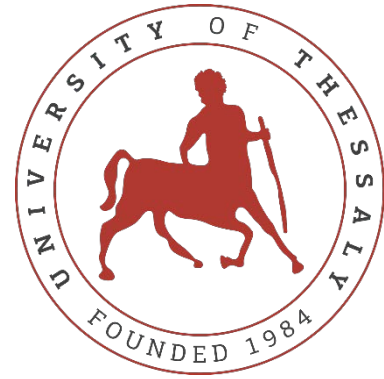


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Academic Positions

- 2020 - currently *Associate Professor, Department of Civil Engineering, University of Thessaly*
- 2016 - 2020 *Assistant Professor, Department of Engineering, Durham University, UK*
- 2014 - 2016 *Research Associate in ERC Advanced Grant “Instabilities and nonlocal multiscale modelling of materials”. ERC-2013-ADG-340561 – INSTABILITIES [University of Trento, Italy].*
- 2012 - 2014 *Marie Curie Research Fellow “Modelling and optimal design of ceramic structures with defects and imperfect interfaces”. IAP-GA-2011-286110-INTERCER2 [University of Trento, Italy].*
- 2011 - 2012 *Research Fellow of Hellenic State Scholarships Foundation. Project title: “Wave propagation problems in gradient elasticity theory”. [Hellenic State Scholarships Foundation, Greece].*
- 2010 - 2012 *Research Associate in NTUA Program for Basic Research “Dynamic fracture and contact within the framework of generalized continua and thermomechanics”. NTUA PEVE 2010. [National Technical University of Athens, Greece].*

Education

- 2009 **Doctor of Philosophy in Applied Mechanics**, National Technical University of Athens, Greece.
- 2005 **Master of Science**, School of Civil Engineering, National Technical University of Athens, Greece. Master programme “Analysis and Design of Structures”.
- 2003 **Diploma in Civil Engineering** (5-year program), School of Civil Engineering, National Technical University of Athens, Greece.

Teaching Experience

- 2016 - 2020 **Assistant Professor** - Department of Engineering, Durham University
- Undergraduate courses:
1. L1 Solid Mechanics and Structures: *Statics and Dynamics*
 2. L3 Solid Mechanics: *Fracture and Fatigue*
 3. L3 Civil Design: *Bridge Design*
 4. L3 Materials: *Ceramics*
 5. L4 Solid Mechanics: *Contact Mechanics*

Publications in Refereed Journals

- [J29] W. Wongviboonsin, **P.A. Gourgiotis**, C.N. Van, S. Limkatanyu, J. Rungamornrat (2020). Size effects in two-dimensional layered materials modelled by couple-stress elasticity. *Frontier of Structural and Civil Engineering*, *accepted*.
- [J28] **P.A. Gourgiotis**, T. Zisis, A.E. Giannakopoulos, H.G. Georgiadis (2019). The Hertz contact problem in couple-stress elasticity. *International Journal of Solids and Structures*, 168, 228-237. [[LINK](#)]
- [J27] **P.A. Gourgiotis** (2018). Interaction of shear cracks in microstructured materials modelled by couple-stress elasticity. *Journal of Mechanics of Materials and Structures*, 13, 401-419. [[LINK](#)]
- [J26] **P.A. Gourgiotis** (2018). Shear crack growth in brittle materials modelled by constrained Cosserat elasticity. *Journal of the European Ceramic Society*, **38**, 3015-3036. [[LINK](#)]
- [J25] **P.A. Gourgiotis**, T. Zisis, H.G. Georgiadis (2018). On concentrated surface loads and Green's functions in the Toupin-Mindlin theory of strain-gradient elasticity. *International Journal of Solids and Structures*, **130-131**, 153-171. [[LINK](#)]

