Dr. Avraam A. Konstantinidis

Associate Professor
Director of the Laboratory of Engineering Mechanics (http://etem.civil.auth.gr/en/)
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▪ *Personal Data*

Date of Birth: 28/12/1971 Place of Birth: Thessaloniki, Greece

▪ *Education*

2000	Ph.D. Diploma, AUTh Title: *Application of Wavelet Theory and Neural Networks on the mechanical response of materials*
1996	Diploma in Electrical Engineering, AUTh

▪ *Work Experience*

12/2017–present	*Associate Professor*, Division of Science and Technology of Structures, AUTh
9/2013–12/2017	*Assistant Professor*, Division of Science and Technology of Structures, AUTh
11/2010–9/2013	*Assistant Professor*, Division of Mechanics, AUTh
5/2003–11/2010	*Lecturer*, Division of Mechanics, AUTh 7/2002–5/2003 Post-doctoral Researcher, Laboratory of Mechanics and Materials, AUTh
4–8/1999	*Visiting Researcher*, Dipartimento di Ingegneria Strutturale e Geotecnica, Politecnico di Torino
11–12/1997	*Visiting Researcher*, Inst. für Material Forschung, Forschungszetrum Karlsruhe

▪ *Additional Experience*

- Young Researcher, EU Program: TMR Network on Material Instabilities in Deformation and Fracture: Mechanics, Materials Science and Nonlinear Physics Aspects, Contract No: ERB FMRX-CT96-0062
- Young Researcher, EU Program: Reactor Vessel Integrity in Severe Accidents, Contract No: FI4S-CT96-0024
- Young Researcher, National Program: PENED ’96 Degradation of Underground Double Porosity Aquifers
- Young Researcher, National Program: PENED ’99 Gradient Theory, Stochasticity and Self-Organization: Applications in Nanomaterials, Industrial Materials and Biocompatible Epilayers
- Industrial Attachment, EKO S.A., Thessaloniki (7-8/1993)
- Industrial Attachment, DEI S.A., Thessaloniki (7-10/1992)

• *Teaching (Depts. of Chemical, Civil, Electrical and Rural Engineering)*

- ***Undergraduate Courses***
  Engineering Mechanics, Strength of Materials, Introduction to Continuum Mechanics, Materials Mechanical Response
- ***Graduate Courses (Interdepartmental Program Nanosciences & Nanotechnologies/N&N)***
  Mechanics of Materials and Micro- Nano- Structures, Nanomechanics

• *PhD & MSc Theses Supervision (at AUT)*

- Advisor in 1 finished PhD Thesis (A. Kampouris, 2022) and 3 ongoing ones (K. Parisis, V. Dimosthenes, A. Stouri). Member of the 3-member Admission Committee in a number of completed PhD Theses (e.g. G. Mokios, D. Tragoudaras, A. Sidiropoulos, E. Georgalis).
- Advisor in 3 (completed) MSc Theses in the Interdepartmental Graduate Program *Nanosciences & Nanotechnologies /NN* (A. Papastergiou, A. Tsigarida, G. Bizbos), as well as a number of (completed) Undergraduate Theses (e.g. V. Alexandri, S. Raptopoulos, A. Kolikidou, C. Charteros).

▪ *Participation in Organization/Committees of Scientific Conferences/Symposia*

- *5th Euromech Solid Mechanics Conference (ESMC-5),* Thessaloniki, 17-22 August, 2003
- *19th Conference and Summer School on Non-Linear Science and Complexity,* Thessaloniki, 10 – 22 July, 2006
- *1st World Symposium on Multiscale Material Mechanics & Engineering Sciences (1st MMMES),* Thessaloniki, 29 April - 2 May, 2007
- *1st International Conference From Nanoparticles & Nanomaterials to Nanodevices & Nanosystems (IC-4N),* Chalkidiki, 16-18 June, 2008
- *2nd World Symposium on Multiscale Material Mechanics and Engineering Sciences (2nd MMMES),* Thessaloniki, 21 - 22 May, 2009
- *Shechtman – Suresh Convocation & Honorary Symposium*, Thessaloniki, 30 Nov. – 3 Dec., 2018
- *NSF Advanced Study Institute: Using Nanotechnology for Fabricating New Biomaterials and Next Generation Electrodes*, Thessaloniki, 18-28 July, 2022
- *Horstemeyer International Symposium on Multiscale Materials Mechanics & Sustainable Applications - SIPS2022,* Phuket, 27 Nov. – 1 Dec., 2022
- *2nd International Symposium on Geomechanics & Applications for Sustainable Development - SIPS2022,* Phuket, 27 November – 1 December, 2022
- *NSF Advanced Study Institute: Using Nanotechnology for Fabricating New Biomaterials and Next Generation Electrodes*, Thessaloniki, 12-24 July, 2023
- *NSF Advanced Study Institute: Using Nanotechnology for Fabricating New Biomaterials and Next Generation Electrodes*, Thessaloniki, 11-20 July, 2024

