

## Refereed Journals

1. E. Mitsoulis and **Th. Zisis**. "Flow of Bingham plastics in a lid-driven square cavity". *Journal of Non-Newtonian Fluid Mechanics*. 101 (2001) 173-180.
2. **Th. Zisis** and E. Mitsoulis. "Viscoplastic flow around a cylinder kept between parallel plates". *Journal of Non-Newtonian Fluid Mechanics*. 105 (2002) 1-20.
3. Mitsoulis, S. Marangoudakis, M. Spyratos, **Th. Zisis**, N.A. Malamataris. "Pressure-driven flows of Bingham plastics over a square cavity". *Journal of Fluids Engineering*. 128 (2006) 993-1003.
4. **A. Zisis** and N. A. Fleck. "Mechanisms of elasto-dynamic erosion of electron beam thermal barrier coatings". *International Journal of Materials Research*. 12 (2007) 1196-1202.
5. Giannakopoulos, A. Kordolemis, **Th. Zisis**. "Development of strong surfaces using functionally graded composites inspired by natural teeth – A theoretical approach". *International Journal of Engineering Materials and Technology*, 131 (2010).
6. **Th. Zisis**, A. Kordolemis, A. E. Giannakopoulos. "Development of strong surfaces using functionally graded composites inspired by natural teeth – Finite element and experimental verification". *International Journal of Engineering Materials and Technology*, 131 (2010).
7. **Th. Zisis** and A. E. Giannakopoulos. "Wedge indentation of elastic-plastic layered substrates: Designing against contact induced plasticity". *Computational Material Science* (2009) 47 (1) 275-285.
8. **Th. Zisis** and N. A. Fleck. "The elastic-plastic indentation response of columnar thermal barrier coatings". *Wear*, 268 (2010) (2-3) 443-454.
9. N. Catsaros, B. Gaveau, M. Jaekel, J. Maillard, G., Maurel, P. Savva, J. Silva, M. Varvayanni, **Th. Zisis**. "Criticality qualifications of a new Monte-Carlo code for reactor core". *Annals of Nuclear Energy*, 36 (2009) (11-12) 1689-1693.
10. N. A. Fleck and **Th. Zisis**. "The erosion of EBV-TBC – The competition between mechanisms". *Wear*, 268 (2010) (11-12) 1214-1224.
11. **Th. Zisis**, M. Varvayanni, P. Savva, N. Catsaros. "Methods and Instruments for Assessing the in-Core Gamma Heating of Materials". *IEEE Transactions of Nuclear Science*, 57 (2010) (2) 837-847.

12. **Th. Zisis**, V. I. Zafiropoulou and A. E. Giannakopoulos. "The adhesive contact of a flat punch on a rubber-like substrate subject to a pull-out force or a bending moment". *Mechanics of Materials*. 43 (2011) (1) 1-24.
13. A. E. Giannakopoulos and **Th. Zisis**. "Analysis of Knoop indentation". *International Journal of Solids and Structures*. 48 (2011) (1) 175-190.
14. M. Ansari, **Th. Zisis**, S.G. Hatzikiriakos, E. Mitsoulis. "Capillary Flow of LDPE". *Polymer Engineering and Science*. 52 (2012) 3 649–662.
15. **Th. Zisis** and A. E. Giannakopoulos. "Analysis of Knoop indentation – Strain Hardening Effects". *International Journal of Solids and Structures*. 48 (2011) 22-23 3217-3231.
16. A. E. Giannakopoulos and **Th. Zisis**. "Analysis of Knoop indentation – Pressure Sensitive Materials". *Mechanics of Materials*. 57 (2013), 53-74.
17. **Th. Zisis**, P.A. Gourgiotis, K.P. Baxevanakis, and H.G. Georgiadis. "Some basic contact problems in couple-stress elasticity", *International Journal of Solids and Structures*. 51, (2014), 2084-2095.
18. N. Othman, M. Ansari, **Th. Zisis**, E. Mitsoulis, S.G. Hatzikiriakos. "Entry flows of polyactides with slip", *Journal of Non-Newtonian Fluid Mechanics*. 210, (2014), 78-84.
19. **Th. Zisis**, P.A. Gourgiotis, F. Dal Corso. "A contact problem in couple stress thermoelasticity: The indentation by a hot flat punch", *International Journal of Solids and Structures*. 63, (2015), 2084-2095.
20. P.A. Gourgiotis, **Th. Zisis**. "Two-dimensional indentation of microstructured solids characterized by couple-stress elasticity", *Journal of Strain Analysis for Engineering Design*. Accepted.
21. **Th. Zisis**, V.I. Zafiropoulou and A.E. Giannakopoulos. "Evaluation of material properties of incompressible hyperelastic materials based on instrumented indentation of an equal-biaxial prestretched substrate", *International Journal of Solids and Structures*. 64, (2015), 226-239.
22. V.I. Zafiropoulou, **Th. Zisis** and A.E. Giannakopoulos. "Instrumented indentation of a non-equal biaxial prestretched hyperelastic substrate", *Submitted*.
23. P.A. Gourgiotis, K.P. Baxevanakis, **Th. Zisis**. "Indentation by a tilted flat punch", *Submitted*.
24. **Th. Zisis** and A. E. Giannakopoulos. "Analysis of Knoop indentation – pre-stressed surfaces". *Submitted*.