- [J24] K.P. Baxevanakis, **P.A. Gourgiotis**, H.G. Georgiadis (2017). Interaction of cracks with dislocations in couple-stress elasticity. Part II: Shear modes. *International Journal of Solids and Structures*, **118-119**, 192-203 [\[LINK\]](#)
- [J23] K.P. Baxevanakis, **P.A. Gourgiotis**, H.G. Georgiadis (2017). Interaction of cracks with dislocations in couple-stress elasticity. Part I: Opening mode. *International Journal of Solids and Structures*, 118-119, 179-191 [\[LINK\]](#)
- [J22] **P.A. Gourgiotis**, D. Bigoni (2017). The dynamics of folding instability in a constrained Cosserat medium. *Philosophical Transactions of the Royal Society A* **375**(2093): 20160159 [\[LINK\]](#)
- [J21] Th. Papathanasiou, **P.A. Gourgiotis**, F. Dal Corso (2016). Finite element simulation of a gradient elastic half-space subjected to thermal shock on the boundary. *Applied Mathematical Modelling* **40**, 10181-10198 [\[LINK\]](#)
- [J20] D. Bigoni, **P.A. Gourgiotis**, (2016) Folding and faulting of an elastic continuum, *Proceedings of the Royal Society A. Mathematical, Physical and Engineering Sciences*, **472**: 20160018 [**Cover Paper**] [\[LINK\]](#)
- [J19] **P.A. Gourgiotis**, Th. Zisis and K.P. Baxevanakis (2016) Analysis of the tilted flat punch problem in couple-stress elasticity, *International Journal of Solids and Structures*, **85**, 34–43 [\[LINK\]](#)
- [J18] **P.A. Gourgiotis** and D. Bigoni (2016) Stress channelling in extreme couple-stress materials Part II: Localized folding vs faulting of a continuum in single and cross geometries, *Journal of the Mechanics and Physics of Solids* **88**, 169–185 [\[LINK\]](#)
- [J17] **P.A. Gourgiotis** and D. Bigoni (2016) Stress channelling in extreme couple-stress materials Part I: Strong ellipticity, wave propagation, ellipticity, and discontinuity relations, *Journal of the Mechanics and Physics of Solids* **88**, 150–168 [\[LINK\]](#)
- [J16] Th. Zisis, **P.A. Gourgiotis**, and F. Dal Corso (2015) A contact problem in couple stress thermoelasticity: The indentation by a hot flat punch, *International Journal of Solids and Structures* **63**, 226–239 [\[LINK\]](#)
- [J15] **P.A. Gourgiotis** and Th. Zisis (2015) Two-dimensional indentation of micro-structured solids characterized by couple-stress elasticity, *Journal of Strain Analysis for Engineering Design* **51**, 318–331 [\[LINK\]](#)

- [J14] **P.A. Gourgiotis** and H.G. Georgiadis (2015) Torsional and SH surface waves in an isotropic and homogeneous elastic half-space characterized by the Toupin–Mindlin gradient theory, *International Journal of Solids and Structures* **62**, 217–228 [\[LINK\]](#)
- [J13] D.S. Anagnostou, **P.A. Gourgiotis** and H.G. Georgiadis (2015) The Cerruti problem in dipolar gradient elasticity, *Mathematics and Mechanics of Solids* **20**, 1088–1106 [\[LINK\]](#)
- [J12] **P.A. Gourgiotis** and S. Stupkiewicz (2014) Macroscopic stress and strain in a doubly periodic array of dislocation dipoles, *Proceedings of the Royal Society A. Mathematical, Physical and Engineering Sciences*, 470: 20140309 [\[LINK\]](#)
- [J11] H.G. Georgiadis, **P.A. Gourgiotis** and D.S. Anagnostou (2014) The Boussinesq problem in dipolar gradient elasticity, *Archive of Applied Mechanics* **84**, 1373–1391 [\[LINK\]](#)
- [J10] **P.A. Gourgiotis** and A. Piccolroaz (2014) Steady-state propagation of a mode II crack in couple stress elasticity, *International Journal of Fracture* **188**, 119–145 [\[LINK\]](#)
- [J9] Th. Zisis, **P.A. Gourgiotis**, K.P. Baxevanakis and H.G. Georgiadis (2014) Some basic contact problems in couple-stress elasticity, *International Journal of Solids and Structures* **51**, 2084–2095 [\[LINK\]](#)
- [J8] **P.A. Gourgiotis**, H.G. Georgiadis and I. Neocleous (2013) On the propagation and reflection of plane waves in half-spaces of microstructured materials governed by dipolar gradient elasticity, *Wave Motion* **50**, 437–455 [\[LINK\]](#)
- [J7] G. Lykotrafitis, H.G. Georgiadis and **P.A. Gourgiotis** (2012) Rapid sliding motion of a rigid flat indenter over a thermoelastic half-space, *Archive of Applied Mechanics* **82**, 1481–1495 [\[LINK\]](#)
- [J6] **P.A. Gourgiotis**, H.G. Georgiadis and M.D. Sifnaiou (2011) Couple-stress effects for the problem of a crack under concentrated shear loading, *Mathematics and Mechanics of Solids* **17**, 433–459 [\[LINK\]](#)
- [J5] **P.A. Gourgiotis** and H.G. Georgiadis (2011) The problem of a sharp notch in couple-stress elasticity, *International Journal of Solids and Structures* **48**, 2630–2641 [\[LINK\]](#)