▪ *Participation in Journal Editorial Boards*

- *Journal of the Mechanical Behavior of Materials/JMBM - formerly*
- *Computer and Experimental Simulations in Engineering and Science/CESES - formerly*

▪ *Guest Reviews in Scientific Journals*

• *Journal of the Mechanical Behavior of Materials*	• *Tissue Engineering*
• *Journal of Biomedical Nanotechnology*	• *Journal of Materials Research*
• *Journal of Materials Science*	• *Journal of Microscopy*
• *Materials Chemistry and Physics*	• *Evolving Systems*
• *Meccanica*	• *Philosophical Magazine*
• *Philosophical Magazine Letters*	• *Applied Materials Today*
• *Biomaterials Science*	• *Frontiers*
• *Zeitshrift Angewandte Mathematik und Mechanik*	• *CATENA*
• *Journal of Building Engineering*	• *Journal of Nanomaterials*
• *Engineering Fracture Mechanics*	• *ACS Applied Polymer Materials*
• *Materials Today Sustainability*	• *Journal of Prosthodontics*

▪ *Guest Reviews in Funding Organizations*

• *Swiss National Foundation*	• *Greek General Secretariat of Research & Technology*
• *Greek Scholarships Foundation*	• *Hellenic Foundation for Research and Innovation*

▪ *Funding ID*

- *Strengthening Public Research and Innovation Infrastructures of the Region of Central Macedonia (2023 – 30 kEuros)*
- *Strengthening Public Research and Innovation Infrastructures of the Region of Central Macedonia (Dec. 2017 – 365 kEuros)*
- *EDVM103 : Modifying the Conceptual Framework for Nano-Indentation: Application to Thin Films Used in Organic Electronics (Dec. 2019 - Mar. 2021 – 41 kEuros*)

▪ *Recognition of Scientific Work*

- *Citations (Scopus):* *510* *h-index (Scopus):* 13
- *Citations (ISI):* *530* *h-index (ISI):* 13

▪ *Publications*

• *Publications in Book Chapters*

1. Stefanidou M., Kamperidou V, Konstantinidis A., Koltsou P. and Papadopoulos S., Rheological properties of bio fibres in cementitious composite matrix, in: *Advances in Bio-Based Fibres: Moving Towards a Green Society*, Chapter 24, Eds. M.R. Sanjay et al., pp. 553-573, 2021. [ISBN: 978-0-12-824543-9]
2. Konstantinidis A. and Aifantis E.C., Gradient nanomechanics in Civil Engineering, in: *Nanomechanics of Structures and Materials*, Chapter 10, Eds. A. Faghidian and K. Zur, pp. 319-333, 2024. [ISBN: ISBN: 978-0-443-21949-8]

