp.G. Pantelakis, Mesodamage of 2024-T3 aluminum alloy specimen due to corrosion-induced localized hydrogen embrittlement, CD-ROM Proceedings of the Tenth International Conference on Fracture, Hawaii, December 2001.
- C11. P. Papanikos and K.I. Tserpes, Modelling the tensile behavior of composite bolted joints, CD-ROM Proceedings of the 4th GRACM Congress on Computational Mechanics, GRACM 2002, Patras, Greece, 27-29 June 2002.
- C12. P. Papanikos and Al.Th. Kermanidis, Effect of corrosion-induced hydrogen embrittlement on the fracture toughness of 2024-T3 aluminum alloy, Proceedings of the Mesomechanics 2002 Conference, pp. 627-633, Aalborg, Denmark, August 2002.
- C13. Th. Kermanidis, S.A. Tsirkas, P. Papanikos, Effect of laser welding parameters on the distortion of thin ship panels, International Conference on Manufacturing Engineering (ICMEN), pp. 691-700, Thessaloniki, Greece, October 2002.
- C14. Th. Kermanidis, K.I. Tserpes, P. Papanikos, G. Labeas and Sp. Pantelakis, Fatigue damage accumulation and residual strength assessment of composite laminates through progressive damage modelling, Proceedings of the Mesomechanics 2003 Conference, pp. 167-174, Tokyo, Japan, 26-28 August 2003.
- C15. V. Karatzaferis, M.A. Kattis, M.A. and P. Papanikos, Analysis of the bond-slip behaviour of FRP reinforcing bars in concrete, Proceedings of the 6th Mesomechanics Conference, pp. 446-451, Patras, May 31-June 4, 2004.
- C16. P. Papanikos, K.I. Tserpes and G. Labeas, Progressive damage modelling of bonded composite repairs, Proceedings of the 6th Mesomechanics Conference, pp. 452-458, Patras, May 31-June 4, 2004.
- C17. M. Tsakiri, C. Ioannidis, P. Papanikos and M.A. Kattis, Load testing measurements for structural assessment using geodetic and photogrammetric techniques, 1st FIG International Symposium on Engineering Surveys for Construction Works and Structural Engineering, Nottingham, UK, June 28-July 1, 2004.
- C18. V. Karatzaferis, M. Kattis, P. Papanikos, Local shear-slip behavior in FRP reinforced concrete elements under cyclic loading, Proceedings of the 15th Hellenic Concrete Conference, Alexandroupolis, Greece, October 25-27, 2006 (in Greek).
- C19. K.I. Tserpes and P. Papanikos, Tensile behavior and fracture of carbon nanotubes containing Stone-Wales defects, Proceedings of the 16th European Conference of Fracture, pp. 39-40, Alexandroupolis, Greece, June 3-7, 2006.
- C20. K.I. Tserpes, P. Papanikos and Sp. Pantelakis, Continuum modelling of interfacial load transfer in carbon nanotube/polymer composites subjected to tension and bending, Proceedings of the Mesomechanics 2008 Conference, Cairo, Egypt, Jan 28-Feb 1, 2008.
- C21. F.S. Efthimiou, P. Papanikos, K.I. Tserpes and Sp. Pantelakis, Continuum simulation of tensile, bending and torsional rigidities of multi-walled carbon nanotubes, Proceedings of the 9th HSTAM International Congress on Mechanics, Limassol, Cyprus, 12 – 14 July 2010.
- C22. D. Ioannou, V. Moulianitis, P. Papanikos, Swarm household robotics: A prospective approach, 2nd Hellenic Robotics Conference, Patras, Greece, 9-10 December 2010 (in greek).
- C23. K.I. Tserpes, P. Papanikos, Fracture behavior and strength of graphemes containing randomly dispersed defects, Proceeding of the 2nd International Conference of Engineering Against Fracture (ICEAF), Mykonos, Greece, June 22-24, 2011.
- C24. P. Papanikos, K.I. Tserpes, Stiffness evaluation of polymers reinforced by specifically or randomly distributed carbon nanotubes, Proceedings of the 16th International Conference on Composite Structures (ICCS 16), Porto, Portugal, June 28-30, 2011.
- C25. K.I. Tserpes, P. Papanikos and Sp. Pantelakis, Numerical study of carbon nanotube-based crack growth enhancement in polymers, Proceedings of the 16th International Conference on Composite Structures (ICCS 16), Porto, Portugal, June 28-30, 2011.
- C26. P. Papanikos, P. Poulin, C. Bartholome, S.K. Kourkoulis and N.D. Alexopoulos, Characterization of PVA-CNT fiber's mechanical behavior: Testing and finite element modeling, Proceedings of the 16th International Conference on Composite Structures (ICCS 16), Porto, Portugal, June 28-30, 2011.
- C27. Z.S. Metaxa, N.D. Alexopoulos, P. Papanikos and C. Stergiou, Tensile mechanical behaviour of aeronautical 2024 and 2198 aluminum alloys after corrosion exposure,

Proceedings of the 4th International Conference on Integrity, Reliability and Failure, (IRF 2013), Funchal, Portugal, June 23-27, 2013.

- C28. P. Papanikos, I. Tapeinos, S.K. Kourkoulis and N.D. Alexopoulos, Finite element modelling of the shear stress distribution of embedded polyvinyl alcohol – carbon nanotube fibers in glass fiber reinforced composites, Proceedings of the 4th International Conference on Integrity, Reliability and Failure, (IRF 2013), Funchal, Portugal, June 23-27, 2013.
- C29. Z. Koutkalaki, P. Papagiannis, Ph. Azariadis, P. Papanikos, S. Kyratzi, D. Zissis, D. Lekkas and E. Xidias, Towards a foot bio-model for performing finite element analysis for footwear design optimization using a Cloud infrastructure, Proceedings of CAD14, Hong Kong, June 23-26, 2014.
- C30. P. Papanikos, Finite element-based optimization of bonded repairs with respect to strength and fatigue life, Proceedings of ICAF 2014, Patras, Greece, July 14-16, 2014.
- C31. P. Papanikos, Finite element modelling of the mechanical behavior of polymers reinforced by randomly distributed carbon nanotubes, Keynote lecture, Proceedings of the 39th Solid Mechanics Conference, Zakopane Poland, Sep. 1-5, 2014.
- C32. Z. Koutkalaki, P. Azariadis and P. Papanikos, Parametric study of the effect of sole's materials on plantar pressure distribution using a finite element foot-footwear model, 3rd International Leather Engineering Congress Innovative Aspects for Leather Industry, IAFLI 2015, Izmir- Turkey, May 2015.
- C33. Z. Koutkalaki, P. Papagiannis, P. Azariadis and P. Papanikos, Finite element evaluation of the mechanical behaviour of a detailed foot/footwear model, Proceedings of Mechanics and Materials in Design Conference (M2D2015), Azores, Portugal, 26-30 July 2015.
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