- [J4] **P.A. Gourgiotis**, M.D. Sifnaiou and H.G. Georgiadis (2010) The problem of sharp notch in microstructured solids governed by dipolar gradient elasticity, *International Journal of Fracture* 166, 179–201 [\[LINK\]](#)
- [J3] **P.A. Gourgiotis** and H.G. Georgiadis (2009) Plane-strain crack problems in microstructured solids governed by dipolar gradient elasticity, *Journal of the Mechanics and Physics of Solids* 57, 1898–1920 [\[LINK\]](#)
- [J2] **P.A. Gourgiotis** and H.G. Georgiadis (2008) An approach based on distributed dislocations and disclinations for crack problems in couple-stress elasticity, *International Journal of Solids and Structures* 45, 5521–5539 [\[LINK\]](#)
- [J1] **P.A. Gourgiotis** and H.G. Georgiadis (2007) Distributed dislocation approach for cracks in couple-stress elasticity: shear modes, *International Journal of Fracture* 147, 83–102 [\[LINK\]](#)

Chapters in Books

- [B3] Th. Zisis, **P.A. Gourgiotis** and H.G. Georgiadis (2018) Contact Mechanics in the Framework of Couple Stress Elasticity, in: Li S. and Gao X.L. (Eds.) *Generalized Models and Non-classical Approaches in Complex Materials 2*, in: Altenbach H. et al., Springer International Publishing AG, Chapter 14, pp. 1–28. [\[LINK\]](#)
- [B2] **P.A. Gourgiotis** and H.G. Georgiadis (2013) Crack Problems in the Theories of Couple-Stress Elasticity and Dipolar Gradient Elasticity: A Comparison, in: Li S. and Gao X.L. (Eds.) *Handbook of Micromechanics and Nanomechanics*. Pan Stanford Publishing, Chapter 12, pp. 435–465. [\[LINK\]](#)
- [B1] H.G. Georgiadis and **P.A. Gourgiotis** (2010) An approach based on integral equations for crack problems in standard couple-stress elasticity, in: Maugin G.A. and Metrikine A.V. (Eds.) *Mechanics of Generalized Continua: One Hundred Years After the Cosserats*. Springer, pp. 253–262. [\[LINK\]](#)

Invited Lectures

- [I2] **P.A. Gourgiotis** (2015) Folding and faulting of an elastic continuum as the response to a material instability. *Mathematics of Differential Growth, Morphogenesis, and Pattern Selection*. [OBERWOLFACH Miniworkshop ID1545b](#)

(November 1-7, 2015, Oberwolfach, Germany– Organized by: Profs. K. Garikipati, A. Goriely and E. Kuhl)

- [I1] **P.A. Gourgiotis** (2011) Crack problems in the theories of couple-stress elasticity and strain-gradient elasticity: A comparison. *Department of Chemical Engineering Materials and Environment (DICMA), University of Rome La Sapienza* (November 3, 2011, Rome, Italy – Organized by: Profs. S. Vidoli and G. Sciarra)

Conference Organization

- [O2] (2018) Mini-Symposium on ‘*Mechanics of Generalized Continua with Applications to Microstructured Materials*’, **10th European Solid Mechanics Conference ESMC2018** [July 1-8] – Organizers: Panos Gourgiotis, Victor Eremeyev, and Patrizio Neff.
- [O1] (2016) Mini-Symposium on ‘*Micromechanics of Materials and Generalized Continua*’, **11th International Congress on Mechanics HSTAM2016** [May 27-30] – Organizers: Panos Gourgiotis, and Thanasis Zisis.

Publications in Conference Proceedings

- [C32] J.A. Marquez Ruiz, B. Chen, J. Trevelyan, **P.A. Gourgiotis**, E.L. Albuquerque (2019) Enriched BEM for water coning. Twelfth UK Conference on Boundary Integral Methods (UKBIM12) (Oxford Brookes, UK; 8-9 July 2019)
- [C31] Th. Zisis, **P.A. Gourgiotis**, H.G. Georgiadis (2018). Contact problems in the context of couple stress elasticity. 10th European Solid Mechanics Conference ESMC2018 (Bologna Italy; 1-8 July 2018)
- [C30] G. Hattori, **P.A. Gourgiotis**, J. Trevelyan (2018) A couple-stress formulation for the isogeometric boundary element method (IGABEM). 6th European Conference on Computational Mechanics ECCM 6 (Glasgow, UK; 11-15 June 2018)
- [C29] **P.A. Gourgiotis**, A. Movchan, D. Bigoni (2018). Dispersion and localization of flexural waves in prestressed elastic plates with rotational micro-inertia. *10th European Solid Mechanics Conference ESMC2018* (Bologna Italy; 1-8 July 2018)