• *Publications in Refereed Journals*

1. Doulgeri Z., Fahantidis N. and Konstantinidis A., On the decoupling of position and force controllers in constrained robotic tasks, *J. Robotic Systems* **15**, 323-340, 1998. [https://doi.org/10.1002/(SICI) 1097-4563(199806)15:6<323::AID-ROB2>3.0.CO;2-P]
2. Huber N., Konstantinidis A. and Tsakmakis Ch., Determination of Poisson's Ratio by Spherical Indentation Using Neural Networks – Part I: Theory, *J. Applied Mechanics* **68**, *Trans. ASME*, 218-222, 2001. [DOI: 10.1115/1.1354624]
3. Moutsopoulos K.N., Konstantinidis A.A., Meladiotis I.D., Tzimopoulos Ch.D. and Aifantis E.C., Hydraulic behavior and contaminant transport in multiple porosity media, *Transp. Porous Media* **42**, 265-292, 2001. [DOI: 10.1023/A:1006745924508]
4. Frantziskonis G., Konstantinidis A. and Aifantis E.C., Scale-dependent constitutive relations and the role of scale on nominal properties, *Eur. J. Mech. A/Solids* **20**, 925-936, 2001. [DOI: 10.1016/S0997-7538(01)01167-6]
5. Konstantinidis A., Frantziskonis G., Carpinteri A. and Aifantis E.C., Size effects on tensile strength and fracture energy in concrete: Wavelet vs. fractal approach, *J. Mechan. Behav. Materials* **12**, 63-75, 2001. [DOI: 10.1515/JMBM.2001.12.2.63]
6. Konstantinidis A., Ioannidou T., Kehagias A. and Aifantis E.C., Gradient constitutive equations, size effects and artificial neural networks, *J. Mechan. Behav. Materials* **12**, 141-157, 2001. [DOI: 10.1515/JMBM.2001.12.3.141]
7. Konstantinidis A. and Aifantis E.C., Recent developments of gradient theory. Part II: Plastic heterogeneity and wavelets, *J. Engng. Mater. Technology* **124**, 358-364, 2002. [DOI: 10.1115/1.1479696]
8. Tsagrakis I., Konstantinidis A. and Aifantis E.C., Strain gradient and wavelet interpretation of size effects in yield and strength, *Mech. Mater.* **35**, 733-745, 2003. [DOI: 10.1016/S0167-6636(02)00205-3]
9. Tsagrakis I., Konstantinidis A. and Aifantis E.C., Size effects in tension: Gradient internal variable and wavelet models, *J. Mechan. Behav. Materials* **14**, 41-58, 2003. [DOI: 10.1515/JMBM.2003.14.1.41]
10. Tsagrakis I., Efremidis G., Konstantinidis A. and Aifantis E.C., Deformation vs. flow and wavelet-based models of gradient plasticity: Examples of axial symmetry, *Int. J. Plasticity* **22**, 1456-1485, 2006. [DOI: 10.1016/j.ijplas.2005.07.009]
11. Fyffe B., Schwerdtfeger J., Blackford J.R., Zaiser M., Konstantinidis A. and Aifantis E.C., Fracture toughness of snow: The influence of layered microstructure, *J. Mechan. Behav. Materials* **18**, 195-215, 2007. [DOI: 10.1515/JMBM.2007.18.3.195]
12. Aifantis K.E. and Konstantinidis A.A., Yielding and tensile behavior of nanocrystalline copper, *Mater. Sci. Engng. A* **503**, 198-201, 2009. [DOI: 10.1016/j.msea.2008.04.084]
13. Aifantis K.E., Konstantinidis A.A. and Hackney S.A., On some aspects of interfaces at the nanoscale, *J. Mechanics and MEMS* **1**, 105-117, 2009.
14. Aifantis K.E. and Konstantinidis A.A., Hall-Petch revisited at the nanoscale, *Mater. Sci. Engng. B* **163**, 139-144, 2009. [DOI: 10.1016/j.mseb.2009.05.010]
15. Zaiser M., Moretti P., Konstantinidis A. and Aifantis E.C., Nucleation of interfacial shear cracks in thin films on disordered substrates, *J. Stat. Mech.* P02047 (1-12), 2009. [DOI: 10.1088/1742-5468/2009/02/P02047]
16. Konstantinidis A., Cornetti P., Pugno N. and Aifantis E.C., Application of gradient theory and quantized fracture mechanics in snow avalanches, *J. Mechan. Behav. Materials* **19**, 39-48, 2009. [DOI: 10.1515/JMBM.2009.19.1.39]