25. **Th. Zisis** and A. E. Giannakopoulos. "Analysis of Knoop indentation – thin films", *Submitted*.

26. **Th. Zisis** and P.A. Gourgiotis. " The effect of eccentricity upon the wedge indentation of microstructured solids ", *Submitted*.

### **Refereed Conference Proceedings**

1. E. Mitsoulis, **Th. Zisis**, D. Kammer, "New simulation results on flow of Bingham plastics", Proceedings of the 3<sup>rd</sup> Pacific Rim Conference on Rheology, paper 162, pp. 1-4, Vancouver, CANADA, July 2001.

2. E. Mitsoulis, D. Kammer, **Th. Zisis**, "Flow of viscoplastic materials around cylinders", Proceedings of the 18th Annual Meeting of the Polymer Processing Society, paper 5, pp. 1-10, University of Minho, Guimaraes, PORTUGAL, June 2002.

3. E. Mitsoulis, **Th. Zisis**, S.G. Hatzikiriakos, "Modeling of paste extrusion in semi-solid state", Proceedings of the 11<sup>th</sup> ESAFORM Conference on Material Forming, Ed. Ph. Boisse, INSA, paper 164, pp. 1-4, Lyon, FRANCE, April 2008.

4. S.G. Hatzikiriakos, E. Mitsoulis, **Th. Zisis**, "Simulation of Poly-Tetra-Fluoro-Ethylene (PTFE) paste in contraction flows", proceedings of the 24th Annual Meeting of the Polymer Processing Society, Ed. G. Titomanlio, Univ. Salerno, paper S08-125, pp. 1-5, Salerno, ITALY, June 2008.

5. E. Mitsoulis, **Th. Zisis**, S.G. Hatzikiriakos, "Influence of Compressibility in Polymer Melt Flows", 6th GRACM International Congress on Computational Mechanics, Aristotle University of Thessaloniki, paper 1205, pp. 1-6. Thessaloniki, GREECE, June 2008.

6. E. Mitsoulis, **Th. Zisis** and S.G. Hatzikiriakos, "Steady Capillary Flow of Polytetrafluoroethylene (PTFE) Paste Experiments and Simulations", 7<sup>th</sup> Hellenic Polymer Conference, Ioannina Science and Technology Park of Epirus, GREECE, pp. 96-97, 28 September-1 October 2008.

7. E. Mitsoulis, **Th. Zisis** and S.G. Hatzikyriakos, "Simulation of Structure in Flow of Polytetrafluoroethylene (PTFE) Paste through contractions", PPS Conference in Charleston, South Carolina, USA, October 26-29 2008.