- [C28] Th. Zisis, P.A. Gourgiotis, H.G. Georgiadis (2018). Contact problems in the context of couple stress elasticity. 10th European Solid Mechanics Conference ESMC2018 [(Bologna Italy; 1-8 July 2018)]
- [C27] G. Hattori, **P.A. Gourgiotis**, J. Trevelyan (2018) A couple-stress formulation for the boundary element method. *International Conference on Boundary Element and Meshless Techniques BETEQ* (Malaga Spain; 9-12 July 2018)
- [C26] **P.A. Gourgiotis** (2017). Microstructural effects on shear crack propagation in brittle materials. *CERMODEL2017 Modelling and Simulation meet Innovation in Ceramics Technology* (Trento, Italy; 26-28 July 2017)
- [C25] D. Bigoni, **P.A. Gourgiotis** (2017) Static and dynamic folding of three-dimensional elastic materials. *ICCM21 21st International Conference of Composite Materials* (Xian, China; 20-25 August 2017)
- [C24] Th. Zisis, **P.A. Gourgiotis**, K.P. Baxevanakis and H.G. Georgiadis (2016) Analysis of the tilted flat punch in couple stress elasticity. *11th HSTAM International Congress on Mechanics* (Athens, Greece; May 27-30, 2016).
- [C23] H.G. Georgiadis and **P.A. Gourgiotis** (2016) On the propagation of torsional & SH surface waves in an isotropic and homogeneous gradient elastic half-space *11th HSTAM International Congress on Mechanics* (Athens, Greece; May 27-30, 2016).
- [C22] T. K. Papathanasiou, **P.A. Gourgiotis**, F. Dal Corso (2015) On the thermoelastic response of a gradient elastic half-space subjected to thermal shock on the boundary. *8th GRACM International Congress on Computational Mechanics* (Volos, Greece; July 12-15, 2015).
- [C21] **P.A. Gourgiotis** and H.G. Georgiadis (2013) Waves in half-spaces of microstructured materials characterized by gradient elasticity. *10th HSTAM International Congress on Mechanics* (Crete, Greece; May 25-27, 2013).
- [C20] K.P. Baxevanakis, **P.A. Gourgiotis** and H.G. Georgiadis (2013) Interaction of cracks with dislocations in couple-stress elasticity. *10th HSTAM International Congress on Mechanics* (Crete, Greece; May 25-27, 2013).
- [C19] T. Zisis, **P.A. Gourgiotis**, K.P. Baxevanakis and H.G. Georgiadis (2013) Plane strain contact problems in couple-stress elasticity. *10th HSTAM International Congress on Mechanics* (Crete, Greece; May 25-27, 2013).
- [C18] **P.A. Gourgiotis** and H.G. Georgiadis (2012) Cracks under concentrated and distributed loadings in materials with microstructure governed by couple-stress

- elasticity. *12th International Conference on Computational & Experimental Engineering and Sciences – ICCES’12* (Crete, Greece; April 30-May 4, 2012).
- [C17] H.G. Georgiadis and **P.A. Gourgiotis** (2011) Full-field solutions for crack problems in couple-stress and gradient elasticity, *2nd International Conference of Engineering Against Fracture* (Mykonos, Greece; June 22-24, 2011).
- [C16] H.G. Georgiadis and **P.A. Gourgiotis** (2010) Notch and crack problems in couple-stress elasticity. *7th German-Greek-Polish Symposium on Advances in Applied Mechanics* (Poznan, Poland; 19-22 September 2010).
- [C15] H.G. Georgiadis and **P.A. Gourgiotis** (2010) Notch and crack problems in couple-stress elasticity. *9th HSTAM International Congress on Mechanics* (Limassol, Cyprus; 12-14 July 2010).
- [C14] H.G. Georgiadis and **P.A. Gourgiotis** (2009) Full-field solutions based on integral equations for crack problems in the Toupin-Mindlin gradient elasticity and in standard couple-stress elasticity. *EUROMECH - Colloquium 510: Mechanics of Generalized Continua: A hundred years after the Cosserats* (Paris, France; 13-16 May, 2009)
- [C13] **P.A. Gourgiotis** and H.G. Georgiadis (2008) An analytical / numerical approach based on integral equations for crack problems of gradient elasticity. *8th World Congress on Computational Mechanics* (Venice, Italy; 30 June - 4 July, 2008).
- [C12] **P.A. Gourgiotis** and H.G. Georgiadis (2007) An approach based on distributed dislocations and disclinations for crack problems in couple-stress elasticity. *8th HSTAM International Congress on Mechanics* (Patras, Greece; July 12-14, 2007).
- [C11] **P.A. Gourgiotis** and D. Bigoni (2015) Stress channelling in polar materials. *XXII Congresso - Associazione Italiana di Meccanica Teorica e Applicata* (Genova, Italy; September 14-17, 2015).
- [C10] **P.A. Gourgiotis** and D. Bigoni (2015) Folding and stress channelling in Cosserat continua. *ESMC-2015, 9th European Solid Mechanics Conference* (Madrid, Spain; July 6-10, 2015).
- [C9] **P.A. Gourgiotis**, F. Dal Corso and Th. Zisis and (2015) The contact problem of a rigid flat punch indenting a couple-stress thermoelastic half-space. *EUROMECH Colloquium 575 - Contact mechanics and coupled problems in surface phenomena* (Lucca, Italy; 30 March-2 April, 2015).