17. Zaiser M., Moretti P., Konstantinidis A. and Aifantis E.C., Roughening and pinning of interface cracks in shear delamination of thin films, *J. Stat. Mech.*, P11009, 2009. [DOI: 10.1088/1742-5468/2009/11/P11009]
18. Aifantis K.E., Konstantinidis A. and Forest S., Modeling strain localization bands in metal foams, *J. Comput. Theor. Nanosci.* **7**, 1-7, 2010. [DOI: 10.1166/jctn.2010.1367]
19. Konstantinidis A., Tsagrakis I. and Aifantis E.C., 1D gradient material mechanics with applications at the nanoscale, *Emerg. Mater. Res.* **1**, 39-47, 2012. [DOI: 10.1680/emr.2012.1.S1.006]
20. Manda M., Moschakis N., Konstantinidis A., Christophilos D., Papadopoulou L., Koidis P. and Aifantis E.C., Probing the mechanical properties of dental porcelain through nanoindentation, *J. Mech. Behav. Mater.* **21**, 41-46, 2012. [DOI: 10.1515/jmbm-2012-0029]
21. Zaiser M., Mill F., Konstantinidis A. and Aifantis K., Strain localization and strain propagation in collapsible solid foams, *Mater. Sci. Engng. A* **567**, 38-45, 2013. [DOI: 10.1016/j.msea.2012.12.038]
22. Konstantinidis A.A., Aifantis K.E. and De Hosson J.Th.M., Capturing the stochastic mechanical behavior of micro and nanopillars, *Mater. Sci. Eng. A* **597**, 89-94, 2014. [DOI: 10.1016/j.msea.2013.12.053]
23. Avlonitis M., Efremidis G. and Konstantinidis A., A statistical study of precursor activity in rain-induced landslides, *J. Mech. Behav. Mater.* **22**, 79-86, 2014. [DOI: 10.1515/jmbm-2014-0009]
24. Zhao J., Zhang X., Konstantinidis A.A. and Kang G., Correlating the internal length in strain gradient plasticity theory with the microstructure of material, *Phil. Mag. Lett.* **95**, 340-349, 2015. [DOI: 10.1080/09500839.2015.1066516]
25. Karapanagiotis I., Aifantis K.E. and Konstantinidis A., Capturing the evaporation process of water drops on sticky superhydrophobic polymer-nanoparticle surfaces, *Mater. Lett.* **164**, 117-119, 2016. [DOI: 10.1016/j.matlet.2015.10.110]
26. Wei X., Konstantinidis A., Qi C. and Aifantis E.C., Gradient plasticity used for modeling extrinsic and intrinsic size effects in the torsion of Au microwires, *J. Mechan. Behav. Mater.* **25**, 53-56, 2016. [DOI: 10.1515/jmbm-2016-0004]
27. Konstantinidis A.A., Frantziskonis G., Askes H. and Aifantis E.C., The use of nanoindentation for determining internal lengths and the constitutive response of monument materials: Models and experiments, *J. Mechan. Behav. Mater.* **25**, 57-60, 2016. [DOI: 10.1515/jmbm-2016-0003]
28. Konstantinidis A.A., Michos K. and Aifantis E.C., On the correct interpretation of compression experiments of micropillars produced by a focused ion beam, *J. Mechan. Behav. Mater.***25**, 83-87, 2016. [DOI: 10.1515/jmbm-2016-0009]
29. Kampouris A.K. and Konstantinidis A., On the interpretation of the indentation size effect (ISE) through gradient theory for Vickers and Berkovich indenters, *J. Mechan. Behav. Mater.* **25**, 161-164, 2016. [DOI: 10.1515/jmbm-2017-0003]
30. Kakavas P.A., Konstantinidis A., Hatzitrifon N.K., Papadopoulos P. and Aifantis E.C., On the constitutive equations of fresh mortar, *J. Mechan. Behav. Mater.* **25**, 183-187, 2016. [DOI: 10.1515/jmbm-2016-0002]
31. Efremidis G., Avlonitis M., Konstantinidis A. and Aifantis E.C., A statistical study of precursor activity in earthquake-induced landslides, *Comput. Geotechnics* **81**, 137-142, 2017. [DOI: 10.1016/j.compgeo.2016.08.010]
32. Sidiropoulos A.D., Harea E., Konstantinidis A.A. and Aifantis, E.C., "Pop-in" and "pop-out" effect in monocrystalline silicon. A statistical investigation, *J. Mechan. Behav. Mater.* **26**, 65-71, 2017. [DOI: 10.1515/jmbm-2017-0015]
33. Petsos G., Konstantinidis A. and Aifantis, E.C., On the role of higher order deformation gradients in necking, spinodal decomposition and neuron firing, *Mech. Res. Comm.* **93**, 119-123, 2018. [DOI: 10.1016/j.mechrescom.2017.11.006]
34. Chattopadhyay A.K., He X., Tsambali A.-A., Konstantinidis A.A. and Aifantis E.C., On stochastic resonance in a model of double diffusion, *Mater. Sci. Technol.* **34**, 1606-1613, 2018. [DOI: 10.1080/02670836.2018.1507697]
35. Tsambali A.-A., Konstantinidis A.A. and Aifantis E.C., Modeling double diffusion in soils and materials, *J. Mechan. Behav.* **27**, 20182003, 2018. [DOI: 10.1515/jmbm-2018-2003]
36. Konstantinidis A.A. and Aifantis K.E., Capturing slip band formation in Ni_3Al nanocubes during compression, *Mater. Sci. Technol.* **35**, 571-576, 2019. [DOI: 10.1080/02670836.2019.1572688]