8. Mitsoulis, E., **Zisis, Th.**, Hatzikiriakos, S.G., "Issues in the Modeling of Paste Extrusion", Proceedings of the 26th Annual Meeting of the Polymer Processing Society, Eds. A.N. Hrymak, U. Sundararaj, Banff, CANADA, July 2010, paper G12-35, pp. 1-7.

9. Anvari Ardakani, H., Hatzikiriakos, S.G., **Zisis, Th.**, Mitsoulis, E., "Processing Characteristics of Toothpaste in Capillary Dies", Proceedings of the 27th Annual

Meeting of the Polymer Processing Society, Ed. M. Bousmina, Marrakech, MOROCCO, May 2011, paper OP18-515, pp. 1-6.

10. Mitsoulis, E., **Zisis, Th.**, Ansari, M., Hatzikiriakos, S.G., "A Comprehensive Study of Low-Density Polyethylene in Capillary Flow", Proceedings of the Society of Plastics Engineers European Technical Conference, EUROTEC 2011, Barcelona, SPAIN, November 2011, paper 193, pp. 1-5.

11. Mitsoulis, E., **Zisis, Th.**, Ansari, M., Hatzikiriakos, S.G. (Invited Keynote Paper) "Flow Behavior of Different Polyethylenes in Capillary Flow", Proceedings of the Society of Plastics Engineers Annual Technical Conference, ANTEC 2012, Vol. 58, Orlando, Florida, USA, April 2012, paper # 1249101, pp. 1-6.

12. **Zisis, Th.**, Gourgiotis, P.A. , Baxevanakis, K.P., and Georgiadis, H.G. "Plane Strain Contact Problems in Couple-Stress Elasticity", 10th HSTAM International Congress on Mechanics Chania, Crete, Greece, 25 – 27 May, 2013.

13. Mitsoulis, E., Norhayani, O., **Zisis, Th.**, Hatzikiriakos, S.G., "Capillary Flow of Polylactides", Proceedings of the 30th International Meeting of the Polymer Processing Society, Eds. S.C. Jana, J. Maia, Cleveland, OH, USA, June 2014, paper 04-16, pp. 1-4.

14. Mitsoulis, E. and **Zisis, Th.** "Tanners simple model of crystallization for power law fluids extended", Proceedings of PPS-29, The 29th International Conference of the Polymer Processing Society, 1593, 596-599, 2014.

15. Th. K. Papathanasiou, P. A. Gourgiotis, F. DalCorso and **Th. Zisis**. "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, 12 July – 15 July 2015.

16. A. Lytra, N. Pelekasis, V. Zafiropoulou, **Th. Zisis**, A. Giannakopoulos, V. Sboros, E. Glynos and V. Koutsos. "Static response of coated microbubbles: modeling simulations and parameter estimation", 8th GRACM International Congress on Computational Mechanics, Volos, 12 July – 15 July 2015.

#### **Abstracts Presented at Conferences and Workshops**

1. E. Mitsoulis, M. Beaulne, D. Kammer and **Th. Zisis**, "Modeling of Viscoplastic Lid-Driven Cavity Flow Using Finite Element Simulations", 3<sup>rd</sup> International Meeting of the Hellenic Society of Rheology, Patras, Greece, June 2002.

2. **Th. Zisis** and N.A. Fleck, "On the Erosion of Thermal Barrier Coatings", HIPERCOAT, Cambridge, UK, June 2002.