- [C8] **P.A. Gourgiotis** and A. Piccolroaz (2014) The mode II crack propagation problem in couple-stress elasticity. *EUROMECH Colloquium 563 – Generalized continua and their application to the design of composites and metamaterials* (Cisterna di Latina, Italy; March 17-24).
- [C7] **P.A. Gourgiotis** and A. Piccolroaz (2013) The effect of couple-stresses in the mode II steady-state crack propagation problem. *6th International Symposium on Defect and Material Mechanics – ISDMM2013* (Nantes, France; July 1-3, 2013).
- [C6] **P.A. Gourgiotis** and H.G. Georgiadis (2011) Energy release rates for cracks and notches in couple-stress elasticity. *5th International Symposium on Defect and Material Mechanics – ISDMM2011* (Seville, Spain; June 27 – July 1, 2011).
- [C5] **P.A. Gourgiotis** and H.G. Georgiadis (2010) Crack problems in the theories of couple-stress elasticity and strain-gradient elasticity. *1st Greek and Greek-Ukrainian Conference on Fracture Mechanics of Materials and Structures* (Xanthi, Greece; 20-24 October, 2010).
- [C4] H.G. Georgiadis and **P.A. Gourgiotis** (2009) Notch and crack problems in dipolar gradient elasticity. *4th International Symposium on Defect and Material Mechanics – ISDMM2009* (Trento, Italy; July 6-9, 2009).
- [C3] **P.A. Gourgiotis** and H.G. Georgiadis (2009) The elastic notch problem for microstructured materials in dipolar gradient elasticity. *3rd Conference on Generalized Continuum Theories* (Thessaloniki, Greece; 1-3 May, 2009).
- [C2] **P.A. Gourgiotis** and H.G. Georgiadis (2008) Integral equation solution of plane-strain crack problems in gradient elasticity. *2nd Conference on Generalized Continuum Theories* (Ioannina, Greece; May 1-3, 2008).
- [C1] **P.A. Gourgiotis** and H.G. Georgiadis (2007) Distributed dislocation approach for cracks in couple-stress elasticity. *3rd International Symposium on Defect and Material Mechanics – ISDMM2007* (Assuois, France; 25-29 March, 2007)

Supervision

Supervision of undergraduate, graduate, and PhD theses

- 2016 - 2019 **Yanpeng Gong**, PhD Thesis: *The isogeometric boundary element method and its application in thermal barrier coatings of aeroengine turbine blade*. Durham University [Co-Advisor: P.A. Gourgiotis]
- 2018- 2020 **J.A. Marquez Ruiz**, MSc Thesis: *Enriched BEM for hydrocarbons recovery*. Durham University [Co-Advisor: P.A. Gourgiotis]

- 2019 - 2020 **R. Schofield:** MSc Thesis: *Functionally graded thin films modelled by couple stress elasticity*. Durham University [Advisor: P.A. Gourgiotis]
- 2016 -2020 **12** MEng and BEng Research Projects, Department of Engineering, Durham University, UK.

Professional Activities

Chartered Civil Engineer - [Technical Chamber of Greece; Exam date: 03/2004]

Reviewer: Proceedings of the Royal Society: A; International Journal of Solids and Structures; European Journal of Mechanics - A/Solids; Journal of Elasticity; Journal of Thermodynamics; Applied Mathematical Modelling; International Journal of Soil Dynamics and Earthquake Engineering; Mechanics Research Communications; Mathematics and Mechanics of Solids; International Journal of Thermal Sciences; Mathematical Methods in Applied Sciences; Journal of Engineering Mathematics; Archives of Mechanics; Meccanica; Journal of Mechanics of Materials and Structures; Journal of Earth System Science; Journal of the European Ceramic Society; Waves in Random and Complex Media.