37. Konstantinidis A., A note on the physical meaning of gradient constitutive relations, 2019. arXiv:1901.09422v1. [https://arxiv.org/abs/1901.09422]
38. Kouris L.S., Bournas D.A., Akintayo O.T., Konstantinidis A.A. and Aifantis E.C., A gradient elastic homogenisation model for brick masonry, *Engng. Struct.* **208**, 110311, 2020. [DOI: 10.1016/j.engstruct.2020.110311]
39. Parisis K., Shuang F., Wang B., Hu P., Giannakoudakis A. and Konstantinidis A., From gradient elasticity to gradient interatomic potentials: The case-study of gradient London potential, *J. Appl. Math. Phys.* ***8***, 1826-1837, 2020. [DOI: 10.4236/jamp.2020.89137]
40. Tsigarida A., Tsampali E., Konstantinidis A.A. and Stefanidou M., On the use of confocal microscopy for calculating the surface microroughness and the respective hydrophobic properties of marble specimens, *J. Build. Engng.* **33**, 101876, 2021. [DOI: 10.1016/j.jobe.2020.101876]
41. Kouris E-G., Kouris L.-A.S., Konstantinidis A.A., Karayannis C.G. and Aifantis E.C., Assessment and fragility of Byzantine unreinforced masonry towers, *Infrastruct.* **6**, 40/1-22, 2021. [DOI: 10.3390/infrastructures6030040]
42. Lappas K.I., Konstantinidis A.A. and Aifantis E.C., Modelling Triple Diffusion of ^{63}Ni in UFG Cu – Zr Ingots, *Sripta Mater.* **201**, 113980, 2021. [DOI: 10.1016/j.scriptamat.2021.113980]
43. Stefanidou M., Kamperidou V, Konstandinidis A., Koltsou P. and Papadopoulos S., Use of Posidonia oceanica fibres in lime mortars, *Constr. Build. Mater.* **298**, 123881, 2021. [DOI: 10.1016/j.conbuildmat.2021.123881]
44. Kouris E.-G.S., Kouris L.-A.S., Konstantinidis A.A., Kourkoulis S.K., Karayannis C.G. and Aifantis E.C., Stochastic dynamic analysis of cultural heritage towers up to collapse, *Buildings* **11**, Art. No. 296, 2021. [DOI: 10.3390/buildings11070296]
45. Mourouzis P., Diamantopoulou E.-I., Tsigarida A., Dionysopoulos D., Konstantinidis A., Samanidou V. and Tolidis K., Evaluation of monomer elution and surface roughness of a polymer infiltrated ceramic network CAD/CAM material after Er,Cr:YSGG laser-assisted tooth bleaching, *Operat. Dentistry* **46-5**, E171-E184, 2021. [DOI: 10.2341/20-158-L]
46. Parisis K., Dimosthenis V., Kouris L., Konstantinidis A. and Aifantis E.C., A note on gradient/fractional one-dimensional elasticity and viscoelasticity, *Fractal Fract.* **6**, Art. No. 84, 2022. [DOI: 10.3390/fractalfract6020084]