3. **Th. Zisis** and N.A. Fleck, "Elastodynamic Erosion of Thermal Barrier Coatings", HIPERCOAT, Santa Barbara, USA, January 2003.
4. **Th. Zisis** and N.A. Fleck, "Quasi-Static Response of Thermal Barrier Coatings", HIPERCOAT, Chatillon, France, August 2003.
5. **Th. Zisis** and N.A. Fleck, "Deformation and Erosion Maps of Thermal Barrier Coatings", HIPERCOAT, Santa Barbara, USA, January 2004.
6. **Th. Zisis** and N.A. Fleck, "Plastic Microbuckling of Thermal Barrier Coatings", HIPERCOAT, Stockholm, Sweden, August 2004.
7. **Th. Zisis** and N.A. Fleck, "Mechanisms of Deformation of Thermal Barrier Coatings", Santa Barbara, HIPERCOAT, USA, January 2005.
8. Mitsoulis, E., Marangoudakis, S., Spyratos, M., **Zisis, Th.**, Malamataris, N., "Pressure-Driven Flows of Bingham Plastics over a Square Cavity", AERC 2006, 3<sup>rd</sup> Annual European Rheology Conference, Hersonisos, Crete, GREECE, April 2006.
9. A. E. Giannakopoulos and **Th. Zisis**, "Analysis of Knoop Indentation", Invited talk at the University of Cyprus, Cyprus, Nov. 2010.
10. **Zisis, Th.**, Mitsoulis, E., Ardakani-Anvari, H., Hatzikiriakos, S.G., "Rheology of Toothpaste: a Semi-Solid, Yield Stress, Thixotropic Material", Proceedings of PPS 2010 Europe-Africa Regional Meeting of the Polymer Processing Society, Eds. M. Cakmak, Y. Menceloglu, Y. Ulcer, Istanbul, TURKEY, October, 2010.
11. Anvari Ardakani H., Hatzikiriakos S.G., **Zisis Th.**, Mitsoulis E., *Rheology and processing of toothpaste*, 6th International Meeting of the Hellenic Society of Rheology-HSR 2011, Athens, GREECE, 28-30 June, 2011.
12. Ardakani, H.A., Hatzikiriakos, S.G., **Zisis, Th.**, Mitsoulis, E., "Study of Toothpaste as a Thixotropic Material", VPF2011, 4<sup>th</sup> Workshop on Visco-plastic Fluids - From Theory to Application, Rio de Janeiro, BRAZIL, November 2011.
13. Hesam A. Ardakani, Evan Mitsoulis, **Thanasis Zisis**, and Savvas G. Hatzikiriakos Simple Models for PTFE Paster Extrusion, paper SP3,18, AERC 2013, Leuven, Belgium, April 2-5 2013.
14. **Th. Zisis**, "Contact Problems in Microstructured Materials", Invited talk at the University of Trento, Italy, Nov. 2013.
15. Othman, N., **Zisis, Th.**, Mitsoulis, E., Hatzikiriakos, S.G., "Rheology of Polylactides: Experiments and Simulations", AERC 2014, 9th Annual European Rheology Conference, Paper FM16, Karlsruhe, GERMANY, April 2014.

16. **Zisis, Th.** and Dal Corso, F., "A Contact Problem in Couple Stress ThermoElasticity", GIMC-GIMA 2014, XX Convegno Nazionale di Meccanica Computazionale, Lazzio, ITALY, June 2014.

17. P. A. Gourgiotis, **Th. Zisis**, F. Dal Corso, "The contact problem of a rigid flat punch indenting a couple-stress thermoelastic half-space", CONTACT MECHANICS AND COUPLED PROBLEMS IN SURFACE PHENOMENA, European Mechanics Society, IMT Institute for Advanced Studies, Lucca, ITALY, 30 March – 2 April 2015.

18. A.E. Giannakopoulos, V. I. Zafiropoulou, **Th. Zisis**, A. Lytra and N. Pelekasis, "Probing of micro and nanocapsules propertied with instrumented indentation" 4th International Conference on Bio-Sensing Technology, 10 - 13 May 2015, Lisbon, Portugal.

19. F. Dal Corso, **Th. Zisis**, P. Gourgiotis, "A thermomechanical contact problem for microstructured solids" January 27, 2015, Orlando (USA) within the "EMN Ceramics Meeting", January 26-29, 2015.

20. F. Dal Corso, **Th. Zisis**, P. Gourgiotis, "Contact regimes during heat conduction through a microstructured solid" March 20, 2015, University of Trento, Trento (Italy), Workshop "State of the art challenges in thermal and mechanical modelling of ceramic materials".