47. Zhao J., Zhang B., Liu D., Konstantinidis A.A., Kang G. and Zhang X., Generalized Aifantis strain gradient plasticity model with internal length scale dependence on grain size, sample size and strain, *Acta Mech. Sinica* **38**, 421188, 2022. [DOI: 10.1007/s10409-022-09009-2]
48. Apostolinas V.G., Galopoulou K.S., Kouris L.-A.S., Anastasiou E.K. and Konstantinidis A.A., Experimental investigation and analytical modelling of the roughness and bonding agent influence on the old-to-repair concrete interfacial bonding strength, *Mater. Struct.* **55**, Art. No. 148, 2022. [DOI: 10.1617/s11527-022-01984-y]
49. Kampouris A.K., Konstantinidis A.A., Yang R., Bai Y. and Aifantis E.C., Internal length gradient approach to pyramidal/spherical nanoindentation experiments, *Nanoscience and Technology* **13**, 47-66, 2022. [DOI: 10.1615/NanoSciTechnolIntJ.2022041078]
50. Karaoulani K., Dionysopoulos D., Tolidis K., Kouros P., Konstantinidis A. and Hill, R., Effect of air-abrasion pretreatment with three bioactive materials on enamel susceptibility to erosion by artificial gastric juice, *Dental Mater.* **38**, 1218-1231, 2022. [DOI: 10.1016/j.dental.2022.06.016]
51. Konstantinidis, A. and Aifantis, E.C., Gradients and internal lengths in small scale problems of mechanics, *Int. J. Multisc. Computat. Engng.* **20**, 89-110, 2022. [DOI: 10.1615/IntJMultCompEng.2022043377]
52. Kampouris A.K., Lappas K.-I., Konstantinidis A.A. and Aifantis E.C., A new method for interpreting Vickers indentation measurements, *Mater. Today: Proc.* **67**, 968-970, 2022. [DOI: 10.1016/j.matpr.2022.06.242]
53. Kampouris A.K., Lappas K.-I., Konstantinidis A.A. and Aifantis E.C., 3-Dimensional strain/stress fields in Berkovich/Vickers indentation: Comparisons with thin film delamination & shear band formation, *Nanoscience and Technology* **14**, 71-93, 2023. [DOI: 10.1615/NanoSciTechnolIntJ.2021040335]
54. Ximinis E., Dionysopoulos D., Papadopoulos C., Tournavitis A., Konstantinidis A. and Naka O., Effect of tooth brushing simulation on the surface properties of various resin-matrix CAD/CAM ceramics, *J. Esth. Restor. Dent.* **2023**, 1-10, 2023. [DOI:10.1111/jerd.13043]
55. Markopoulos I., Kouris L.-A. and Konstantinidis A., On the use of microstructure characteristics

to predict metal matrix composites' macroscopic mechanical behavior, *Appl. Sci.* **2023**, 13, 4989, 2023. [DOI: 10.3390/app13084989]

56. Dionysopoulos D., Papageorgiou S., Papadopoulos C., Davidopoulou S., Konstantinidis A. and Tolidis K., Effect of whitening toothpastes with different active agents on the abrasive wear of dentin following tooth brushing simulation, *J. Funct. Biomater.* **2023**, 14, 268, 2023. [DOI: 10.3390/jfb14050268]
57. Chattopadhyay A.K., Parisis K., Konstantinidis A. and Aifantis E.C., Transport in a stochastic double diffusion model, *Meccanica*, 1-15, 2023. [DOI: 10.1007/s11012-023-01686-x]
58. Tsardaka E.-C., Sougioultzi K., Konstantinidis A. and Stefanidou M., Interpreting the setting time of cement pastes for modelling mechanical properties, *Case Stud. Constr. Mater.* **19**, e02364, 2023. [DOI: 10.1016/j.cscm.2023.e02364]
59. Pechlivani E.M., Kampouris A.K., Melidis L., Katakalos K., Kontodina T., Tzovaras D. and Konstantinidis A.A., 3D Printed Inconel mechanical response related to volumetric energy density, *Mater. Today: Proc.* **93**, 39-47, 2023. [DOI: 10.1016/j.matpr.2023.06.438]
60. Pechlivani E.M., Melidis L., Pemas S., Tzovaras D., Katakalos K. and Konstantinidis A.A., On the effect of Volumetric Energy Density (VED) on the characteristics of 3D printed metals and alloys, *Metals* **13**, 1776, 2023. [DOI: 10.3390/met13101776]
61. Kampouraki Z.-C., Petala M., Zacharias K., Konstantinidis A., Kostoglou M. and Karapantsios Th.D., Highly sensitive impedance spectroscopy technique for online monitoring of biofilm growth on metallic surfaces, *Environm. Res.* **240**, 117401, 2024. [DOI: 10.1016/j.envres.2023.117401]
62. Gkrava E., Tsiridis V., Manoudis P., Zorba T., Pavlidou E., Konstantinidis A., Karapantsios T.D., Spathis P.K. and Karapanagiotis I., A robust superhydrophobic coating of siloxane resin and hydrophobic Calcium Carbonate nanoparticles for Limestone protection, *Mater. Today Comm.* **38**, 108393, 2024. [DOI: 10.1016/j.mtcomm.2024.108393]
63. Kalampokis S., Manthos E., Konstantinidis A., Kakafikas Ch. and Kalapouti A., Bio-modified Bitumen: A comparative analysis of Algae influence on characteristic properties, *Eng* **2024**, 5, 417-432, 2024. [DOI: 10.3390/eng5010022]
64. Avgoulas D.I., Petala M., Briandet R., Dergham Y., Noirot-Gros M.-F., Konstantinidis A.A., Kostoglou M. and Karapantsios Th.D., Effect of surface treatment and shear flow on biofilm formation over materials employed in space water storage and distribution systems, *Frontiers Mater.* **11**, 1401764, 2024. [DOI: 10.3389/fmats.2024.1401764]
65. Pemas S., Sougioultzi K., Kouroutzidou C., Stefanidou M., Konstantinidis A.A. and Pechlivani E.-M., Enhancing clay-based 3D printed mortars with polymeric mesh reinforcement techniques, *Polymers* **16**, 2182, 2024. [DOI: 10.3390/polym16152182]
66. Galopoulou K.S., Apostolinas V.G., Kouris L.A.S., Anastasiou E.K. and Konstantinidis A.A, Validating concrete-to-concrete interfacial modelling through a multi-parametric experimental campaign, *J. Struct. Engng.* **151**, 04025015, 2025. [DOI: 10.1061/jsendh.steng-13687]

- ***Publications in Conference Proceedings***

P1. Konstantinidis A., Frantziskonis G. and Aifantis E.C., Wavelets Approach to Adiabatic Shear Banding, in: *Proc. of the 5th National Congress on Mechanics* **2**, pp. 930-936, Ioannina, Greece, 1998.

P2. Konstantinidis A., Pontidou Ch. and Aifantis E.C., Application of gradient theory and wavelets on instabilities of polymeric materials, in: Proc. 2nd Panhellenic Conference of Chemical Engineering, Thessaloniki, 1999.

P3. Zaiser, M., Fyffe, B., Moretti, P., Konstantinidis, A. and Aifantis, E.C., Pinning and propagation of interface cracks in slope failure: 1D and 2D considerations, in: *Proc. of the 2nd Int. Symp. Continuous Discontinuous Modelling of Cohesive Frictional Materials (CDM2004)*, eds. P.A. Vermeer, W. Ehlers, H.J. Hermann, E. Ramm,. Balkema Publishers, pp. 435-446, 2004.

P4. Aifantis, K.E. and Konstantinidis A., Applications of gradient deformation theory of plasticity to nanopolycrystals, in: *Proc. of PLASTICITY '05*, eds. A.S. Khan and A.R. Khoei, Neat Press, pp.469-471, 2005.

P5. Konstantinidis, A., Pugno, N., Cornetti, P. and Aifantis, E.C., Avalanche Mechanics: LEFM vs. Gradient Model, in: *Proc. of the 16th European Conference of Fracture (ECF16)*, CD-ROM,

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- ***Participation/Presentation/Posters in National/International Conferences***

- *9th Summer School/4th Panhellenic Conference on the Complexity and Chaotic Dynamics of non-Linear Systems, Patras, A. Bountis (Org.), 22 July – 2 August, 1996, Participation*
- *1st Euroconference and U.S. Workshop on Material Instabilities in Deformation and Fracture*, Chalkidiki, E.C. Aifantis (Org.), 4-7 September 1996, *Poster*
- *2nd Euroconference on Material Instabilities in Deformation and Fracture*, Thessaloniki, E.C. Aifantis (Org.), 31 August - 4 September 1997, *Poster*
- *5th National Congress on Mechanics*, Ioannina, C.V. Massalas (Org.), 27-30 August 1998, *Oral Presentation*
- *2nd Panhellenic Conference of Chemical Engineering, V. Papageorgiou (Org.), Thessaloniki, 27-29 May 1999, Presentation*
- *ALERT 2004*, Aussois, France, F. Darve (Org.), 11-13 October 2004, *Oral Presentation*
- *2nd International Symposium on Continuous and Discontinuous Modelling of Cohesive Frictional Materials (CDM2004)*, Stuttgart, H. Herrmann (Org.), 24-27 September 2004, *Oral Presentation*
- *Symposium Honoring the Contributions of Elias Aifantis*, *2005 Joint ASCE/ASME/SES Conference on Mechanics and Materials*, Baton Rouge, USA, D. Bammann, H. Zbib and P. Sofronis (Org.), 1-3 June 2005, *Oral Presentation*
- *18th Summer School on Non-Linear Science and Complexity, Volos, A. Bountis (Org.), 18-30 July 2005, Oral Presentation*
- *16th European Conference of Fracture (ECF16)*, Alexandroupolis, E. Gdoutos (Org.), 2-7 July 2006, *Oral Presentation*
- *8th HSTAM Int. Congress on Mechanics*, Patras, D.E. Beskos (Org.), 12-14 July 2007, *Oral Presentation*
- *4th International Workshop on Nanosciences and Nanotechnologies*, Thessaloniki, S. Logothetidis (Org.), 16-18 July 2007, *Poster*
- *4th International Conference on Multiscale Materials Modeling*, Tallahassee, USA, A. El-Azab (Org.), 27-31 October 2008, *Oral Presentation. In addition, presentation of Keynote Lectures for E.C. Aifantis and M. Zaiser*
- *Mesomechanics 2009*, Oxford, A. Korsunsky & D. Dini (Org.), 23-26 June 2009, *Oral Presentation*
- *7th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM)*, Crete, 18-22 September 2009, *Invited Oral Presentation*
- *Summer School on MMMES: Curricula Interfacing & Innovation*, August 2010, Epanomi, *Invited Oral Presentation*
- *ENOC 2011*, Rome, July 2011, *Invited Oral Presentation*
- *ICNAAM 2011*, Chalkidiki, September 2011, *Invited Oral Presentation*
- *AIFANTIS International Symposium*, Antalya/Turkey, October 2015, *Invited Oral Presentation*
- *Shechtman – Suresh Convocation & Honorary Symposium*, Thessaloniki, 30 November – 3 December 2018, *Invited Oral Presentation*
- *NSF Advanced Study Institute: Using Nanotechnology for Fabricating New Biomaterials and Next Generation Electrodes*, Thessaloniki, 18-28 July 2022, *Invited Oral Presentation*
- *Horstemeyer International Symposium on Multiscale Materials Mechanics & Sustainable Applications - SIPS2022*, Phuket, 27 November – 1 December 2022, *Invited Oral Presentation*
- *2nd International Symposium on Geomechanics & Applications for Sustainable Development - SIPS2022*, Phuket, 27 November – 1 December 2022, *Invited Oral Presentation*
- *NSF Advanced Study Institute: Using Nanotechnology for Fabricating New Biomaterials and Next Generation Electrodes*, Thessaloniki, 12-24 July 2023, *Invited Oral Presentation*
- *XXXVII Panhellenic Conference on Solid State Physics & Materials Science*, Thessaloniki, 17-20 September 2023, *Invited Oral Presentation*
- *NanoInnovation 2023, MS – Bridging the Gap between Atomistic Modeling and Continuum Mechanics*, Rome, 20 September 2023, *Invited Oral Presentation*
- *1st Online-Symposium on Experimental and Simulation Challenges in MecaNano*, 15 February 2024, *Invited Oral Presentation*
- *NSF Advanced Study Institute: Using Nanotechnology for Fabricating New Biomaterials and Next Generation Electrodes*, Thessaloniki, 11-20 July 2024, *Invited Oral Presentation*